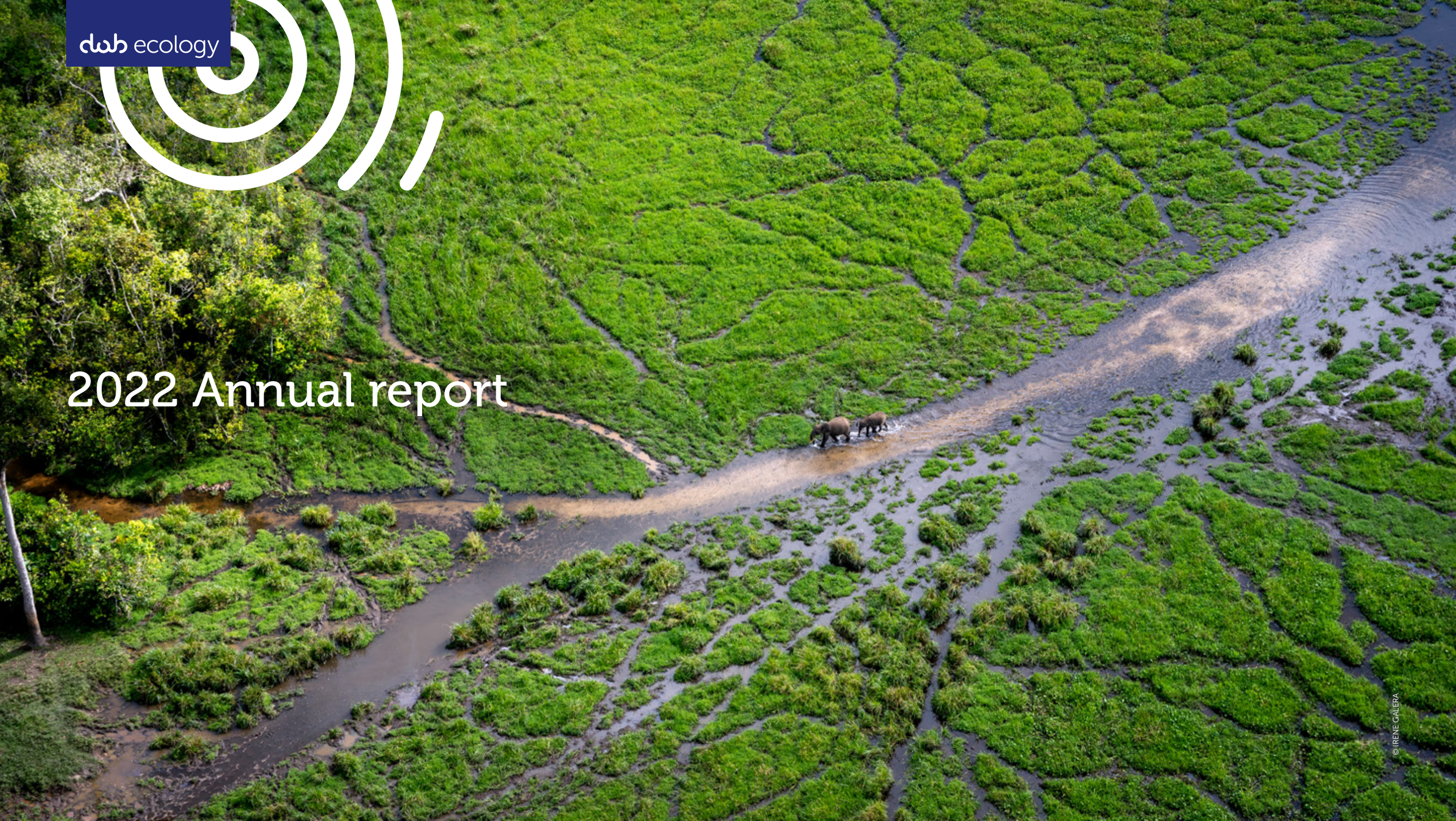
dwb ecology

# 2022 Annual report



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# Welcome

2022 was a successful year for DOB Ecology. Our partners achieved many important results for forests and wetlands that were borne out of the commitment and expertise of their staff and the cooperation that they built-up with local communities, living in or depending on these ecosystems. We were also delighted to see the high-profile launch of global knowledge tools developed by our partners that will serve the wider conservation community as well as our partners.

At the same time, 2022 also brought with it challenges for DOB Ecology and its partners around the world. Many parts of the world were just emerging from the COVID crisis when we were faced with the twin challenges of the energy and cost of living crises that were trigged by the war in Ukraine. Our partners demonstrated resilience in being able to deliver valuable results, despite increases in their costs of operation in relation to their programme budgets.

Last year we were delighted to welcome two new partners to the DOB Ecology network – IUCN The Netherlands with Nativa Bolivia (Chaco dry forest, Bolivia) and the University of Groningen ('CoCost' research in Kenya and Tanzania), while WRI and Jocotoco completed their programme cycles successfully. We also provided a one-off grant to the Netherlands Red Cross – Princess Margriet Fund for climate resilience support in Haiti.

The Board met 5 times in 2022 and provided oversight and guidance to the DOB Ecology team comprising of Maas Goote, Birgitte Laarakker and Marianne Hilders. The Board gave its sincere thanks to Maas who left at the end of 2022, having been the driving force behind the development of DOB Ecology since its establishment in 2016.

We would like to thank our partners for the inspiration they give us every day, as they tackle some of the most challenging situations for people and nature around the world.

With warm greetings,
**From the team at DOB Ecology**

# 2022 at a glance

## Forests

Restored area (ha)

25,613

108,793

Actively protected area (ha)

4,600,932

6,820,444

## Wetlands

Restored area (ha)

992

2,799

Actively protected area (ha)

44,241

1,127,074

## Beneficiaries

Number of people

50,280

140,899

Results 2022

Cumulative results up to 2022

Results 2022

Cumulative results up to 2022

dob ecology

DOB Ecology is a non-profit organization founded by a Dutch entrepreneurial family. Their philanthropy supports NGOs that work with communities to protect, manage and restore threatened ecosystems, with a focus on wetlands and forests in Africa and South America. The organization also supports the development of cutting-edge knowledge and research needed for biodiversity conservation and restoration.

During 2022, DOB Ecology's portfolio comprised 21 programmes that were carried-out by leading NGOs, both local and international. The work of our partners was divided nearly equally between Africa and South America, as well as between forests and wetlands. Knowledge partners working globally represented about a tenth of the total.

In 2022 two of our partners (WRI, Jocotoco) finished their programmes and two new ones joined our network: a programme on Indigenous management of protected areas (IUCN NL with Nativa Bolivia) and the CoCost research programme in Kenya and Tanzania (University of Groningen). We also provided a one-off grant to help build climate resilience in Haiti (Red Cross NL with Princess Margriet Fund).

To promote the interaction and knowledge exchange between partners DOB Ecology hosted two virtual knowledge sessions for its partners. Also, two editions of the 'GO Magazine' were published online that featured our partners' stories on "Optimism in times of crisis" and "Ecotourism as a driver for change".

# Programmes Africa

Both ENDS

## Communities regreen the **Sahel**

Working towards large-scale land restoration in three countries (80,000 hectares in Niger and 60,000 hectares each in Senegal and Burkina Faso) through Farmer-Managed Natural Regeneration (FMNR) by and for communities.

African Parks

## Embedding intelligence-based conservation in **Odzala-Kokoua**

Generating knowledge that improves conservation success in Odzala-Kokoua and helps park managers make well-informed decisions about which interventions to start, adjust, scale-up or down.

Wageningen Environmental Research

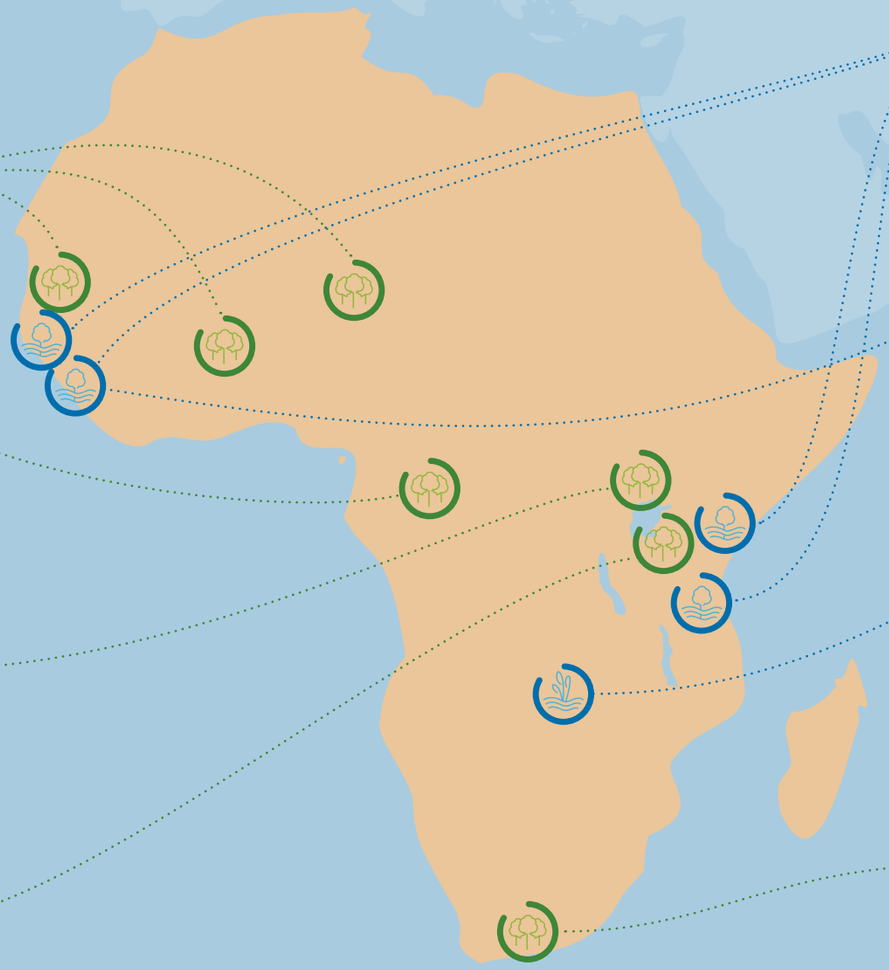
## Restoring the **Manafwa watershed**

Restore the resilience of the Manafwa watershed. A solid foundation for resilient farming is laid by investing in practices and technologies that enable farmers to become stewards of the natural resources in their villages and the National Park.

University of Groningen

## A sustainable future for the **Greater Serengeti-Mara Ecosystem**

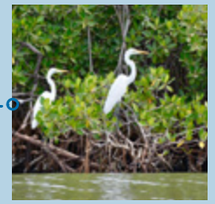
Develop practical solutions for conservation and ecological restoration in the Greater Serengeti-Mara Ecosystem in Kenya and Tanzania, by combining local knowledge with first-class academic research.



Wetlands International

## Safeguarding mangroves along the **West and East African coasts**

We help protect and restore valuable mangroves, empower local communities to manage their natural mangrove resources more sustainably, and improve their livelihoods through new, sustainable sources of income.



PRCM

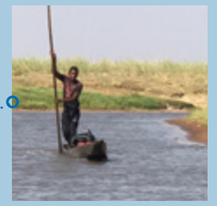
## Saving the mangroves on **Tristao**

Safeguard and expand the mangroves area so that they have a broad vegetation cover and enable the local communities to reduce the use of mangrove wood by encouraging alternative economic activities.

WWF Zambia

## A resilient **Zambezi river basin** for people and nature

We support strengthening of the protected area network to secure ecological integrity of the Zambezi headwaters which are key to the provision of downstream ecosystem goods and services.



Gouritz Cluster Biosphere Reserve

## Restoring the **Gouritz Cluster Biosphere Reserve**

Increase the resilience and sustainability of the Gouritz biosphere reserve, by supporting the creation of a 100,000 ha ecological corridor and restoration of 10.000 ha by planting the indigenous spekboom and removing invasive species.

# Restoring the **Gouritz Cluster Biosphere Reserve**

**Partner**
Gouritz Cluster Biosphere Reserve

**Location**
Southern part of South Africa where three global biodiversity hotspots converge: the Fynbos, Succulent Karoo and Maputoland-Tongoland-Albany hotspots.

**Duration**
2017 - 2025

## Forests

| Restored area (ha) | Actively protected area (ha) |
|---|---|
| 3,362 | 13,397 |
| 4,800 | 35,879 |

## Beneficiaries

| Number of people |
|---|
| 308 |
| 3,228 |

Results 2022
Cumulative results up to 2022







The Gouritz Biosphere Reserve is the only area in the world where three global biodiversity hotspots converge. Threats in this region come from outdated agricultural practices, invasive alien vegetation, and too frequent and catastrophic fires. Land is being cleared on a large scale for cultivation. Besides this, there is a fight against poverty and exclusion. Gouritz is dedicated to the conservation and restoration of threatened biodiversity, tied to socioeconomic development for the wellbeing of the people in its domain.

## What happened in 2022?

Gouritz has made good progress in getting landowners to partner with them in building ecological corridors totaling about 100,000 ha. In 2022, 32 landowners joined to participate in this project covering together an area of 39,189 hectares. Gouritz's extension officers, Louis and Halcyone are actively liaising with landowners to evaluate the extent of invasive alien plants on their land and demonstrate the use of biological control agents (like insects and fungi) to combat these. To assist the extension officers in creating the Gouritz Corridor, five management guideline booklets have been published this year for landowners on: 1) erosion control, 2) fire management, 3) invasive alien plants management, 4) sustaining land and water, and 5) micro-corridor management.

In 2022, as part of the restoration activities, a total of 70,078 Spekboom trees were planted across 73 hectares from March to September. In addition, 3,289 hectares were cleared of invasive alien plants of which a majority were in the high priority mountain areas that are more difficult to reach and where clearing activities are more complex.

Gouritz is also working to set up 2 nature-based enterprises in the reserve as another way to help conserve and restore the region. The Goukou Nursery is now running as a commercial enterprise through a partnership with the Mont Blanc farm. A phase 1 study on production of essential oils has also been completed.

# Safeguarding mangroves along the **West and East African coasts**

**Partner**
Wetlands International

**Location**
The Grand Saloum in Senegal, Cacheu NP and Catanhez NP in Guinea-Bissau, Lamu and Tana Delta in Kenya, the Rufiji Delta in Tanzania.

**Duration**
2017 - 2025

## Mangroves

## Beneficiaries

| | Restored area (ha) | Actively protected area (ha) | Number of people |
|---|---|---|---|
| Results 2022 | 739 | 27,500 | 22,061 |
| Cumulative results up to 2022 | 1,782 | 167,000 | 57,658 |

The mangroves on the East and West African coasts, which constitute 19% of global mangrove coverage, provide millions of people with food, clean water and raw materials and act as buffers against storms, tsunamis and sea-level rise. Mangrove Capital Africa protects and restores these mangroves for the benefit of nature and people.

## What happened in 2022?

This was the first complete year that the programme was active in 4 countries: Senegal and Guinea-Bissau on the west coast and Tanzania and Kenya on the east coast of Africa.

### Senegal

In the Saloum Delta 104 hectares of degraded mangroves were restored by local communities using the Ecological Mangrove Restoration approach. In Casamance the team worked in 4 Marine Protected Areas (MPAs), but here, unfortunately, the use of harmful and illegal fishing nets was observed. To address this, a sensitization campaign was undertaken for mangrove resource users on the rules and regulations in MPAs and illegal equipment was confiscated by the authorities. Further, 40 new mangrove clubs were set up in schools to build awareness about the importance of mangroves among pupils and, indirectly, their families.

### Guinea-Bissau

A good start was made in the Cacheu Natural Park where 418 hectares of mangroves were restored by local NGOs with guidance from the project team. Action was started to gain a higher protection status for the Cacheu area which will make it possible to designating sustainable use areas and harder to implement harmful activities such as mining. The goal over time is to upgrade the Cacheu Natural Park and the surrounding areas, together known as Jeta-Pecixe-Cacheu, to an UNESCO Biosphere Reserve. The communities in Guinea-Bissau are poor and less well organized compared with neighbouring countries. So saving and loans schemes were introduced to these communities.

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### Tanzania

The work in the Rufiji Delta remains challenging. The main reason is continued encroachment by pastoralists and rice farmers who use the mangrove areas of the Rufiji Delta at various times of the year, including areas where the team is restoring mangroves. A dialogue among key stakeholders aimed at finding solutions to the issue of encroachment was held. In 2022 34 hectares of mangroves were restored.

### Kenya

Wetlands International, together with the Kenya Forest Service, identified a total of 93.2 ha of potential areas for restoration in Lamu Southern Swamp as a result of mapping activities with local communities and other stakeholders. In 2022, 30 hectares were restored which is behind schedule. This is due to security concerns in the Lamu programme area due to its proximity to the border with Somalia.

The local community is being actively engaged. Improved cooking stoves have been installed by 15 community members in 53 households, following a training programme, and this benefits approximately 2,000 people in the Matondoni village. These stoves use less wood and their use is much less hazardous to human health than open fire cooking.

# Communities regreen **the Sahel**

**Partner**
Both ENDS

**Location**
Niger, Senegal, Burkina Faso. The semi-arid Sahel drylands, a combination of grassland and savanna, with areas of wood- and shrubland.

**Duration**
2017 - 2024

## Forests

Restored area (ha)

22,199

99,313

## Beneficiaries

Number of people

18,537

59,550

Results 2022

Cumulative results up to 2022







In the Sahel, land degradation is one of the biggest threats to the traditional livelihoods of millions of people. Niger, Burkina Faso and Senegal are also countries that are highly affected by droughts and food insecurity. This program supports local communities with a sustainable and low-cost method of farming known as Farmer-Managed Natural Regeneration (FMNR). Through FMNR, farmers in the Sahel can regreen their land, by allowing the dormant but still active 'underground forest' of roots and seeds to sprout spontaneously, and manage it better.

## What happened in 2022?

The programme introduced two monitoring tools last year. First, Kobo Collect is used to collect data on the ground about the size of plots, number of trees regenerated, tree species, size etc. Second, large-scale monitoring is done through remote sensing.
The challenge is that current techniques using satellite data struggle to identify individual trees in an open landscape such as the Sahel. To improve this the programme cooperates with WRI on their "Trees in Mosaic Landscapes" data set. Several programme partners shared their experiences during the United Nations Convention to Combat Desertification (UNCCD) COP15 in Abidjan.

## Niger

In Niger, where the programme is working the longest, programme results are exceeding expectations. In 2022 the team focused on informing nomadic people on the negative impact of cutting of trees on the lands they pass through. The "Best FMNR practitioners" competitions created a lot of interest about the methodology and attracted new farmers to adopt it.

## Senegal

Progress in the field is going well in Senegal. FMNR and regreening techniques are already included in national strategies and policies. Therefore, the team focused on increasing the uptake of these methods and provided three guidelines for the implementation of FMNR at the local level.

## Burkina Faso

Burkina Faso was affected by two military coups this year. Due to the instable political situation, the programme decided to not expand to new municipalities. Within the current project area work continued and relationships with farmers and authorities were maintained. Some of the farms have little tree diversity and, in such cases, the FMNR methodology is complemented with tree planting. To support this several tree nurseries have been set up by the programme.

# A resilient Zambezi river
## for people and nature

**Partner**
WWF Zambia

**Location**
North-Western Zambia where the Zambezi river enters from Angola through the Kabompo Forest and then continues to create an area with vast floodplains including the Barotse Floodplains.

**Duration**
2017 - 2023

**Wetlands**

Actively protected area (ha)
530,000
530,000

Results 2022
Cumulative results up to 2022





The Zambezi river above Victoria Falls is completely free-flowing and supports vast wetland systems. It holds huge amounts of water for months or even years which makes it possible for people and the economy to survive periods of drought. Large-scale development projects in mining and energy are now emerging which could have negative impacts on ecosystem integrity, wildlife and nature, and livelihoods of millions of people who rely heavily on the ecosystem goods and services provided by the river and its wetlands.

### What happened in 2022?

One aim of the project is to strengthen the knowledge base for conservation. Key monitoring of socio-ecological data has now been successfully compiled for the Greater Liuwa (13 years) and Greater Kabompo (5 years), making them among the best in the country. An important result in 2022 was the publication in Ecology and Evolution Journal of a comprehensive study on the Liuwa wildebeest ("Predation strongly limits demography of a keystone migratory herbivore in a recovering transfrontier ecosystem").

A second key result in 2022 was the successful reintroduction of African wild dogs to the Greater Liuwa Ecosystem. Wild dogs disappeared from the ecosystem in 2015 and are thought to have succumbed to a rabies outbreak. The reintroduced pack produced five pups, three of which survived. This is the first breeding pack of wild dogs in Liuwa in nearly a decade and is a key step forward in the Liuwa Predator Management Plan.

Good progress was made in establishing a Fisheries Management Area in West Lunga in Kabompo.
The proposed Fisheries Management Area for gazetting was approved by the Department of Fisheries.
Meanwhile village level community fisheries groups were established in all six fisheries management zones which allows community representatives to be put forward as representatives on the Fisheries Management Committee.

The planned declaration of stretches of the Kabompo River as a Water Resources Protected Area has been delayed. This process is carried-out in cooperation with the Water Resources Management Authority.

# Communities saving mangroves on **Tristao**

**Partner**
PRCM

**Location**
Located in Guinea, along the border with Guinea-Bissau, the Tristao Islands characterized by sandbanks, mud, rocks, estuaries and mangrove forests.

**Duration**
2019 – 2027

## Mangroves

Restored area (ha)

Results 2022: 168

Cumulative results up to 2022: 693

## Beneficiaries

Number of people

Results 2022: 230

Cumulative results up to 2022: 1,264

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The Tristao Islands are an isolated group of islands, located in northern Guinea. The mangroves that cover half of them make up a valuable ecosystem and are a key habitat for wildlife and fishery resources. Mangrove wood is intensively used for cooking and lighting, as well as for income generating activities like fish smoking, and mangroves are cleared to make space for rice fields. The interventions of PRCM aim to reverse this trend.

## What happened in 2022?

PRCM generated good results in 2022. The hydrology of 37 ha of abandoned rice fields was restored to create the right circumstances for mangroves to return. By flattening the dikes around them at specific locations and intervals, the tide transports mangrove seeds naturally to these areas. After 4 years of work a total of 375 ha of abandoned rice fields have been restored to mangroves.

During the rainy months of 2022, from July to September, a planting campaign with local communities was organized in which 151 ha of new mangroves were planted. The sites reforested were chosen carefully based on cartographic and soil studies. This brings the total to 318 ha mangroves restored after 4 years.

One of the main economic activities of women is fish smoking which uses a lot of mangrove wood. In the past year 80 stoves were constructed that significantly reduce the consumption of wood as improving the quality of women's lives. Based on good results, the communities hope to construct more of these stoves in other villages.

To prevent further clearance of mangroves for new rice fields, the project is also helping to improve the yields in degraded rice fields that are still in use. Dike maintenance and the reinforcement of existing drainage pipes also took place in the past year.

# Restoring the **Manafwe Watershed**

**Partner**
Wageningen Environmental Research

**Location**
The Manafwe Watershed in Eastern Uganda, bordering with Mount Kenya National Park, is an area prone to landslides and flooding.

**Duration**
2019 – 2023

## Beneficiaries

Number of people

| Results 2022 | Cumulative results up to 2022 |
|---|---|
| 4,505 | 8,974 |





The Manafwa watershed in Uganda has a good climate and fertile volcanic soils for food production but is also highly populated with the majority of the people dependent on agriculture. The pressure on the land is high, often resulting in encroachment on fragile areas and farming on ever steeper slopes and marginal lands. The project tries to preserve the area for its future generations by laying a solid foundation for resilient farming and achieving good stewardship of natural resources.

## What happened in 2022?

In 2022, 4505 farmers were trained through the 'Plan Integré du Paysan (PIP)' or so-called PIP competition model. This is an integrated farm planning approach based on drawing the current and your desired future of your farm. This brings the total number of trained farmers to 8,974 spread over 215 villages and 8 sub-counties in the Bududa district. Existing PIP farmers received additional technical training in sustainable land use management and banana agronomy. This training is very hands-on to help farmers gain practical skills.

The 6 Village Savings and Loan Associations, totaling 169 members, that were set up before were supported with additional knowledge on implementation of internal regulations and rules, and record keeping. The project also successfully conducted an environmental education week/competition for 12 targeted schools and added 14 new schools to the environmental education module.

The Uganda Wildlife Authority (UWA), responsible for managing and protecting the Mount Elgon National Park, is an important partner. The project, in partnership with UWA, organised sensitization workshops about current levels of encroachment on the National Park at parish level. The five parishes are Mabina and Kasuni in Bukalasi sub-county, Matuwa in Bushiyi sub-county, Bunabutiti and Bumushiso in Bushika sub-county.

Encroachment has increased over the years through cutting trees to clear land for farming and settlement, burning of charcoal, hunting and poaching, removal and changing of park boundary marker stones, and uncontrolled harvesting of natural resources. Participants acknowledged the benefits that communities derive from the national park and the reasons to conserve it. The benefits include herbal medicines, bamboo shoots and other vegetables, fresh water, firewood and pasture for animals.

# Embedding intelligence-based conservation in **Odzala-Kokoua National Park**

**Partner**
African Parks

**Location**
Odzala-Kokoua National Park in Congo-Brazzaville, tropical rainforest that includes a special type of "bais" wetlands.

**Duration**
2021 - 2024

**Forests**

**Actively protected area (ha)**
38,000
1,348,700

Results 2022
Cumulative results up to 2022

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Odzala-Kokoua National Park is home to over 4,400 plant species and 106 different mammal species. The partnership between DOB Ecology and African Parks consists of two parts: the development and protection of Odzala-Kokoua National Park; and an innovation in park management and nature conservation that will be actively used throughout African Parks and made available to the wider conservation community.

## What happened in 2022?

In Odzala-Kokoua park, a third ranger base became operational in early 2022. Now with bases in its South, East and North, Odzala's community development, human-wildlife conflict and law enforcement teams can ensure a year-round presence across all park communities. The park runs five enterprise projects with the local communities which continue to expand each year - cacao, black pepper, honey, gardening and wild mango. The Imbalanga Ecotourism Camp was launched to provide sustainable revenue sources and expand the range of income avenues for the communities surrounding the park.

Further a park-wide wildlife and human impact survey recorded wildlife densities and signs of human presence. The survey results provide key data to the park management, allowing areas which are species rich or at higher human-risk to be targeted for additional research and patrols. Last year also saw the recruitment of fifty-one new rangers, an achievement which will contribute significantly to wildlife protection efforts.

At organization level in 2022, African Parks completed the process of ensuring that all parks they manage have a long-term sustainability strategy. Each strategy specifies the park's goals on a 20-year time horizon and defines what will affect whether these goals can be achieved. In addition, all parks have developed research partnerships with international universities and a knowledge exchange programme has been established among the parks.

university of groningen

# A sustainable future for the **Greater Serengeti-Mara Ecosystem**

**Partner**
University of Groningen

**Location**
Kenya and Tanzania
Greater Serengeti-Mara Ecosystem filled with savannah, wetlands and woodlands.

**Duration**
2022 - 2025



The Greater Serengeti-Mara Ecosystem is one of the largest and most important migratory ecosystems for terrestrial mammals and is one of the last relatively intact ecosystems in Africa. The different economic, political and land tenure systems in Kenya and Tanzania mean that a shared management approach at ecosystem scale is hard to accomplish.

Cross-boundary research carried-out by locally based PhD students are being used to provide an integrated view on the future of this ecosystem. The CoCost (Corridors, Coexistence, Synergies, Transitions and Training) research program offers insights that can underpin a sustainable future for wildlife and people in the Greater Serengeti-Mara Ecosystem.

## What happened in 2022?

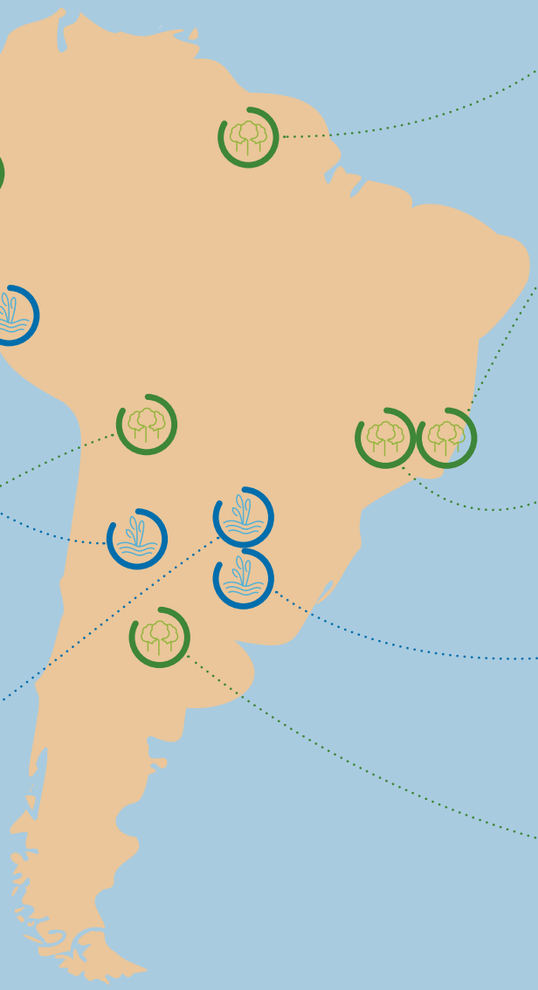
One of the PhD students, who is close to finishing her thesis, has made an important career step by being appointed as the Chief Park Warden of Arusha National Park in Tanzania. In this role she will continue to contribute to the conservation of this area.

Another PhD student is investigating the impact of a conservation fence along Ikorongo Game Reserve to prevent elephants from raiding crops on farmland. First results show that the fence is working very well in reducing human-elephant conflict. He is now studying the ecological impacts of this fence.

During 2022 tension arose between the government of Tanzania and the local communities on the establishment of the new 150,000 ha Pololeti Game Reserve in Loliondo. This led to a temporary halt to one of the PhD studies. During the second half of 2022, the unrest settled down and the research could successfully continue in good collaboration with the local communities.

Finally, an intensive course on Data Science for Conservation was organized that provided 30 participants, mostly ecologists from protected areas across Tanzania, with new knowledge to improve their conservation practices.

# Programmes South America



Red Cross/PMF

## A Green Pearl

Identifying opportunities for ecological restoration and economic development in La Vallée de Jacmel, Haiti

Amazon Conservation Team

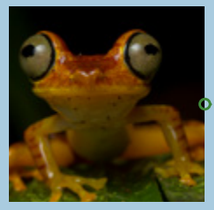
## Guardians of the Amazon forest

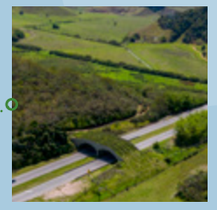
Working towards a biocultural corridor of 30 million hectares across the eastern Guiana Shield, managed by indigenous people in collaboration with the respective governments.

Fundación Jocotoco

## Saving the Chocó rainforest

Acquire and partially restore 2,100 hectares of the Chocó rainforest that connect the Jocotoco owned Canandé reserve with two protected areas and an indigenous reserve.





AMLD

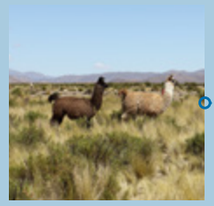
## Ecological Restoration of the Atlantic Forest

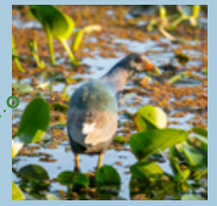
We help create a biodiverse and vibrant habitat for the Golden Lion Tamarin through the purchase and reforestation of 236 ha of degraded forest which connects two forest patches – resulting in a connected forest area of 10,000 ha.

Wetlands International

## Saving High Andean Wetlands for people and nature

Demonstrate and field-test innovative approaches to improve livestock grazing practices, wetland management and restoration at high altitude, in collaboration with local authorities and communities.





Regua

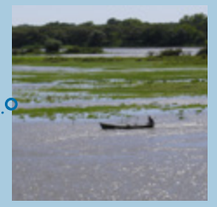
## Restoration of the Guapiaçu Watershed

We support the long-term conservation of the Guapiaçu watershed and its biodiversity through the acquisition of two parcels of land.

IUCN NL and Nativa Bolivia

## Conservation of the Ñembi Guasu indigenous reserve

We support better management of the Ñembi Guasu reserve based on local indigenous values and help provide connectivity in the Chaco-Pantanal conservation landscape.



Wetlands International

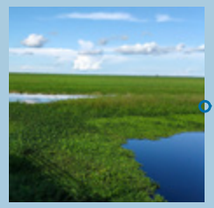
## Saving the Corredor Azul

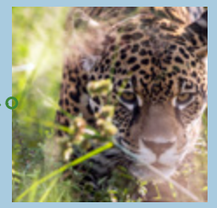
Conserve 1 million hectares of wetlands, promote the sustainable use of 300,000 hectares and protect three iconic wetlands: the Pantanal, Iberá Marshes and Paraná Delta in the Paraná-Paraguay river basin.

Both ENDS

## Wetlands without Borders

Support civil society to play a stronger role in governance and planning for the restoration, conservation, and sustainable development of the La Plata Basin.





Rewilding Argentina

## Rewilding the Gran Chaco

Guarantee the long-term conservation of El Impenetrable National Park through the reintroduction of locally extinct species, the restoration of degraded habitat and the creation of a local nature-based economy for local communities.

# Ecological restoration of **the Atlantic Forest**

**Partner**
AMLD

**Location**
The lowland Atlantic Forest of Brazil, one of the most threatened and biologically diverse areas on the planet.

**Duration**
2017 – 2022

## Forests

| Restored area (ha) | Actively protected area (ha) |
|---|---|
| 0 | 0 |
| 88 | 236 |

Results 2022
Cumulative results up to 2022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Golden Lion Tamarins could once be found in all of the lowland Atlantic Forest of Rio de Janeiro State in Brazil. However, centuries of deforestation for timber and charcoal production, agriculture and cattle ranching, reduced the monkey's forest habitat to 2% of its original area. AMLD's goal is to increase the population of the species in the wild through various conservation and restoration efforts.

### What happened in 2022?

Strengthening AMLD's capacity to engage the public in biodiversity conservation, both local residents and ecotourists, is an important project objective. The Fazenda Igarapé that was acquired in 2019 now serves as a base for AMLD's work and for controlled public use. It has been renamed the "Parque Ecológico Mico-Leão-Dourado" or Golden Lion Tamarin Ecological Park.

The park's principal attractions are the Atlantic Forest, the golden lion tamarin, and an exhibition about AMLD's strategies to conserve this endangered species. Structures, such as a lookout tower, have been created to allow visitors to observe the restored forest landscape, the forested highway overpass, the corridor connecting the Poço das Antas Reserve, and a demonstration of agroforestry.

Due to the COVID pandemic, the park opening was delayed until May 2022. Even so, in the remaining eight months of 2022 AMLD received 2,247 visitors – students, tourists, and participants in events and meetings. This was the highest level of annual public interaction that AMLD had experienced in its 30-year history. The establishment of the Golden Lion Tamarin Ecological Park has completely changed AMLD's relationship with the public and with a greater chance to achieve their objectives.

# Saving the High Andean **Wetlands** for people and nature

**Partner**
Wetlands International

**Location**
Argentina, Peru
High Andean wetlands
>3200m high.

**Duration**
2017 – 2024

## Wetlands

| Restored area (ha) | Actively protected area (ha) |
|---|---|
| 85 | 4,265 |
| 324 | 24,292 |

## Beneficiaries

| Number of people |
|---|
| 130 |
| 809 |

Results 2022
Cumulative results up to 2022








The High Andean wetlands are an oasis for biodiversity and people in the very arid environment of northern Argentina and southern Peru. Their economic value is significant: they supply pasture for llamas and alpacas and provide fuel and food resources to local communities. In addition, they are an essential source of drinking water and store a substantial amount of CO2. However, a century of human activities has affected these ecosystems and the increasing global demand for lithium (for batteries) severely threatens the area.

## What happened in 2022?

By December 2022 a total of 690 families were engaged by the programme's activities. Together they manage 24,292 ha under improved livestock grazing management practices across the project sites. The programme is also restoring 324ha of wetlands through various interventions.

### Argentina

In Laguna de Pozuelos the first ever management plan for the Unesco Biosphere Reserve has been completed for formal approval by the authorities. With this plan - that was prepared with the involvement of communities and authorities - the region has a blueprint to protect and develop the area for the benefit of all.

In Catamarca and Salinas Grandes, uncontrolled lithium mining has become alarming. Wetlands International issued a policy statement that was used to highlight lithium mining impacts at COP14 of the Ramsar Convention on Wetlands of International Importance in November 2022. The programme also supports local communities to access information on government plans for lithium mining in the area.

### Peru

In 2022 the programme reached an agreement with a local community in Carampoma to create a Private Conservation Area. Due to mining interests this Private Conservation Area will be significantly smaller than originally designed. In Lake Júnin a protocol for the sustainable management of peatbogs in the Natural Reserve of Lake Júnin was approved by SERNANP, the management authority for protected areas. In addition, SERNANP expressed their interest in using this tool for monitoring peatbogs in other Peruvian protected areas.

# **Wetlands** without Borders

**Partner**
Both ENDS

**Location**
Argentina, Brazil, Bolivia and Paraguay
Wetland system of the Paraguay and Paraná rivers – La Plata Basin –the largest freshwater wetlands in the world

**Duration**
2017 – 2023

## Beneficiaries

Number of people

| Results 2022 | Cumulative results up to 2022 |
|---|---|
| 2,379 | 4,108 |









Large infrastructure projects, such as hydropower dams, highways and harbour development together with deforestation for agriculture, currently threaten the unique ecosystem and the livelihoods of small-scale farmers and fishermen who depend on the forests and rivers of the La Plata Basin. Often, local communities are neither informed nor involved in the planning of such projects in their region. The programme aims to inform communities about their rights so that their views and needs are taken into account and alternatives considered that are more sustainable.

## What happened in 2022?

The Cuiaba river in Brazil is an important tributary for the Pantanal and was under threat from plans to construct 6 small hydropower dams. Pressure from civil society led to the approval of a new state law that prohibits the construction of new dams in the Cuiaba river.

In Argentina advocacy continued through requests for access to public environmental information to the 'General Administration of Ports and the Waterway Control Entity'. Through these requests the programme strives to improve transparency on planning and environmental assessments of infrastructural developments.

The Mayor Otaño municipality in Paraguay established a new biocultural corridor called "Parejha". The concept is that such biocultural corridors (re)connect similar natural habitats and communities that share common socio-cultural practices. The programme is working to establish 4 more biocultural corridors in Argentina and 6 in Paraguay.

The programme supported farmers to transform 170 ha of farmland to agroecological agriculture production and in addition set-up three new model farms in Argentina and Bolivia. The programme launched an agroecological "Seal of identity". The first 132 farmers were certified this year in Bolivia and Paraguay.

# Saving **the Corredor Azul**

**Partner**
Wetlands International

**Location**
Brazil, Argentina, major wetland systems in the Parana River Basin.

**Duration**
2017 – 2023

## Wetlands

Actively protected area (ha)

Results 2022: 12,476

Cumulative results up to 2022: 935,782

## Beneficiaries

Number of people

Results 2022: 562

Cumulative results up to 2022: 2,660

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The 3,400 km long Paraná-Paraguay river system is one of the world's last remaining large, free-flowing rivers. This Corredor Azul ('Blue Corridor') is a system of amazing natural beauty and biodiversity and a unique myriad of land and water habitats. This program aims to safeguard the health and connectivity of the river system and its iconic wetlands – the Iberá Marshes and the Paraná Delta in Argentina, and the Pantanal in Brazil.

## What happened in 2022?

In Brazil, part of the work was paused for a few months due to the presidential elections; during this period electoral regulations restricted face-to-face meetings, especially those ones involving the government sector. During 2022, the Kadiwéu Indigenous Territory management plan was updated. As part of this process, training was provided on fire management and control using both modern and indigenous knowledge.

In Argentina, advocacy undertaken by the team to highlight the role of wetlands paid off. The Argentinian National Climate Change Plan presented during the Climate COP27 in Egypt included the importance of wetland ecosystems for climate change and adaptation.

The programme is cooperating with cattle farmers and the forestry sector to improve the management of wetlands. By the end of 2022 a total of 46,125 ha in the Paraná Delta and Pantanal were being managed more sustainably by their landowners.

A "Handbook on Environmental Impact Studies on Wetlands" developed by the programme was presented to several international financing institutions that invest in the region. Staff members of the Inter-American Development Bank were trained on the use of the Handbook.

# Guardians of **the Amazon forest**

**Partner**
Amazon Conservation Team

**Location**
Suriname, Guyana, Brazil, French-Guiana
The eastern Guiana Shield, a region of more than 30 million hectares of pristine rainforest and home to four indigenous tribes

**Duration**
2019 – 2023

**Forests**

**Actively protected area (ha)**

| Results 2022 | Cumulative results up to 2022 |
|---|---|
| 2,889,775 | 2,889,775 |

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The Guiana Shield is one of the few remaining unspoiled wild places on earth. However, the region is exposed to major threats such as mining, illegal logging and major infrastructure projects. The Amazon Conservation Team (ACT) partners with indigenous and other local communities to protect tropical forests, building on their traditional culture.

## What happened in 2022?

In 2022, the Life Plan for the village of Kwamalasamutu was prepared by the Trio people. This is the first ever indigenous life plan to have been developed in Suriname. A life plan is a document in which indigenous people capture their vision of the present and future, based on their traditional knowledge systems and cultural principles. The life plan development process builds on and strengthens individual and collective leadership among the Trio and helps them to formulate their position on economic developments in their territory. ACT also hosted three regional meetings that brought together tribes from all four countries and facilitated knowledge exchange on traditional indigenous medicine, community forest monitoring and the importance of developing life plans.

Together with many stakeholders ACT facilitated the development of new legislation on collective land rights in Suriname that will be presented to Parliament next year. If approved, this would be the first act that legally recognizes the rights of indigenous and maroon citizens in the country.

ACT also supports the indigenous communities with the development of sustainable enterprises. Three enterprises exist: honey and propolis production from stingless bees, the INIRI jewelry line and herbal tea production. Especially the stingless bees provide a solid income for the farmers. For all three enterprises the socio-economic impact is currently being evaluated.

FUNDACIÓN REWILDING ARGENTINA

# Rewilding **the Gran Chaco**

**Partner**
Rewilding Argentina

**Location**
The Gran Chaco is a vast lowland area with dense dry forests with scattered wetlands and palm groves in Chaco Province in Northern Argentina.

**Duration**
2019 – 2025

## Forests

Actively protected area (ha)
0
847,600

## Beneficiaries

Number of people
125
245

Results 2022
Cumulative results up to 2022





The Gran Chaco is the largest dry forest in South America and the continent's most extensive forest region after the Amazon rainforest with high deforestation rates and severe degradation due to years of overgrazing. Rewilding Argentina's wants to develop the "El Impenetrable" park into a fully functioning ecosystem with all its native species that serves as sources of development and pride to surrounding communities.

## What happened in 2022?

In 2022, good progress was made with the reintroduction projects in the El Impenetrable National Park (EINP), notably:

- 40 red-footed tortoises (monitored through telemetry) were the first species to be reintroduced and another 39 new tortoises were imported from Paraguay.
- A male giant otter (thought to be extinct as well) was sighted in the Bermejo River. A pre-release enclosure has been constructed and a female otter from Iberá has been translocated to the park with the aim of keeping the wild male in the relative safety of the EINP.
- Qaramta, the wild male jaguar (discovered and collared in 2020) remained mostly within the region of the Jaguar Reproduction Center, where two captive females are located. These females from Iberá Park mated with Qaramta to augment the population and genetic variability in both parks.
- A second wild male jaguar, presumed to have been lured to the area by the presence of the captive females, was sighted and collared and named Tewuk.

Unfortunately reintroduction of marsh deer in the park was delayed. However Chaco Province issued a permit to allow reintroduction on adjacent land which it is expected will lead to the same result.

The El Impenetrable National Park (EINP) is steadily becoming a driving force for the local economy. Rewilding Argentina's vision and working model have sparked the interest of provincial authorities, particularly the Chaco's Province Tourism Institute. They are working together to position the EINP as an emerging nature tourism destination.

This year, another 62 people joined the "Entrepreneurs by Nature" program that has been key to developing El Impenetrable's territorial brand, bringing the total to 245 entrepreneurs. At the Nueva Población Gateway a communal square equipped with a traditional kitchen area, food court, and parking lot was built.

The Fidelidad camping site (a free campground) was opened in April and the Los Palmares Glamping Site, including a trail network, opened in July. In total, 2,813 visitors visited this new tourist destination in 2022. This represents a good start to developing a local economy that benefits from nature restoration.

# Turning Timber into Forest:
# **Saving the Chocó**

**Partner**
Fundación Jocotoco

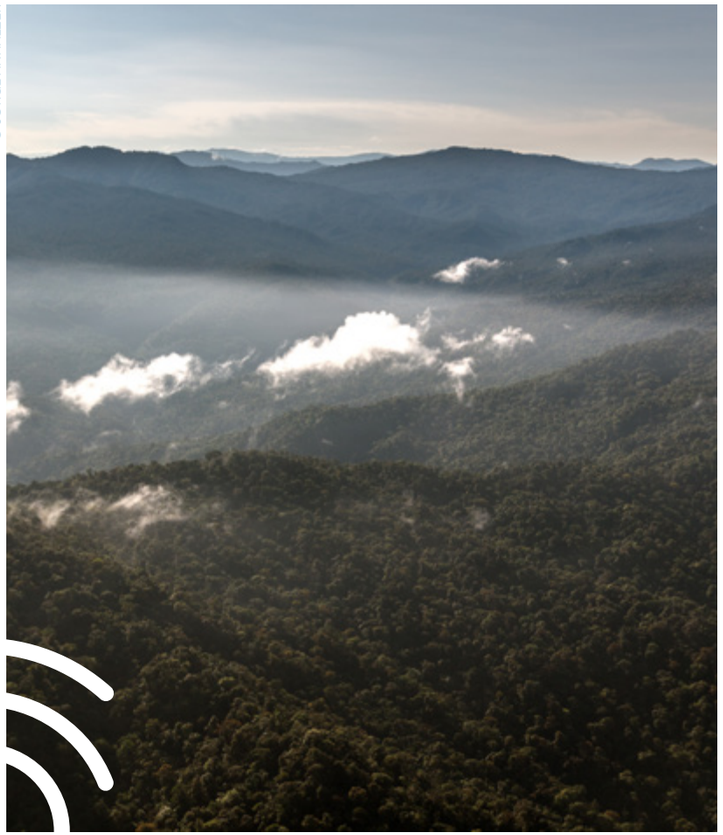
**Location**
Ecuador
The Chocó rainforest on the western slopes of the Ecuadorian Andes, one of most threatened biodiversity hotspots globally.

**Duration**
2020 – 2022

## Forests

**Actively protected area (ha)**

| Results 2022 | Cumulative results up to 2022 |
|---|---|
| 1,296 | 1,686 |



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To protect the Chocó, Fundación Jocotoco acquires plots of pristine forest, degraded forest and pastureland to combine them into one large contiguous area: the Canandé reserve. This is a private reserve of approximately 10,200 ha of which 1,686 ha was acquired with the support of DOB Ecology.

### What happened in 2022?

Through expansion of the reserve in 2022, Jocotoco has managed to connect Canandé with the Cotacachi-Cayapas National Park lying directly to the east. This approach means that logging companies are now blocked from constructing new roads deeper into the forest. In addition, the government approved the inclusion of the Canandé reserve into Ecuador's national system of protected areas. This means that the area will be protected from extractive industries.

Due to the expansion of the reserve, Jocotoco's operations are now spread out over a much larger area. Recent incursions of armed people from outside claiming ownership of the land show that an increased presence of park guards throughout the reserve is urgent. Therefore, small park guard stations have been set up close to the boundaries of the reserve.

This programme ended successfully in 2022.


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# Restoration of **the Guapiaçu watershed**

**Partner**
REGUA

**Location**
It is part of the Mosaico Central Fluminense, being the third largest remaining pocket of Atlantic Forest in Brazil.

**Duration**
2020 – 2024

## Forests

| Restored area (ha) | Actively protected area (ha) | |
|---|---|---|
| 4 | 48 | Results 2022 |
| 4 | 152 | Cumulative results up to 2022 |

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The Atlantic rainforest of coastal Brazil is recognised as one of the most important regions for biodiversity on earth and much of this is highly fragmented by agriculture, plantations of non-native forest, and urban development. Forest loss and other inappropriate land uses have caused soil degradation and extensive silt runoff, causing problems for water supplies in catchments where many millions of people live. To address this REGUA has been active in the Guapiaçu catchment since 2003 purchasing the remaining forest remnants and actively acquiring degraded pasture land to restore by restoration. They aim to link-up the fragments to provide corridors for the many species found only in these forests.

### What happened in 2022?

The REGUA reserve now stands at 7,969 hectares with a further 4,069 hectares for which REGUA has signed a management agreement with landowners, and another 762 hectares for which funding has been secured but acquisition still needs to be concluded. This means that more than 25% of the Guapiacu watershed is protected.

In addition to concluding land purchases, REGUA also took action to support the tapirs that were reintroduced in October 2021 and which is challenging due to their low reproduction rate (a single offspring born after a 13-month gestation). These animals play an important role in the forest by dispersing seeds. One of the tapirs (Macacu) was injured as the result of clashes with other tapirs. The animal was placed in a recovery enclosure for treatment for a month and has recovered well and is again roaming free.

REGUA's rangers are increasingly successful in their work and have helped researchers to set up camera traps to monitor the state of the fauna. A large part of the Serra do Mar property is primary forest and is home to the "critically endangered" Southern Muriqui.

# Groundwork for Growth

**Partner**
Prinses Margriet Fonds / Netherlands Red Cross

**Location**
Haiti

**Duration**
2022

## Beneficiaries

Number of people

| Results 2022 | Cumulative results up to 2022 |
|---|---|
| 1,443 | 1,443 |

The Green Pearl Programme in Haiti aims to strengthen the resilience of communities and support the restoration of landscapes. To become safe and thriving communities, the health of the landscape in which they live is essential – for ecosystem services, opportunities for income generation, and as a buffer against disaster risks.

During 2022 farm plans were developed and tree and vegetables seedlings were distributed among households. The water rehabilitation for two locations was completed, securing access to clean water for domestic use for 362 households and 800 students. Further a honey market study was conducted and two assessments completed on agricultural activities and on water sources.

Unfortunately, due to the highly challenging security context, the reforestation and biodiversity assessments could not be started which means that there is a weaker basis than planned to guide restoration efforts in the wider landscapes.

This one-year programme finished in 2022.

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# Conservation of the **Ñembi Guasu** indigenous reserve

**Partner**
IUCN NL with Nativa Bolivia

**Location**
Bolivia
Indigenous Reserve Ñembi Guasu, Chaco Dry forest

**Duration**
2022-2024

**Forests**

Actively protected area (ha)
1,128,416
1,128,416

Results 2022
Cumulative results up to 2022







The Indigenous Reserve of Ñembi Guasu (meaning 'the great hideout' in Guaraní language) covers 1.1 million hectares of largely intact Chaco dry forest. The area is home to the Guaraní population as well as the isolated Ayoreo indigenous community. The reserve is home to several species such as the chacoan peccary, jaguar, giant armadillo, chacoan titi monkey and giant anteater. It is the first protected area that was created by an autonomous indigenous government in Bolivia.

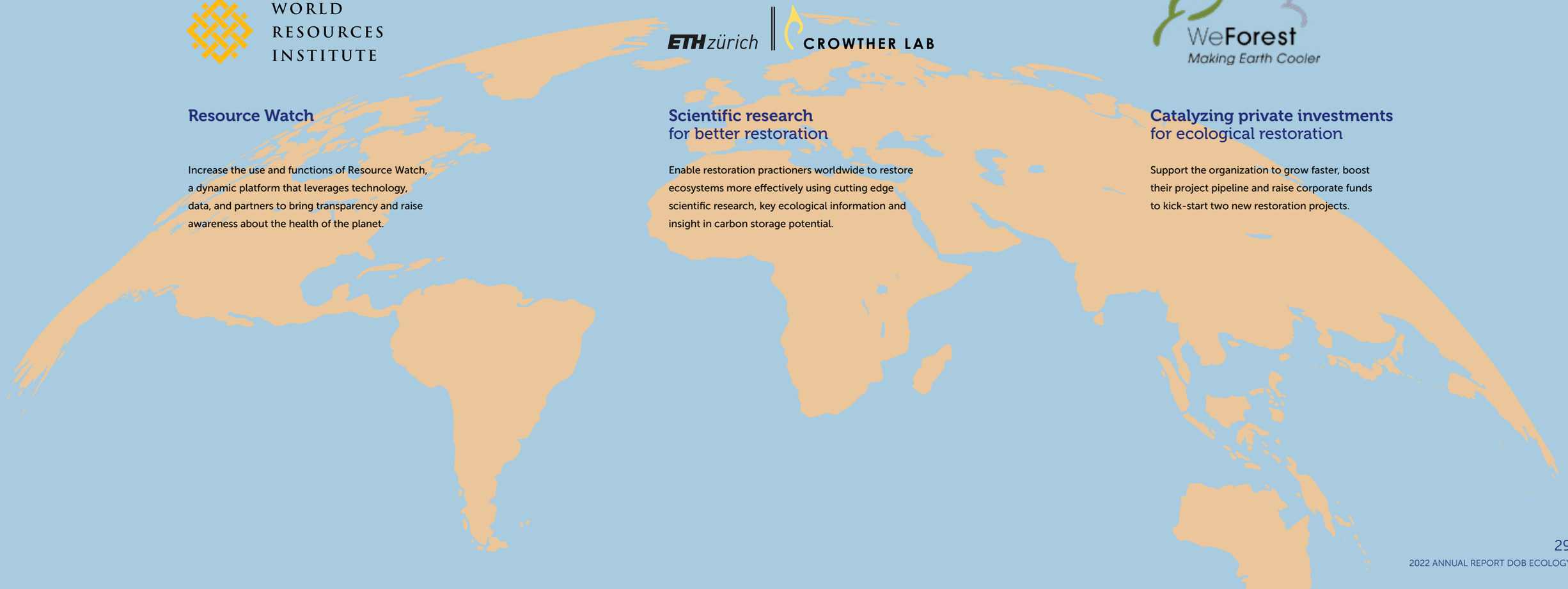
## What happened in 2022?

In 2022, the first steps were made in setting up the infrastructure needed to manage the indigenous reserve properly. Construction of the Base Camp "Ñembi Misi" is almost finished, however the lack of suitable drinking water at the site requires the construction of a new well. A team was hired, including the first five rangers coming from local communities. The team was trained on a variety of topics, such as integrated fire management, restoration methodologies, wildlife monitoring and surveillance. A park ranger manual and a surveillance plan were also developed. Regular surveillance of the area takes place together with park rangers from the two neighbouring national parks. On the west side of the park a gate has been installed to control entry.

A reserve management plan was developed with all stakeholders involved and was presented to the indigenous government. During a biodiversity study, needed to provide a baseline for management of the reserve, a potentially new viper species was registered.

The indigenous government has also strengthened its relations with neighboring municipalities in 2022 and resolved issues that occurred when the Ñembi Guasu reserve was declared, and the limits of the reserve overlapped with other municipalities. Although the adjusted park borders mean the park has become smaller, most of the municipalities are interested in declaring the parts of the park that now fall within their boundaries as municipal reserves, thereby protecting the buffer zone of the park.

# Global programmes



WORLD RESOURCES INSTITUTE

## Resource Watch

Increase the use and functions of Resource Watch, a dynamic platform that leverages technology, data, and partners to bring transparency and raise awareness about the health of the planet.

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## Scientific research for better restoration

Enable restoration practioners worldwide to restore ecosystems more effectively using cutting edge scientific research, key ecological information and insight in carbon storage potential.

WeForest
Making Earth Cooler

## Catalyzing private investments for ecological restoration

Support the organization to grow faster, boost their project pipeline and raise corporate funds to kick-start two new restoration projects.

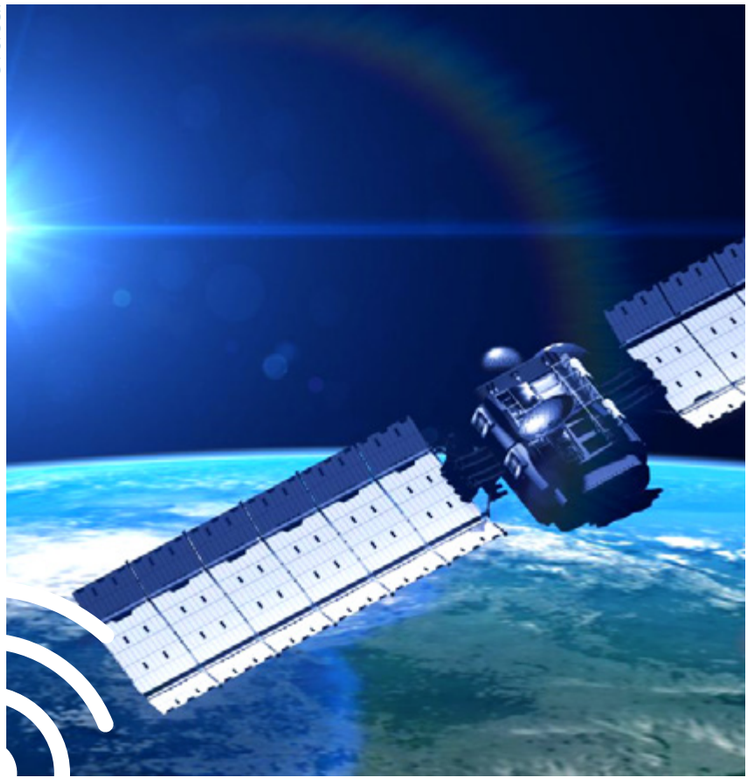
WORLD RESOURCES INSTITUTE

# Resource Watch

**Partner**
World Resources Institute

**Location**
Global

**Duration**
2017 – 2022



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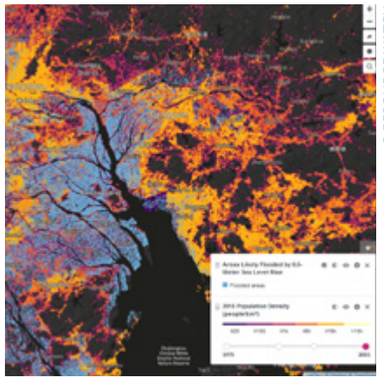

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In 2018, with the support of DOB Ecology, The World Resources Institute (WRI) launched Resource Watch, an open, freely accessible, online global data platform that unites technology, data transparency and partners to drive sustainable management of the planet's resources and improve planetary health.

## What happened in 2022?

During 2022, the development of Resource Watch was finalized with the successful launch of MyResourceWatch, a feature through which users can make location-specific analyses by combining their own data with the global data sets provided in Resource Watch. The platform was also used as a basis for developing other apps or tools. This spin-off led to 19 new tools on a variety of environmental issues.

Resource Watch data was used in the past year to put several environmental issues higher on the public agenda, such as ocean health, detection of land use change outside dense forests, and air quality in cities. The air quality visualizations for example are now used by several cities in Mexico and Colombia as a forecasting tool and to inform the development of action plans to reduce air pollution.

This programme ended successfully in 2022.

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# Scientific research
## for better restoration

**Partner**
Crowther Lab

**Location**
Global

**Duration**
2018 - 2024

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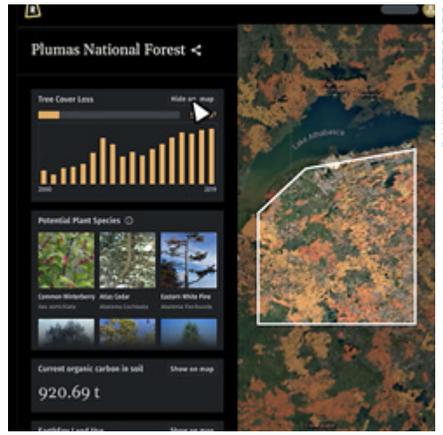


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Crowther Lab is a new research group established at ETH Zurich in 2017 that aims to generate key knowledge required to make restoration projects a success. Their research provides restoration practitioners worldwide with free access to important ecological information, local carbon storage potential, along with information on the type of trees, soil microbes and animals. This data is communicated through the platform Restor that unites hundreds of restoration professionals worldwide.

### What happened in 2022?

Throughout 2022 Crowther Lab continued to produce high level research and published 7 papers in leading journals. In addition, the Lab started a cooperation with the government of Costa Rica to monitor and support Costa Rica's payments for ecosystem services program. The Lab continues to draw international attention.

Devil's Breath, a documentary film about the 2017 wildfires in Portugal produced by Leonardo DiCaprio, features a visit to the wildfire sites by Tom Crowther and shows how the Lab's research is trying to address these issues.

# Catalyzing private investment in **ecological restoration**

**Partner**
WeForest

**Location**
Global: in threatened and degraded tropical forests.

**Duration**
2021 – 2023

**Forests**

**Restored area (ha)**
48
48

Results 2022
Cumulative results up to 2022







WeForest develops holistic and multi-stakeholder reforestation projects through a Forest and Landscape Restoration approach. They work with local communities to protect old forests and grow forests around them to halt global warming and conserve biodiversity, as well as helping to lift people out of poverty. DOB Ecology supports WeForest to grow their pipeline of non-carbon projects to leverage the existing wave of corporate interest.

## What happened in 2022?

In 2022, WeForest filled three key staff positions: Natasja Watts has been appointed as Head of Project Development in Lusaka; Liz Oates is the new Corporate Partnership Development Manager at HQ; and Simon Berhanu is the new Forest and Landscape Restoration Advisor in Ethiopia. These additional staff members help streamline the processes for project development, due diligence assessment and decision-making.

WeForest has started using a new "Project Opportunity Assessment Tool" which highlights the key areas of focus at all stages of project development. At the end of 2022, approximately 64 projects have been identified, 11 projects have been screened (or are currently in that phase) and 7 projects are in the scoping phase.

WeForest is developing a strong pipeline of potential corporate partners. The recent focus on carbon credits has diverted corporate funding away from other forms of forest conservation. However, there is an emerging business movement that is calling for nature to be the foundation of forest-based climate solutions - rather than carbon - which could offer potential for additional corporate partners.

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