BUILDING CLIMATE RESILIENCE IN THE NYON RIVER WATERSHED

FERNEY

BIODIVERSITY CONSERVATION

15 years’ experience and over MUR 20M invested in biodiversity conservation

103 ha conservation park created in 2008 Partnership between Ferney Ltd and the Government of Mauritius

46,000+ native and endemic trees replanted.

Reintroduction of 200+ endemic birds

2 native and endemic nurseries with 25,000 plants available.

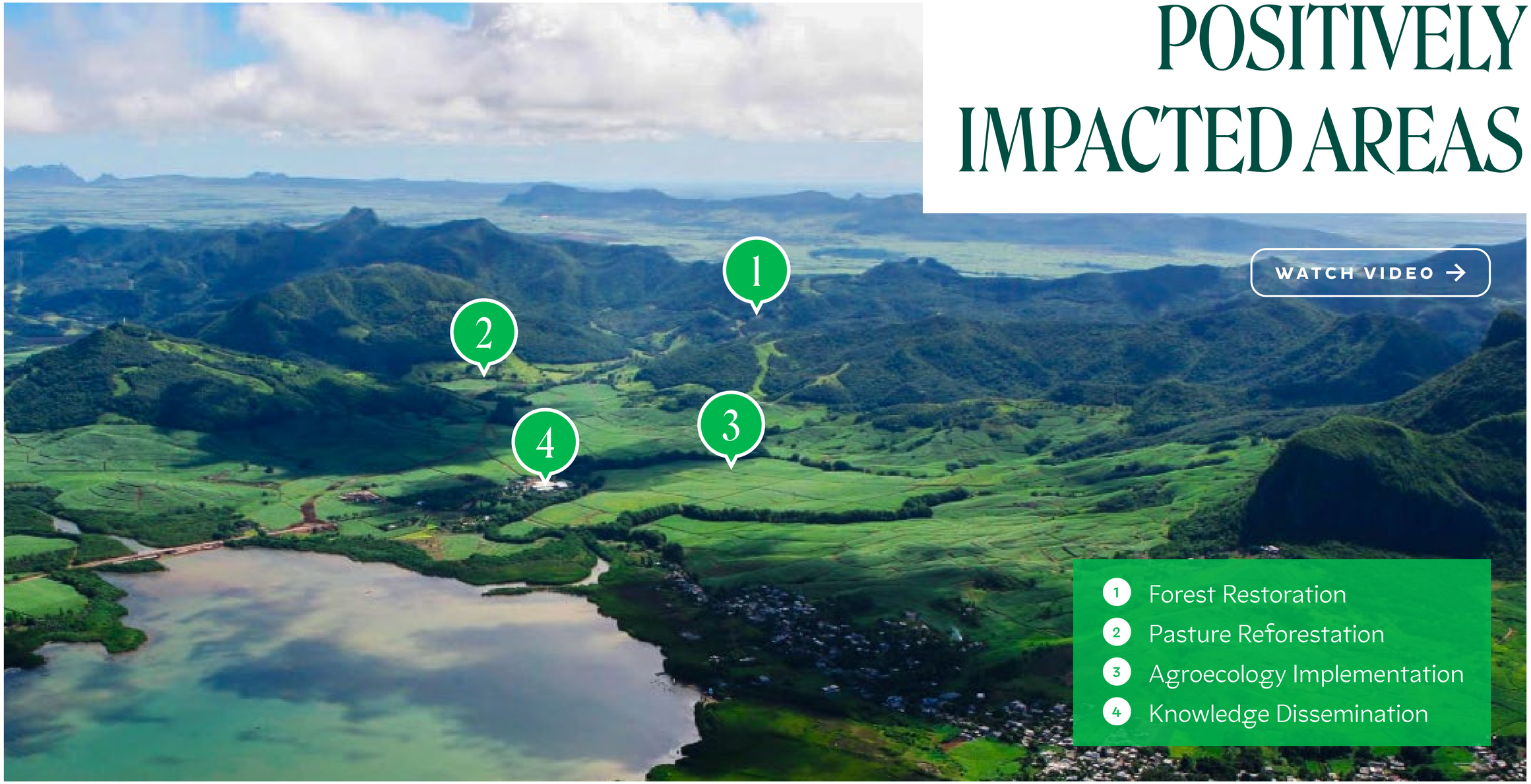
Operational field station for scientists and endemic bird reintroductions

30-ha ecosystem restoration programme launched in 2023, funded by the Critical Ecosystem Partnership Fund

Existing collaborations with:

The Mauritian Wildlife Foundation
Reef Conservation
Université des Mascareignes
Université de Maurice
NGO Nature Yetu
Nature Technics

POSITIVELY IMPACTED AREAS



FOREST RESTORATION

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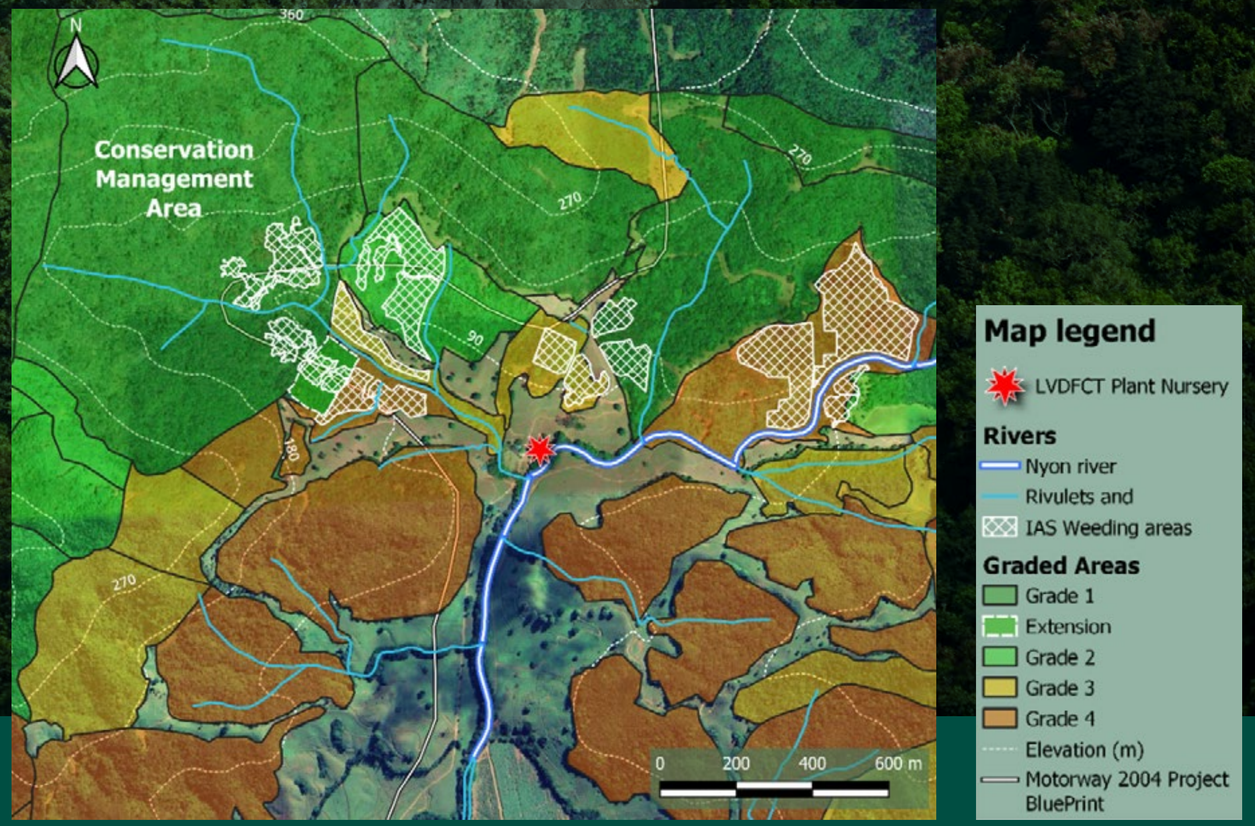
WATCH VIDEO →



Threatened Biodiversity

Scientists show that 11% of the flowering plants endemic to Mauritius Island are already extinct (Florens F.B. V., 2013), notably due to habitat loss and invasive alien species colonization. The same goes for snails (44% extinct) and landbirds (63%) species endemic to Mauritius. Biodiversity is still threatened today as in the last 68 years, Mauritius lost 50% of its plant populations, equivalent to 100,000 trees lost per year. Mortality is mainly caused by Invasive Alien Species, such as the Chinese guava, the Ravenala, or vines such as Hiptage.

The last 1.3%

Current good quality forest cover is approximatively less than 1.3% on Mauritius island (Hammond et al., 2015), and 0% on Rodrigues. Unfortunately, the remnants are still threatened by plant pests and change in land use. Mauritius being part of the MADIO biodiversity hotspot, when a plant or an animal endemic to Mauritius goes extinct, it totally disappears from the Earth, without any individuals of the same species outside of Mauritius.

Lack of evidence-based information

Nowadays, conservationists in Mauritius are rising but arrived at a time where most original natural habitats were already transformed. Historic records of these native forests and the remaining 1.3% are one of the only resource conservationists can use to understand forest ecology in Mauritius and adapt restoration practices accordingly. Mauritius scientific community must then produce evidence-based information to support long-term ecological restoration and eventually build climate resilience for the island.

PASTURE REFORESTATION

Ecosystem services inherent from reforestation activities

As a presumed consequence of climate change and anthropogenic land cover change, flash floods occurred in the Rivière des Creoles – Ferney – Vieux Grand Port area in 2020 and 2021, rivers overflowed, damaging villages and agricultural lands. The state of the watershed forest in Ferney has a significant role to play in exacerbating or attenuating these impacts. In the long-term, the restored native tree cover immediately near the Nyon river will contribute to water retention and soil permeability, while reducing runoff and preventing downstream flooding. Pastureland reforestation shall then support water availability for sustainable agriculture lower in the Ferney Valley.

Using pioneer plant species to trigger ecological successions

For pasture reforestation, we use light-loving plant species that grow fast in full sunlight. This kind of plant species, called pioneer plants, are mainly indigenous to Mauritius in our context. We then use Harungana madagascariensis and Leea guineensis, providing fruits within a few years for the wild flying fauna in Ferney. The planted trees then become a preferred perch for birds notably, favouring endemic seed propagation under the planted trees.

Between August 2023 and April 2025, we planted 4,050 young trees inside pasturelands, covering a total of 6-ha out of the 10-ha objective until July 2026

AGRO-ECOLOGY IMPLEMENTATION

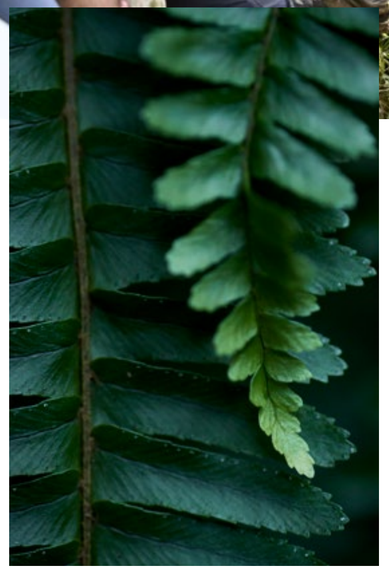
Women empowerment and social farming

Following the Wakashio oil spill in 2020, devasting the marine and coastal ecosystems in Mauritius South-East coast, many families could not benefit from marina and coastal ecosystem services. To help support their families, a group of women approached Ferney to start cultivating and learn about agroecological practices. Showing great motivation, they continued and built a social farm with 11 beneficiaries. They are now implementing agroforestry, covering half an hectare, in Ferney Agri-Hub, Vieux Grand Port.

Agroecological data collection

While adopting agroecological techniques in multiple regions of Mauritius, one must record data as a reminder of the trials and errors, as well as agroecology success stories. The South-East Ladies Agro. cooperative implementing agroforestry in Ferney collect yield, labour cost, and rainfall data to evolve in their practices.

This movement is also carried out by public, civil society, and other private actors in Mauritius. The work performed by the Food and Agricultural Research and Extension Institute (FAREI), the Mauritius Chamber of Agriculture (MCA), or Eco-Sud Resilient Organic Community is notably significant at the national scale. Partnerships with actors from the other Indian Ocean Islands are also crucial to maintain the movement as informative as possible.



KNOWLEDGE DISSEMINATION

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Sharing lessons learned and evidence-based information

Ecosystem restoration would not be as impactful without communication. Therefore, in the context of the CEPF-funded project, we shared our lessons learned as well as the evidence-based restoration practices on social media with the support of our partner Nature Yetu.

Growing Ecosystem Services Ambassadors in Mauritius

During our knowledge dissemination sessions, we encourage the public in adopting a critical eye when looking at watershed ecosystems. They obtain basic ecological knowledge and learn how Mauritius conservationists develop Ecosystem-based Adaptation solutions to build resilience.

Publishing data to the scientific community

Restoration activities in Ferney may represent a valuable source of information for the scientific community. In Mauritius, the costs of restoration remains a key concern, and we collect data daily in terms of labour and project achievements.

ECOLOGICAL RESTORATION & REFORESTATION

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WHERE / WHAT ?

La Vallée de Ferney (3,166 ha)

Project began in August 2023 and will end in July 2026

- 20 ha restored + 10 ha reforested
- 0.5 to 2 ha of agroforestry
- 2 km of the Nyon River with enhanced ecosystem services

WHY ?

Facilitate natural ecological processes such as pollination, fauna nutrition, and seed dispersal.

Involving the local communities in producing healthy food crops easily accessible.

- 1,785 ha of forests (2021 assess.)
  - 326 ha well conserved
  - 625 ha highly invaded
- 19 threatened plant species endemic to Mauritius
- 1,050 ha of agricultural land
- 26 artificial Kestrel nests (MWF)
- 3 Mauritius Flying-Fox roosts
- Dozens of non-identified interspecific interactions

CURRENT PROGRESS

As per May 2025, 14 ha of watershed ecosystem has been restored in the Ferney Valley.

On the agroforestry side, a cooperative of 5 women completed 97 hours training with Terres d'Agroécologie and FORMA'TERRA between 2023 and 2024. The cooperative, now called South-East Ladies Agro., includes 11 women, and cultivates vegetables, fruit trees, and companion plants on a total surface of 5,100m^2.

THANK YOU

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