

## LEVERS FOR SUCCESS

- **Political and financial support:** reforestation with indigenous tree species being costly, its implementation benefited from considerable political and financial support.
- **Awareness-raising/communication:** the use of indigenous tree species is now possible due to raised awareness among all managers of natural habitats concerning the importance of conserving the biodiversity of Mayotte and the negative consequences for island ecosystems of the introduction of alien tree species.
- **Continuous monitoring:** the monitoring and maintenance of planted areas over the medium term is one of the key factors in their survival.
- **Feedback on experience and partnerships:** a study led by the Mayotte Department on the planting techniques implemented laid the foundations of an alternative management procedure to ensure greater resilience of indigenous seedlings in padzas.

## RECOMMENDATIONS

- Identify resource people for leading projects on non-publicly owned land to enable the reforestation of padzas outside public forests.
- Provide considerable training guidance for forestry workers based in Mayotte for better understanding of the specific technical features inherent to the project.

## FOR FURTHER INFORMATION

- Mayotte departmental Council  
Experimental trials of technical reforestation routes for eroded land [online] available here (in french) : [http://www.genieecologique.fr/sites/default/files/documents/rex/fichere\\_x\\_laureat\\_pnge\\_cat3\\_mayotte\\_padzas\\_0.pdf](http://www.genieecologique.fr/sites/default/files/documents/rex/fichere_x_laureat_pnge_cat3_mayotte_padzas_0.pdf)

## PROJECT LEADER

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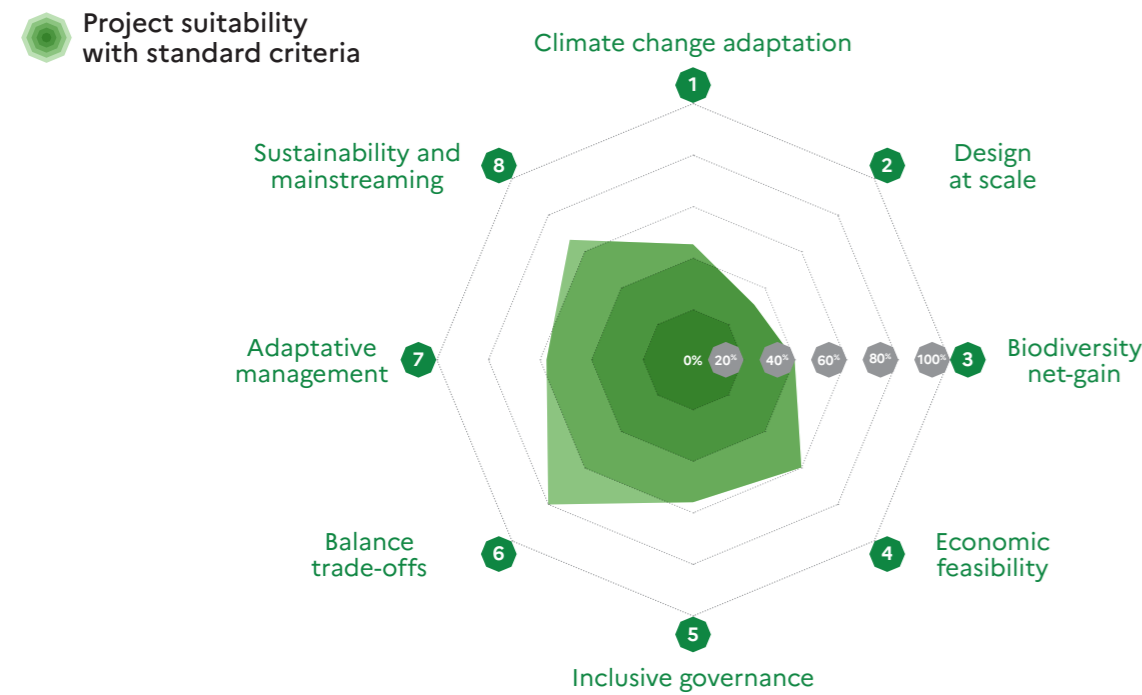
## DATE

January 2022

## FACT FILE EDITOR

Nicolas Rodrigues

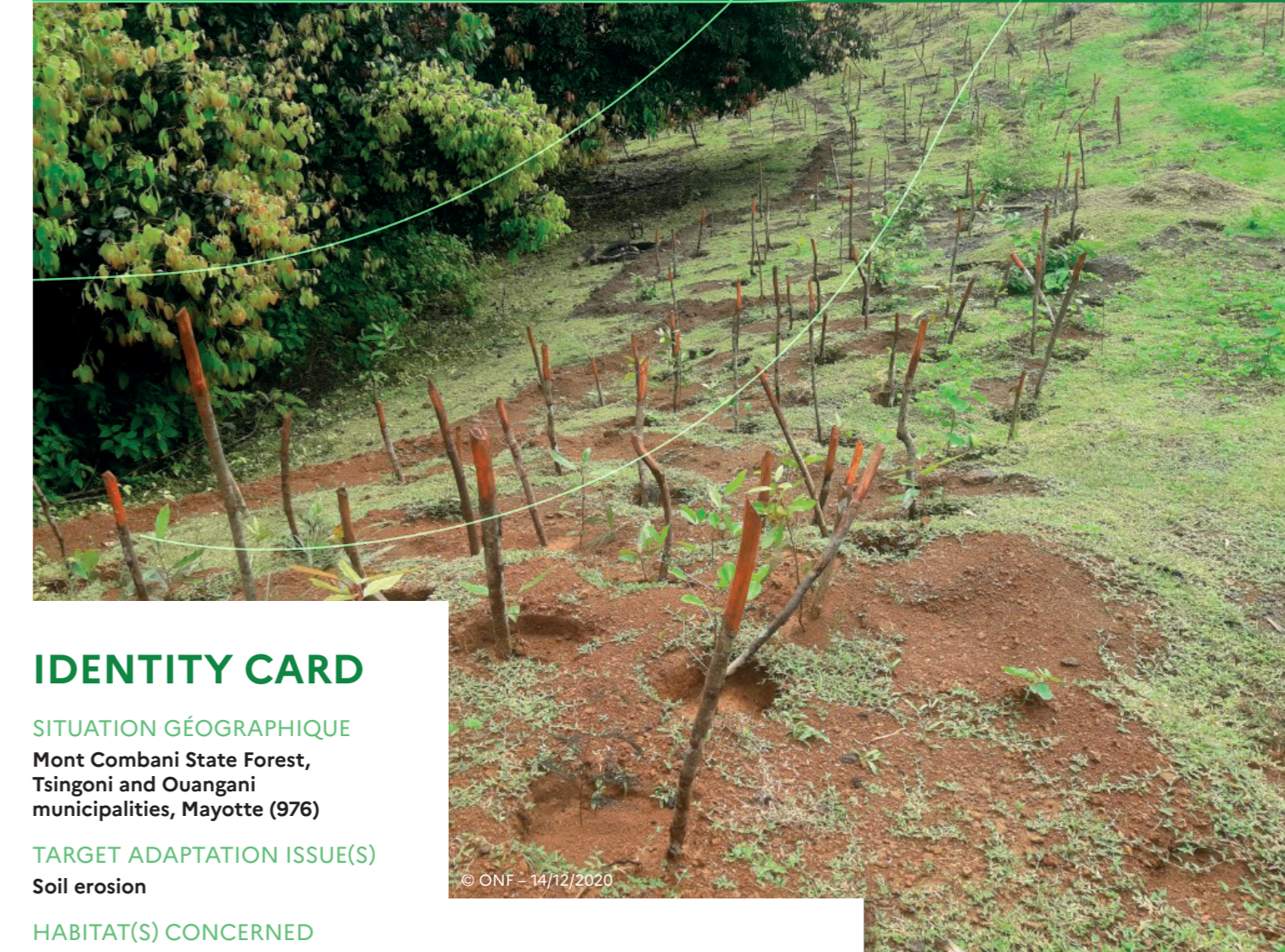
## ASSESSMENT ACCORDING TO THE IUCN GLOBAL STANDARD FOR NATURE BASED SOLUTIONS



www.secondregard.fr - Coordination: Communications Département - Novembre 2022

# REFORESTATION OF PADZAS WITH INDIGENOUS PLANTS

2018 - 2023



## IDENTITY CARD

### SITUATION GÉOGRAPHIQUE

Mont Combani State Forest, Tsingoni and Ouangani municipalities, Mayotte (976)

### TARGET ADAPTATION ISSUE(S)

Soil erosion

### HABITAT(S) CONCERNED

Forest ecosystems

### TYPE(S) OF NBAS

Restoration of degraded ecosystems

### PROJECT LEADER(S) AND ASSOCIATED PARTNER(S)

The French National Forest Office (ONF)

### FUNDERS AND BUDGET

- DEAL Mayotte (80%)
  - ONF (20%)
- Total budget: **36 113.47 €**

### REGULATORY CONTEXT OF THE PROJECT

- State-owned forest



Before the works  
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## PROJECT OBJECTIVES

- **For adapting to climate change**  
Avoid the transit of 8.4 tons of sediments per year caused by soil erosion and improve the management procedure for reforesting the padza with indigenous tree species, in order to generalise it on the island and thus preserve the lagoon from silting up (nearly 20 000 tons of sediments per year).
- **For biodiversity**  
Encourage the return of biodiversity associated with the indigenous pioneer species planted and conserve the natural regeneration of other ombrophile (shade-loving) indigenous species, to the detriment of invasive alien species.

## CONTEXT AND ISSUES

The reef-lagoon complex of the island of Mayotte is the largest in the western Indian Ocean, with a surface area of about 1 500 km<sup>2</sup>. It is currently threatened by high silting levels linked, in particular, to the input of sediments stemming from the erosion of the island's soils. This erosion results mainly from the impact of tropical rains and cyclones, of which the frequency of violent events is tending to increase due to the effect of climate change on soils laid bare by human activities (construction worksites, dirt roads, agriculture and plantations, deforestation). It has been estimated that the erosion of padzas (deforested areas) and crop areas leads to the transit of 550 000 to 600 000 tons of sediments to the lagoon every year.

The overall aim of the RECIF project is to reduce the terrigenous inputs from the erosion of padzas by reforesting them with indigenous species in two identified areas of the state forest of Mont Combani (0.19 and 0.23 ha). It should confirm the management procedures to be selected for this reforestation.

In the longer term, the targeted objective is to restore almost 1000 ha of padzas (including 423 ha in public forest) to ensure the retention of 20 000 tons of sediments per year. This project is intended to be reproducible and to be replicated in the usual forest management of the rest of the island.

## ACTIONS IMPLEMENTED

The reforestation of these two sites involves the following steps:

- Gathering seeds of the following indigenous species: *Gagnebina pterocarpa*, *Premna serratifolia*, *Albizia glaberrima*, *Apodtes dimidiata*, *Ohna ciliata*, *Mimusops comorensis*, *Mimusops coriacea*;
- Nursery-growing: 2000 seedlings of indigenous species required for reforestation;
- Preparation of the ground (digging, creation of half-moon shaped holes and staking);
- Planting: performed just before the rainy season. According to the survival rate observed, restocking may then be carried out. Maintenance of the young trees is also planned once a year for three years.

## SCHEDULE

PROJECT LIFESPAN	
2018	Drafting the project
2019	Contractualisation
2019 - 2020	Growing seedlings and planting them on the padza
2021 - 2022	Maintenance
2022 - 2023	Assessment of results

## GOVERNANCE ADOPTED

The project was set up on the public lands managed by ONF.



After the works  
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## BENEFITS AND CONTRIBUTIONS OF THE PROJECT

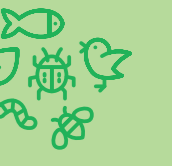


### BENEFITS REGARDING TARGET ADAPTATION SOILS

- Soil erosion: reduced by reforestation.

### BENEFITS FOR BIODIVERSITY

- The exclusive use of indigenous tree species for reforestation is beneficial for the typical forest fauna and flora.
- In the long run, it is hoped to regenerate forest soil suited to insect life as well as the return other better-known taxa (forest birds, bats, lemurs, etc).



### OTHER BENEFITS PRODUCED

- Protection of water resources: the planting of indigenous species restores the biological functioning of the soil, promoting the infiltration of water by plants and the preservation of freshwater resources. The reforestation of 0.42 ha of padza should result in an annual gain of 1680 m<sup>3</sup> of river water in the dry season.



## MONITORING INDICATORS

### Monitoring of planting

- Estimation of the survival rate at 3 months and at 12 months after planting, by counting dead seedlings