

## Project to combat the dust storm phenomenon or *Tiomena* and restore degraded lands through large-scale rebuilding in the Androy – the deep south of Madagascar

### 1. Summary of the project

The deep south of Madagascar is hit hard by the effects of climate disruption caused by the phenomena of upwelling, dipole of the southern Indian Ocean and El Nino, which are exacerbated by the consequences of current climate change. The latter is manifested through global warming causing the intensification of wind which is at the origin of the phenomenon of sand-dusting or *Tiomena*, which is increased by the loss of vegetation cover protecting the soil following the use of plows, the practice of cultivation by burning, deforestation ...

As a result, agricultural production has dropped by 70% and 16 episodes of famine have occurred in the south since 1896, resulting in nearly 1.5 million victims from the three regions (Anosy, Androy and Atsimo Andrefana). Numerous projects and organizations have been intervening there for more than 40 years, but the food insecurity situation is becoming more complicated and requires another approach that addresses the real source of the problem, the drought that results in a generalized lack of water and food.

Faced with this situation, in order to bring changes in the life of the population in the south of the Big Island, in collaboration with the Association Colibri Madagascar, the Rotary Club of Toliara plans to mobilize all the actors who are present there to work together to fight against the drought that causes desertification through a large-scale reforestation. The project consists of restoring degraded lands and setting up windbreaks that will constitute a green belt to protect the soil, reduce the effects of *Tiomena*, offer other alternatives to the wood energy and construction sector and especially increase carbon sequestration and evapotranspiration.

### 2. Project owner

Founded in 1959, the Rotary Club of Toliara in District 9220 currently has 20 members. The RC Toliara will collaborate closely with the Association Colibri with its volunteers who have already successfully tried reforestation activities in the south to fight against the *Tiomena*. For this new Rotary year 2021-2022, RC Toliara has the ambition to continue this particular activity as a medium and long term response to the problems caused by *Tiomena* and the drought experienced by the communities in the south.

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### **3. Beneficiaries**

These are mainly rural communities in the coastal Communes in the District of Ambovombe Androy, which have nearly 150,000 inhabitants. Indirectly, this project benefits the entire population of the extreme south of Madagascar, which is close to 2 million people (Anosy, Androy and part of Atsimo Andrefana regions).

### **4. Vision of the Rotary Club International of Toliara**

Plant 100,000 trees per year to contribute to large-scale reforestation efforts aimed at re-greening the South by 2030.

### **5. Goal**

Contribute to the State's objective of reforesting 40,000 ha per year to cover Madagascar with forests.

### **6. General objective**

Combating the sand trap or Tiomena and restoring degraded land to build resilience in communities in southern Madagascar.

## 7. Specific objectives

- Mobilize all actors to contribute to the realization of this vision
- Identify and train civil society entities and organizations on innovative tree planting techniques (nurseries, planting, direct seed sowing care...) in arid and semi-arid zones
- Establish nurseries that can hold more than 100,000 seedlings with indigenous and other adapted and fast-growing species
- Identify and map the lands to be prioritized for reforestation
- Organize regular reforestation campaigns

## 8. Expected results

- All stakeholders are mobilized to meet this challenge
- Entities and organizations ready to contribute are identified and trained in innovative tree planting techniques in arid and semi-arid zones
- Indigenous and other adapted and fast-growing species are identified/listed with their listed with their propagation and planting techniques
- Nurseries with a capacity of more than 500,000 seedlings are set up
- Degraded lands to be prioritized are identified and mapped
- Regular reforestation campaigns are organized
- Degraded soils are gradually restored to mitigate Tiomena
- Forests and windbreaks are created to soften and even slow down the southeast trade winds
- The resilience of communities in southern Madagascar is strengthened

## 9. Activities

- Mobilize the actors who can contribute to the realization of the action plan
- Capitalize on innovative techniques of restoration of degraded soils and reforestation in arid and semi-arid zones on a global scale
- Train actors on these innovative techniques with a series of practices
- Study the possibility of their use in the South
- Train actors on these innovative techniques with a series of practices
- Identify adapted and fast-growing indigenous and non-indigenous species
- Identify favorable locations for nurseries and install beds and shade and shade houses
- Train and empower nursery managers
- Dig a traditional well for each nursery
- Set up the nurseries
- Identify degraded soils
- Map the soils to be prioritized for restoration

- Evaluate the needs in terms of number of seedlings and others for the restoration of these degraded lands
- Prepare seedlings
- Plan reforestation activities
- Define the dates of the reforestation series
- Reforest and restore degraded soils
- Monitor and evaluate activities



## Appendix

Mobilization of actors (civil servants, students, high school and school children) for reforestation trials of jatropha, acassya and filaos (5,000 seedlings planted in 24 hours) in Ambovombe

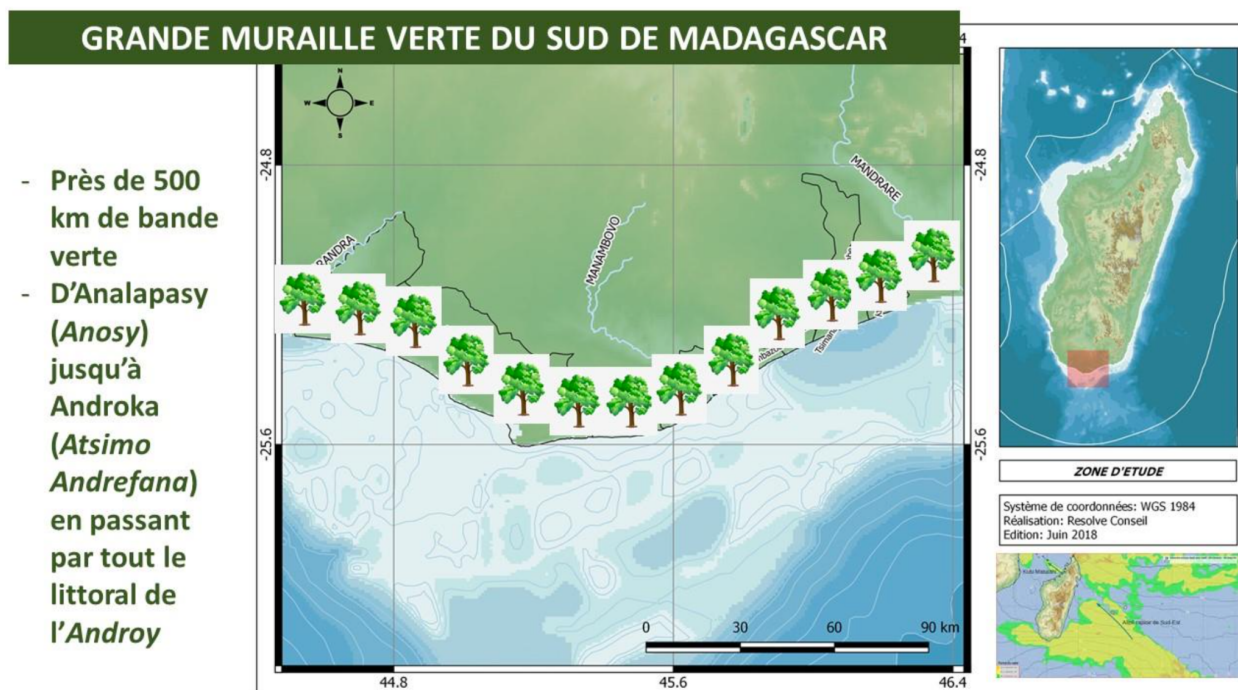


Coaching by a Colibri technician

High school girls in the middle of reforestation



Extract from the presentation on the main causes of famine in southern Madagascar and proposals for sustainable solutions



Translation:

LONG GREEN WALL ALONG THE SOUTHERN COAST OF MADAGASCAR

- Near 500km of green wall
- D'Analapasy (Anosy) all the way to Androka (Atsimo Andrefana) passing through the coastline of l'Androy