

**Project update: October 2024**

## **Effectiveness for community-based seagrass restoration in Ranobe Bay, Southwest of Madagascar**

**By BEVA Grilante**

### **Introduction**

This project is being implemented in Ranobe Bay, Southwest of Madagascar. The objective is to assess the feasibility of community-based seagrass restoration in this region. This report aims to present the project's progress from June to October 2024. It describes the preliminary results of this project, the upcoming activities and the challenges encountered during this project.

### **➔ Priliminary results of monitoring to the restoration site**

This project restored 3,300 square meters of degraded seagrass beds in Ranobe Bay in April and May 2024. During the transplantation campaigns, 1,224 seagrass shoots were planted at two sites in Ranobe Bay (Beravy and Ifaty). Monthly monitoring campaigns of the restoration site began in June 2024. As of now, five monitoring campaigns have been conducted across the two transplantation sites. The monitoring aims to assess the progress of the transplanted seagrass and identify the factors affecting the survival and growth of the transplanted shoots.

After five months of transplantation, monitoring conducted from October 26th to 29th, 2024, indicates that the average survival rate of the transplants is  $38.73 \pm 15.03\%$  in Beravy and  $81.54 \pm 8.95\%$  in Ifaty. The recovery of seagrass varies by transplantation site. In October, the mean coverage rate in Beravy is  $5.27 \pm 10.21\%$ , while in Ifaty, it increases to  $42.37 \pm 27.57\%$ . The transplantation site in Beravy is affected by high sediment retention, which has led to transplant mortality and prevent to the proper growth of seagrass shoot.



Figure 1: Transplantation of seagrass after one month (left in Beravy and right in Ifaty)  
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Figure 2: Transplantation of seagrass after five months (left in Beravy and right in Ifaty) © BEVA Grilante.



Figure 3: Seagrass recovery in the restoration site after five months of transplantation (left in Beravy and right in Ifaty) © BEVA Grilante.

### → Training workshop to local community

As part of our project supported by the National Geographic Society, a training workshop to local community session on the participatory monitoring methodology of the seagrass ecosystem and the seagrass transplantation technique was held on September 4<sup>th</sup> to 5<sup>th</sup>, 2024. This aimed to strengthen the capacity of local communities in conservation and restoration initiative of the seagrass ecosystem in Ranobe Bay. A total of 40 members from local communities, representing at 6 villages in the Ranobe Bay, attended in this training. During the event, ideas were exchanged to better understand the situations and challenges related to the conservation of this ecosystem. Thanks to this practical and theoretical training, the participants acquired the necessary skills for participatory monitoring methods of the seagrass ecosystem and techniques for restoration seagrass by method with sediment.



Figure 4: Illustrative photos from the training session with local communities on techniques for participatory monitoring and restoration techniques of the seagrass ecosystem in Ranobe Bay, Southwest Madagascar © Rodin Boleslas.

➔ **Surveillance of the restoration site**

For the surveillance of the restored areas, a patrol campaign was also conducted from September 17 to 18, 2024, during which 3 canoes with 6 fishermen practicing destructive fishing gears (beach seining) were apprehended. The fishermen were given a warning. Thanks to the commitment of the local communities, patrol campaigns will continue during periods of spring low tides.



Figure 5: Photo showing the fishermen using destructive fishing gears (Beach seining) in the seagrass bed during the low tide © BEVA Grilante.

→ **Mobilization and awareness of local communities for protection environment**

On World Cleanup Day (september 20, 2024), community volunteers were mobilized to participate in the cleanup of the village and the beach at Ifaty. More than 80 locals' communities' members participated in this event. During this campaign, a **Mada Seagrass** association teams takes the opportunity to raise awareness among the local communities about the impacts of plastic pollution on marine ecosystems and biodiversity.



Figure 6: Illustration photo during the World clean-up day event © Rodin Boleslas

→ **Engagement of local communities in seagrass conservation and restoration**

The engagement of local communities in the conservation on seagrass ecosystem in Ranobe Bay plays a crucial role. A community association named "MANASOA RIAKE" and an association of youth conservationists and researchs called "MADA SEAGRASS Research and Conservation" have recently been created with the aim of protecting the marine and coastal environment, particularly by taking initiative for conservation of seagrass meadows in Madagascar.

Supported by MADA SEAGRASS, the MANASOA RIAKE association is establishing a controlled seagrass area in Ranobe Bay. The purpose of this protected area is to protect the seagrass restoration area and ensure the natural regeneration of seagrass for the resilience of this ecosystem and also to the marine biodiversity. The process of officially establishing this protected area is currently underway. The MANASOA RIAKE association fights against also illegal fishing in Ranobe Bay and participate on the action of seagrass restoration.

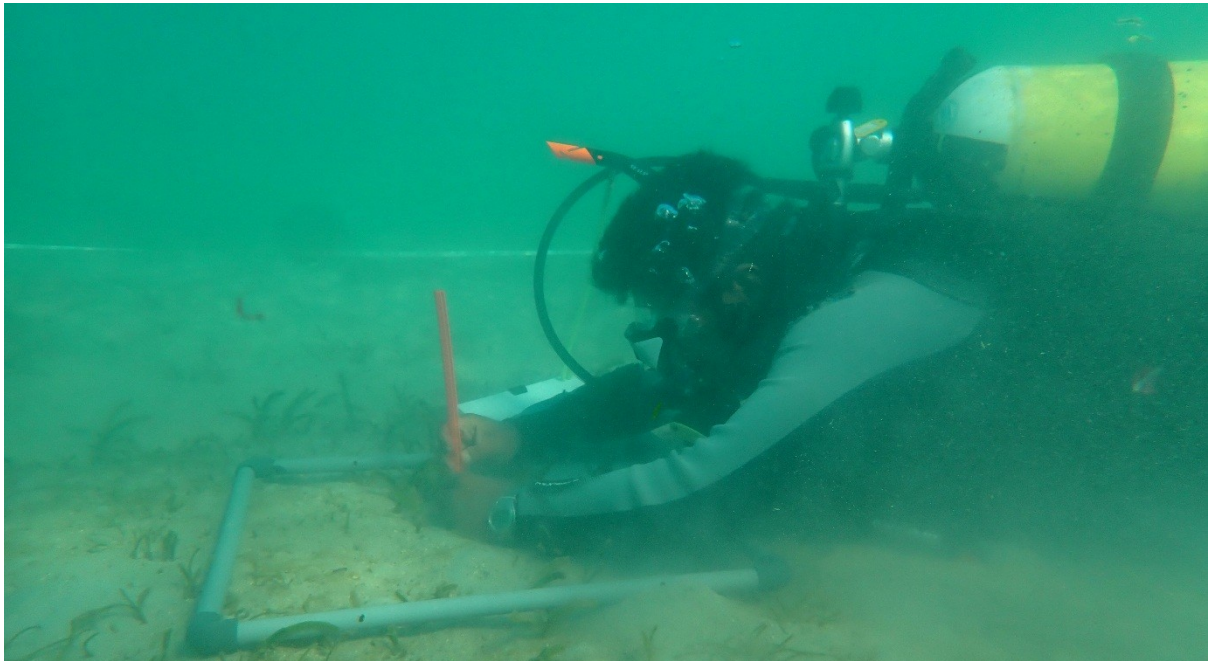
## → Ongoing Activities

Monitoring campaigns for the restoration site is currently underway and take end on february 2025. Currently, five campaigns of monitoring have already been conducted. The purpose of these monitoring efforts is to determine the evolution of seagrass in the restoration site such as the survival and growth of the transplants and to identify the factors determining for the success of seagrass restoration.

## → Upcoming Activities

As part of our project for the conservation and restoration of seagrass meadows in Ranobe Bay, supported by the National Geographic Society and The Rufford foundation, environmental education and awareness sessions for children in schools will be carried out on November 2024. And the last campaign of seagrass transplantation will be implemented in Ambalaboy and Beravy also on November 2024.

## Some photos taken during fieldwork



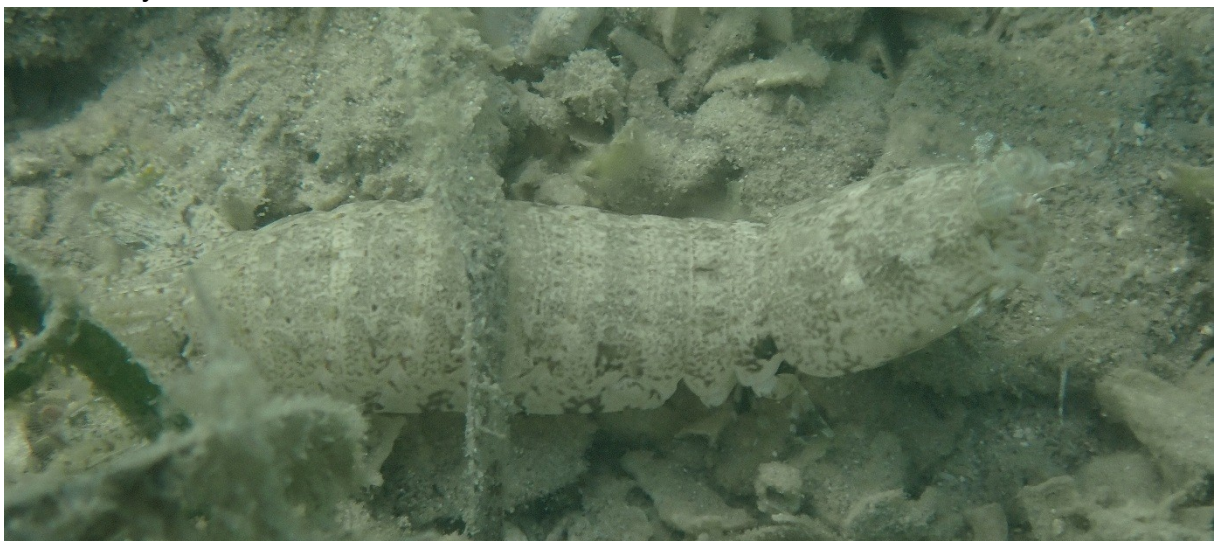
The diver measured the height of the canopy leaves using a graduated ruler  
© BEVA Grilante.



*Hippocampus borboniensis* is one of the species of hippocampus within the Syngnathidae family. This species is threatened with extinction and is listed on the IUCN Red List. Photo © BEVA Grilante.



Fish species associate on seagrass ecosystem has been observed in the restoration site in Ifaty © BEVA Grilante.



A crustacean specie associated with the seagrass ecosystem has been observed at the restoration site in Ifaty © BEVA Grilante.



*Synapta maculate* © BEVA Grilante.