

Dr. Lou Frotté Marine Environment Officer

Nature-Based Solutions for adapting to climate change: practical actions of the Guadeloupe Port Authority



Nature-Based Solutions

"Actions aimed at protecting, sustainably managing and restoring natural or modified ecosystems to directly address societal challenges in an effective and adaptative manner, while ensuring human well-being and producing benefits for biodiversity"

LIFE Adapt'Island project

- Nature-based solutions
- Ecosystem services provided
- Restoring connections between coastal ecosystems
- Replicating innovative techniques in





- Ecosystemic impacts of the actions
- Socio-economic benefits for the

The environmental policy of the Guadeloupe Port Authority



- Public awarness raising

- the Caribbean



- Disseminate good practices

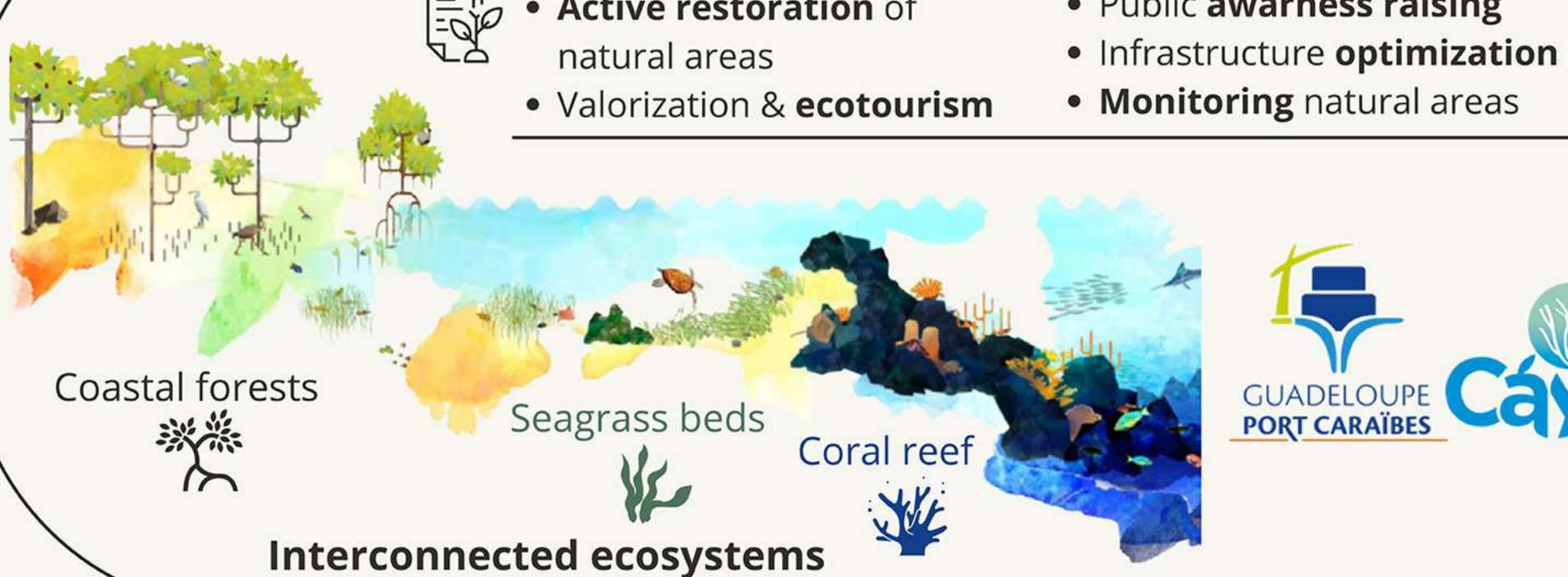
162 fruits collected on 2 sites - mid-July 2023

224 plants growing - end September 2023

Transplant scheduled for January 2024

236 seeds planted - mid-July 2023

- archipelago
- Raising public awarness of environmental preservation



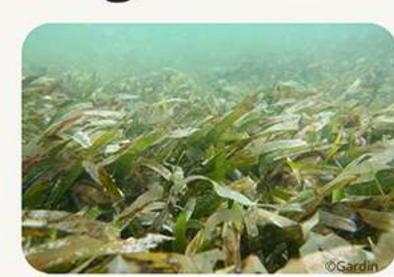


Marine phanerogam seagrass beds



Ĵ

Targeted species: Thalassia testudinum Turtlegrass







Targeted species:

Coral reefs

Acropora cervicornis Staghorn coral





Acropora palmata 🎉 Elkhorn coral



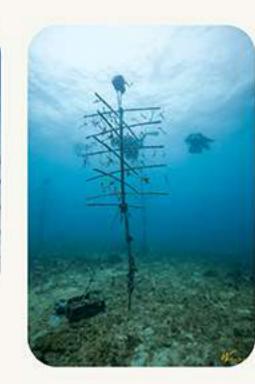


• Two coral nurseries: A cervicornis & A. palmata

- 21 trees, 7 domes, 8 tables: 2,600 cuttings
- Growth monitoring protocol, genetic studies
- Structures maintenance, diseases management



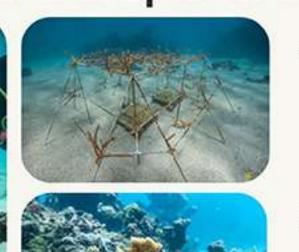




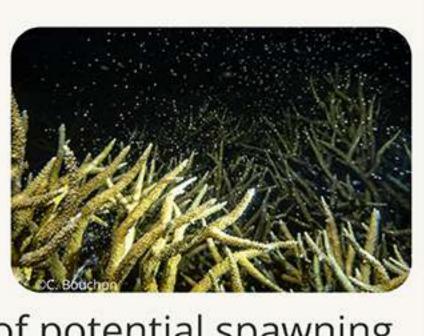


Annual coral transplantation





- 2021, 2022, 2023: 4 sites
 - 1,550 A. cervicornis: bunch of cuttings on coral reef & domes
- 42 A. palmata: concrete cubes & domes
- Biannual ecological & growth monitoring





Annual coral spawning operations







- A. cervicornis & A. prolifera: Observation of potential spawning
 - A. cervicornis in nurseries: Observation of gonad maturity
 - A. palmata: collection of gametes with monitoring of the early stages of cell and larval development (coral larvae pool)

Terrestrial actions

seagrass meadows ecosystem

Hawksbill turtle nesting site



Enabling the development of mangroves in an urbanized area prone to flooding

Ecomooring area: Reduce anthropogenic pressure on seagrass beds surrounding the Cochons Islet

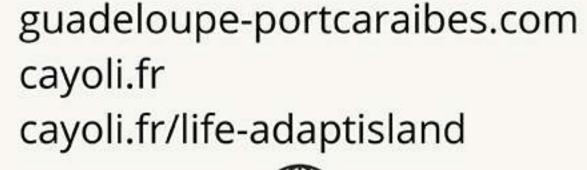
• Educational underwater trail: Raise awarness about marine life biodiversity with a focus on the

- Disposal and treatment of plant and inert waste

Further informations

CariPorts - An environmental label for Caribbean ports

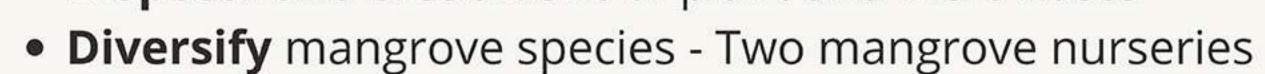






grand-port-maritimedecayoli.guadeloupe life_adaptisland





• 6 ecomoorings (LIFE) + 57 standard moorings (GPMG) - Jan. 2023

20 screw anchors (LIFE) scheduled by end of 2023

Biannual ecological monitoring of seagrass beds

4 educational buoys + 2 land-based panels

Creation of underwater trail in January 2024

Biannual ecological monitoring of seagrass beds



