Global Gateway

Nature-based solutions for protecting the coastal zone

INTPA-NEAR Environment & Climate Week

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Seagrass restoration in Mauritius

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Project by

reef CONSERVATION

European Commission

The issue: coastal degradation

Depleted fish stocks in the lagoon

Coastal erosion

Water pollution

Sediment from rivers

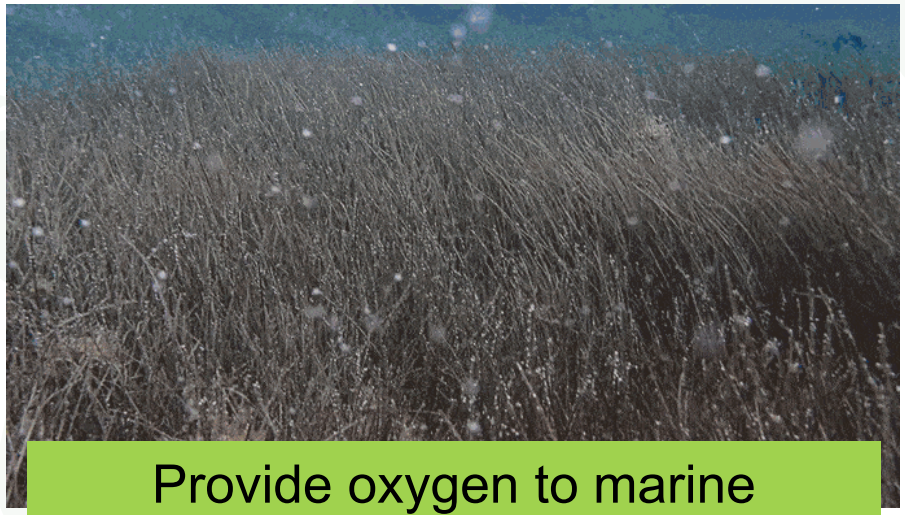
Impacting on tourism, fishermen's livelihoods,, communities' well-being and health, etc

3 coastal ecosystems

Major ecosystem services from seagrass, as NBS for above mentioned issues

Nurseries to many young marine organism

Home to many marine organism



Provide oxygen to marine organism

Prevents sand erosion by retaining sand and sediment within its roots

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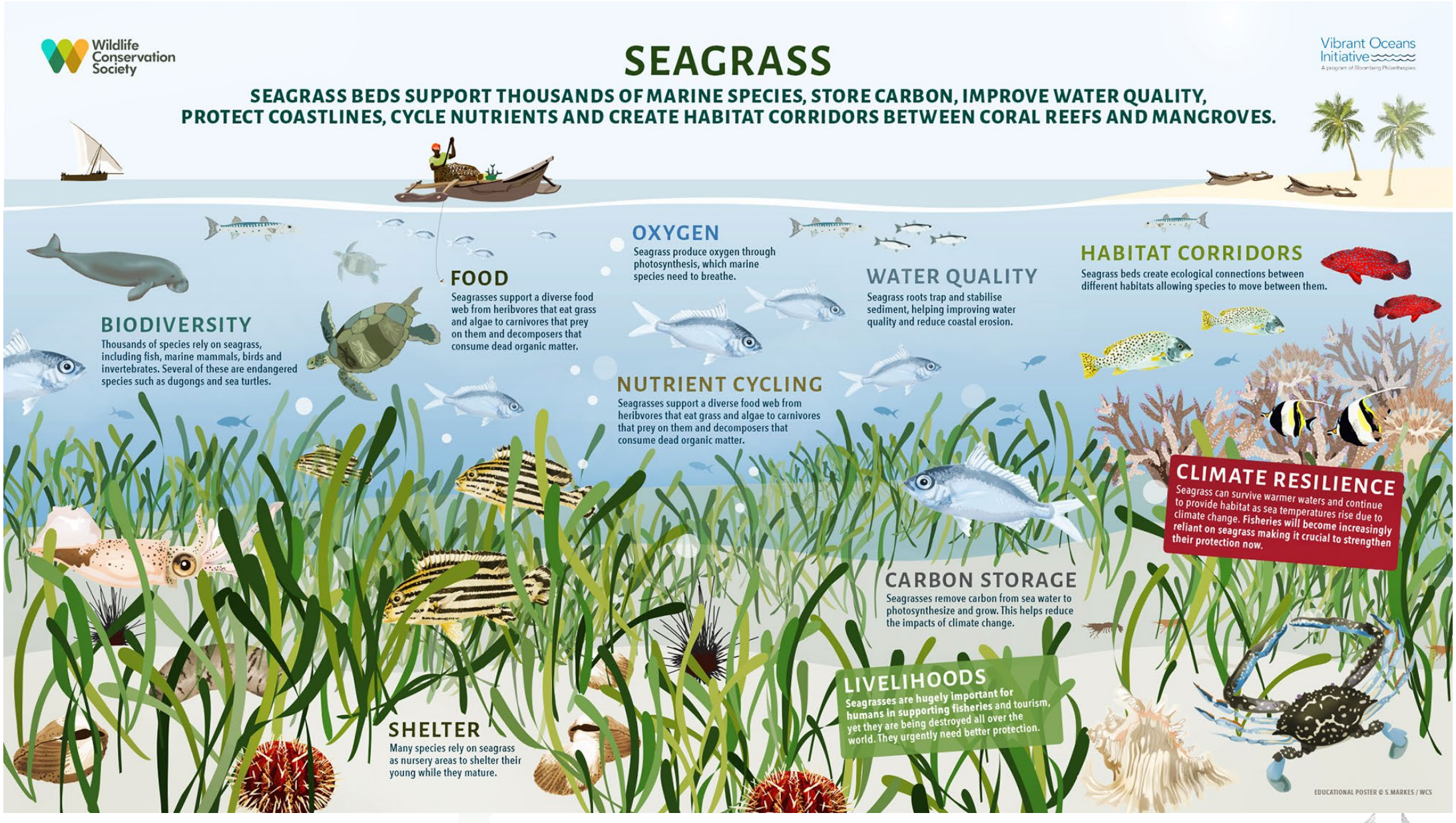

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Source: Wildlife Conservation Society

European Commission

Threats to seagrass

- Boat anchors, overfishing
- Human activities in seagrass , tourism
- Water pollution and sediments
- Rise in sea temperatures

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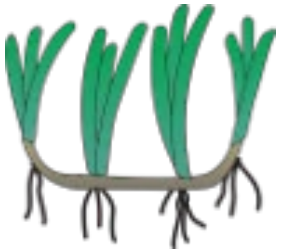
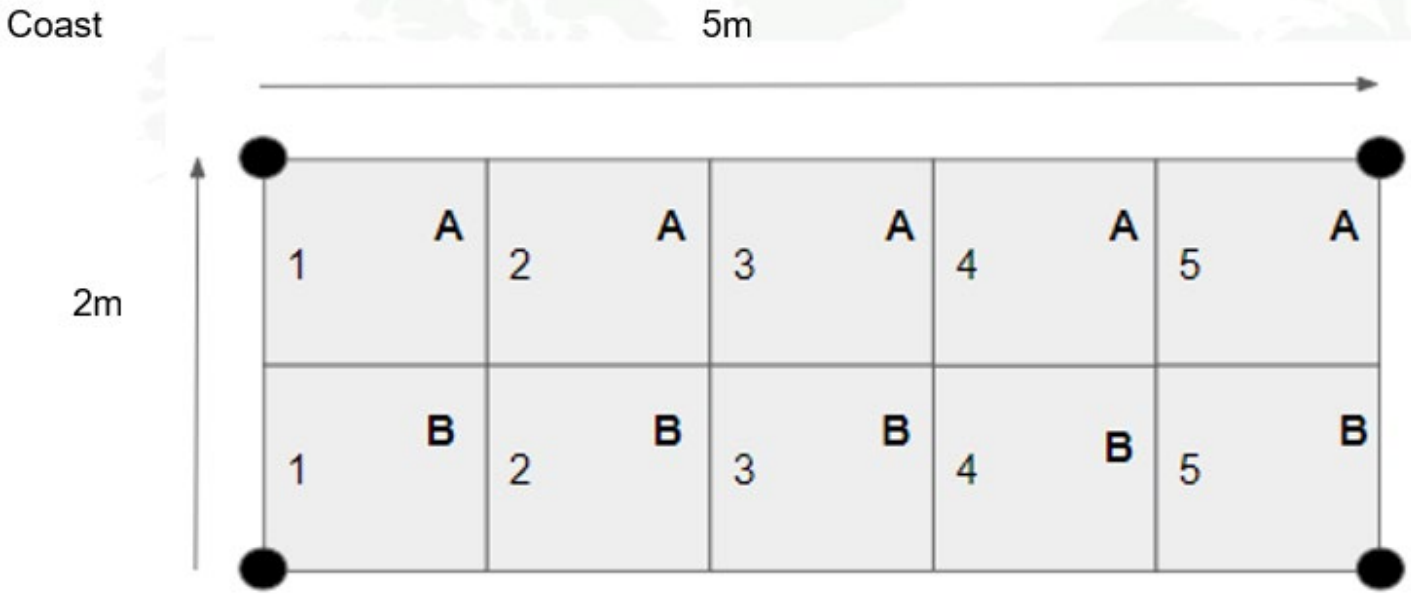
Seagrass restoration project objectives



- Investigate stakeholders and citizen needs and cultural perceptions of ecosystem services of seagrass.
- Empower community members through Citizen Science to participate in ecosystem-based solutions
- Inventory of seagrass meadows, improve knowledge of their status and biodiversity.
- Investigate best practices for seagrass restoration adapted to Mauritius.
- Investigate carbon sequestration potential of impacted and unimpacted seagrass meadows
- Assess connectivity of economically important fish species across seagrass meadows
- Evaluate how seagrass restoration can lead to sustainable coastal management, to inform evidence-based decision making.

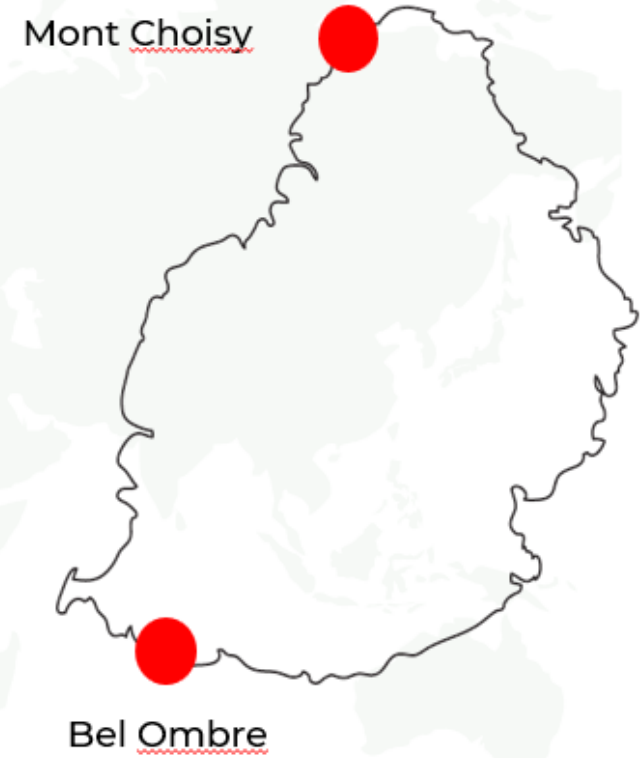
Seagrass restoration in Mauritius

- This is a first in Mauritius.
- 5 restoration methods are being tested at 2 sites



Layout design of restoration program.

A and B represent the 2 densities being tested.
A = 4 shoots/m^2 and B = 16 shoots/m^2



The mission is to use nature-based solution to protect the coastal zone and ensure that ecosystem services are provided

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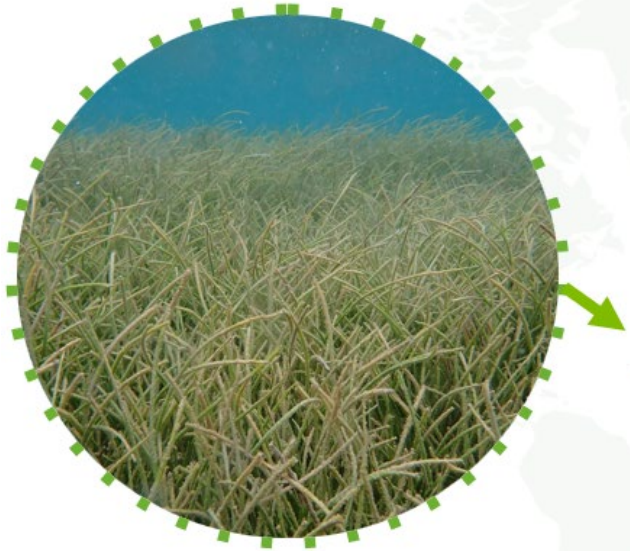
Steps for restoration



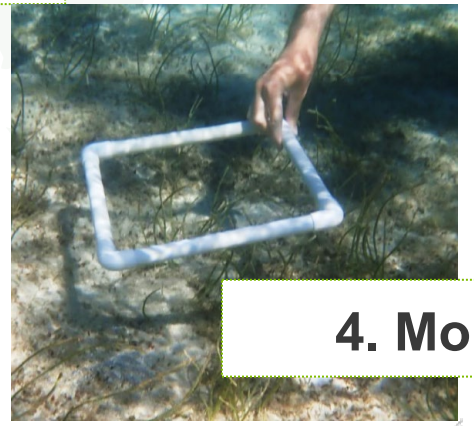
Species used for restoration

Syringodium isoetifolium

1. Harvesting

2. Preparation

3. Planting



4. Monitoring

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Forthcoming project activities

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Regulatory success factors for NBS like seagrass restoration

- Land use planning, coastal property regime
- Existence of protected areas
- Degree of enforcement of protection status, fishing regulations etc.
- Coherence between multiple sector policies

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Stakeholder related success factors for NBS like seagrass restoration

Awareness, understanding of ecosystem services, by different stakeholder groups (hotels, tourists, fishermen, communities, etc).

Consensus building around management plan.

Income needs and expectations to be managed.

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Scientific and technical success factors for NBS like seagrass restoration

- No ready made solution, trials to determine most adapted technique, species etc.
- Need scientific expertise and lessons from other projects.
- Time for plants to grow, ecosystems to recover, before success can be monitored and demonstrated.
- Availability of planting material
- Funding for pilot and for upscaling.

Environmental success factors or obstacles

Continued pressure from water pollution, sea temperature rise, tourism and fishing activities in the restored areas, etc jeopardise success of seagrass restoration

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Thank you for your attention !

Any Questions?

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