

SEAGRASS in Zanzibar

Seagrasses are flowering plants that grow in shallow waters along the coast. They form productive meadows that provide food and shelter for many important species, including fin fish, shellfish, squid, octopus, crabs and sea cucumbers, which in turn provide income and nutrition for the people of Zanzibar. But seagrasses are in decline due to many human impacts and we all need to help protect and restore these vital habitats.



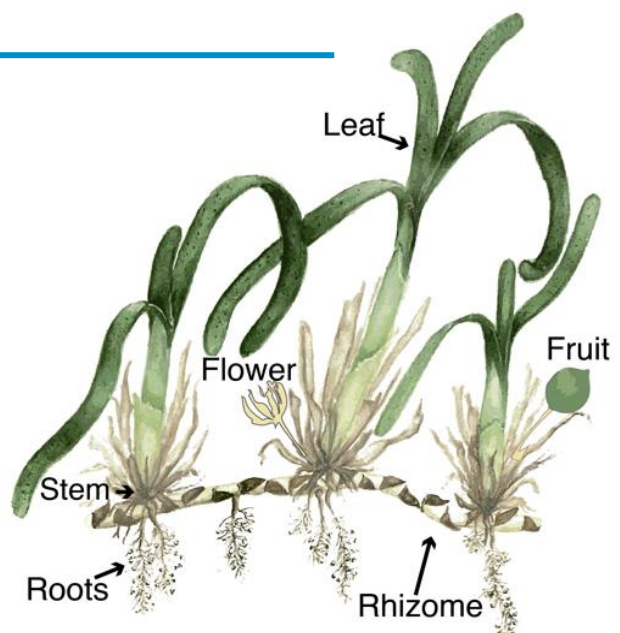
FACTS

About seagrass plants

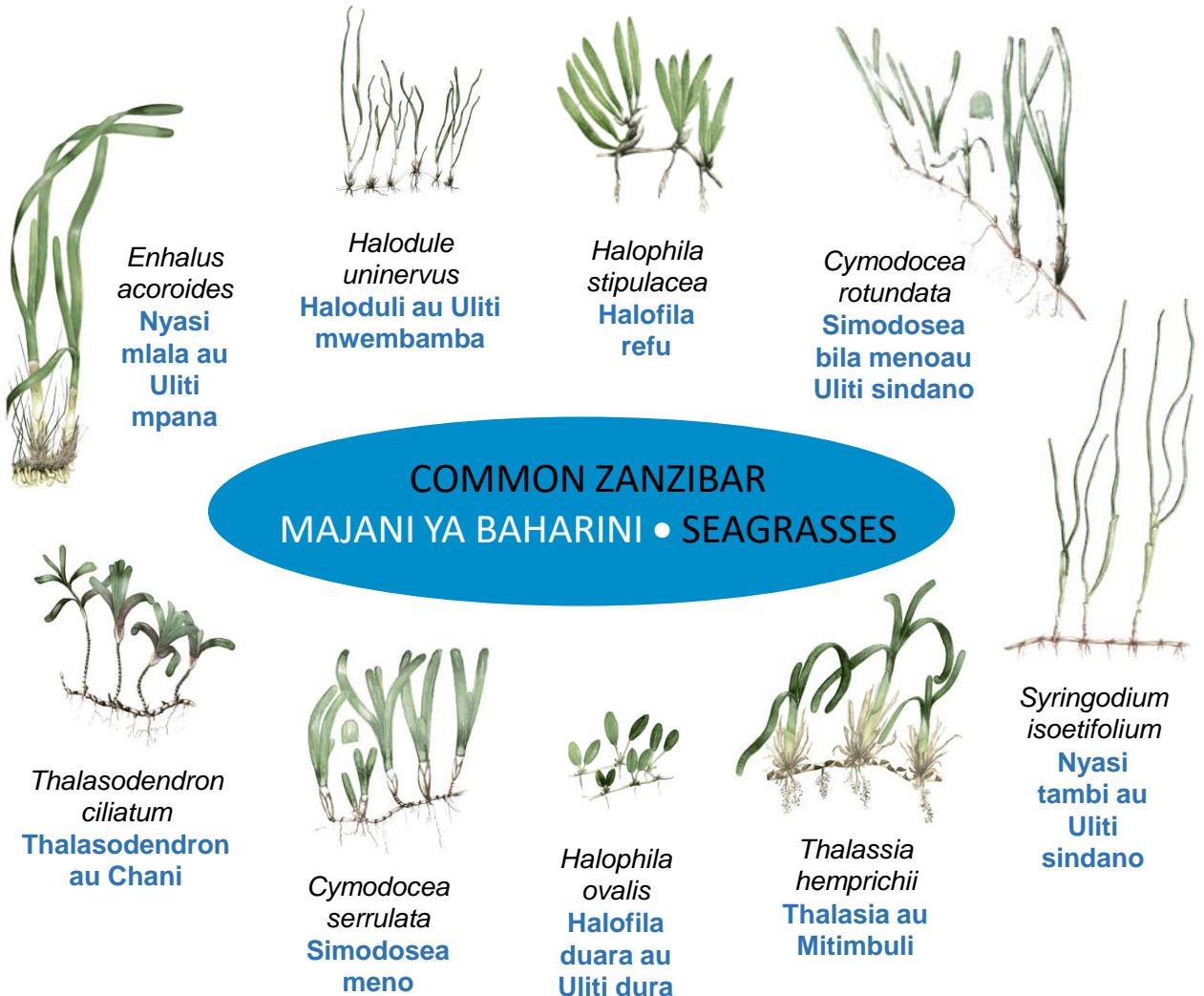
Seagrasses are flowering plants. They complete their entire life cycle under water.

Every plant has:

- Leaves
- Stems
- Rhizomes
- Roots



- Seagrass meadows are **nursery grounds** for commercially important fin fish and shellfish, supporting 1/3 of fisheries globally.
- By providing food and habitat for thousands of species, seagrasses **enhance the biodiversity** of coastal ecosystems. Thirty times more animals live in seagrasses compared to nearby sand flats.
- By reducing water currents and trapping and stabilizing the sediment, seagrasses **improve water quality, reduce nutrient pollution** to adjacent ecosystems, and **protect** coastal communities against erosion and storms.
- Seagrasses absorb and store organic carbon within their tissues and sediment. Seagrasses **trap carbon** 35 times more efficiently than rainforest, making them powerful carbon sinks and a great defense against climate change.



Illustrations: Adapted from Richmond, M.D. (ed.): A Guide to the Seashores of Eastern Africa and the Western Indian Ocean Islands. Sida-SAREC, Stockholm, 2004.

Photos: Stephanie Helber, Dieuwke Hoejmakers, Agustin Moreira Saporiti



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Seagrass in Zanzibar

70% of Zanzibar fisherman say seagrasses are **prime fishing habit**.

45% of Zanzibar people living on the coasts use seagrass beach cast as **fertilizer** in family gardens.

44% of Zanzibar seaweed farmers use seagrass roots as a **remedy** for stings.

70% of seaweed farmers know farming has a **negative effect** on seagrasses.

40% of farmers see this as a **threat** to the ecosystem.



Drivers of decline

Despite the importance of seagrasses, they are declining worldwide. 30% of seagrasses have disappeared. The main drivers of seagrass loss are:

- 1. Poor water quality** due to the run-off of nutrients, sediment, and pollutants from the land
- 2. Habitat destruction** from coastal development and use
- 3. Physical destruction** from dredging, trawl fishing, boat anchoring, and shading and trampling during seaweed cultivation

How can you help?

- **Reduce sediment and waste run-off** from land into the sea.
- Keep the sea **free from litter**.
- **Take care** when driving boats and anchoring in seagrass beds.
- **Minimize the use** of trawling fishing gear and always **remove unused nets** from the sea.
- **Alternate** where seaweed farms are placed to allow seagrasses to recover from trampling and shading.

References

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Fortunately, there are ways to help seagrasses recover even if the meadow is lost or in decline. Seagrass restoration focuses on replanting seagrasses to areas that once had thriving meadows.

Project “Seagrass for life”

The project “Seagrass for Life” aims at actively involving **Zanzibar’s local community** in the protection of seagrass meadows and research on this topic. During a workshop in 2019, schoolchildren, teachers, scientists, algae farmers and fishermen from Zanzibar discussed the importance of the seagrass meadows for the **local economy and environment**. Children from four local schools were collecting washed up seagrass fruits on the beach and later observed the growth of new seedlings. Additionally, researchers from ZMT cooperated with seaweed farmers and **planted seagrass seedlings** along with seaweed. This way, the natural habitat is less impacted by farming practices and seaweed farms also benefit from the ecosystem services that the seagrasses provide.



Take home messages

- Seagrasses form important habitats for many animals, which in turn provide income and nutrition for people of Zanzibar
- They improve water quality, reduce nutrient pollution, trap carbon and protect coastal communities against erosion
- Poor water quality due to run-off from the land and physical destruction cause a significant decline of seagrasses
- Alternating the location of seaweed farms, avoiding pollution and minimizing fishing gear helps to protect seagrass meadows

Imprint

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