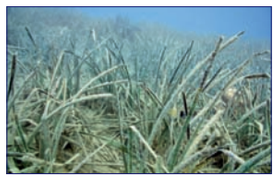
Studied seagrass beds on the Turkish coast

With an extensive (1,600 km) Mediterranean coastline,Turkey presents exceptional conditions for the development of large seagrass beds.

Studies done at the Gökçeada Island and the Mersin area, in collaboration with the Istanbul University Fisheries Faculty, and the Middle East Technical University Institute of Marine Sciences respectively, confirm the importance of these formations.

The Mersin area has a particular importance as it corresponds to the limit of North-Eastern extension of the Posidonia meadows in the Mediterranean. This geographical limit of extension of the species seems related to a too high water temperature during summer season.
Whereas the Gökçeada meadows seem to be under the influence of water masses from the Black Sea (low salinity and winter low temperature).


Posidonia meadows in Mersin


Babadil Bay Eastern Mersin


Posidonia meadows in Gökçeada


Meadow and sponges in Mersin

Action Plan for the Conservation of Marine Vegetation in the Mediterranean Sea

Adopted in 1999, by the Contracting Parties to the Barcelona Convention, this Action Plan has several objectives:
- To implement measures for the management and protection of marine plant species
- To fight against the destruction of these formations, deemed to be key components of littoral ecosystems
- To ensure the preservation of these formations in characteristic areas.

The implementation of this Action Plan has been entrusted to the Regional Activity Centre for Specially Protected Areas (UNEP/MAP-RAC/SPA).

The MedPosidonia Project

In the framework of this Action Plan, a sub-regional project for the inventorying, mapping and monitoring of Posidonia meadows in Algeria, Libya, Tunisia and Turkey (MedPosidonia Project) has been implemented over a three-year period (2006-2008), thanks to the financial support of the Total corporate Foundation.
The Project aims at collecting information on the presence and evolution of Posidonia meadows in selected sites, and training national teams to make them able to pursue these tasks in the future.

This document was produced by Gérard Pergent, in collaboration with Souha El Asmi (RAC/SPA, Tunis).
Illustrations and photos: Gérard Pergent and the Integration and Application Network (IAN).

UNEP
MAP
RAC/SPA

T.C. Çevre ve Orman Bakanlığı

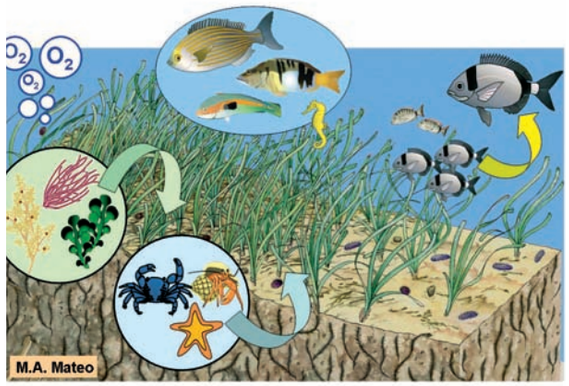
Oases of the Mediterranean
Seagrass Beds

With the support of FONDATION TOTAL

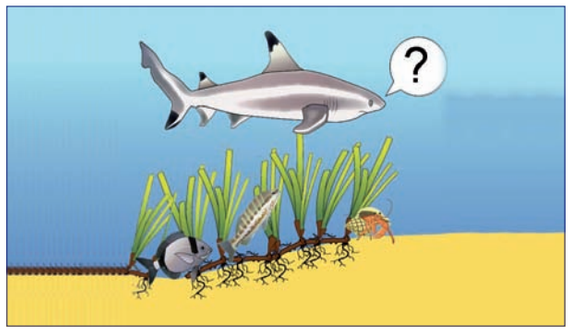
Why are seagrasses so important?

1 – Ecological contribution

- Primary production: They produce more vegetal matter than tropical forests.
- Source of food: They are at the base of numerous food chains.
- Biodiversity hot spots: They shelter several hundred animal and vegetal species.

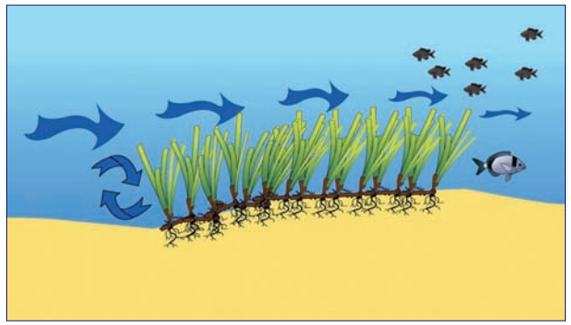


- Water oxygenation: They generate over 10l of oxygen per m^2 per day.
- Protection from predators: They offer a refuge beneath the foliar shoots.



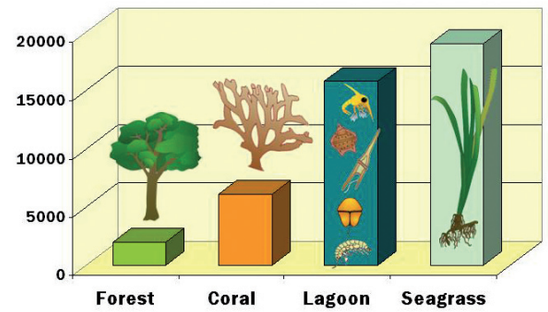
2 – Sedimentary contribution

- Reduction of water movement: They reduce wave and current force.
- Stabilization of soft bottoms: They trap and fix sediment.
- Fight against erosion: They protect beaches thanks to the accumulation of dead leaves.



3 – Economic contribution

- Spawning areas and nurseries: They promote the reproduction of fish and crustacean.
- Habitats for numerous species: They allow sustainable fishing activities.

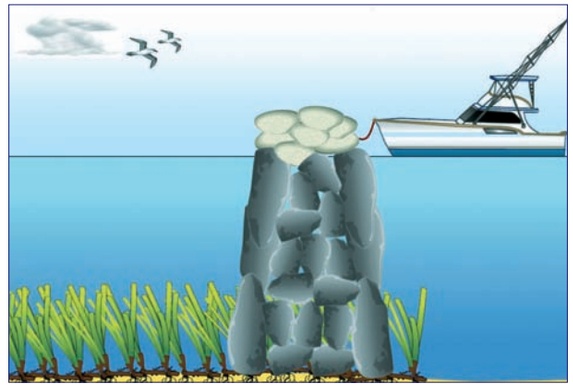


Economic values and services ($/m²/year) of the main ecosystems (Costanza *et al.*, 1997).

Why do seagrass beds disappear?

1 – Coastal development

They are covered by port facilities and waste from waste dredging.

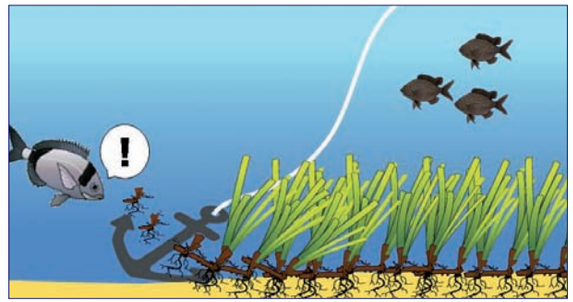


2 – Urban and industrial waste

They have not enough light for photosynthesis and are destroyed by pollutants.

3 – Mechanical damage

They are torn out by fishermen's trawls or anchors of pleasure craft.



4 – Nutrient increase

They are smothered by epiphytic algae linked to waste from fish farming, agriculture and urban activity.