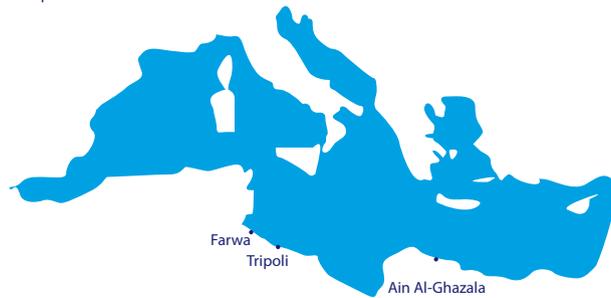


### Studied seagrass beds on the Libyan coast

With an extensive (2,000 km), protected (low urbanization) coastline, Libya presents exceptional conditions for the development of large seagrass beds.

Studies done, in collaboration between the Regional Activity Centre for Specially Protected Areas, the Environment General Authority and the Marine Biology Research Centre, at Farwa, Ain Al-Ghazala, Tajura and Garaboulli (near Tripoli) areas, confirm the importance of these formations.



Cymodocea beds cover between 60 and 80% of the seabed in Ain Al-Ghazala and Farwa coastal lagoons. Posidonia meadows exhibit a vitality that is unique in the Mediterranean Sea and constitute true natural monuments (atolls).

Posidonia atolls in the Ain Al-Ghazala Lagoon



### 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 combat 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 the EGA (Environment General Authority, Tripoli, Libya) and RAC/SPA (Tunis, Tunisia). Illustrations and photos: Gérard Pergent and the Integration and Application Network (IAN).



## Oases of the Mediterranean Seagrass Beds

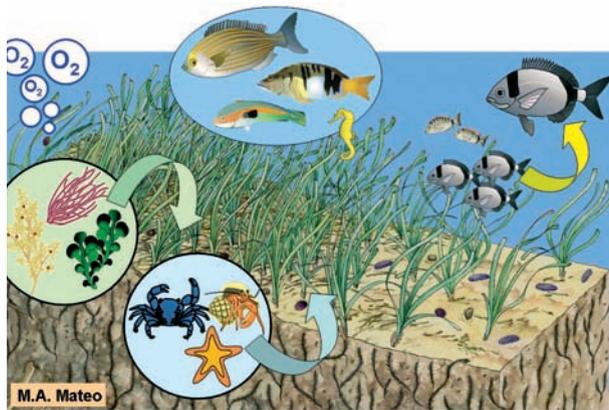


With the support of **FONDATION TOTAL**

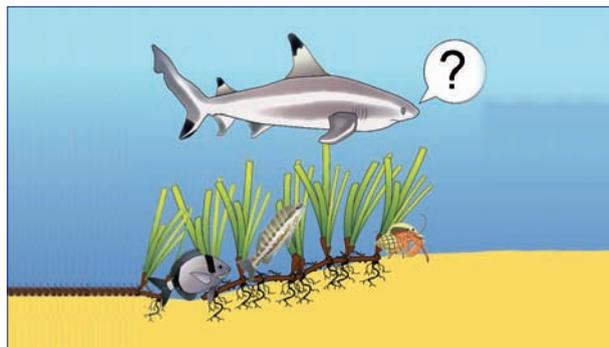
## Why are seagrasses so important?

### 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.

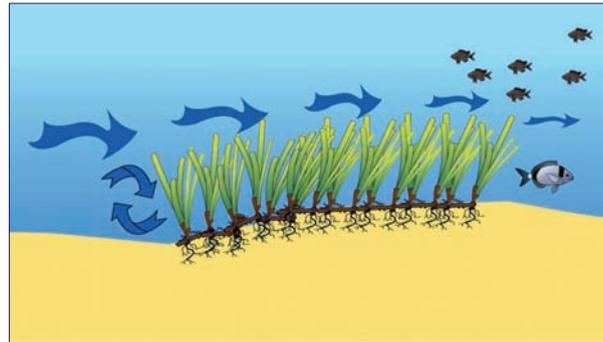


- Water oxygenation: They generate over 10l of oxygen per m<sup>2</sup> per day.
- Protection from predators: They offer a refuge beneath the foliar shoots.



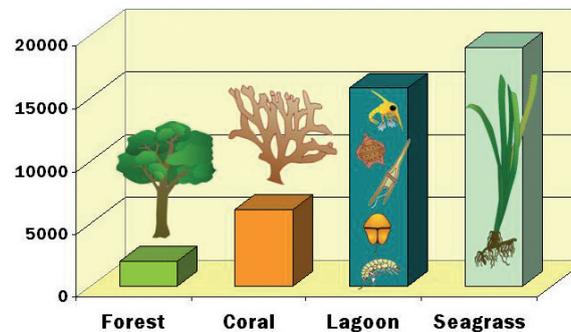
### 2 – Sedimentary contribution

- 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.

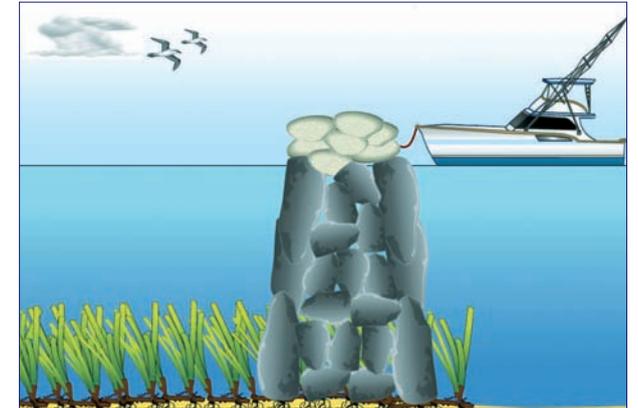


Economic values and services (\$/m<sup>2</sup>/year) of the main ecosystems (Costanza et al., 1997).

## Why do seagrass beds disappear?

### 1 – Coastal development

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

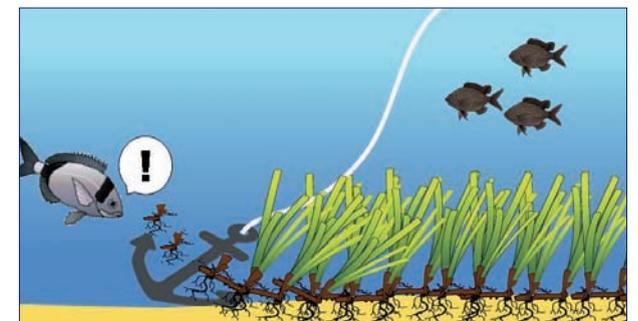


### 2 – Urban and industrial waste

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.