

## Project

# EVALUATION OF VALUE OF BIOMASS AND DIVERSITY OF EPIPHYTE MACROALGAE ON *Posidonia oceanica*

I+D+i  
**GIZC**  
GESTIÓ INTEGRADA  
DE LA ZONA COSTANERA

Axis  
Bloc 1.1  
Thematic area

Disciplinary research  
Environment  
Biodiversity and global change



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## Summary

The eutrophication of coastal waters (understood as a disproportionate increase of algae caused by an excessive supply of nutrients in the environment) lowers the quality of water for various human uses and can also cause the elimination of areas of *Posidonia oceanica*.

The supply of nutrients in coastal waters can stimulate the development of algae that grow on the leaves of *Posidonia oceanica* (epiphyte macroalgae), negatively affecting its growth and survival.

As a reaction, herbivores, feeding on these algae, can reduce the negative effects caused by an excess of nutrients in the environment.

Current knowledge does not allow us to predict the evolution of ecological equilibrium between *Posidonia oceanica* and the epiphyte algae colonising them after a growth in the supply of nutrients, nor identify what levels of development of these can be considered indicators of eutrophication of coastal waters.

## Actions

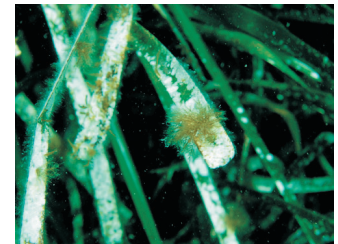
-Assess the role of herbivores in the regulation of the effect of the supply of nutrients on the proliferation of epiphyte macroalgae in areas of *Posidonia oceanica*.

-Identify levels of development of epiphyte macroalgae in areas of *Posidonia oceanica* that can be considered as indicators of eutrophication of coastal waters.

-Maintain the series of data begun in 2003 on biomass and diversity of epiphyte macroalgae on *Posidonia oceanica* carrying out samples and analysis corresponding to 2006 and 2007.



Area of *Posidonia oceanica*



Epiphyte algae growing on leaves of *Posidonia oceanica*



Sampling herbivores



Fieldwork

## Applications

### Research

The results of this project will be of great use to the international scientific community in the field of marine biology and ecology, especially countries bordering the Mediterranean Sea.

### Administration

The final products of the project will help regional local administration to establish plans to look out for the eutrophication of coastal waters.

### Enterprise

Environmental consulting and auditing businesses will be able to use the results of the project to quantify the degree of eutrophication in coastal areas and assess the impact of specific human activity there.

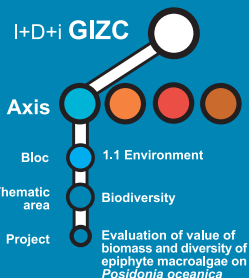
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