Corals of deep Mediterranean: Distribution and diversity related with their threats and state of protection

Introduction
The Mediterranean Sea has been proposed as a hot spot of terrestrial and coastal marine biodiversity. It represents an excellent biological archive of past and modern deep coral growth. Coral reefs provide niches and nursery grounds for several species, including commercial fish species. Cold-water coral ecosystems are long lived, slow growing and fragile, which make them especially vulnerable to physical damage.

State of the art
Abiotic and biotic factors determining deep-coral distributions

Temperature
13.4-13.9°C

Depth
150-1100m

Topographic distribution

Access to food source

Dissolved oxygen
3.74-4.54ml/L

Salinity
38.4-38.9

Diversity of Mediterranean corals

Main framebuilders

Lophelia pertusa

Madrepora oculata

Any of the species of Mediterranean cold-water corals can be considered endemic.

Importance of corals and threats

Importance

Contain huge number of endemism and is a biodiversity hot-spot

Threats

Any of the species of Mediterranean cold-water corals can be considered endemic.

Discussion

Topographic distribution is very important

Main framebuilders are the corals M. oculata and L. pertusa

Corals don't have high richness and diversity

Associated animal communities have a high diversity and level of endemism

Major threats are trawls and environmental changes

European legislation is not enough

Conclusions

More studies required

• Effects of abiotic factors changing
• Geographical and habitat distribution
• Diversity, ecological and biological functioning.

Legislation

• A new open sea MPAs to include cold-water corals
• Get an adequate regulation of human activities and avoid impacts to coral communities

The awareness about cold-water corals ecosystems and associated communities must continue rising

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