

INDICATORS OF CLIMATE CHANGE IMPACT IN THREE SPECIALLY PROTECTED AREAS OF MEDITERRANEAN IMPORTANCE

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Context

The SAP BIO was adopted in 2003 by the Contracting Parties to the Barcelona Convention as the SPA/BD Protocol implementation instrument to overcome the threats hanging over marine and coastal biodiversity in the Mediterranean. It was updated in 2009 on climate change issues.

MPAs and SPAMIs alleviate local stressors by providing protection and increasing the ability of populations to resist climate anomalies. Moreover, networks of marine reserves are considered one of the most effective tools to face the impacts of global climate change on marine ecosystems and livelihoods.

One of the Mediterranean priorities for marine biodiversity conservation is the implementation of a monitoring network of climate change impacts in MPAs, including SPAMIs, through indicators specific to the Mediterranean region.

Actions

Thirteen indicators of climate change impacts have been identified by UNEP/MAP-RAC/SPA for putting into practice in MPAs; **five of them are of top priority** and its monitoring implementation has been advised to MPA managers and countries.

Hence, we conducted a baseline work through a group of scientists expert in field monitoring of climate change to assess those indicators taking as pilot three SPAMIs:

- **Mar Menor and Oriental Mediterranean Murcia coast, Spain**
- **Portofino, Ligurian Sea, Italy**
- **Torre Guaceto, Adriatic Sea, Italy**

Available data, graphs, photos, and information on the following indicators were compiled and monitoring protocols developed:

- **SST and thermal stratification**
- **Mortality and bleaching events**
- **Range shift of alien / temperature-sensitive species**
- **Reproduction and breeding date of selected species**
- **Episodic species outbreaks (blooms)**

Results

Production of the document entitled “Indicators of Climate Change Impact in Three Specially Protected Areas of Mediterranean Importance”

It reports on how top priority indicators have been studied and monitored in three SPAMIs.

A detailed framework and diverse cost-effective methodologies are proposed to support the implementation and establishment of the monitoring of feasible climate change indicators in SPAMIs and other MPAs in the Mediterranean and other marine ecoregions.

Thank you - Merci

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