



UNEP/MAP Barcelona Convention policy advances on climate change and MPA related issues

MPA Engage capitalization event
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Stavros Antoniadis

Associate Administrative Officer, UNEP/MAP Coordinating Unit, Barcelona Convention Secretariat

MAP - Barcelona Convention: Overview

- Barcelona resolution on MAP adopted in 1975; The Convention adopted in 1976. Both amended in 1995
- 22 Contracting Parties including the EU
- The Convention is complemented by 7 Protocols: Dumping, Prevention and Emergency, LBS, Hazardous Wastes, SPA/BD, Offshore, ICZM
- MSSD, other Strategies, Integrated Policies and Action Plans to combat and prevent pollution and protect/conservate marine and coastal biodiversity
- Ecosystem approach as the overarching principle → achieve/maintain Good Environmental Status of the Mediterranean Sea and Coasts
- MAP vision: **“A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse for the benefit of present and future generations”**



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Climate change and impacts on
biodiversity

The Mediterranean a climate change hotspot where vulnerabilities are exacerbated

SoED
2020
State of the Environment and
Development in the Mediterranean



Warming
20%
faster than global average

A decrease of
-0.1

in the pH of the ocean since
the pre-industrial period, and
a forecast of -0.4 by 2100



Already
0.4°C

increase in seawater temperature
(up to +3.5°C by 2100)



Low-lying coastal
cultural heritage sites
are threatened by
flooding and erosion



+1.54°C

increase in air temperature:
above the global average
(projection in 2040: +2.2°C
versus +1.5°C global level)



-30%

of rainfall in spring/summer
by 2080 and +10/20% of heavy
rainfall events outside of summer



Sea level rise

between 0.43 and 2.5 m by 2100, depending on
scenarios and projections. Increased risk for the
20 million people living below 5m of current sea level

Increased fire risk
through a longer
fire season, increasing
heatwaves and drought



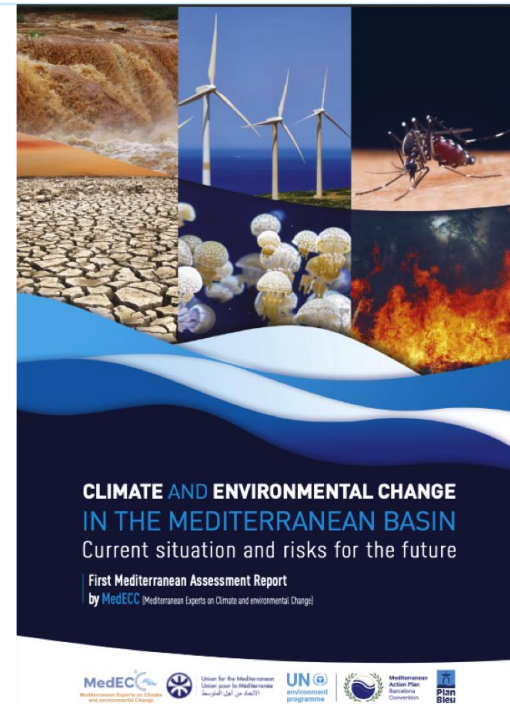
Consequences

- ⊕ heat waves
- ⊕ coastal erosion
- ⊕ fires
- ⊕ invasive species
- ⊕ acidification of the sea
- ⊕ floods
- ⊕ modification of migrations and risk of extinction of certain species
- ⊕ quality aquaculture fishing
- ⊕ agriculture production



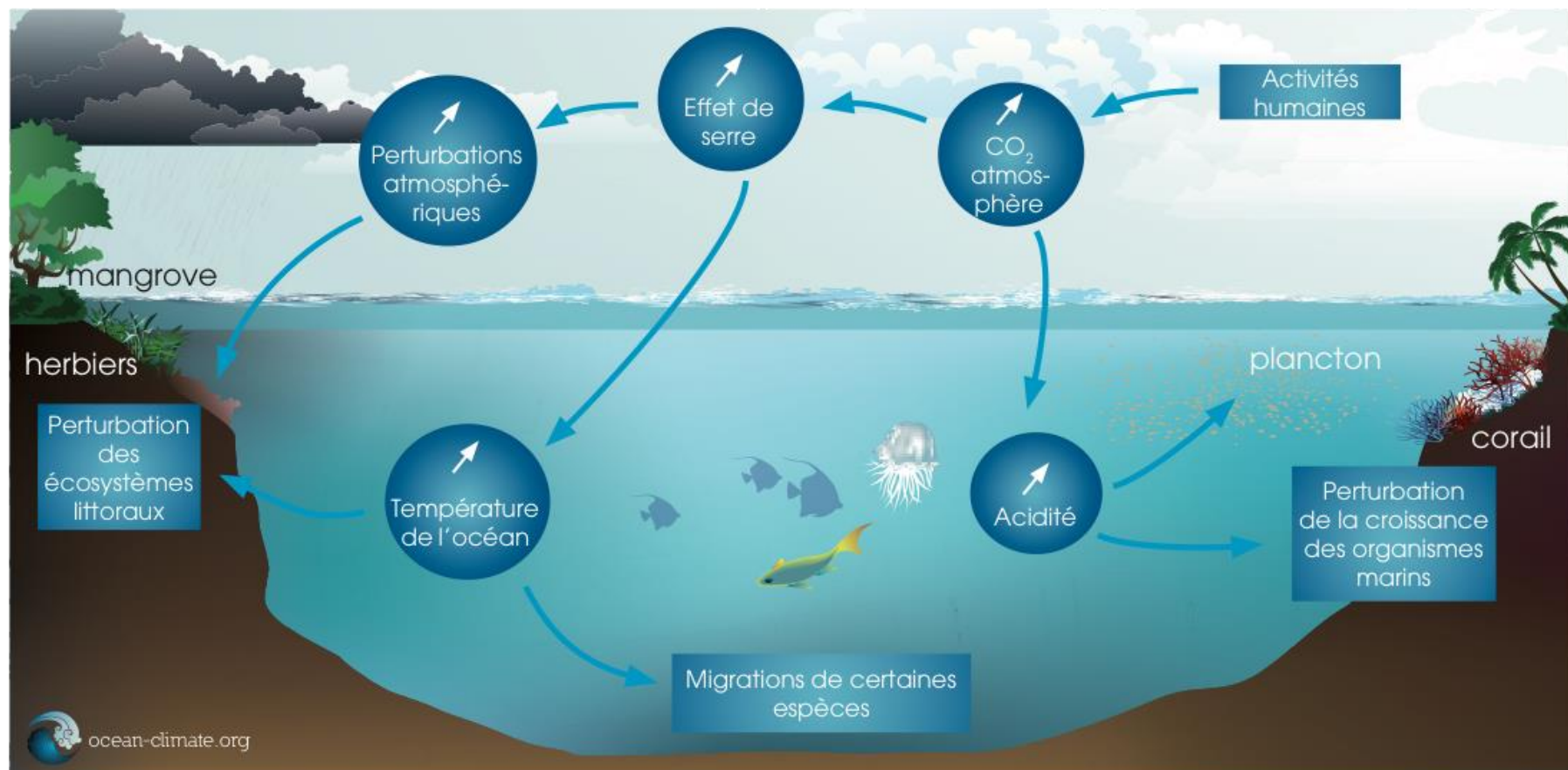
#SustainableMED

To consult the full report on the State of the Environment and Development in the Mediterranean and its information sources: www.planbleu.org/soed/2020



<https://www.medecc.org/first-mediterranean-assessment-report-mar1/>

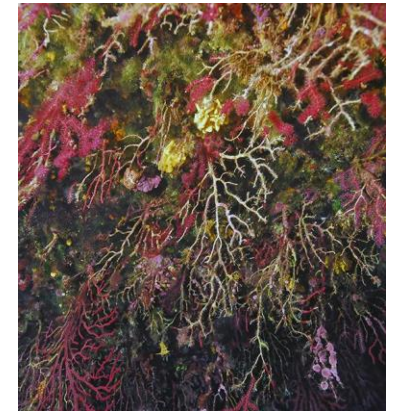
Climate Change impacts on marine biodiversity



Conséquences de l'augmentation du CO₂ sur les écosystèmes marins

Key impacts on biodiversity

- **Changes concerning the distribution of native species**
 - *Species preferring warm waters extend their range to areas where they were absent or rare.*
 - *Decrease in the abundance of some cold-water species in the northern parts of the Mediterranean (NW Med. And N Adriatic).*
- **Spread of NIS in the Mediterranean**
- **Large-scale mortality of macrobenthic communities**
- **Acidification impacts**
 - *Reduced calcification rates, reduced growth and necrosis of some calcareous organisms.*
- **Sea level rise effects, i.e. threat to the habitats of endangered species (coastal lagoons, underwater caves, beaches, etc.).**





The role of MPAs in Climate Change Adaptation

Promotion of ecosystem resilience

- MPAs can promote resilience and faster recovery of ecosystems against climate change related disturbances.

The NW Mediterranean is experiencing abnormal regional warming.

In the MPA of the Medes Islands (NE of Spain), we observe:

- Absence of extreme temperatures even in summer.
- Mitigation of thermal variations during periods of long lasting anomalies.

In comparison with other sites in the NW Mediterranean, the area is less vulnerable to large-scale mortality phenomena of coralligenous communities.



MPAs acting as site “guards”

- Unlike unprotected sites under pressure from anthropogenic factors, MPAs can be used for monitoring the impacts of climate change in the long term.
 - Better understanding of the reactions of the environment to CC stressors.

Miramare MPA (Adriatic, Italy)

Long-term monitoring data in the revealed:

- Regressions of some endemic algae species and the appearance of new ones.
- The sighting, for the first time in the region, of new species of warm-water fish.



MPAs acting as a carbon sequestration tool

- By sheltering *blue carbon* ecosystems (i.e. Posidonia meadows, salt marshes, Rhodolith beds: calcareous red algae, etc.), MPAs offer the means for significant carbon storage.

Example: Posidonia meadows trap and store large amounts of organic carbon (carbon sinks):



Storage rate for the Mediterranean: between 0.15 and 8.75×10^6 tC / year.



Historical deposit in matte from 2,5 to $20,5 \times 10^9$ tC.



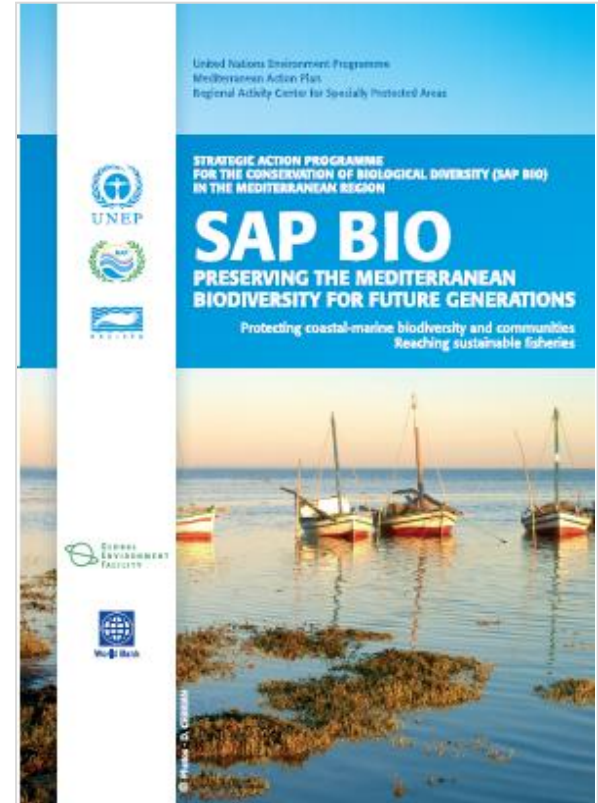
MAP Biodiversity Regulatory and Policy Framework

Biodiversity conservation and SPA/SPAMI network

- 9 Action Plans + 1 Strategy for the conservation of endangered species and their habitats (monk seal, turtles, cetacean, birds, cartilaginous fish, vegetation, coralligenous, dark habitats, non-indigenous species)
- Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to Achieve Aichi Target 11 in the Mediterranean MPA (COP 19, Athens, 2016)
 - Strengthen networks of protected areas at national and Mediterranean levels, including in the high seas and ABNJ;
 - Improve Mediterranean MPA network through effective and equitable management;
 - Promote sharing of environmental and socio-economic benefits and integration into the ecosystem and marine spatial planning approaches;
 - Ensure the MPA network stability by enhancing their financial sustainability.
- Currently 1,126 MPAs in the Mediterranean Sea covering 209 303 km² (**8.3%**), including only 0.06% of strictly protected areas;
- SPAMI List established in 2001 to promote cooperation in management and conservation of natural areas and protection of threatened species and habitats;
- 39 SPAMIs included in the SPAMI List; Regular assessment and SPAMI review.

The Strategic Action Programme for the Conservation of Biological Diversity (SAP BIO)

- The first SAPBIO was adopted in December 2003 for a 15-year period
- Played 2 important roles:
 - ✓ A strategic framework for implementation of the SPA/BD Protocol at national and regional levels. It allowed harmonization and alignment of planning for biodiversity conservation in the Mediterranean.
 - ✓ Facilitating exchanges among departments within and among countries on common objectives in biodiversity conservation.



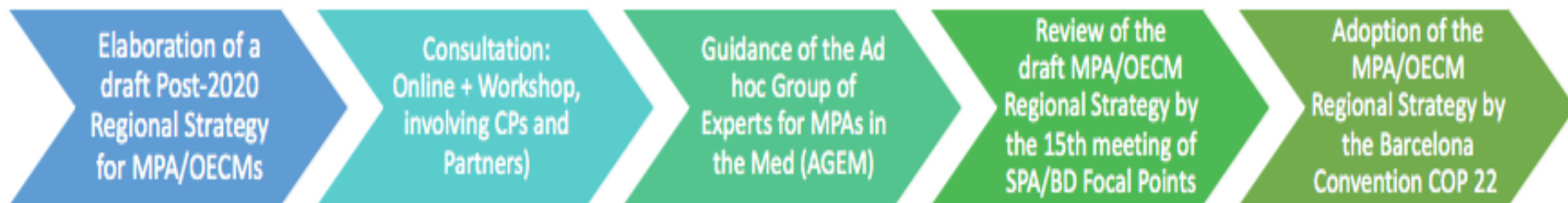
Post-2020 SAPBIO

- The Barcelona Convention COP 21 (December 2019) requested to prepare in 2020-2021 the Post-2020 SAPBIO, aligned with the Sustainable Development Goals, harmonised with the CBD Post-2020 Global Biodiversity Framework through the optic of the Mediterranean context.
- The Post-2020 SAPBIO should be:
 - ✓ action-oriented
 - ✓ made of activities tailored towards realistic objectives and reasonably achievable
 - ✓ coordinated with relevant international organizations and supportable by donors and funding agencies.
- **Target 3.3. under Objective 3 on Ecosystem Health dedicated to Climate Change mitigation and adaptation**



The Post-2020 Regional Strategy for MPAs and OECMs in the Mediterranean

- The Post-2020 Regional Strategy for MPAs and OECMs in the Mediterranean should be:
 - ✓ actionable and transformational
 - ✓ in line with the Post-2020 Global Biodiversity Framework of the CBD, the Post-2020 SAPBIO, and other relevant global, regional and sub-regional processes and initiatives,
 - ✓ elaborated in consultation with relevant global and regional organizations, national institutions, and Mediterranean countries' representatives (COP 21 Decision IG.24/6)
- **Specific output dedicated to the recognition and accounting of the contribution of MPCAs and OECMs to sustainable development goals, the blue economy, climate change mitigation and adaptation, and the wider society**





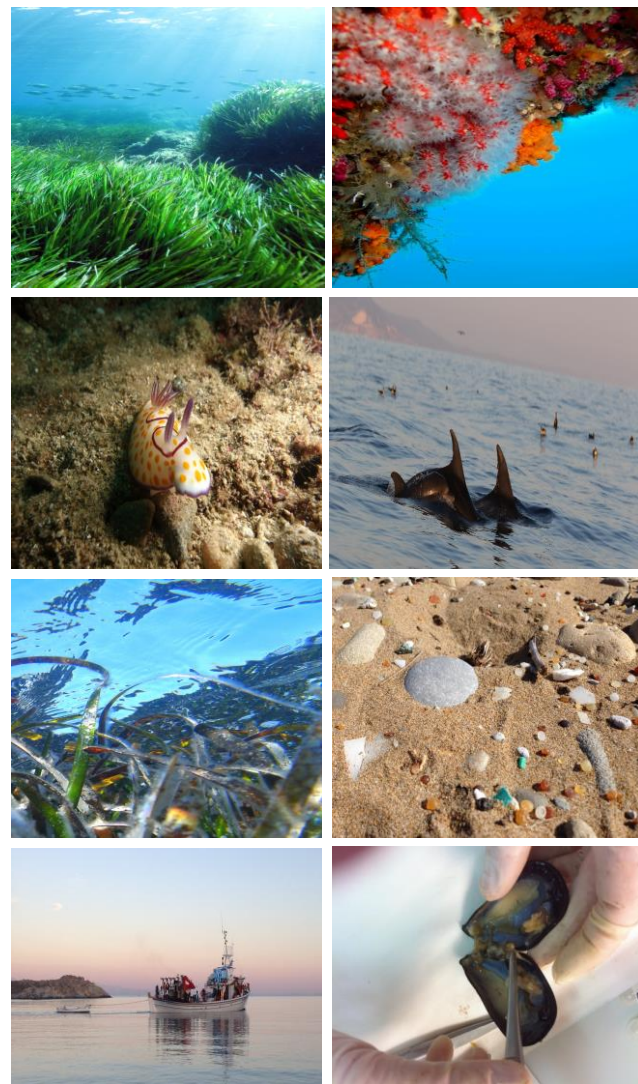
UNEP/MAP
Barcelona Convention
Ecosystem Approach Roadmap:
Implementation and the Way
Forward

Good Environmental Status of the Mediterranean

- 11 Ecological Objectives covering all the main aspects of the marine and coastal environment (COP 17, Decision IG. 20/4)

- | | |
|---|---------------------------------------|
| 1. Biodiversity | 7. Hydrography |
| 2. Non-indigenous species | 8. Coastal ecosystems and landscapes |
| 3. Harvest of commercially exploited fish and shellfish | 9. Pollution (contaminants) |
| 4. Marine food webs | 10. Marine litter |
| 5. Eutrophication | 11. Energy including underwater noise |
| 6. Sea-floor integrity | |

- 28 Operational Objectives (COP 17, Decision IG. 20/4)
- 61 Indicators (COP 17, Decision IG. 20/4)
- 40 GES definitions (COP 18, Decision IG.21/3)
- 66 Targets (COP 18, Decision IG.21/3)
- Integrated Monitoring and Assessment Programme (IMAP): 23 Common Indicators and 4 Candidate Indicators (COP 19, Decision IG.22/7)



IMAP implementation at national level and further development at regional level

- ❑ Implementation of national monitoring programmes (national IMAP)
- ❑ Mobilization of external resources to support IMAP implementation
- ❑ Delivery of quality-assured data for 23 Common Indicators of IMAP
- ❑ Progressing towards definition of assessment scales and criteria for IMAP CI
- ❑ Progressing towards consensus for integrated GES assessment methodologies
- ❑ Mobilizing science-policy interface and collaboration with scientific community
- ❑ Building a strong Information System for IMAP to collect and assess data, using SEIS principles
- ❑ Strengthening capacities of the Contracting Parties on IMAP implementation
- ❑ Very strong synergies with EU MSFD to benefit from the work already undertaken
- ❑ Full participation in the UN Decade on Ocean Science

Streamline Ecosystem Approach in MAP Barcelona Convention at programmatic, regulatory and policy level, with ultimate objective to achieve/contribute to GES

- ❑ UNEP/MAP Medium-Term Strategy 2022-2027
- ❑ Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)
- ❑ Post-2021 Mediterranean Strategy for Prevention of and Response to Marine Pollution from Ships
- ❑ Ballast Water Management Strategy for the Mediterranean Sea (2022-2027)
- ❑ Legally binding Regional Measures under LBS Protocol Article 15: WWTP, management, sludge management, marine litter
- ❑ Progress on the implementation of Roadmap for Proposal for the Possible Designation of the Mediterranean Sea, as SOx Emission Control Area
- ❑ Pilot implementation in selected areas of measures to combat marine litter and sound management of obsolete chemicals

Thank you



Mediterranean Action Plan Coordinating Unit
Barcelona Convention Secretariat



Stavros Antoniadis

Associate Administrative Officer
UNEP/Mediterranean Action Plan Coordinating Unit
Barcelona Convention Secretariat

stavros.antoniadis@un.org

<https://www.unenvironment.org/unepmap/>