



MPA4Change

POLICY BRIEF

100MPA MEDALLIANCE- EMPOWERING MPA MANAGERS FOR CLIMATE RESILIENCE



*Recommendations for
incorporating climate change
adaptation measures in Marine
Protected Areas through the
endorsement and support of the
**100MPA MedAlliance: Building
resilient MPAs to face the
climate emergency by 2030.***

Executive Summary



- The Mediterranean Sea is experiencing climate change impacts at an accelerated rate, threatening marine biodiversity and the livelihoods that depend on it.
- Marine Protected Areas (MPAs) are recognised as effective nature-based solutions for climate change adaptation and mitigation. However, currently less than 8% of Mediterranean MPAs are implementing actions to address the escalating climate crisis. Besides poor governance, lack of technical capacity, and insufficient expertise continue to limit their ability to act as tools for climate resilience.
- The MPA4Change InterregEuroMed project as a facilitator and catalyst of the 100MPA MedAlliance, empowering MPAs with tools, expertise, and strategies to adapt effectively to climate change.
- The 100MPA MedAlliance, an initiative developed within the framework of MPA4Change, seeks to support at least 100 Mediterranean MPAs by 2030 in developing and implementing robust climate adaptation plans.
- Stakeholders are called upon to support this alliance through policy integration, funding and active participation, in line with regional frameworks such as the Barcelona Convention and the Union for the Mediterranean's GreenerMed Agenda.
- The goal of this brief is to build momentum and political support for the 100MPA MedAlliance, encouraging MPA managers to take action and urging governments, agencies, and funders to provide the policy, technical and financial backing needed to reach 100 climate-ready MPAs by 2030.



The Climate Emergency in the Mediterranean

The Mediterranean Sea is warming approximately **three times faster** than the global ocean average, with sea surface temperatures rising at unprecedented rates (Pastor et al., 2020; Garrabou et al. 2022). This makes the region one of the world's most prominent climate change hotspots.

Rising temperatures, sea level rise, and increasing heatwaves and storms are causing habitat loss, shifts in species distribution, and mass mortality events that are reshaping this fragile marine environment. Without immediate and concrete actions, these losses could become irreversible. Protecting the Mediterranean is not only about preserving marine life — it is about safeguarding a vital ecological, economic, and cultural resource for future generations.



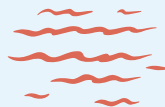
**Warming Sea Surface
Temp. 0,4°C/ decade**

3 times faster than the
global average



**1 - 6 Marine
Heatwave events**

during the last 40 years
with a duration up to
100 days



**75 - 100% of the
sea affected**

each year in the last
decade by Marine
heatwaves



**Sea level rise
3,6 mm/year**

expected to increase

Human activities already put intense pressure on the Mediterranean: the region receives nearly 30 % of global international tourist arrivals, and studies show that over 90 % of assessed fish stocks are over-exploited. These pressures compound climate impacts, such as rising sea surface temperatures, increasing frequency and extent of marine heatwaves, and accelerating sea-level rise threatening marine ecosystems, coastal livelihoods, food security, and socio-economic stability.

However, most MPAs remain ill-equipped to respond to these escalating threats due to a combination of **limited management capacity, insufficient political support, lack of technical expertise, and weak integration of climate adaptation** into existing governance frameworks.

While some national initiatives exist, fragmented and uncoordinated efforts are not enough to match the scale and urgency of the crisis. Regional cooperation is essential. Policy frameworks such as the **Post-2020 Strategic Action Programme for Biodiversity (SAPBIO)** under the Barcelona Convention and the **GreenerMed Agenda** of the Union for the Mediterranean (UfM) provide a roadmap for action, but implementation remains weak, particularly in the field of marine climate adaptation, which is the focus of this initiative.

Why the 100MPA MedAlliance?

Officially **designated Marine Protected Areas (MPAs)** — including national statutes, Marine Natura 2000 sites, and the Pelagos Sanctuary — **cover only 8.3% of the Mediterranean Sea.**

No-go, no-take, or no-fishing zones represented just **0.04%, and fewer than 8% of MPAs** had integrated climate adaptation measures into their management frameworks (UNEP/MAP, SPA/RAC & MedPAN 2020; Bernat et al., 2022; Garrabou et al., 2019; Canizzo et al., 2025; Champion et al., 2024; Corelli et al., 2024; O'Regan et al., 2021).

These gaps illustrate the urgent need for coordinated and scalable action across the region — a **need the 100MPA MedAlliance aims to meet.**



What is the 100 MPA MedAlliance?

The **100MPA MedAlliance** is a collaborative initiative developed within the framework of the Interreg **Euro-MED MPA4Change** project. It aims to unite at least 100 Mediterranean MPAs by 2030 to enhance their resilience through climate adaptation.

The 100MPA MedAlliance supports MPAs by:



Empowering MPAs: Providing ready-to-use toolkits for risk assessment, monitoring, participatory engagement, and the development of climate adaptation action plans.



Building Expertise: Establishing a regional roster of experts to guide MPAs in designing and implementing climate strategies.



Fostering Policy Integration: Aligning MPA management with international, EU, and Mediterranean climate frameworks — including the Kunming-Montreal Global Biodiversity Framework, the EU Biodiversity Strategy, and the Post-2020 SAPBIO under the Barcelona Convention.

By 2030, the 100MPA MedAlliance aims to have **at least 100 MPAs actively implementing climate adaptation plans, contributing to a more resilient Mediterranean Sea.**

While the initiative focuses primarily on adaptation, it **also supports broader climate resilience goals**, including the protection of blue carbon ecosystems that can contribute to mitigation.



The 100MPA MedAlliance and the MPA4Change project **build upon a decade of work** and capitalisation across the Mediterranean.

This includes methodologies, tools, and knowledge from regional and EU-funded initiatives such as:



MPA-ENGAGE, AMARE+, REST-COAST, LIFE ENABLE, FUTUREMARES, MSP4BIO, SEMPA, ENSERES, PHAROS4MPAs, Mediterranean Blue Forests, FishEBM Med, MERCES, SEACURE, DIVERSEA, CESNA-LB, POLICE, and MPA NETWORKS, among others.

Projects and partners working in contrasted socio-ecological context allowed to build a shared version contribute to well-managed, climate-resilient MPAs that function as nature-based solutions across the basin.



Strategic Alignment

The 100MPA MedAlliance aligns with key policy frameworks and targets at global, European, and regional levels:

Barcelona Convention (SPA/BD Protocol)

Contributes to the Protocol on Specially Protected Areas and Biological Diversity; supports the regional 30×30 target (30 % protected, 10 % strictly protected); enhances MPAs as tools for adaptation.

UNEP/MAP – IMAP & CAR/CC

Strengthens regional coordination and data-sharing on climate impacts, in line with the Integrated Monitoring and Assessment Programme (IMAP). Especially relevant is the potential synergy with the Climate Change Regional Activity Centre (CAR/CC).

Post-2020 SAPBIO (Strategic Action Programme for Biological Diversity, Mediterranean)

Aligns with the GBF and SDGs, emphasizing the expansion and effective management of MPAs/OECMs, integrating climate change impacts (e.g. sea level rise, acidification) and regional priorities.

2030 GreenerMed Agenda (UfM)

Positioned at the same level of importance: this regional framework (endorsed by 42 UfM countries in 2021) brings together environment, climate change, and sustainable development goals. It facilitates operational convergence across countries, helps align policies, plans and investments, and integrates themes such as ecosystem-based protection, habitat restoration, adaptation and resilience.

Kunming-Montreal Global Biodiversity Framework (GBF)

Supports implementation of Target 3 (30×30) and Target 8 (adaptation and ecosystem resilience); reinforces the role of MPAs as frontline nature-based solutions.

UN Sustainable Development Goals (SDGs)

- SDG 13 – Climate Action: Supports Target 13.2 by integrating climate measures into national strategies via MPA adaptation plans.
- SDG 14 – Life Below Water: Enhances resilience and protects biodiversity through effective MPA management.
- SDG 6 & SDG 15 – Clean Water & Life on Land: Acknowledges land-sea nexus (coastal eutrophication, freshwater inputs, watershed management) affecting marine ecosystems.

EU Green Deal Flagship Initiatives

- EU Adaptation Strategy: Promotes smarter, systemic adaptation through data sharing and local action.
- EU Biodiversity Strategy for 2030: Advances the 30 % protection target with 10 % strictly protected.
- Nature Restoration Regulation: Facilitates marine habitat restoration (e.g. seagrass, coralligenous) via nature-based solutions.

Other Relevant Initiatives

- EU Mission: Restore our Ocean and Waters
- Marine Strategy Framework Directive (MSFD)
- EU Maritime Spatial Planning Directive
- EU Marine Action Plan



Lighthouses of Change: Pilot MPAs Leading the Way



The MPAs engaged by the **100MPA MedAlliance** serve as **lighthouses**, guiding neighbouring MPAs in adopting climate adaptation strategies and improving management effectiveness. Their strategic geographical distribution facilitates the spread of best practices, encouraging other regions to implement similar solutions. By fostering regional cooperation and strengthening connections across the Mediterranean, this approach amplifies conservation efforts, enhances biodiversity protection, and contributes to a more resilient Mediterranean MPA system.

The **100MPA MedAlliance** builds on **proven tools and methodologies**, successfully tested in diverse socio-ecological contexts across the Mediterranean over the past decade. **More than 30 partners** — including MPA management bodies, research teams, and NGOs from **9 Mediterranean countries** — have co-developed and applied the MPA4Change toolkits to ensure their effectiveness and adaptability.



The **MPA4Change toolkits** are structured resources designed to support MPA managers through the full process of designing local climate adaptation strategies.

They cover:

- data collection and ecological monitoring,
- current and future vulnerability assessments,
- participatory engagement strategies,



and communication tools — all converging in the development of **local adaptation action plans**.

At present:

70+ monitoring sites in **25+** MPAs across **11** Mediterranean countries record sea temperature via T-MEDNet, providing continuous data on warming and marine heatwaves.

Vulnerability assessments have been completed in several local MPAs, guiding managers on climate risks and adaptation options.

+3,000 volunteers, **60** scientists and **250+** partner entities contribute through Observadores del Mar, with **13,000+** citizen observations supporting ecological monitoring.

Hundreds of managers and stakeholders trained in online and field sessions are now equipped to integrate adaptation into daily MPA management.

“



“Citizen science allows us to monitor changes in real-time and engage our community. This creates ownership and faster reaction when problems arise.” — Giorgio Fanciulli, MPA manager, Portofino MPA (Italy)

”



“

“Participatory adaptation planning helped us align eco-tourism and seagrass protection — we now involve all stakeholders in implementation.”

Marno Milotić- Brijuni National Park director (Croatia)

”

**BRIJUNI**
National Park

Call to Action: How You Can Support the 100MPA MedAlliance

Why Now?

The upcoming **EU Multiannual Financial Framework (2028–2034)**, the Barcelona Convention COP24, the emergence of a Mediterranean macro-regional strategy, and the UfM’s 2030 GreenerMed Agenda create a timely policy window to scale adaptation efforts across MPAs. This brief is designed primarily as an outreach document for MPA managers. By joining the **100MPA MedAlliance**, MPAs gain access to tools, technical guidance, and visibility as part of a broader Mediterranean effort.

While MPA managers and site-level practitioners are the main audience, this brief also conveys strategic messages for political and institutional actors. Mediterranean stakeholders are encouraged to:

- **(1) Adopt joint climate adaptation measures** under frameworks such as the Barcelona Convention COP24.
- **(2) Ensure that marine climate adaptation is prioritised** in the post-2027 EU Cohesion Policy programming, especially under the European Regional Development Fund (ERDF) and related instruments currently under consultation.
- **(3) Formally endorse the 100 MPA MedAlliance** as a shared regional initiative for climate resilience implementation and recognition across the Mediterranean.

For MPA Managers

- Join the **100MPA MedAlliance** and **partner networks such as MedPAN and EUROPARC** to access toolkits, training, and expert support for Marine Protected Areas.
- Advocate within your networks and institutions for the endorsement of the **100MPA MedAlliance** and the integration of climate change adaptation plans into local, regional, and national marine and biodiversity policies.
- Implement and showcase best practices, such as:
 - **Conducting integrated actions** such as harmonised monitoring, vulnerability assessments, participatory engagement, and adaptation planning, as tested under the Interreg Med transferred under the MPA4Change project.
 - **Disseminating outcomes**—e.g., how Portofino uses citizen science for real-time alerts, and Brijuni's integration of nature-based restoration into management plans.

For Policy Makers

- Integrate climate adaptation into national and regional MPA policies using proven frameworks such as the **MPA-Engage Joint Governance Plan** and in alignment with regional strategies like the Post-2020 SAPBIO under the Barcelona Convention and the **Greener MedAgenda**.
- Harmonise monitoring and assessment protocols by adopting the standardised tools transferred through the **MPA4Change toolkits**, including common guidelines and templates for climate monitoring. These tools support alignment with **EU-level frameworks** (e.g. Marine

Strategy Framework Directive – MSFD) and regional mechanisms such as IMAP under the Barcelona Convention, improving data comparability and policy coherence.

For Donors & Institutions

- Support climate-resilient MPAs through targeted investment in capacity-building and training programmes, such as those developed under **MPA4Change** and to be scaled up through the **100MPA MedAlliance**.
- Explore regionally relevant blended-finance approaches where national frameworks allow — including **EU-aligned schemes** such as nature credits, results-based restoration finance, and **Blue Natural Capital** initiatives.
- While innovative tools like blue carbon bonds and debt-for-nature swaps have been piloted globally (e.g. Seychelles, Bahamas), their application in the Mediterranean requires enabling policies and investment frameworks at national and regional levels.
- Aligning donor strategies with the **EU Nature Restoration Regulation, GreenerMed Agenda, and Barcelona Convention** objectives will ensure coherence and impact.



Contact & Endorsement

This policy brief is produced under the Interreg Euro-MED MPA4Change project.

Contact:

- info@100mpamedalliance.org
- <https://mpa4change.interreg-euro-med.eu/contact-us/>

Website:

- MPA4Change: <https://mpa4change.interreg-euro-med.eu/>
- 100MPAMedAlliance.org: 100MPAMedAlliance.org

Note: When displaying the MPA4Change logo alongside other logos, ensure the EU emblem is at least the same height as the largest of the other logos, in accordance with EU guidelines.

About this Policy Brief

This policy brief has been produced in the framework of the Interreg Euro-MED MPA4Change project (Euro-MED0200736). The work has been **led by Patricia Puig and María Giménez (Oceanogami)** and has been made possible thanks to the inputs and revisions from **Joaquim Garrabou (CSIC), Nicolas Espitalier and Anna Monserrat (B.link), and Fernando Pinillos (EUROPARC Federation)**.

In addition, we want to thank for their contributions to **Federico Minozzi and Sanna Kaisa-Juvonen (EUROPARC Federation)**, as well as to the whole **MPA4Change project partnership** for their direct or indirect contributions and support.

References

- Bernat, P., Frongia, V., Minetti, D., Molinari, A., Penati, F., Garrabou, F., & Vlachogianni, Th. (2022). MPA Engage: Engaging Mediterranean key actors in Ecosystem Approach to manage Marine Protected Areas to face Climate change. Policy Paper. INTERREG Mediterranean. <https://mpa4change.interreg-euro-med.eu/wp-content/uploads/sites/77/policy-paper-climate-change-in-mediterranean-mpas-fast-tracking-actions-for-effective-management-and-enhanced-resilience-in-a-changing-ocean.pdf>
- Cannizzo, Z.J., Hunter, K.L., Hutto, S., Selgrath, J.C., Wenzel, L. (2025). Future-proofing the global system of marine protected areas: Integrating climate change into planning and management, *Marine Policy*, volume 171, 106420. <https://doi.org/10.1016/j.marpol.2024.106420>
- Champion, C., Lawson, J.R., Whiteway, T., Coleman, M.A. (2024). Exposure of marine protected areas to future ocean warming: Indices to guide climate adaptation planning, *Ocean & Coastal Management*, volume 254, 107143. <https://doi.org/10.1016/j.ocecoaman.2024.107143>
- MedECC (2020) Climate and Environmental Change in the Mediterranean Basin – Current Situation and Risks for the Future. First Mediterranean Assessment Report [Cramer, W., Guiot, J., Marini, K. (eds.)] Union for the Mediterranean, Plan Bleu, UNEP/MAP, Marseille, France, 632pp. ISBN: 978-2-9577416-0-1/<https://www.medecc.org/medecc-reports/climate-and-environmental-change-in-the-mediterranean-basin-current-situation-and-risks-for-the-future-1st-mediterranean-assessment-report/>
- Corelli, V., Boerder, K., Hunter, K. L., Lavoie, I., & Tittensor, D. P. (2024). The biodiversity adaptation gap: Management actions for marine protected areas in the face of climate change. *Conservation Letters*, 17, e13003. <https://doi.org/10.1111/conl.13003>
- European Commission (2020). EU Biodiversity Strategy for 2030: Bringing Nature Back into Our Lives. European Commission. https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en
- Garrabou, J., Gómez-Gras, D., Medrano, A., Cerrano, C., Ponti, M., Schlegel, R., et al. (2022). Marine heatwaves drive recurrent mass mortalities in the Mediterranean Sea. *Global Change Biology*, 28(19), 5708–5725. <https://doi.org/10.1111/gcb.16301>

- Garrabou, J., Azzurro, E., Bensoussan, N., Sbragaglia, V., & Otero, M. (2019). Joint Governance Plan. Developing adaptation plans to face climate change impacts in Mediterranean Marine Protected Areas. MPA-ADAPT. https://adaptecca.es/sites/default/files/documentos/mpa-adapt_jointgovernanceplan.pdf
- MAPAMED (2019). Database of Marine Protected Areas in the Mediterranean. <https://www.mapamed.org/>
- MedPAN (2022). MPA Success Story: A National Park made by 14 islands of natural and historical importance. Case Study. <https://medpan.org/en/resource-center/mpa-success-story-national-park-made-14-islands-natural-and-historical-importance>
- Merotto, L., & EUROPARC (2020). Climate change adaptation in the Portofino Marine Protected Area: the collaboration with local stakeholders. Case Study. Presentation. https://www.europarc.org/wp-content/uploads/2020/05/L.Merotto-Portofino-MPA-Siggen-Europarc_DEF.pdf
- O'Regan SM, Archer SK, Friesen SK and Hunter KL (2021) A Global Assessment of Climate Change Adaptation in Marine Protected Area Management Plans. Front. Mar. Sci. 8:711085. https://www.researchgate.net/publication/354357577_A_Global_Assessment_of_Climate_Change_Adaptation_in_Marine_Protected_Area_Management_Plans
- Pastor, F., Valiente, J. A., & Khodayar, S. (2020). A Warming Mediterranean: 38 Years of Increasing Sea Surface Temperature. Remote Sensing, 12(17), 2687. <https://doi.org/10.3390/rs12172687>
- UNEP/MAP & SPA/RAC (2021). Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (SAPBIO). UNEP/MAP. https://www.rac-spa.org/sites/default/files/doc_sapbio/post_2020_sapbio.pdf
- UNEP/MAP, SPA/RAC & MedPAN (2020). Status of Marine Protected Areas in the Mediterranean Sea. MedPAN. <https://medpan.org/en/resource-center/status-marine-protected-areas-mediterranean-sea-2020-edition>

