



TOWARDS A NATURE POSITIVE MEDITERRANEAN

*Accelerating the transition for the conservation,
restoration and wise use of biodiversity in the
Mediterranean*

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Interreg 
Mediterranean

 **BIODIVERSITY
PROTECTION**

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Summary

This policy paper draws on various recent policy discussions and papers at a global level, particularly the transformation pathways from the Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). It also stems from the need to tackle climate change and biodiversity targets simultaneously to generate solutions at the Mediterranean basin.

Building on the IPBES findings, this paper identifies transformative actions that bring about change in the conservation, restoration and wise use of coastal and marine biodiversity ensuring the positive coexistence between economic sectors and sensitive species and habitats found in the Mediterranean region. It argues for the feasible implementation of these actions through available solutions and tools developed by the Interreg Mediterranean Biodiversity Protection Community, among others, that would place the region in the path of ecological resilience and nature recovery.

Section 1 justifies, through evidence, the need to address the climate change and biodiversity crisis in a more integrated manner across the Mediterranean region, and calls for urgent transformative actions. Section 2 describes the international and regional policy commitments and main strategies to mitigate and adapt to climate change, halt biodiversity loss and put it on a path to recovery. It argues for a Nature Positive movement towards 2030 to build the support action needed to bend the curve on biodiversity loss and ensure nature's contributions to people, which will also contribute towards achieving the SDGs, Net-zero and the 2050 Global Biodiversity Vision.

The following section, (Section 3), translates the idea of transformative change unlocking the potential of Nature Positive Solutions through the delivery of four transformational pathways for the Mediterranean basin. Key levers for transformation are presented with examples driven from experiences of the Mediterranean Biodiversity Conservation Community funded Interreg Mediterranean Programme. Lastly, section 4, provides a set of proposed response actions for initiating transformation which can emerge from, and be realised by, multiple actors working across diverse contexts.

01. The time for decisive action

The Mediterranean has long been recognised as a global conservation priority. However, the pressures we exert, continue to degrade it and the pace of regeneration is not fast enough to permit recovery¹. Although some indicators demonstrate there have been improvements, overall, the evidence of the alarming decline in biodiversity, both locally and globally, continues to mount. Roughly 11% of marine species (including common species that were once abundant, such as sperm whales, sharks and the endemic fan mussel *Pinna nobilis*² and 14% of coastal terrestrial species are in decline and threatened with extinction. Wetlands have declined by almost 50% since the 1970s, especially on the eastern and southern shores of the basin³. Other coastal ecosystems such as seagrasses and macroalgal forests that were once extensively distributed across the Mediterranean, have also seen a continuous decline in their coverage and health over the years. Today, the region is a hotspot for a number of climate risks. The Intergovernmental Panel on Climate Change⁴ reported that **air temperatures in the Mediterranean are rising about 20% faster than the global average** and, according to the future projections and scenarios, seawater is expected to continue warming from 1.1 to 3.8°C by 2100. The first report by the network of Mediterranean Experts on Climate and Environmental Change (MedECC) confirmed these observations, indicating the high vulnerability of the coastal environment. The sea level has risen by 6 centimetres in the past two decades alone, and this trend is accelerating⁵. Likewise, increasing concentrations of dissolved CO₂ has acidified the waters of the Mediterranean Sea, affecting the fishing and aquaculture industries. Other climate risks such as wildfires, storms, droughts, floods and marine heatwaves already seen over last years, will experience a rise in frequency and/or intensity. These pressures are likely to increase over the next decade unless substantial action to reduce greenhouse gas (GHG) emissions is taken.

The population continues to grow in coastal and urban areas of the Mediterranean region and is predicted to reach 572 million by 2030⁶. The region is one of the most popular tourist destinations in the world and supports key economic sectors born of the sea such as fisheries, aquaculture, energy, transport and logistics. The combination of population growth alongside tourism, maritime traffic, increases in consumption of goods and resources, and climate change, generates multiple environmental pressures that will continue to intensify over the next decades.

¹ UNEP-MAP, Plan Bleu (2020). State of the Environment and Development in the Mediterranean. Chapt. 3: Biodiversity and Ecosystem Services. Several authors. 341pp.

² IUCN Red List of Threatened Species IUCN

³ Trombetti et al., 2022. Mapping and assessment of the state of wetland ecosystems: a Mediterranean perspective. Interreg Mediterranean Biodiversity Protection Community project. 84pp.

⁴ IPCC (2022). Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Retrieved from <https://www.ipcc.ch/report/ar6/wg2/>

⁵ 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

⁶ UNEP-MAP. Mediterranean Quality Status Report 2017, Barcelona Convention.

Such pressures threaten to intensify biodiversity loss and the related decline of nature's contributions to people⁷ such as fisheries production, flood protection and carbon sequestration.

There is increasing awareness that climate change and biodiversity loss cannot be treated as independent issues. The United Nations Sustainable Development Goals (SDGs) directly include combating climate change and halting biodiversity loss, and climate and biodiversity also underpin the other SDGs⁸. In addition, there is growing evidence^{9,10} that **healthy nature and natural climate solutions can provide around one-third of the cost-effective climate mitigation needed between now and 2030** to stabilise warming to below 2°C. These Nature-based Solutions can provide a powerful defence against the impacts and long-term hazards of climate change, that will support the economy and benefit the overall quality of life.

As we move to act urgently on climate change, we need to prevent further pressure on biodiversity and implement options that provide synergistic gains for mitigating both the climate and biodiversity crises. Implementing these synergistic actions will require careful planning and a transformational approach to prevent further biodiversity loss and to identify and capitalise on opportunities that simultaneously mitigate both the climate and biodiversity crises, while also realising sustainable development in the Mediterranean¹¹.

Action changes will involve linking biodiversity issues to sustainable food and consumption, greatly increasing financial and human resources for conservation and restoration, and maintaining freshwater supplies while providing food for the growing coastal towns and cities¹².

02. Boosting integrated pathways for a nature-positive response in the Mediterranean

The recognition for urgent climate and biodiversity action has led to policy actions at global and regional levels. The post-2020 Global Biodiversity Framework (GBF) of the Convention on Biological Diversity (CBD), currently in negotiation, is expected to commit the global community to goals to halt and reverse biodiversity loss through 22

⁷ IPBES category of nature's contributions to people. <https://ipbes.net/glossary/natures-contributions-people>

⁸ Sustainable Development Goals. United Nations General Assembly, 2015

⁹ Griscom, B. W., Adams, J., Ellis, P. W., Houghton, R. A., Lomax, G., Miteva, D. A., ... Fargione, J. (2017). Natural climate solutions. Proceedings of the National Academy of Sciences of the United States of America, 114, 11645–11650. 10.1073/pnas.1710465114

¹⁰ Seddon, N., Sengupta, S., García-Espinosa, M., Hauler, I., Herr, D. and Rizvi, A.R. (2019). Nature-based Solutions in Nationally Determined Contributions: Synthesis and recommendations for enhancing climate ambition and action by 2020. Gland, Switzerland and Oxford, UK: IUCN and University of Oxford.

¹¹ IPCC (2019): Summary for Policymakers. In: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3–35.

¹² IPBES (2019): Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Brondizio, E.S., Settele, J., Díaz, S., Ngo, H.T. (eds). IPBES secretariat, Bonn, Germany, 1144 pages. ISBN: 978-3-947851-20-1.

action-oriented targets for 2030 which aim to contribute to the 2050 Vision for Biodiversity. The vision of the framework is a world living in harmony with nature where: ***“By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”*** The new framework also reflects this need for a transformational change in order to reach the established goals and includes a dedicated target on mitigation and adaptation to climate change - Target 8 in its first draft form aims

“to minimise the impact of climate change on biodiversity, contribute to mitigation and adaptation through ecosystem-based approaches, contributing at least 10 GtCO₂e per year to global mitigation efforts, and ensure that all mitigation and adaptation efforts avoid negative impacts on biodiversity”¹³.

To achieve this post-2020 vision, countries will need to work together effectively to steer action on biodiversity by the public and private sectors, and bring about the transformational changes in national goals, policies and actions needed to avert the biodiversity loss predicted over the next decades. The SDGs and Agenda 2030 have been highlighted as a useful framework to create more coherent climate and national biodiversity planning.

“Nature Positive by 2030” has recently been proposed by non-state actors and several Government leaders¹⁴ as a global goal to stop and reverse the loss of nature in order to strengthen the GBF mission. This goal aims to achieve a Net Nature Positive outcome by 2030 by reversing biodiversity loss and improving the state of nature against a 2020 baseline, supporting both climate action and the Sustainable Development Goals (Figure 1). Increasing commitment to the nature-positive concept has stimulated a range of conservation and industry initiatives through public-private partnerships to drive transformational change.

Under the Paris Agreement, the first global stocktake will happen in 2023. It will assess whether the net result of climate actions currently being taken by countries is consistent with the goal of keeping the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels. This process has been highlighted as a key moment where carbon neutrality pathways must demonstrate they do not compromise biodiversity conservation, but rather ensure countries are collectively placing themselves onto nature-positive climate neutrality pathways.

<Limiting climate change to 1.5°C is essential for achieving ambitious biodiversity goals>^{11,12}

¹³ Recommendation CBD/WG2020/REC/4/1. Post-2020 global biodiversity framework.

¹⁴ [Nature Positive by 2030 - Leaders Pledge for Nature](#)

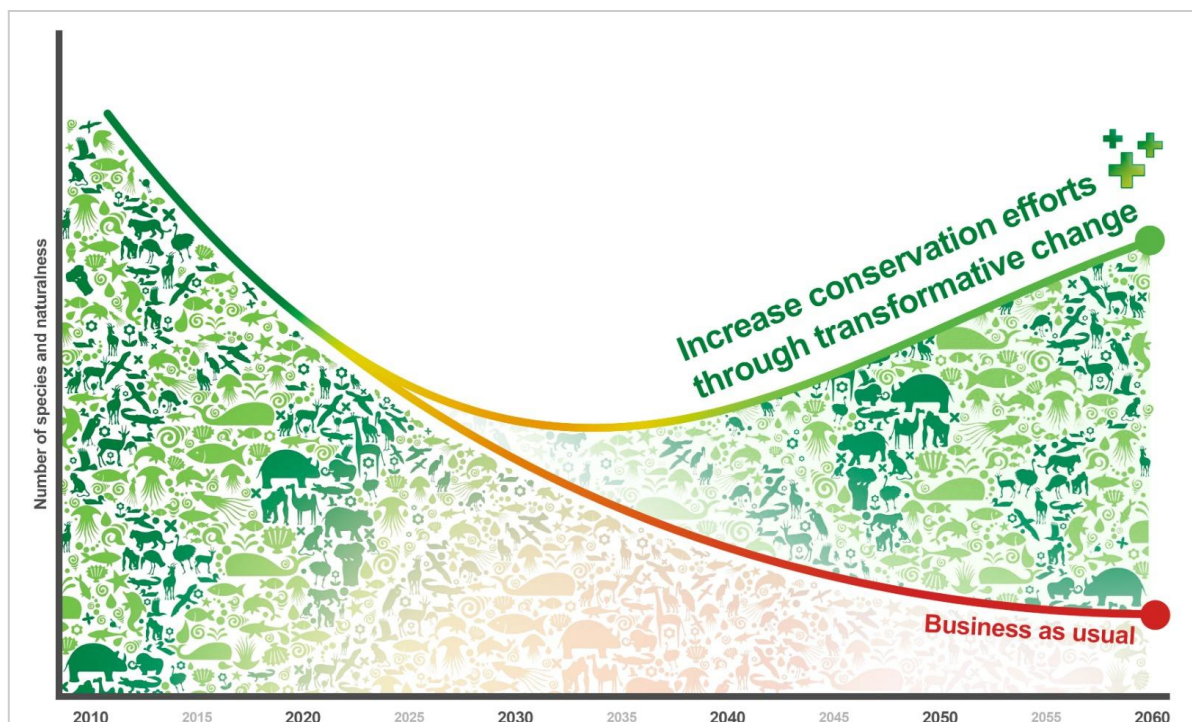


Figure 1. Illustrative diagram to achieve a Net Nature Positive by 2030 so it is visibly and measurably on the path of recovery.

Mediterranean governments are increasing commitments and actions intended to mitigate climate change, halt biodiversity loss and put it on a path to recovery. Strategic frameworks under the UNEP/MAP-Barcelona Convention, the EU and the General Fisheries Commission for the Mediterranean (GFCM) have included a range of goals that by 2030 will provide support moving towards a healthier ecosystem and stable climate (Figure 2). To safeguard biodiversity and help drive improvements in environmental sustainability, other international strategies, including various Conventions and Agreements (e.g. Ballast Water Convention), have established short to medium-term sectoral plans to safeguard biodiversity and help drive improvements in environmental sustainability, including rules and standards for preventing and/or reducing specific threats to the marine environment or its biodiversity. Under the Barcelona Convention, a new set of ambitious targets for biodiversity have been recently adopted by Mediterranean countries for expanding protected areas, species management plans and ecosystem restoration as well as for reducing key pressures on health and natural ecosystems and species (Figure 2). Most of these targets and biodiversity measures have direct or indirect impacts on climate change mitigation (Annex 1) besides adaptation, and will help to achieve the goal of carbon neutrality under the UNFCCC. There is also a Regional Climate Change Adaptation Framework for Marine and Coastal Areas under the Barcelona Convention, in line with the Mediterranean Strategy for Sustainable Development 2016-2025, to increase the resilience of the Mediterranean marine and coastal environment and its socio-economic systems to the impacts of climate change¹⁵.

¹⁵ Decision IG.22/6. Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas. Barcelona Convention. [rccaf_eng.pdf \(unep.org\)](https://www.unep.org/med/medconvention/decision-ig226)

The Framework recognises that climatic changes will have impacts that do not respect the boundaries of a coastal zone as it is usually defined and that coastal adaptation actions may be required further inland, in particular in inland watersheds.

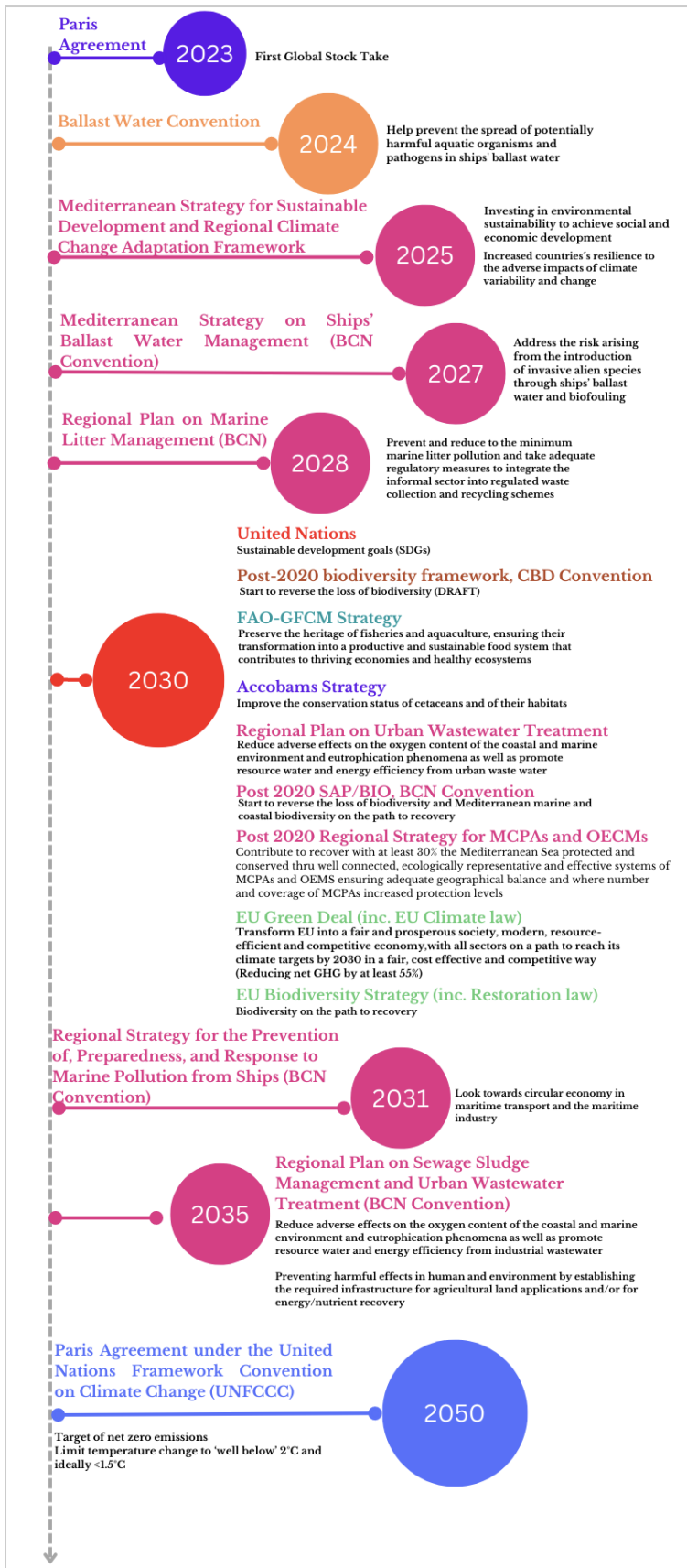


Figure 2. Main intergovernmental goals and targets for nature and sustainability in the Mediterranean. BCN: Convention of Barcelona for the Protection of the Marine Environment and the Coastal Region of the Mediterranean. CBD: Convention of Biological Diversity. FAO-GFCM: General Fisheries Commission for the Mediterranean. MCPA: Marine and Coastal Protected Areas. OECMs: Other-effective area-based conservation measures.

Biodiversity can support climate action in many ways, particularly through healthy ecosystems and well-designed 'Nature-based Solutions' (NbS). NbS are intended to protect, sustainably manage, and restore ecosystems that address societal challenges such as climate change, while providing human well-being and biodiversity benefits¹⁶. NbS support both climate change mitigation and adaptation include protecting and restoring ecosystems such as wetlands and seagrass meadows, and reforesting degraded woodland areas, thus enhancing soil carbon sequestration whilst increasing resilience to climate change impacts. The potential regulatory effects of these biodiversity conservation actions on the climate system include increasing the storage of CO₂ emissions by land and marine ecosystems and lowering GHG emissions.

NbS can encompass natural features, nature-based features, and approaches that can use, manage, or be inspired by nature. This includes preserving and restoring natural and modified ecosystems, creating novel ecosystems, building and integrating green and blue infrastructure, and adopting multiple ecosystem-based approaches across the space.

Scaling up these nature-based solutions is a powerful tool for adaptation in Mediterranean coastal communities increasing their socio- ecological resilience and avoiding the negative feedbacks of climate change.

Other actions taken to halt or reverse biodiversity loss have some consequences on climate change mitigation, although the form and strength of such contributions vary. These measures might include establishing protected areas and enhancing ecological connectivity, rebuilding marine megafauna (marine mammals, sharks and big predatory fish), increasing sustainable fishing and reducing pollution from all sources, particularly eutrophication¹⁷.

Some of the current policy measures endorsed by the different international frameworks (e.g. EU Climate law, EU's Neighbourhood, Development and International Cooperation Instrument, IMO shipping emissions) will assist Mediterranean countries in their advance towards climate targets. However, adopting further meaningful measures to reduce GHG to attain net-zero emissions by 2050 or before will be needed; as the capacity of the ecosystems, and the ocean itself, can be affected by current and future fossil fuel emissions.

Different policies have been set up to drive the Covid-19 pandemic recovery plans and socio-economic trajectories of Mediterranean countries, with a good number dedicated to sectors that are associated with a heavy biodiversity footprint, such as agriculture, energy and industry¹⁸. While some countries have taken measures to integrate biodiversity into these policies, further actions should be sought to pull these sectors onto a more sustainable trajectory. **Societal actors (e.g. from the business and finance sectors) and multi-stakeholder platforms in regions and cities can contribute to this transformational change for biodiversity and climate.**

¹⁶ IUCN (2020). Global Standard for Nature-based Solutions. A user-friendly framework for the verification, design and scaling up of NbS. First edition. Gland, Switzerland: IUCN

¹⁷ IPBES-IPCC (2021). Scientific Outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change. 232pp.

¹⁸ OECD, 2020. Biodiversity and the economic response to COVID-19: Ensuring a green and resilient recovery. 26pp.

Halting the biodiversity loss in the Mediterranean and taking nature along a path to recovery, alongside meeting climate goals, will fundamentally require transforming the economies, policies and viewpoints. Smart government policies and decisions for example introducing economic recovery and fiscal measures to address unemployment and boost economic activity, while also supporting biodiversity can help drive the transformational changes needed to protect, effectively manage and restore this biodiversity.

03. Options and pathways forward in the Mediterranean: unlocking the potential of Nature Positive Solutions

There are many different pathways to recovery. The direct and indirect drivers of biodiversity loss set out in the IPBES Global Assessment Framework demonstrate the importance of mainstreaming coordinated action to conserve and restore nature¹². It also examined several priority points for intervention, overarching strategic actions and priority interventions (levers) key to bring this societal transformation at a global level. The result of this multi-model assessment indicates that enhancing conservation efforts and the sustainable use of nature are central to an effective post-2020 Global Biodiversity Framework. It also emphasises that achieving these goals involve making fundamental reforms to economic and financial systems, including by addressing environmental impacts in socially just and appropriate ways and tackling poverty and inequality as vital parts of sustainability¹². Biodiversity-based solutions are not without drawbacks and these measures must be evaluated based on the full range of their impacts and the context in which they are being implemented¹⁷.

In line with this Global Framework and building on the experience in the Mediterranean, here we reflect on the most promising transformation pathways and key levers that could help to rapidly recover nature, driving the efforts that need to be prioritised to transform it into a Nature Positive region by 2030. These pathways could also help shape the critical step towards the path to recovery for a healthy Mediterranean Sea.

Transformation 1: Meeting climate goals while maintaining nature and nature’s contributions to people

The Mediterranean region may need to consider building on a common regional framework for climate change mitigation that complements the adaptation framework already established and provides long-term low-emission development strategies with a range of policy options that could be used to limit or remove human-related greenhouse gas (GHG) emissions from the atmosphere, including carbon dioxide, methane, nitrous oxides, and others. Selected policy tools could reduce net GHG emissions from different economic sectors, including energy, maritime transportation, industry, agriculture, livestock and commercial and residential buildings while providing an overview of the best practices for the region under the diverse socio-economic and climatic contexts.

The elaboration of this comprehensive framework for GHG mitigation aligned with the national biodiversity strategies will serve to integrate disparate national management frameworks based on solid and comprehensive scientific evidence and using precautionary

approaches, while being of wide societal, environmental and of economic interest, affecting all stakeholders in the Mediterranean.

Important positive synergies of the transformation pathway are therefore **to ensure that terrestrial, freshwater and marine biodiversity conservation are fully integrated within the mitigation and adaptation components of the Nationally Determined Contributions (NDCs)** to the Paris Agreement by Mediterranean countries with actions at sea as well as at the land interface. Understanding the trajectories of climate change at local level can also help predict, prepare and defend against future disasters and build local coastal resilience practices. This will require participatory and inclusive spatial planning to address difficult trade-offs and balance biodiversity and climate change outcomes, such as divert management practices in tourist hotspots.

Other interventions **investing in Nature based Solutions (NbS) should be sought to reduce climate risks and to mainstream biodiversity positive outcomes.** For example, enhancing protection (e.g. designating protected areas) to avoid emissions from the conversion of forests, wetlands, or from degradation of seagrasses and wetlands (carbon storage ecosystems), can help mitigation efforts, reduce the risk from flooding and stabilise coastal erosion, thereby decreasing the risk and intensity of disasters. Interventions to restore salt marshes (e.g. changes on wetland hydrology for example, when salt marshes are diked) or improve their management, can also regenerate the carbon pool generated by these type of blue carbon ecosystems (e.g. increase soil carbon sequestration and retention in wetlands and seagrasses). Equally, increasing protected areas and reducing target threats on deep-sea ecosystems will help to maximise the carbon storage potential of the Mediterranean sea.

Local adaptation strategies and plans with NbS can also increase support for local activities and build on existing knowledge while providing a platform for greater engagement and networking of municipalities, while raising public awareness of adaptation to climate change and the benefits of these actions. Furthermore, the socio-economic benefits of NbS can generate economic opportunities and a wide range of jobs for local communities.

Other substantial climate mitigation optimal approaches with nature at this transformation path are towards coastal forest and fire management, changes in fertilizer uses, reduction of waste from coastal cities and towns as well as the demand for energy and livestock products¹⁹.

Transformation 2: Conserving and restoring nature while contributing positively to human well-being

Forests, soils, wetlands, coastal marine areas and other ecosystems must be conserved and restored. **Protection and improved management of these coastal and marine ecosystems offer the most cost-effective options for nature-based climate mitigation and adaptation strategies while contributing to knock-on effects on human well-being.**

Marine Protected Areas (MPAs) and other spatial conservation measures, as examples, have the potential to rewild and build resilience into the ecosystems by enhancing resistance, and/or recovery. Many existing protected areas in the Mediterranean are at risk, mostly due to political changes, incomplete implementation and institutional weaknesses. The transformation to increase their efficiency will require the integrated design and

implementation of interventions through close coordination between relevant institutions and agencies at different government levels for enforcing the management. In particular, through enhanced monitoring systems, human capacities and legal frameworks and by also working towards the expansion of protected areas network to reach the 30% area-based protection target by 2030, with one third of that area to be strictly protected; and ongoing processes regarding Other Effective area-based Conservation Measures (OECMs). Interventions towards the establishment of transboundary MPAs or OECMs beyond national jurisdictions in the Mediterranean would guide spatial planning strategies (Marine Spatial Planning processes). Such interventions help create co-benefits of conservation efforts with food provision (Transformation 3) at a national level while at the same time reaching global and regional conservation targets. They can also contribute to disaster risk reduction, encourage healthier lifestyles, improve water quality and contribute to long-term food security.

A second focus on this transformation is based on **restoration and rewilding, as they may play a critical role in enhancing nature's contributions for delivering nature-based solutions for food security, climate change mitigation and adaptation, and biodiversity loss.**

Efforts in the Mediterranean are limited in this arena, partially due to the large challenges that remain to maintain their long-term outcomes. Restoration programmes sometimes face strong difficulties because of political and institutional constraints; ineffective supply of governance and accountability; lack of incentives and finance; and conflicts between development, resource exploitation and natural conservation goals, among others. Moreover, governance processes are frequently limited by the constantly changing political, economic and natural climatic conditions.

Interventions for conservation, restoration and rewilding must be designed and implemented in cooperation with local communities. This might entail long-term interventions in order to produce changes in social norms and behaviours that promote trust and improved conservation outcomes. The changes should be designed with strategies (e.g. identifying local blue-green infrastructure interventions in coastal cities; protect or sustainably manage river to sea ecological networks; alternative nature-based space use, marine tourism levies) that ensure nature enhances human well-being and that its role in this is recognised by stakeholders.

Transformation 3: Balancing food provision from the sea and the land with nature protection in a changing climate

Integrated strategies are needed that address sustainable, productive, resilient food systems as well as conserving the environmental health in the Mediterranean.

There is broad consensus of the need for bold action built on authoritative science (alternatively evidence) to improve the performance of food systems and transform the way the world produces, consumes and thinks about food¹⁹. The need to bring a transformational change into fisheries to curb overfishing and help manage competing claims with biodiversity conservation has been recognised by Mediterranean countries (GFCM-FAO, 2022). Agriculture, with an important role in the economy of countries around

¹⁹ Secretary-General's Chair Summary, Statement of Action on United Nations Food Systems Summit | UN Press

the Mediterranean, has also been recognised as one of the main drivers responsible for the global loss of biodiversity, climate change, soil degradation and freshwater depletion. The environmental costs of modern agriculture farming, unsustainable fisheries or other food production such as intensive aquaculture practices remains high. These sectors in the Mediterranean are highly vulnerable and are already impacted by climate change and other global change processes (MedECC 2019). However, agriculture and fisheries are also an important source of GHG emissions, particularly the former; on land from its direct contribution to methane (CH₄) and nitrous oxide (N₂O) as well as emissions associated with land use change, industry and transport. At sea, emissions predominately result from the fuel use of fishing vessels or seabed disturbance caused by trawling operations together with food supply chains on land.

Shifting toward sustainable land-use or sea-resource use that balances food production with nature conservation, will include interventions focused on efficient and resilient agricultural systems, aquaculture and fisheries that support livelihoods and that reduce both their footprint and impacts on nature. As such, efforts should be aimed at exploring, for example, alternative agriculture production methods that could help mitigate emissions (e.g. low-emission, climate-resilient food systems); reduce other sources of environmental pollution and enhance friendly biodiversity practices; adapt to climatic conditions by reducing dependence of water availability (i.e. through adapted crops to a changing climate); and that use local, autochthonous varieties of crops. In addition, consumer demand should shift towards production systems close to consumers, healthy and innovative biodiversity friendly diets (e.g. examining opportunities with new invasive species), reducing losses and wastage while bringing more sustainable standards along food supply chains.

Implementing this food system transformation should also aim to foster and build frameworks for co-design, adaptation, testing and mainstreaming mitigation solutions with the potential to transform food systems, reduce emissions and deliver sustainable development co-benefits.

Most governments will need to strengthen coordination mechanisms across different ministries or regional governments to anticipate and manage potential side effects of intervention actions (e.g. impacts from local policies on food to other regions). Efficient implementation will require effective policies, closer collaboration between conservation managers, scientists and local stakeholders, and enhanced public awareness and engagement. Functional transboundary governance systems as proposed for the South Adriatic Ionian Sea – Ecologically and Biologically Significant Area (SAIS-EBSA), are a good way forward to bring policy integration whereby countries or regions can adopt different driving ideas and can activate a variety of governance arrangements to address interventions towards balancing food provision, reduced waste, accelerated climate mitigation and nature protection.

Transformation 4: Building a stronger nature positive economy in the Mediterranean

A nature-positive economy in the Mediterranean will involve a systemic change in the way we think about the value of nature, how we account for natural capital and the costs of ecosystem degradation within economic development. New business and

financial models have the potential to accelerate this shift towards a nature-positive development path that takes into consideration climate adaptation and mitigation needs as well as unlock nature's value while minimising resource use and pollution²⁰. At the UN Stockholm +50 conference in June 2022, the case for a **Roadmap to a Nature Positive Economy**²¹ was made, demonstrating the political foundation for this proposal and offering a way for financial and economic decision makers to take leadership of this work. **Building this roadmap in the Mediterranean needs to fully reflect the value of Mediterranean nature in all decision-making so that people, governments and businesses are motivated to enhance nature and address climate challenges, develop sustainable resource use, tackle invasive species and significantly reduce pollution.** This roadmap and transformation path to nature-positivity needs to be fully embedded in the economic reform agendas across scales. It will be different for each economic sector, therefore business think tanks recommend that nature-positive interventions should be considered flexible, evidence-based, and use collaborative methods.

A clear case where to build a stronger nature positive economy transformation in the Mediterranean should be placed **on maintaining and reviving healthy coastlines** that are critical to providing protection from flooding, erosion and other extreme weather events. Coastal erosion not only affects biodiversity but also creates economic risks for the Mediterranean tourism industry and coastal cities requiring area-based governance approaches that build on ecological principles especially in very sensitive land-sea interfaces. This could be encouraged through reconnecting tourism and coastal cities with nature through a shift in the paradigm of unsustainable touristic models. This process would require enabling factors/ conditions such as establishing local and regional stakeholder dialogue, integrating nature infrastructure and biodiversity into policy and coastal planning, and facilitating better knowledge and evidence on biodiversity and ecosystem services to support management and business decisions.

Other key areas where to initiate this system-wide transformation in the Mediterranean are in those high impact sectors, such as buildings and construction, water, food (Transformation 3) and mobility through adopting and implementing policies that promote circularity, resource efficiency, regenerative production approaches and nature-based solutions in value chains¹². This transformation in the Mediterranean will require a greater role by companies, investors and policy makers working alongside civil society to bend the curve on nature loss by 2030 and address climate change.

Interventions should target areas in which individual and collective action from business and other actors (such as state-owned enterprises, investors and financial corporations) are urgent, those underpinning ecosystem-based adaptation to climate change and nature-based solutions, or where the drivers of degradation are more deeply connected to economic and business activities.

This transformational change may also involve novel business models, increasing volunteer private sector commitments to climate change actions and also investing directly in nature conservation; setting up market-based incentives and financial regulatory systems to drive large-scale action for transformation.

²⁰ 2020 World Economic Forum. Nature Risk Rising, Why the Crisis Engulfing Nature Matters for Business and the Economy, New Nature Economy series, 36pp.

²¹ Stockholm +50 conference. [Key Messages and Recommendations - Formatted.pdf \(unep.org\)](#)

Key levers for transformation

The shift towards these four transformation pathways is an urgent priority for sustainable development in every country in the Mediterranean and towards achieving the SDGs, Net-zero and the 2050 Biodiversity Vision. Transformations must be directed to meet time-bound, quantitative targets and require several critical action levers for accelerating progress towards climate and biodiversity objectives to implement these transformations:

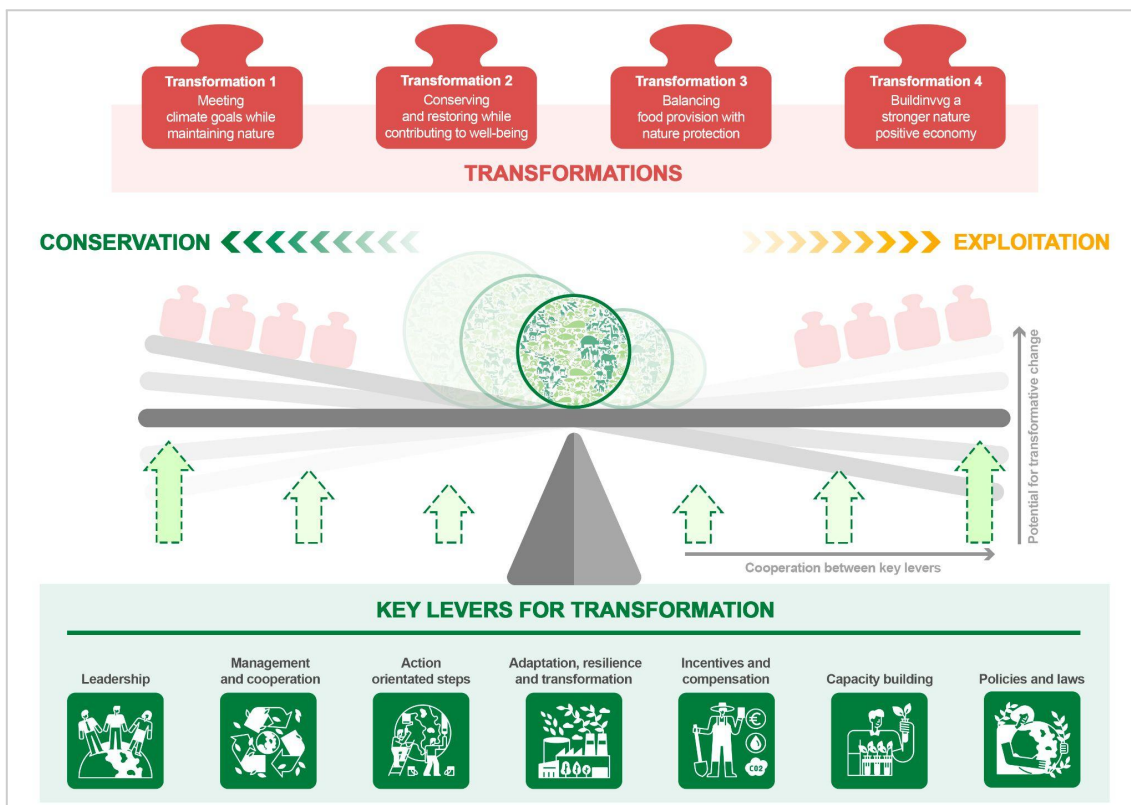


Figure 3. Proposed transformation pathways and levers for the Mediterranean inspired by the IPBES Global Assessment report, 2019.

Leadership

Transformation requires leadership that can help shape the vision, tackle challenges and guide the needed strategies for development of pathways in the region. Leadership at a government level will need to take bold steps, build consensus and get all stakeholders moving efficiently down the transformation path. The International Leader's Pledge for Nature²², that is supported by several Mediterranean countries, is an example of commitments towards this, which amplifies the voices and advocates for driving the sustainability agenda. The pledge reaffirms their commitments to protect and conserve at least 30% of land and ocean by 2030, transform production and consumption to be well within planetary boundaries, and to ensure an equitable transition to nature-positive economies. EU Mediterranean countries, Albania, Bosnia and Herzegovina, Israel, Lebanon, Monaco, Montenegro and Morocco, have all committed to this pledge.

²² Home - Leaders Pledge for Nature

Spotlight from the MBPC Community

With a more specific target, the Joint Charter of Commitments for Mediterranean beaches²³ with Posidonia is framed on this leadership. The charter was created as a stable collaboration between country governments at any administrative level and concerned local stakeholders across the Mediterranean, to promote sustainable and nature-based management practices for beaches with the seagrass *Posidonia oceanica*, addressing climate change impacts and tourism. Signatures of the charter, among them several Mediterranean regions, local municipalities and tourism enterprises, share principles and signal a commitment to creating and implementing an action plan for the long-term conservation of these coastal and marine environments.

Regional planning processes involving effective stakeholder engagement through targeted conversations and workshops with key regional leaders and influencers, can bring success to a pathway for achieving long-term results, enabling effective and integrated decision making, and balancing conflicting situations and compromises. A clear example to put forward is through the Permanent Commission for the Protection of the Adriatic Sea and Coastal Area²⁴. Here, engaging sub-national authorities, including cities, regions, and economic actors in the leadership fora (SAIS-EBSA Conservation Community (SECC)) is helping to advance mainstreaming conservation and bringing the rationale in line with decision makers and sectoral stakeholders for the South Adriatic Ionian Strait Region. Such practices are transferable to other EBSAs in the Mediterranean region and wider.

Integrated management and cross-sectoral cooperation for a good governance

In many Mediterranean countries, management is entrusted to regional and local governments, while in others a more centrist national approach is followed. Levels of support for more nature-oriented approaches could be further increased with more knowledge of the available management options and a better balance of powers. Clear identification of management responsibilities and integrated efforts of scientists, conservation practitioners, business and policy specialists, will help drive this.

Coordination and governance become very complex when different land- and sea-use issues are managed by different levels of government and with limited public participation. Enhancing both aspects towards the management integration at the point between the land and the sea, by first improving the laws and regulations at this interface as well as by better governance and increasing participation of coastal residents, will be key factors to reduce political and organisational obstacles to integrate biodiversity into national coastal management frameworks in the Mediterranean.

Spotlight from the MBPC Community

To implement this vision, several projects at the Interreg Mediterranean community demonstrated the importance of acting through broad participatory processes to build this integrated management and cross-sectoral collaboration. One of the solutions provided is

²³ Joint Charter of Commitments. Posbemed2 Interreg Med Project. Posidonia - act4posidonia.eu

²⁴ Executive Summary of the SAIS-EBSA workshop, 2022. Transboundary governance in the SAIS-ESBA and contiguous regions. Interreg Mediterranean Biodiversity Protection. 6pp.

to enable the development of Environmental Contracts²⁵, voluntary and negotiated agreements between stakeholders for an integrated, concerted and sustainable management, designed for wetlands and MPAs. These multi-stakeholder/multi-level governance tools address both private and public bodies and take their shape through inclusive and deliberative decision-making processes that are based on a shared vision of the local territory taking into account an intersectoral approach.

Setting up action plans around a decision-making framework at coastal sites (e.g. Natura 2000 sites) to guide immediate, medium and long-term local planning, has also been demonstrated as a very successful solution to provide guidance and assistance on management measures and in understanding present conditions and future scenarios at the sea and landscape level (e.g. on how to enhance coastal resilience). Building on this through systematising the use of collaborative processes and monitoring allows adaptive planning to address local needs and contexts, and economise efforts for tackling challenges issues (e.g. limited funding, lack of community support) across sites, as well as to better explore the opportunities with local stakeholders.

Action orientated steps

National decision-makers need to strengthen the coherence between global or Mediterranean agreements and commitments with national-level and sub-national level action. Dialogue is needed to translate the commitments and transformational change inspirations into action on the ground in their territories (local, sub-national or sub-regional levels as Conference of Peripheral Maritime Regions-CPMR).

For the transformation pathways to be meaningful and practicable, significant efforts will need to be channelled into these national-level dialogues that explicitly address how global commitments – across the domains of climate policy, biodiversity, economy and food – will be translated into national agendas and local action. The establishment of time-bound, smart objectives will assist in the operational implementation of the strategies with different sectors and stakeholders.

Spotlight from the MBPC Community

Equally, ongoing subregional dialogues can mirror international policy processes. Approaches such as the Roadmap for MPAs and OECS²⁶ built from a large consultation process across the region, offer the means of building support, assessing collectively in a standardised way achievements and reporting consistently on the results. It also creates opportunities for bringing better practices to biodiversity management, which include solutions that range from ensuring more effective protection, to broader area-based approaches that balance use. Further, it highlights how transformational change to the different sectors related to MPAs in their territories could be delivered.

Actions towards further developing MPA policy and governance structures so that they are more equitable, integrated with other sectors and responsive to local MPA conditions and

²⁵ European Interreg Med Tune up, 2022. Policy Toolkit for environmental contracts in Marine Protected Areas planning and management processes. 25pp.

²⁶ MedPAN, SPA/RAC, WWF, Prince Albert II Foundation. 2022. Post-2020 Mediterranean Marine Protected Areas Roadmap: The road to 2030.

will produce better outcomes for MPAs include: Strengthening national legislation and ensuring effective enforcement mechanisms; improving knowledge; building capacities to manage and enhance nature value; and providing support for their long-term financial sustainability.

Management of adaptation, resilience and transformation

Important knowledge gaps exist in designing pathways and strategies for each transformation, their implementation and monitoring of results. In this sense, the integration of diverse expertise and knowledge has the potential to enhance the action of these transformation pathways and serve as a learning platform for adaptation and resilience.

Spotlight from the MBPC Community

Knowledge of climate change has shown to be of great importance in supporting the planning of several MPAs in the Mediterranean. It helps achieve engagement support from the community towards decisions on adapting tourism and fisheries practices as well as supporting monitoring and planning related to real local issues in their territories²⁷.

A further example of enhanced knowledge benefits, is building resilience from the increasing both yachting and boating pressure through technical guidelines and recommendations. These guidelines have supported the establishment of “no-go areas”, buffer zones around MPAs as well as specific authorisation procedures to access extremely sensitive biodiversity areas²⁸.

Incentives and compensation schemes

Opportunities for finance will facilitate the transformational process. Financial incentives are likely to be important in some Mediterranean countries or in some specific situations. Exploring nature-based solutions, for example, in national climate strategies opens the door for accessing greater volumes of climate finance through existing channels. Opportunities, through nature-positive projects, might also achieve higher prices on voluntary carbon markets and draw more finance into the sector.

In some countries, realignment of the incentives that drive unsustainable practices or promoting those with a nature-positive orientation will be key. There will be the need to identify and address current incentives that result in ecosystem degradation and to replace these with incentives more likely to promote sustainability and climate resilience or mitigation.

Spotlight from the MBPC Community

Effective governance will favour this process. For example, to better incentivise localised co-management of fisheries in MPAs and exploring how existing mechanisms that support the development and testing of similar measures such as Territorial Use Rights for Fisheries, could be implemented at the national level to support the transformation

²⁷ Vernal et al. 2022. The MPA Engage Policy Paper. 26pp.

²⁸ Pharos4MPAs, Recommendations for Leisure boating; Portofino MPA website; Cappanera, 2019

towards sustainable fisheries and nature protection²⁹. These types of measures, including those building on a transformation for better governance, have been developed in several marine protected areas (MPAs) in the Mediterranean working with small-scale fishing communities³⁰. Applying the lessons learned from these practical experiences of fishers and MPA managers working together to resolve real management issues, ensured MPA's management objectives, secured the trust of local dependent communities and provided the basis for successfully implementing a wide range of other supporting incentive measures, such as sustainable fishing practices, local marketing of fish products, pesca-tourism and more.

Financial incentives²⁷ and natural capital accounting to facilitate the economic engagement of stakeholders and mixing private-public investment could be further tools to help implement actions to promote sustainability and climate resilience or mitigation (similar to the "Integrated territorial investment"). The development of a natural capital accounting system applied to a Marine Protected Area (MPA) in the Balearic Islands (Spain)³¹ was successful in showing the importance of its natural capital to the region. This system identifies, quantifies and monetises the natural assets and ecosystem services of the area so that those responsible for marine conservation policies in the region could be informed in an efficient and robust way. This system is transferable and can be implemented and upscaled to other areas in the Mediterranean to incentivise nature positive investments.

Capacity building

Investment in capacity building is needed across all the transformation pathways. Successful merging of practices (e.g. those drawing on knowledge multi-stressors and biodiversity mapping, participatory approaches, scenarios/vulnerabilities assessments or nature based solutions) as well as transferring best practices, should happen regularly to allow replication and adaptation in different territories. This knowledge transfer is particularly important where continuous staff turnover occurs within the public administration bodies, requiring constant re-investment into individual capacity building to ensure programmes and successful practices are uninterrupted.

Spotlight from the MBPC Community

Capacity building and further support to local authorities, MPA managers and local communities is critical. Stakeholders should be equipped with effective instruments to monitor and manage the environment and its pressures (e.g. marine litter, maritime traffic, recreational boating hotspots) to help prioritise upstream solutions (e.g. in keeping with the waste management hierarchy and providing additional protective measures to mitigate risks in certain hotspot areas)^{32,33}. Numerous experiences ready for scaling-up from the MBPC projects have been developed to increase knowledge and share best practices across

²⁹ IUCN, 2019. Key recommendations for international policy makers. FishMPABlue2 project. 21pp.

³⁰ <http://www.medmaritimeprojects.eu/section/fishmpablue>. FishMPABlue2 project: fishmpablue-2.interreg-med.eu

³¹ European Interreg Med MPA Networks. Natural Capital accounting-Pilot study in a protected marine area in the Balearic islands. 73pp.

³² Marine Litter in the Mediterranean: Knowledge and Tools By the MED Biodiversity Protection Community's Working Group "Biodiversity Management and Protection", March 2019.

³³ Plan Bleu (2022) Guidelines for the sustainability of cruises and recreational boating in the Mediterranean region, Interreg MED Blue Growth Community project.

the region. Examples include the modules on “Ecosystem-based Management and Marine Spatial Planning in the Mediterranean” that targeted a wide range of actors to adopt best practices and use nature-positive approaches in planning and implementing sectoral activities in the Mediterranean Sea ³⁴.

Implementation of policies and laws

Finally, bolstering the implementation and enforcement of environmental laws and policies, is key to further lead the transformational change for reducing biodiversity loss and mitigate climate change. Fostering effective, accountable and transparent decision-making in climate and biodiversity matters will be a transformative incremental step.

Spotlight from the MBPC Community

Clearer coordination of competences, management actions and collaboration with stakeholders on the management of the beach and coastal zone, is a key component in ensuring good decision-making that leads to the implementation of sustainable management actions. With this goal, and based on experience from other regions like Balears and previous projects’ outcomes, several regional administrative bodies from Mediterranean regions in Sardinia, Macedonia and Croatia have worked towards establishing various procedure guidelines and tools. For example, for approving operations, supporting authorisation procedures and establishing management options for the integrated management and preservation of the Posidonia ecosystem in protected areas and Natura network 2000 sites³⁵. These valuable tools will support decision-making towards adopting measures across the scale more respectful of natural systems and oriented towards strengthening their resilience.

Opting for a participatory approach has the potential to reduce conflict, build trust and facilitate learning among stakeholders, who are then more likely to support project goals and implement decisions in the long run. Furthermore, it is essential to maintain regular communication with local communities regarding decisions that affect them and on the protection and use of the coastal and marine area.

04. Response actions for initiating transformation

Amid the growing urgency to seize all available opportunities to mitigate climate change and reduce biodiversity loss, the following response actions, aligned with the IPBES recommendations, provide recommendations on how the Mediterranean could initiate this systemic change **to achieve biodiversity and climate change ambitions** for 2030 and 2050.

³⁴ [Interreg Euro-MED Academy: #02_Ecosystem-based Management \(interreg-euro-med-academy.eu\)](https://interreg-euro-med-academy.eu)

³⁵ <https://posbemed2.interreg-med.eu/>

Transformation 1: Meeting climate goals while maintaining nature and nature's contributions to people

I. Scale up and implement climate ambition to help steer a more sustainable recovery

Supporting the formulation and implementation of climate mitigation and adaptation actions and sustainable energy policies across Mediterranean countries is key to achieve climate and biodiversity targets. Ambitions need to be raised (including those from the business sector), and local communities should be engaged in the transformation process, helping to formulate how nature can contribute to the process (e.g. reclaiming natural spaces). Efforts should also be made to assist least developed countries, by incentivising the reduction of emissions from different sectors such as agriculture, maritime transport and the food production value chain.

II. Invest and develop a more coordinated and integrated approach to Mediterranean approaches of nature-based solutions

NbS have not been widely deployed to enhance climate resilience in the Mediterranean. In addition, the private sector has not been fully engaged or invested in their use as yet. Actively encouraging businesses and governments to invest in these solutions must become a priority objective of all future development planning and policies, hence ensuring that NbS are systematically incorporated into decision-making. This will enable change-driven biodiversity responses and improve ecosystem health and the continued provision of ecosystem services. Shared learning practices will be core in building climate resilience and in the use of NbS on a wider scale.

III. Closing key knowledge gaps on blue carbon ecosystems

Filling knowledge gaps on blue carbon ecosystems is a priority to ensure their adequate conservation. Investment should drive research, particularly across the south and eastern Mediterranean part of the basin, and ensure adequate spatial and thematic accuracy data in the northern basin. Identifying key priority areas as hotspots can help focus conservation efforts in the region and guide development aspirations in ways that aim to minimise impacts on these carbon ecosystems throughout the region.

Transformation 2: Conserving and restoring nature while contributing positively to human well-being

IV. Design and implement a stronger set of policies to end nature loss

Environmental and sectoral policies need to address the underlying causes of nature degradation (e.g. when contributed by other sectoral policies or practices) and the implementation of these policies needs to be strengthened. Future development policies must ensure full-cost accounting of natural capital, encourage good practices with the strategic use of incentives and subsidies, and bring more coherence between international commitments with territorial-level action. The use of publicly available knowledge maps on key biodiversity areas and other biodiversity hotspots with existing pressures, can help to flag areas where overexploitation or spatial use undermines the biodiversity and climate

change targets. This can help guide policies (e.g. additional protective measures) for the conservation and restoration of biodiversity.

V. Support of coastal and marine initiatives which promote restoration, recovery, enhancement or resilience

Support projects and financial resources to make the transformational changes are needed to restore nature in the Mediterranean coastal and marine environment. This support should focus on capitalising actions for nature by working with local communities, local administrations and business stakeholders, and by using ecosystem-based approaches to improve habitat connectivity, the restoration of natural flows (e.g. wetlands), and the level of high/fully protected MPAs in the Mediterranean Sea. Mapping areas where the likelihood of restoration efforts is high, can help to prioritise where and how restoration interventions should be deployed.

VI. Rebuilding marine megafauna

This action additionally involves increasing the pool of living carbon and enhancing nutrient cycling and ocean productivity, therefore also contributing to mitigating both climate change and biodiversity loss. A Mediterranean-wide effort towards rebuilding megafauna (marine mammals, sharks and big predatory fish) by reducing maritime traffic collisions and heavy disturbances as well as by diminishing fisheries bycatch mortality will help the health and viability of many Mediterranean megafauna populations to rebound. In addition, enhancing knowledge of the risk of collisions between ships and megafauna (e.g. whales) within Particularly Sensitive Sea Area (PSSA), Sanctuaries or Protected Areas; increasing sustainable fishing practices including those supported through market based instruments and incentives; reducing litter production; and increasing spatial protection measures (MPAs or OECMs), will also assist in decreasing these threats on megafauna thereby also helping to promote recovery in these target species.

Transformation 3: Balancing food provision from the sea and the land with nature protection in a changing climate

VII. Setting up a comprehensive plan for the management of small-scale fishing within and around MPAs

National technical workshops should be formalised for countries to provide a cross-sectoral and inclusive forum for improving small-scale fishing governance in MPAs and other area-based management units (e.g. local fisheries closures or fisheries restricted areas). The development and adoption of comprehensive plans regarding the management of fishing within and around these areas with short- and long-term smart objectives and co-management or participatory mechanisms, will be a key valuable approach to promote good management, secure coastal livelihoods and contribute to regional targets and plans across the Mediterranean.

VIII. Transform agriculture and aquaculture production and food demand

Alternative agriculture and aquaculture production methods could help mitigate emissions (e.g. low-emission, climate-resilient food systems), reduce other sources of environmental pollution and enhance biodiversity-friendly practices. Alternative methods could also help

adapt to the climatic conditions. For example, in agriculture, using crops adapted to a changing climate could reduce dependence on water availability and by using local, autochthonous varieties.

Transformation 4: Building a stronger nature positive economy in the Mediterranean

IX. Incorporate climate-smart and land-sea integrated management in local plans

The resilience and effectiveness of the coast at each territory should be enhanced. This can be achieved by elaborating climate change adaptation and mitigation action plans that integrate a joint management for the land-sea interface and is tailor-made to the local specific context.

X. Increase private sector commitments to climate action and directly investing in nature conservation

Across the Mediterranean, private-sector commitments should be promoted for climate action, with companies adopting further strategies aimed at reaching net-zero emissions and investing in nature. To this end, opportunities to engage the business community, for example the food sector (agriculture, fisheries and aquaculture) and tourism (e.g. cruise sector and hotel chains) in policy discussions and on building commitment actions, should be capitalised upon.

Cross-Cutting

XI. Promote the Mediterranean value of nature

One of the most important barriers to accomplishing protection and conservation of nature is **the different perceptions held by different stakeholders on the value of nature**. Without awareness and opportunities to showcase the importance of biodiversity and the advantages of healthy and resilient nature, local citizens and stakeholders are not likely to take the steps needed to implement changes in their daily lives and practices. Creating meaningful change requires a shift in mindset and thinking differently about how communication tools, education and awareness-raising are employed as a means of disseminating knowledge and offering new perspectives to different stakeholders and the general public.

XII. Mainstream the use of available tools and scale-up local successful initiatives and best practices

A number of the tools, initiatives and approaches (for monitoring, visualising knowledge, management support and capacity building) that have proved valuable in fostering and implementing planning and good practices, can be used to improve implementation actions in other territories. Initiating the implementation of tools and /or standards – especially in regions where information is scarce, and mainstreaming their use, can create critical action levers for accelerating progress towards climate and biodiversity objectives.

XIII. Support increased cooperation between north/south and south/south and between governmental and non-governmental actors at different levels on ecosystem conservation

Stable partnership and leadership collaborations across regions can be enabled with a sustainable funding plan based on a combination of funding solutions at national and local levels. Solutions include activities of regional and international cooperation, supporting local communities most affected by the climate and biodiversity emergency, and diversifying income generation opportunities beyond tourism, to ensure greater resilience to the financial impacts of future pandemics, human-made risks or natural hazards.

Final Remarks

No single immediate action response is likely to yield sufficient rapid transformation to achieve the goals for climate and nature conservation in the Mediterranean basin by 2050. Climate change and biodiversity are inherently connected. Through their integration, the full potential of biodiversity to support climate action and achieving the UN Sustainable Development Goals could be leveraged at the same time as reversing the ongoing decline in Mediterranean coastal and marine biodiversity. Additional transformation paths to bring actions further inland will also be needed.

Every Mediterranean country therefore, will require a complementary and integrated set of actions from different levels of government, civil society, science and business. Starting with these immediate collective actions, political leadership, cooperation and financing, countries will move a little closer towards these transformations and towards a healthier Mediterranean with a fully sustainable future.

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Acronyms

CBD Convention on Biological Diversity

CPMR Conference of Peripheral Maritime Regions

EBSA Ecologically or Biologically Significant Marine Areas

EIA Environmental impact assessment

EU European Union

GES Good environmental status

GFCM General Fisheries Commission for the Mediterranean

IAS Invasive Alien Species

ICZM Integrated Coastal Zone Management

MBPC Mediterranean Biodiversity Protection Community

MCPA Marine and Coastal Protected Area

NbS Nature-based Solution

NDC Nationally Determined Contribution

NIS Non-indigenous species

OECD Other effective area-based conservation measures

SAIS-EBSA Southern Adriatic Sea Ecoregion-Ecologically or Biologically Significant Marine Areas

SAPBIO Strategic Action Programme for the conservation of BIOlogical diversity

SDG Sustainable Development Goal

SEA Strategic environmental assessment

PSSA Particularly Sensitive Sea Areas

UNEP United Nations Environment Programme

UNFCCC United Nations Framework Convention on Climate Change

Disclaimer

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Key Terms

Climate change resilience: the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a potentially hazardous event (as climate change) in a timely and efficient manner. Source: IPCC, 2012.

Ecologically or Biologically Significant Marine Areas (EBSA): An area of the ocean that has special importance in terms of its ecological and biological characteristics and are defined as “geographically or oceanographically discrete areas that provide important services to one or more species/populations of an ecosystem or to the ecosystem as a whole, compared to other surrounding areas or areas of similar ecological characteristics, or otherwise meet the [EBSA] criteria”. Source: Convention on Biological Diversity (CBD).

Ecosystem approach: a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way ... It recognizes that humans, with their cultural diversity, are an integral component of many ecosystems. Source: CBD.

Ecosystem resistance, and/or recovery: Ability of the ecosystem to resist and recover from human and natural disturbances.

Ecosystem restoration: the process of halting and reversing degradation, resulting in improved ecosystem services and recovered biodiversity. Ecosystem restoration encompasses a wide continuum of practices, depending on local conditions and societal choice. Source: UNEP, 2021.

Nature-based Solutions (NbS): actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits Source: IUCN.

Nature positive: ...an equitable, nature-positive and net zero world [would] ensure there is more nature globally in 2030 than there was in 2020, by halting and reversing the loss of nature to put nature on a path to recovery for the benefit of all people and the planet by 2030, as well as tackle climate change, achieve the Sustainable Development Goals, and enable people and communities to thrive in a healthy and stable future. Source: IUCN, 2020.

Nature positive economy: one in which businesses, governments and others, take action at scale to reduce and remove the drivers and pressures fuelling the degradation of nature, and work to actively improve the state of nature and the ecosystem services it provides. Source: Cambridge Institute for Sustainability Leadership.

Nature positive interventions: steps taken towards being nature positive.

Nature positive solutions: solutions for enhancing the resilience of our planet and societies to halt and reverse nature loss— by 2030, against a 2020 benchmark, while providing climate change mitigation and adaptation benefits. Source: Nature Positive

Other-effective area-based conservation measures (OECMs): A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long term outcomes for the in situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio-economic, and other locally relevant values. Source: CBD, 2018.

Annex 1

Potential contribution of the Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) Targets of Mediterranean countries under the Barcelona Convention to Climate change mitigation targets of the Paris Agreement and CBD Draft Targets of the Global Biodiversity Framework (CBD GBF). The colour coding and goal scaling reflects own expert judgement based on scientific knowledge.

Annex 1. Potential contribution of the Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO) Targets of Mediterranean countries under the Barcelona Convention to Climate change mitigation targets of the Paris Agreement and CBD Draft Targets of the Global Biodiversity Framework (CBD GBF). The colour coding and goal scaling reflects own expert judgement based on scientific knowledge.

CBD GBF Targets	Targets Post-2020 SAPBIO for 2030	Actions Post-2020 SAPBIO for 2030	Climate change mitigation potential
2	1. SPECIES AND HABITATS PLANS Update Mediterranean action plans for selected species and habitats listed under the SPA/BD Protocol	At least 30% of species and habitats which were not in favourable status in 2020, are in GES category or show a strong positive trend, especially in priority benthic habitats, where the decline of coralligenous habitats and marine vegetation has been halted and sea-floor integrity is maintained	Significantly link to the achievement of the target
	2. SPECIES RECOVERY Develop recovery plans and implement emergency actions for endangered and threatened species whose continued survival depends on such actions, including their habitats	All Mediterranean countries are implementing recovery plans and emergency actions, as appropriate, for threatened and endangered species, including, when relevant, a Mediterranean network of stranding centres	Aids the achievement of the target
4	3. MARITIME TRAFFIC Reduce the impact of maritime traffic (noise & collision) on sensitive marine species (Cetaceans, Turtles, others)	The impact of noise and collision from maritime traffic is considerably reduced in most of the identified vulnerable areas, through appropriate regulation reducing noise levels and collision events.	Can create conditions that further achieve the target
6	4. NIS/IAS COMMITMENT Ratification of the International Convention for the Control and Management of Ballast Water and Sediments from Ships (BWM Convention), and adoption of the Regional strategy addressing ship's ballast water management and invasive species (2022-2027)	All Mediterranean countries collaborate in the enforcement of the Mediterranean Ballast Water Management Strategy (2022-2027) implementing the guidelines to minimize the transfer of invasive aquatic species	No significant interactions known
	5. NIS/IAS CAPACITY Strengthen the capacity of the Mediterranean countries to deal with alien marine species	All countries have conducted a baseline study, and are collecting data and monitoring within the framework of IMAP, on the presence of alien marine species, the pathways of their introduction, and the state of their population trends, including those used in aquaculture	Can create conditions that further achieve the target
6	6. NIS/IAS CONTROL Take the necessary field actions to mitigate the impact from NIS/IAS	The introduction and spread of the most harmful invasive alien species are regulated, preventing their impacts in 100% of the most vulnerable areas and/or priority sites, decreasing the number of protected species they threaten by 50%, and effectively managing 50% of the most significant pathways of introduction	Can create conditions to further achieve the target

16	7. LITTER Prevent leakage and remove marine litter to mitigate its impact on the ecosystem	All countries report the effective prevention and removal of marine litter, so the leakage of plastic to the sea has significantly decreased and the removal from the sea and beaches has increased compared to 2027.	No significant interactions known
14	8. EIA/SEA Implement environmental assessments, considering cumulative impacts on the coastal zones and their carrying capacity.	Most Mediterranean countries adopted within the national EIA/SEA procedures, a framework of specific measures and indicators for addressing the impact on biodiversity and of specific measures favouring nature-based solutions	Aids the achievement of the target
14	9. WIND ENERGY Advocate that wind farms, are regulated in MCPAs, and cannot be developed elsewhere before their effects on the marine environment, biodiversity and human activities have been sufficiently researched, the risks are understood and alternatives assessed	The Barcelona Convention, has adopted the proposal	No significant interactions known (possible conflicts)
14	10. MINERALS In line with the precautionary principle, the exploitation of minerals should not be authorised until the effect on the marine environment, biodiversity and related human activities have been sufficiently researched and the risks are understood and alternatives assessed.	The Barcelona Convention, has adopted the regulation of the prospection or exploitation of inorganic minerals in or under the seabed	Significantly link to the achievement of the target
1	11.SPATIAL PLANNING Support countries for the development of systematic conservation planning taking into account ICZM, land use/marine use planning and management aspects in the context of MSP	100% of MPAs, and as appropriate OECMs, and 50% of the remaining marine areas are sustainably managed by applying ecosystem-based approaches including biodiversity and climate change-informed marine spatial planning	Significantly link to the achievement of the target
2	12. RESTORATION Support restoration of ecosystems providing key services, those degraded and expected to become increasingly critical in a changing climate, such as wetlands and shallow seashore habitats among others	All Mediterranean countries have developed inventory of ecosystems with the highest ecological relevance and/or regeneration potential (as nursery areas, carbon stocks, avoiding coastal erosion, preventing or reducing the impact of natural disasters) such as Posidonia beds, coralligenous assemblages, wetlands, and dune systems, among others, and most Mediterranean countries have completed restoration activities on most of those selected between the identified priority areas	Significantly link to the achievement of the target
8	13. CLIMATE CHANGE Increase climate change impacts monitoring and contributions to mitigation and adaptation, particularly to warming, acidification, and to disaster risk reduction, through nature-based solutions and ecosystem-based approaches	i. All Countries have developed Early Warning Systems (EWS), mapping, risk assessment and reduction strategies, by which adaptation plans, based on nature-based solutions, are integrated into planning and budgeting processes.	Can create conditions to further achieve the target
		ii. A climate change monitoring network in MPAs representative of the Mediterranean conditions is fully operational	Can create conditions to further achieve the target
	14. GOOD ENVIRONMENTAL STATUS Promote actions, including scientific research, with the view of achieving GES for all biodiversity-related ecological objectives within the Ecosystem Approach EcAp/IMAP	i. All the biodiversity related ecological objectives of Good Environmental Status (GES) show positive trends, being verifiable by scientific knowledge	Aids the achievement of the target
		ii. Most Mediterranean countries have reached GES in an effective implementation of the Ecosystem Approach and its roadmap	Aids the achievement of the target

3	15. MCPAs and OECMs Assist countries in the implementation of the Post2020 Regional Strategy for MCPAs and OECMs	At least 30 % of the Mediterranean Sea is protected and conserved through well connected, ecologically representative and effective systems of marine and coastal protected areas and other effective area-based conservation measures, ensuring adequate geographical balance, with the focus on areas particularly important for biodiversity.	Significantly link to the achievement of the target
		The number and coverage of marine and coastal protected areas with enhanced protection levels is increased, contributing to the recovery of marine ecosystems	Significantly link to the achievement of the target
20	16. INVERTEBRATES Survey distribution and abundance, and assess status and main anthropogenic pressures, over priority invertebrate species with focus on <i>C. rubrum</i> , <i>P. nobilis</i> , and vermetid platforms	The distribution, abundance, and status assessment studies in all countries are finished, at least for <i>C. rubrum</i> , <i>P. nobilis</i> , and vermetid platforms	
20	17. VERTEBRATES Establish the distribution, status, and the main anthropogenic pressures of species listed under Annex II to the SPA/BD Protocol	Ready in all Mediterranean countries	
20	18. HABITATS In coastal and offshore waters, inventory and cartography key Mediterranean habitats, and assess their status and main anthropogenic pressures	Achieved cartography of key habitats in the identified priority areas, covering 100% protected areas, and also including FRAs and OECM, and their status and responses to threats and impacts have been assessed	Can create conditions to further achieve the target
6	19. NIS/IAS Database Develop the shared georeferenced database (MAMIAS), user-friendly platform, to continuously monitor the status and pathways of non-indigenous species and support early warning	All Mediterranean countries continuously monitor the status and pathways of nonindigenous species and share it within the MAMIAS platform, aiding to mitigate detrimental effects of NIS/IAS	No significant interactions known
5	20. OVERFISHING and IUU Implement science-based management plans to effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing, including phasing out harmful fisheries subsidies which contribute to overcapacity and overfishing	i. In the Mediterranean, the data collection system and discharge control are standardized and adopted	No significant interactions known
		ii. There is zero-tolerance for illegal practices	Aids the achievement of the target
		iii. Overfishing has drastically dropped compared to 2020 levels so that marine resources are harvested sustainably.	Aids the achievement of the target
		iv. Fisheries subsidies is promoted at the regional/country levels	--
4	21. BY-CATCH Develop a national mechanism & implement agreed scientifically tested by-catch mitigation measures, to eliminate all intentional/accidental killing of threatened/endangered species and/or in bad conservation status	i. All countries have developed a mechanism to deal with Bycatch mitigation including the adaptation and/or ban of fishing gears most harmful to biodiversity, including on the seabed;	Significantly link to the achievement of the target
		ii. fishing gears have no significant adverse impacts on endangered and threatened species and vulnerable ecosystems	Significantly link to the achievement of the target
9, 21	22. SMALL SCALE FISHERIES Promote the FAO Voluntary Guidelines for Securing Small Scale Fisheries (VGSSF) and co-management practices in professional SSF, advised by traditional ecological knowledge and best available science	In MPAs and OECMs, and in fishing grounds, the capacity of small-scale fisher organizations has been enhanced to engage and partner co-management models, and the practice of IUU fishing, including recreational fishing, is controlled with full Participation from the respective sectors involved	--

10	23. AQUACULTURE Support developing the Post2020 GFCM Aquaculture and Fisheries strategy - transforming the aquaculture industry through science-based solutions and marine spatial planning (MSP) tools	The Mediterranean aquaculture industry is fully transformed in line with the ecosystem approach, through science-based solutions and marine spatial planning tools	Can create conditions to further achieve the target
14	24. TOURISM Develop a framework of specific indicators for assessing the impact of marine and coastal tourism on destinations and for promoting ecotourism.	i. Environmental assessments including the framework of specific tourism indicators, taking into consideration the cumulative impacts on the coastal zones and their carrying capacity, is in process of adoption in all countries and implemented in most Mediterranean countries	-
		ii. Hotspots of pressure from the tourism industry in marine and coastal biodiversity (including habitat disruption, noise, light, water quality, garbage) are identified	Can create conditions to further achieve the target
12,19	25. INTEGRATING BIODIVERSITY Integrate biodiversity values into national and local development planning processes, into the strategies and planning processes of marine-related economic sectors, into national accounting as appropriate, reporting systems, and into the assessment of environmental impacts	In most Mediterranean countries biodiversity conservation is mainstreamed in the strategies and planning processes of MSP, including fisheries, aquaculture, agriculture, coastal tourism, ports, maritime transportation, education, and also in EIA/SEA frameworks.	Can create conditions to further achieve the target
	26. POLITICAL WILL AND COORDINATION Ensure political will and recognition at the highest levels of Government or State, to develop appropriate governance schemes, in particular cross-sectorial and multi-level institutional coordination	Each Party has incorporated Post-2020 SAPBIO in its national biodiversity strategy and action plan	-
21	27. STAKEHOLDER PARTICIPATION Facilitate stakeholder engagement to address conflict between users, build capacity to contribute to the SAPBIO enforcement, particularly in MPA planning and management, through participation of all stakeholders in a transparent decision-making process	In all countries, formal and informal platforms to ensure the participation of the relevant sectors and stakeholders in priority sectors are established and operative, including local and subnational authorities, the private sector, civil society, women, youth, academia and scientific institutions, in a whole-of-society approach	-
	28. TOP-DOWN AND BOTTOM-UP SCALING OF INTERNATIONAL COMMITMENTS Scale down international commitments into national plans and to local level, streamlining the approach, targets and actions of the Post-2020 into national strategies and into local planning processes, while facilitating the bottom up feeding of local proposals into future planning processes at the national/Mediterranean levels	All countries can present positive results in implementing the updated 1995 Specially Protected Areas and Biological Diversity (SPA/BD) Protocol, and in effectively scaling-down and adapting the proposed SAPBIO Actions to the local context, while recuperating any relevant proposals from the local level to feed future Mediterranean planning processes	-

	<p>29. IMAP REFINEMENT Identification of the gaps that hinder the good environmental status evaluation, and in case needed, support countries to fill them out</p>		-
13	<p>30. CAPACITY BUILDING FOR THE Post-2020 SAPBIO AT NATIONAL LEVEL Enhance the national capacities to implement the Post2020 SAPBIO, to manage MPAs and vulnerable marine and coastal habitats and species within and across national jurisdictions, with particular attention to less developed countries, and towards reducing the gender and the digital divide</p>	In every country key officers, MPA managers, field technicians, and local authorities responsible for the environment, fisheries, and enforcement, are sufficiently trained	Can create conditions to further achieve the target
13	<p>31. NETWORKING Support existing regional, subregional and/or transboundary networks, or develop new ones as needed, to enhance capacities, knowledge, experience and opportunity sharing, inter alia, on topics as NIS/IAS, migratory species, MPA management, habitat restoration, reduced bycatch, harmonized monitoring, compliance with law and regulations, and other subjects relevant to the Post-2020 SAPBIO</p>	Human networks at national, sub-regional and regional level - inter alia on NIS/IAS, migratory species, MPA management, habitat restoration, reduced by-catch, harmonized monitoring, compliance with law and regulations- have been developed and strengthened to ensure the enhancement of capacities, knowledge, good practices, experience sharing, and the development of joint actions	Can create conditions to further achieve the target
20	<p>32. AWARENESS Increase awareness, understanding and appreciating of the values and threats to the marine environment</p>		Can create conditions to further achieve the target
20	<p>33. OUTREACH AND EDUCATION Promote the integration of marine biodiversity and ecosystems conservation concerns into school, higher education, professional training, and citizen science</p>	The marine biodiversity conservation and its relevant strategies/tools are included in the curricula of schools and universities in as many countries as possible, where universities are networking in North-South and South-South exchanges, and many MPAs are used as a framework for education and awareness activities, involving NGOs and citizen science	-
	<p>34. EMPLOYMENT Adequately increase the employment, notably public employment in direct relation to marine biodiversity conservation (and eventually include redirecting existing one) as basic component for future blue economy wise development</p>	As related to the baseline, the employment, notably public employment, in direct relation to marine biodiversity conservation has significantly grown in the region, and not less than doubled in any country	-

Mediterranean Biodiversity Protection Community project

The **Mediterranean Biodiversity Protection Community** project (2019-2022) is a continuation of the **PANACeA project** (2016 to 2019) with an aim to advance networking and management efforts inside and outside protected areas (PAs) in the region. The community brings together over 350 key public and private players by mainstreaming management efforts for environmental sustainability and increasing the impact of biodiversity protection projects towards common identified strategic goals.

Tools developed by the Mediterranean Biodiversity Community projects are available at the [Projects and people | MBPKP \(uma.es\)](#)

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