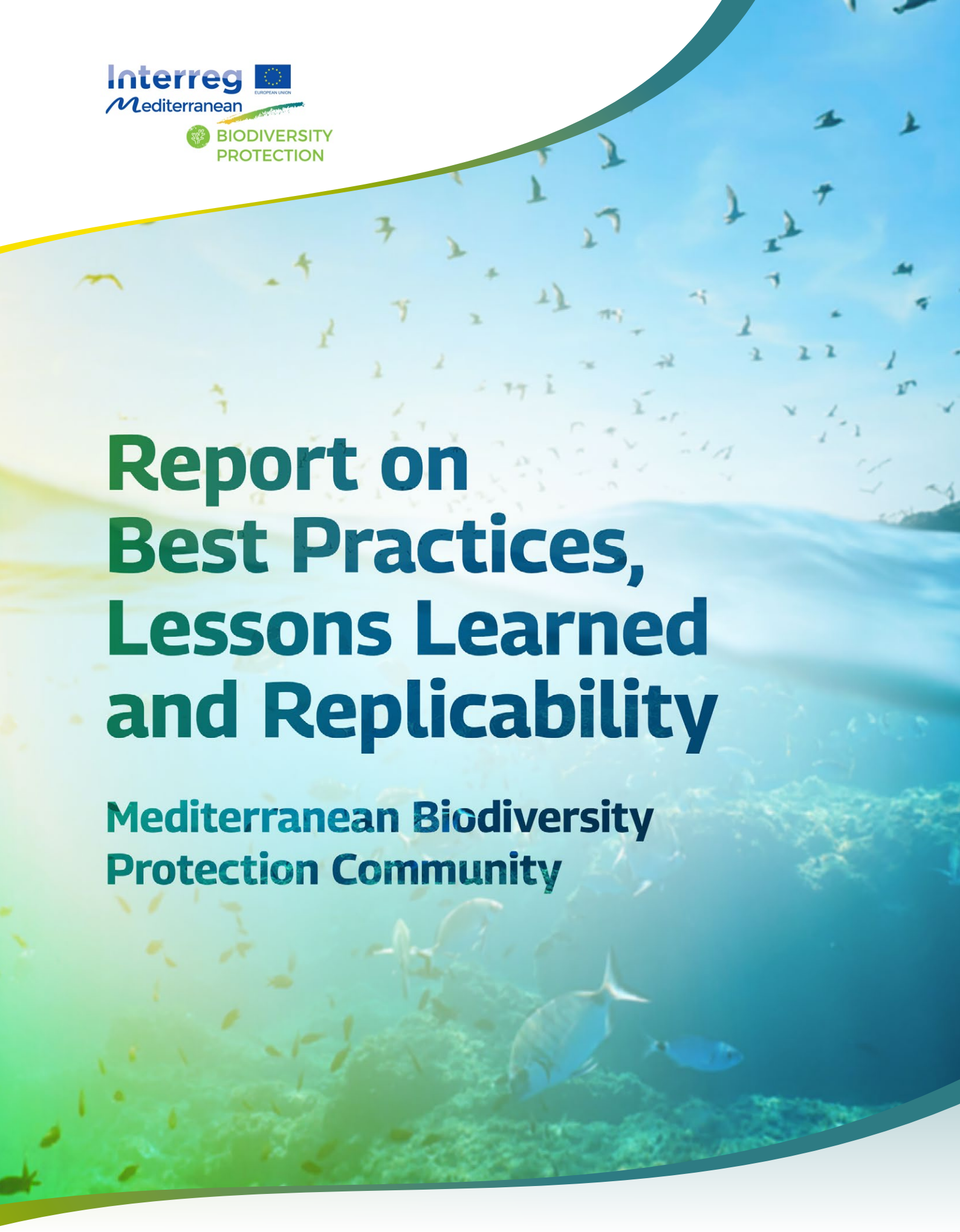
Interreg Mediterranean
EUROPEAN UNION
BIODIVERSITY PROTECTION

Report on Best Practices, Lessons Learned and Replicability

Mediterranean Biodiversity Protection Community



UNIVERSIDAD DE MÁLAGA ETC UMA MedCités MedCities CPMR INTERMEDITERRANEAN COMMISSION UN environment United Nations Environment Programme MAP Mediterranean Action Plan Barcelona Convention Plan Bleu Latte CREATIVE Montenegro Ministry of Ecology Spatial Planning and Urbanism MARINE INSTITUTE INSTITUT ZA MORE

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INTRODUCTION AND CONTEXT

The **Mediterranean Biodiversity Protection Community (MBPC)** is an Interreg MED Horizontal Project that constitutes the second phase of the Interreg MED Biodiversity Protection Horizontal Project PANACeA, which ended in October 2019 and aimed to "streamline networking and management efforts in Mediterranean Protected Areas (PAs) as a mechanism to enhance nature conservation and protection in the region". Running from 2019 to 2022, the MBPC's objective is to mainstream biodiversity management efforts aimed at ensuring environmental sustainability in the Mediterranean.

The MBPC gathers a total of 17 Modular Projects (MPs) that cover topics such as biodiversity protection, coastal and marine conservation, climate change adaptation, pollution, land-sea interactions, the ecosystem-based approach, participatory governance mechanisms and approaches, small-scale fisheries and wetlands, among others. The MBPC's MPs are funded by the **Interreg MED Programme** under its Priority Axis 3 "Protecting and promoting Mediterranean natural and cultural resources". The MPs contribute to the Programme's Specific Objective 3.2 - "To maintain biodiversity and natural ecosystems through strengthening the management and networking of Protected Areas". The MBPC builds on synergies between relevant Mediterranean stakeholders such as protected area managers, policymakers, civil society and scientists. It also capitalises on the achievements of the MBPC's MPs and increases the visibility and impacts of their results in order to mainstream these efforts across the Mediterranean region. As part of the MBPC's Work Package 5 on Capitalisation led by Plan Bleu/RAC, this report showcases a selection of the best practices implemented by the MBPC's MPs and delves into the conditions for their successful transfer and replication elsewhere in the Mediterranean and beyond.

MBPC - Modular Projects

Phase 1 projects (2016-2019)

- ACT4LITTER
- AMARE
- ConFish
- EcoSUSTAIN
- FishMPABlue2
- MEDSEALITTER
- MPA-ADAPT
- POSBEMED
- PHAROS4MPAs
- WETNET

Phase 2 projects (2019-2022)

- AMAre Plus
- FishMPABlue2 Plus
- Plastic Busters MPAs
- MPA NETWORKS
- TUNE UP
- POSBEMED2
- MPA Engage

The MBPC has also developed a **TOOLS CATALOGUE**.
It presents the work of the Community's MPS, using the same categories of tools as this report (monitoring, management and geospatial). Both of these reports support the MBPC's will to transfer and replicate its results. Moreover, this "tools catalogue" approach has been adopted by several other Interreg MED Horizontal Projects, such as the Sustainable Tourism Community.

In 2022, it was agreed to enrich the Tools catalogue with new contents in cooperation with the ENI CBC MED funded project ENSERES for ENhancing Socio-Ecological RESilience in Mediterranean coastal areas.

The MBPC's Working Groups

WG1
BIODIVERSITY PROTECTION AND TRANSBOUNDARY CHALLENGES
CBD, Barcelona Convention, EU Biodiversity Strategy, EU Habitats Directive, MSFD, MSP

WG1 aims to increase understanding, knowledge and awareness on multiple environmental threats to biodiversity and natural resources. It also promotes best practices guided by Ecosystem-based Management (EBM) tools to mainstream them into regional governance mechanisms, with the overall aim of focusing on functional ecosystem units by addressing cumulative pressures and impacts on biodiversity and ecologically significant areas.

WG1 focuses on key topics such as marine pollution and climate change, for example.

WG2
SUSTAINABLE USE OF NATURAL RESOURCES
EU CFS, GFCM management plans

WG2 seeks to convene scientists, researchers, practitioners and policymakers around measures that support the sustainable use of resources in the Mediterranean. Indeed, such an ecosystem-based management approach is possible only if there is a common understanding of the existing interdependencies and reciprocal influences between natural resources on the one hand, and the needs of economic growth and human society on the other.

WG2 notably focuses on small-scale fisheries and co-management, amongst others.

WG3
INTEGRATED ECOSYSTEM MONITORING AND MANAGEMENT
EU MSP, MSFD, WFD, Barcelona Convention, ICZM

WG3 addresses key challenges for the Mediterranean in relation to integrated ecosystem monitoring by contributing to a better understanding of land-sea interactions and wetland ecosystems. Land-sea interactions (LSI) include interactions due to natural processes as well as interactions between land and sea-based activities. The influence of LSI on planning processes and plans for terrestrial and marine areas, as well as on relations between humans and their marine and terrestrial environments are studied by this WG, such as marine renewable energy and the boating sector.

WG3 also supports integrated ecosystem monitoring and management approaches in wetlands.

The MBPC frames its activities in three Working Groups (WGs), which were established in 2016-2019 in the framework of the PANACeA project.

The aims of these WGs are to:

Promote
joint collaborative work between the MBPC's different components

Propose
biodiversity protection and management tools and capacity building opportunities to project partners and interested actors

Put
the **Mediterranean Ecosystem-based Declaration** into practice in partnership

Raise
awareness of Mediterranean biodiversity knowledge and challenges in the region

Over the years, the MBPC's Modular Projects have gathered and applied considerable knowledge related to the topics described above. Ranging from context-specific measures and actions to regional recommendations and approaches, this knowledge can both enrich theory and orient practice when it comes to biodiversity conservation, monitoring and management. Below, you will find a selection of some of the best practices that reflect part of these projects' work. These Best Practices are divided into three categories: **MANAGEMENT**, **MONITORING** and **GEOSPATIAL** tools and provide insights into the work that committed individuals and organisations from around the Mediterranean have been undertaking together to preserve and restore Mediterranean biodiversity over the past years. These different types of tools have different functions:

MANAGEMENT TOOLS

can support managers in defining and regulating the activities of specific sectors (such as fisheries), ecosystems (such as wetlands) or challenges (such as marine litter). They can also support better coordination with other maritime sectors in the context of the Blue Economy or Marine Spatial Planning, for instance.

GEOSPATIAL TOOLS

provide access to data and knowledge to support biodiversity conservation efforts and improve ecosystem-based management practices.

MONITORING TOOLS

support data collection and the ecological and socio-economic monitoring of key phenomena and processes.

The MBPC is expanding other tool categories to include financial and **capacity building** tools.

2 MANAGEMENT BEST PRACTICES

2.1

MARINE PROTECTED AREAS (MPA) ACTION PLANS: MARINE LITTER

Project name and duration: ACT4LITTER (2016-2018)

Pilot areas: Ebro Delta Nature Park (SP), Levante de Mallorca-Cala Ratjada MPA (SP), Cabo de Gata-Nijar Natural Park/UNESCO Global Geopark (SP), Miramare MPA (IT), Torre del Cerrano MPA (IT), Torre Guaceto MPA (IT), Strunjan Landscape Park (SL), National Park of Kornati (HR), Thermaikos Gulf Protected Areas (GR)

Partners: Catalan Waste Agency - MedWaves, Sant'Anna School of Advanced Studies, MedPAN, MIO-ECSDE

Target stakeholders: MPA managers, public authorities, conservationists, small and medium enterprises, beachgoers (residents and tourists), the tourism sector

Context

The Marine Litter MPA Action Plan tool is designed for MPA managers to identify, select and implement targeted actions to tackle marine litter in their MPAs and to support efforts in achieving their conservation goals.

Objectives

The main objectives of this tool are to:

- **PREVENT** and **REDUCE** marine litter entering the coastal and marine environment of Mediterranean MPAs.
- **COLLECT** and **REMOVE** marine litter from the coastal and marine environment of Mediterranean MPAs by using sound methods that do not pose any threats to habitats and species, focusing specifically on marine litter hotspots and accumulation areas.
- **ENHANCE** and **DEEPEN** our knowledge of the marine litter threat (amounts, composition, sources, pathways and impacts) in Mediterranean MPAs.

Methodology

The implementation of this tool comprises 4 phases:

1. Identification and engagement of stakeholders:
Setting up a team in charge of preparing and implementing the action plan.

2. Analysis and Scenarios:
Collecting all available information on marine litter, possibly using the Marine Litter Watch Month (MLWM) tool, engaging stakeholders and proposing a set of measures for marine litter prevention and mitigation. The MLWM can help in shortlisting priority measures by matching each MPA specificity with a list of over 100 marine litter prevention best practices.

3. Setting the Vision:
Engaging stakeholders and the wider community to discuss findings and build a consensus on the final measures to be included in the action plan.

4. Designing the Future:
Drafting and adopting the Marine Litter Action Plan, which should include: I) goals and objectives, II) a preamble explaining the scope and process followed to produce and approve the Plan, III) the specific context of the MPA and area, IV) the governance structure, V) the institutional framework for implementation and VI) the priority marine litter measures agreed by the different stakeholders, as well as an implementation roadmap.

Results and Implementation Challenges

This tool can improve the networking capacity of Mediterranean MPAs and assist MPA stakeholders in establishing a marine litter action plan. Moreover, the action plans implemented in the pilot areas also demonstrated the importance of involving small-scale economic actors and fostering local strategies for marine litter removal. Potential implementation challenges are the lack of relevant data and financial resources as well as difficultiesin establishing efficient collaborations with local actors.

Transfer, replicability and scaling up

Marine Litter Action Plans can be developed and adopted by all Mediterranean MPAs. Coordinated approaches and actions can therefore be established at the Mediterranean scale to tackle marine litter and achieve conservation objectives in MPAs. However, every action plan should reflect the needs determined by an MPA's specific context. Therefore, this tool could be enhanced with a guide prepared by MPA managers reflecting their context-specific experiences.

Ideal scale of implementation	MPA 2
Organisational capacity needed	MPA Managers can play different roles in its implementation and follow up, for example implementers, facilitators and/or promoters. Capacity is therefore needed. 3
Technological infrastructure required	PC and internet connection 2
Training needed?	Training on implementing an action plan can be prepared using a quick guide that has been developed for MPA managers. The implementation time is context-specific. 3
Estimated cost	Needs to be estimated and tailored to each MPA's needs, specific context and characteristics. 3

For more information

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Links:

- ACT4LITTER website
- Quick Guide for MPA managers on setting the Action Plan & Deliverables page with links to the 9 pilot Action Plans
- Showcase measures to tackle Marine Litter in MPAs
- Biodiversity Protection Knowledge Platform – Act4Litter project viewer
- Biodiversity Protection Knowledge Platform – Marine Litter resources

Interreg Mediterranean ACT4LITTER

2.2.

SUSTAINABLE MANAGEMENT OF POSIDONIA

Project name and duration: POSBEMED (2016-2018)

Partners: Entente Interdépartementale de Démoustication Méditerranée (FR), IUCN Centre for Mediterranean Cooperation (SP), International Marine Centre Foundation (IT), Hellenic Centre for Marine Research (GR), ECO-logica srl (IT)

Pilot sites: Spain, France, Italy, Greece and Cyprus

Target stakeholders: National and local authorities, protected area managers, beachgoers (residents and tourists)

Context

Despite its key role in regulating coastal ecosystems, *Posidonia oceanica* faces numerous challenges in the Mediterranean. The lack of a consistent legal framework, conventional fishing activities, the impacts of boats, unsustainable beach cleaning methods and widespread negative social perceptions are preventing the sustainable management of *Posidonia oceanica* and beach dunes in coastal ecosystems. For many beachgoers, beaches must be clean and crystal clear, and therefore devoid of any Posidonia banquettes. Today, many municipalities and local stakeholders are aware of this topic and are seeking sustainable solutions for the management of Posidonia banquettes that focus on integrated coastal ecosystem conservation.

Objectives

The aim of this tool is to foster local sustainable management practices for decision makers and beachgoers to avoid the loss of valuable Posidonia coastal habitats and associated ecosystem services. In particular, the tool aims to:

- Inform a common transnational strategy and action plan for Mediterranean coastal areas where Posidonia beach-dune systems occur.
- Maintain the integrity, ecological function and environmental value of the Posidonia coastline, while taking local expectations, present perceptions and the existing coastal zone dynamics (seagrass deposition, formation of banquettes on the beaches) into account.
- Develop the working capacity of relevant stakeholders through multi-stakeholder participation.

Methodology

This tool presents guidelines for establishing a governance strategy and action plan for better Posidonia banquette management, conservation and restoration, based on an improved understanding of the types of Posidonia littorals that stakeholders are dealing with. Monitoring and evaluating interventions are an important part of the implementation of this tool and consists of defining indicators to monitor the status of the coastal environment, including beach-dune systems. The tool also contains recommendations for beach cleaning (avoiding the use of mechanical methods whenever possible), disposal options, vehicle access to the beach, banquette use and beach certification schemes.

Results and Implementation Challenges

This tool can be adopted by municipalities in which Posidonia banquettes and beach-dune systems occur as well as by all Mediterranean MPA managers. The tool's transnational integrated strategy and action plan are designed to inform regional and national policies and to identify funding opportunities for organisations seeking to implement sustainable beach and coastal management practices in the Mediterranean.

This tool reinforces municipalities' roles in beach management and conservation while aligning their efforts with EU legislation. Targeted strategies to involve other relevant stakeholders to participate in sustainable beach management were developed based on attitude analyses, while the costs involved in Posidonia banquette management were assessed through cost-benefit analyses. During the tool's implementation, the main challenges identified were:

- Context-specific implementation challenges
- Perceptions of beachgoers concerning Posidonia
- The different and sometimes conflicting needs and activities of key economic sectors
- Knowledge and capacity gaps of local beach cleaning personnel.

Transfer, replicability and scaling up

Ideal scale of implementation	Local, MPA, National, Regional 5
Organisational capacity needed	Periodic training for personnel and managers are necessary, as well as periodic assessments of the measures taken (monitoring and evaluation based on a set of indicators to monitor the state of the coastal environment) 5
Technological infrastructure needed	Machinery and manual tools (e.g. rakes) for beach cleaning/posidonia wrack management/etc... and simple IT tools to carry out field surveys etc... 5
Training required?	Familiarising stakeholders with the proposed governance framework and capacity building for personnel (beach cleaning techniques) 4
Estimated cost	Context-specific (mainly applies to management, training and monitoring costs) 5
Other [...]	Preconditions for successful transfer: Familiarising stakeholders with the proposed tool's governance framework and how it can support a broader vision for Integrated Coastal Zone Management 3

For more information

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Links:
- POSBEMED website
- Biodiversity Protection Knowledge Platform – POSBEMED project viewer
- Strategy and action plan for posidonia beach-dune systems
- panaceaweb.adabyron.uma.es/posbemed-project/

Interreg Mediterranean POSBEMED

2.3

ENVIRONMENTAL CONTRACTS

Project name and duration: TUNE UP (2019-2022), building on the WETNET (2016–2019) project's achievements

Partners: ZRC-SAZU-Research Centre of the Slovenian Academy of Sciences and Arts (SI), FAMP-Andalusian Federation of Towns and Provinces (SP), SEO/BirdLife-Spanish Ornithological Society (SP), SARGA-Government of Aragon (SP), RCDI-Development and Innovation Network (PT), GDA-GRC-Gozo Development Agency - Gozo Regional Committee (MT), Tour du Valat (FR), CIRF-Italian Centre for River Restoration (IT), Veneto Region (IT), Province of Vercelli (IT)

Pilot sites: Amvrakikos Gulf MPA (GR), Thermaikos Gulf - Axios Delta (GR), Saltworks of Camargue (FR), Cabo de Gata MPA - Nijar Natural Park (SP), L'Albufera Valencia (SP), Kotor - Risan Bay (MNE), Secovlje Salina Landscape Park (SI), Sinis Peninsula - Mal di Ventre Islands (IT), Ventotene - Santo Stefano Islands (IT)

Target stakeholders: Government agencies (local, regional, national), research centres, NGOs and local communities

Context

Environmental contracts are voluntary contracts that aim to enhance the effectiveness of the management, coordination and planning of protected wetlands and MPAs in the Mediterranean. Their objective is to ensure proper governance to protect wetlands and MPAs and their surroundings through a multi-stakeholder/multi-level governance approach.

Objectives

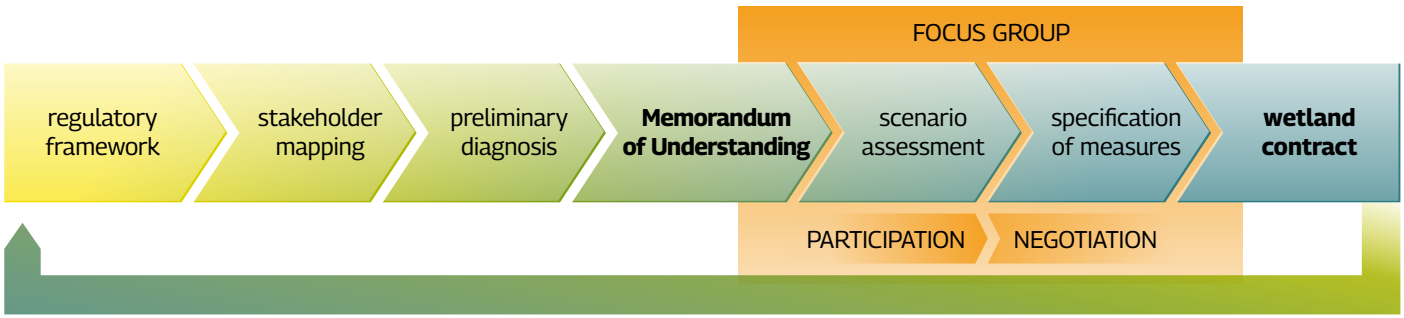
Environmental contracts aim at improving governance practices in wetlands and MPAs, based on a participatory approach. Indeed, by engaging all relevant stakeholders around the same table, horizontal and vertical management processes that concern these valuable areas can be better integrated and streamlined. Additionally, most often local stakeholders (fishers, farmers, local communities) that are usually not included in management processes can develop a stronger sense of ownership of the wetland and MPA management process.

Methodology

The Wetlands/MPA Contract consists of an agreement between the stakeholders concerned. It is based on a participatory process that includes workshops and working groups on themes such as agriculture, hydrology, environment and tourism, focusing on 3 strategic areas: governance, environment and socio-economic development. During this process, it is of key importance to:

- Map out all of the activities that are being carried out within the MPA or wetland area, while prioritising those that are heavily dependent on a healthy environment;
- Identify the main leaders in terms of organisations and individuals in local communities to engage them and amplify their voices, while prioritising individuals that directly benefit from the wetlands;
- Create a Wetland/MPA Council that includes the main local actors under the oversight of national authorities to define ownership (common property protocols), access type, accountability for wetland use and protection (using Elinor Ostrom's eight principles as a framework);
- Local authorities should act as "observers" and experts as "facilitators" and should not have a primary role. Signatories should be the main parties that have a stake in the area.

The main elements of the voluntary contracts are described below:



The implementation timeline is 5 years and comprises two main steps:

(I) "Participation", which includes stakeholder mapping, preliminary diagnosis, a memorandum of understanding, targeted diagnosis and an assessment of alternatives

(II) "Negotiation", divided into two consecutive steps: specification of measures and the adoption of the Voluntary Contract.

Results and implementation challenges

The main result of the Voluntary Contracts is the improved effectiveness of wetland and MPA management through the active involvement and participation of all relevant stakeholders. The main challenges revolve around involving all of the necessary stakeholders and public authorities, linking the Voluntary Contract to government tenders and including national authorities as "observers", not necessarily as contract signatories.

Transfer, replicability and scaling up

Ideal scale of implementation	This tool encourages international collaboration across MPA networks and cooperation between state, industry and other actors	5
Organisational capacity needed	The use of participatory processes is advised whenever possible	3
Technological infrastructure required	No need	1
Training needed?	5-10 people should be trained on management tools, citizen participation processes and on action plans and management in natural areas.	3
Estimated cost	The final cost will likely depend on factors such as the type and length of the course, the number of people to involve, and whether previous training was provided	2

For more information

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TUNE UP Project: Christos Papantos, Anatoliki: papantos@anatoliki.gr

Links
- WETNET Project
- TUNE UP Project
- Environmental Contracts in Marine Protected Areas: methodology and pilot cases
- More about the project

Interreg Mediterranean WETNET

2.4

MARINE LITTER PREVENTION AND MITIGATION ACTIONS

Project name and duration: Plastic Busters MPAs (2018-2022)

Partners: Italian National Institute for Environmental Protection and Research (IT), University of Siena, Department of Physical Sciences, Earth and Environment (IT), Corsican Agency for Environment (FR), Regional Government of the Balearic Islands. Department of Environment, Agriculture and Fisheries (SP), Management Agency of Zakynthos National Marine Park (GR), Tuscan Archipelago National Park (IT), MIO-ECSDE (GR), Spanish Oceanographic Institute, Balearic Centre of Oceanography (SP), Hellenic Centre for Marine Research, Institute of Oceanography (GR), IFREMER (FR), Catalan Waste Agency - MedWaves (SP), Hellenic Ministry of Environment and Energy, Special Secretariat for Water (GR), Albanian Ministry of Environment-Directorate of Biodiversity and Protected Areas (AL), Ministry of Environmental and Nature Protection of Croatia (HR), University of Split, Faculty of Civil Engineering, Architecture and Geodesy (HR)

Pilot sites: Pelagos Sanctuary (FRMCO, IT), Tuscan Archipelago National Park (IT), National Marine Park of Zakynthos (GR), Cabrera Archipelago National Maritime-Terrestrial Park (SP)

Target stakeholders: MPA managers, national and local governments

Context

Marine litter is an example of a problem that does not have a "one solution fits all". It requires a combination of multi-stakeholder and multi-sectoral efforts across nations and disciplines in order to address it effectively. Slashing plastic pollution and breaking away from a throwaway society requires a paradigm shift in our lifestyles and a transformation of the way we think and act. To this end, ocean literacy and education for sustainable development are key marine litter prevention and mitigation actions that lie at the heart of the Interreg MED Plastic Busters MPAs project. Working for and from the perspective of an MPA manager, Plastic Busters MPAs sought to offer concrete solutions to prevent and mitigate the impacts of marine litter by showcasing marine litter measures in 10 Mediterranean MPAs. The identification of the project demonstration sites has been made by leveraging the work conducted by the Interreg MED ACT4LITTER project (see Best Practice 2.1). ACT4LITTER shortlisted 10 no-regret measures to curb marine litter in MPAs in a Joint Plan for Action.

Objectives

The overarching aim of this tool is to provide an overview of marine litter management best practices measures that seek to prevent, reduce and mitigate marine litter at the international, regional, national and local levels. The inventory of applied measures aims to establish a common understanding within the project partnership, based on recent advances in terms of marine litter management. This will help define and shortlist appropriate marine litter measures to be piloted by managers in MPAs, who are at the forefront of the devastating effects of marine litter.

Methodology

Refining the ACT4LITTER list of measures and taking into consideration the role MPA managers can play in the elaboration of measures (as implementers, facilitators, promoters), four major types of priority measures towards preventing and mitigating marine litter effectively in MPAs were selected, tested and replicated within the scope of the Plastic Busters MPAs project:

(I) Setting up a scheme to phase out the use of single use plastics

(II) Developing targeted awareness raising campaigns

(III) Establishing a derelict fishing gear management scheme and

(IV) Implementing an extended producer responsibility scheme.

Results and Implementation Challenges

MPAs can serve as a unifying force and catalyst for change towards litter-free coasts and seas through the participatory elaboration and implementation of MPA-specific marine litter action plans. These plans pave the way for improved policy implementation and legislation enforcement regarding marine litter. MPAs can address the marine litter threat by directly operationalising targeted prevention and mitigation measures. Indeed, stakeholders are knowledge agents, and treating them as such not only fosters trust, which is key to mobilising action, but also leads to more creative and dynamic solution identification and problem solving approaches.

Transfer, replicability and scaling up

The following elements are critical success factors and enabling conditions for the transfer, replication and scaling up of the project's results:

- Fit-for-purpose data
- Participatory decision-making and bottom up approaches
- Feasible and effective solutions
- Coordinated and multilevel actions
- Methodologically sound processes
- Encouraging a paradigm shift in the way we produce and consume.

Moreover, the following project deliverables can support and enhance replication efforts:

- The Plastic Busters MPAs Guidelines
- The Plastic Busters MPAs e-learning module
- The Plastic Busters MPAs Capitalisation and Mutual Learning Events
- Follow-up projects
- Building synergies with ongoing projects and initiatives.

For more information

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More links:

- Plastic Busters MPAs website
- Plastic Busters MPAs: deliverables database
- More about the project

Interreg Mediterranean
PLASTIC BUSTERS MPAs

2.5

THE MEDPLAN BUSINESS PLANNING TOOL

Project name and duration: MPA Networks (2019-2022)

Partners: MedPAN (FR), Portofino MPA (IT), Parc National du Port Cros (FR), Torre Guaceto MPA (IT), Torre del Cerrano MPA (IT), Brijuni National Park (HR), Landscape Park Strunjan (SI), National Marine Park of Zakynthos (GR), Marilles Foundation (SP), Institute of Nature Conservation in Albania (AL)

Pilot sites: Gokova MPA (TK), Penisola del Sinis – Isola di Mal di Ventre MPA (IT), Portofino MPA (IT), Public Institution Nature of Šibenik-Knin County (HR), Society for the Protection of Nature in Lebanon (LB), Tyre Coast Nature Reserve (LB), Landscape Park Strunjan (SI), Landscape Park Debelirtič (SI), and Ashtum El- Gamil Protectorate-Egyptian Environmental Affairs Agency (EG)

Target stakeholders: MPA managers and financial officers

Context

Mediterranean MPAs lack staff, equipment and ultimately funding to achieve their objectives. In fact, only 11% of MPAs consider that they have a sufficient budget to fully meet their management needs.This precarious financial situation triggers a cascade of management problems as funds are necessary to hire and train staff, manage and monitor the protected area, work with local communities and stakeholders, invest in infrastructure and equipment, conduct surveillance patrols, enforce regulations and other management activities. MPA management plans therefore need to be supported by a realistic financial strategy to secure adequate resources for effective management and conservation activities over time. MPA managers also need to develop and regularly update a business plan to drive their financial strategy on a day-to-day basis.

Objectives

The MedPlan tool is designed to enable MPA managers to develop and update their Business Plan in a simple way. The tool allows MPA managers to:

- Plan for future costs,
- Evaluate current and future revenues and,
- Assess financial gaps.

Methodology

Business plans for MPAs do not focus on investment returns, but rather on environmental performance. They are internal management tools for maximising environmental performance despite limited resources. It is important to note that a clear management strategy based on an operational management plan is essential for developing and implementing a sustainable financial strategy. The four steps of the overall "business plan" approach applied to marine conservation are:

- A cost classification
- The identification of associated needs for each conservation objective and/or measure
- Cost estimates associated with the conservation objectives and/or measures
- Estimates of current and future revenues to cover the costs.

Results and Implementation Challenges

The MedPlan tool has been designed in a simple way to ensure that it is accessible to as many users as possible. Once the business planning approach and the tool are understood by the users , it can be adapted to fit the specific needs of the MPA. The basic features of the MedPlan tool can therefore be enhanced by users. For example, during one training session, the tool was enriched to allow data to be processed in several currencies in order to better forecast the financial situation of the MPA over time in a context of high inflation.

For another MPA with a very structured and detailed Management Plan, the MedPlan tool was adapted to allow a more granular processing of the data according to the priority levels assigned to the activities in the Plan. Such improvements to the tool can be supported as part of the training. By using the MedPlan tool, MPA managers will be able to plan costs and revenues in line with their management plan, in order to drive a financial strategy and thus strengthen and sustain their conservation activities over time.

To answer this need, a training course on business planning has been developed by MedPAN and Brijuni National Park, in consultation with The MedFund, and with support from BlueSeeds as part of the MPA NETWORKS project. This training module is offered as part of the financing cycle of the MedPAN regular training programme. The training combines e-learning resources in the form of five online video tutorials for self-study, and face-to-face or distance learning sessions, where MPA managers and financial officers work on the MedPlan tool to develop their business plan based on their own financial data. Specific equipment has to be purchased to perform the suggested methodologies. In addition, normal costs for activities at sea should be planned.

Transfer, replicability and scaling up

Ideal scale of implementation	MPA level	2
Organisational capacity needed	Capacity to organise and adapt business training sessions	2
Technological infrastructure required	Computer equipment to perform the suggested methodologies	2
Training needed?	Basic knowledge of the business planning approach	2
Estimated cost	Normal costs for activities at sea should be planned.	3

For more information

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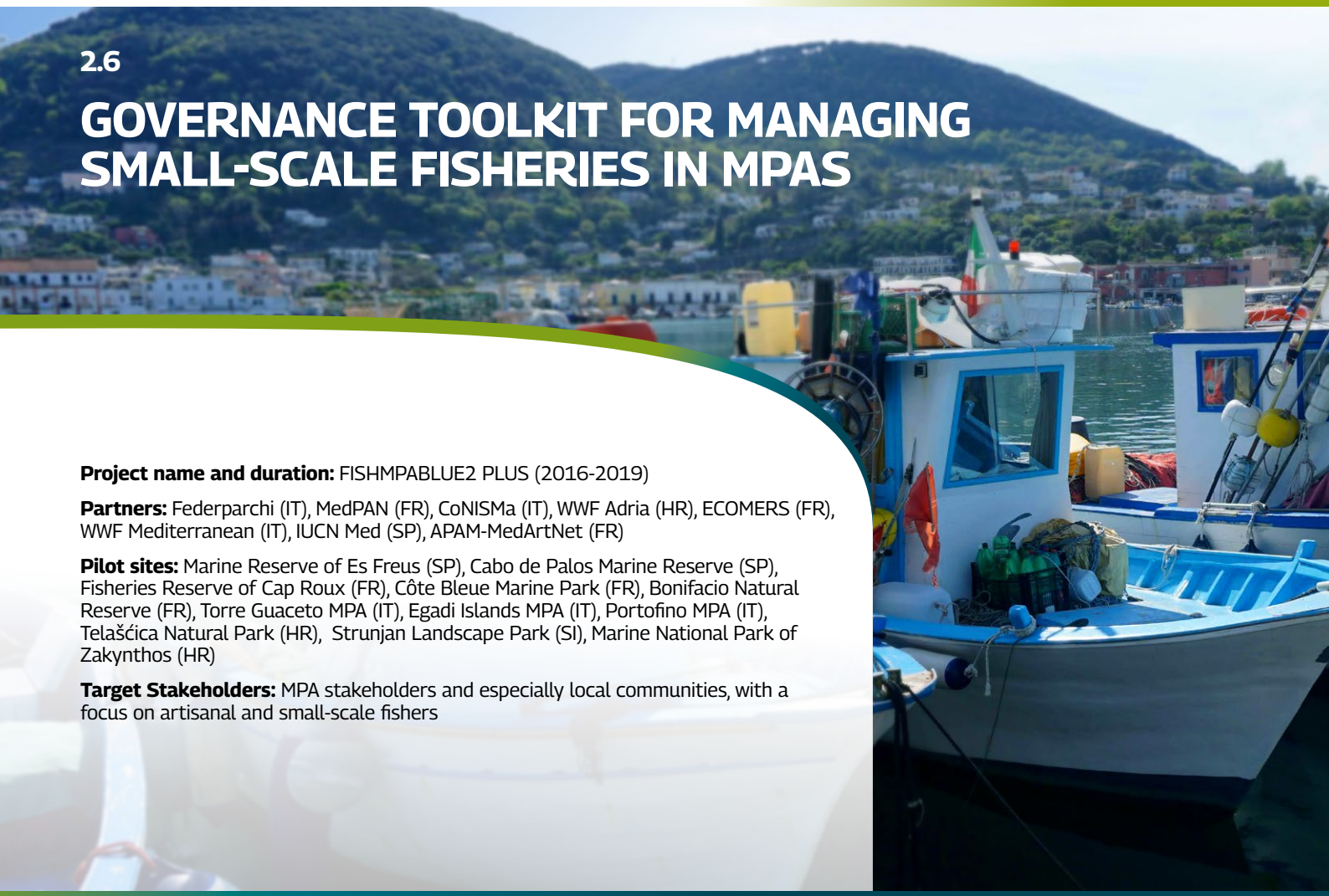
Links:
- MPA Networks website
- MPA Networks Business Planning Module
- More about the project

Interreg Mediterranean MPA NETWORKS



2.6

GOVERNANCE TOOLKIT FOR MANAGING SMALL-SCALE FISHERIES IN MPAS

Project name and duration: FISHMPABLUE2 PLUS (2016-2019)

Partners: Federparchi (IT), MedPAN (FR), CoNISMa (IT), WWF Adria (HR), ECOMERS (FR), WWF Mediterranean (IT), IUCN Med (SP), APAM-MedArtNet (FR)

Pilot sites: Marine Reserve of Es Freus (SP), Cabo de Palos Marine Reserve (SP), Fisheries Reserve of Cap Roux (FR), Côte Bleue Marine Park (FR), Bonifacio Natural Reserve (FR), Torre Guaceto MPA (IT), Egadi Islands MPA (IT), Portofino MPA (IT), Telašćica Natural Park (HR), Strunjan Landscape Park (SI), Marine National Park of Zakynthos (HR)

Target Stakeholders: MPA stakeholders and especially local communities, with a focus on artisanal and small-scale fishers

Context

The Mediterranean Sea is currently exposed to a broad range of anthropogenic threats. MPAs are a crucial management tool to address cumulative threats, notably the ongoing loss of marine biodiversity, marine pollution, overfishing and seascape degradation. In parallel, small-scale fisheries (SSF) are severely challenged by the collapse in fish stocks, which threatens livelihoods around the Mediterranean rim. FISHMPABLUE2 encouraged the dissemination of good governance principles and adaptive management strategies that actively involve local communities, notably fishers, throughout all steps of the MPA establishment process. This can increase support for MPAs and contribute to their success, while at the same time contributing to the emergence of healthy and long-term community relationships based on a shared decision-making process.

Objectives

This governance toolkit seeks to support MPA managers in navigating the multi-dimensional tools available to improve MPA effectiveness in SSF management. It goes beyond the business-as-usual challenges of budget and staff limitations that often hinder MPAs. Broadly speaking, the toolkit also aims to reconcile conservation goals with SSF and associated livelihoods through the development of participatory decision-making processes and co-management, as opposed to top-down and centralised planning. In doing so, rural resource management and governance in the Mediterranean can be improved.

Methodology

The toolkit comprises twelve SSF management measures divided into five main themes: involvement in decision-making, strengthening enforcement, knowledge and ownership, improving the environmental sustainability of SSF and improving SSF profitability. Each measure was implemented in at least one pilot MPA, and evaluated according to the following criteria: cost, time needed, local stakeholders' involvement, perceived effectiveness and the MPAs that implemented the measure. Formalised Local Governance Clusters (LGC) were formed to improve the level of engagement with fishers and strengthen SSF co-management.

Results and Implementation Challenges

FISHMPABLUE 2 undertook ecological and socio-economic monitoring campaigns both before and after the governance toolkit was implemented over one year, which indicated:

• **Ecological benefits:** Significant increases in habitat health and fish stocks. For instance, positive effects on protected fish assemblages when compared to unprotected ones were observed, with early signs of increased fish diversity, density and biomass, despite the high variability in MPA characteristics.

• **Economic benefits:** Positive effects on fish catch and fishers' incomes.

• **Social benefits:** Thanks to the LGCs created by the toolkit, increased buy-in and more willingness to implement the tools were observed among stakeholders.

• **Governance benefits:** 67% of fishers reported that the new set of management measures had enhanced their relationship with MPA management boards. Fishers felt empowered and the toolkit generated more support for MPAs. These actions were also perceived as having reduced illegal activities in MPAs where tools to strengthen enforcement were implemented.

The main implementation challenges consisted of:

• Identifying and engaging the relevant stakeholders to create successful collaboration platforms

• involving marginal groups

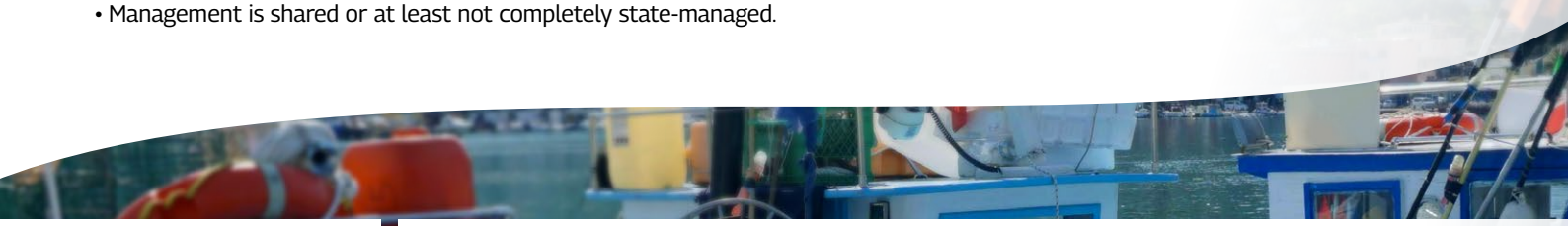
• Creating a horizontal co-management structure

• Allocating the time, staff and financial resources needed to ensure regular meetings and exchanges with the targeted stakeholders.

Transfer, replicability and scaling up

In order to allow for the transfer of these measures to other MPAs, they should satisfy the following basic conditions:

- The MPA needs to be legally gazetted, with appropriate and operational regulations in place
- The MPA has a clearly defined management plan that is being implemented with operational goals and objectives
- There is acceptable enforcement and budget capacity with plans for long-term financial stability
- Monitoring systems are in place that inform management activities allowing for adaptive management
- The MPA has adequate staff capacity and staff presence
- The governance system consists of inclusive decision-making processes, such as co-management and participatory governance tools
- Management is shared or at least not completely state-managed.



Ideal scale of implementation	MPA level 2
Organisational capacity needed	- Appropriate links must be established between facilitators, MPA stakeholders and fishermen, in the local language - Potential need for negotiation and conflict resolution 5
Technological infrastructure required	A computer and an internet connection 2
Training needed?	Training for tool facilitators in participatory processes and local convening 5
Estimated cost	Costs vary depending on the specific tools in the toolkit 3

For more information

Project Coordinator:
Luca Santarossa, Federparchi - Europarc Italy, luca.santarossa@parks.it

Useful Links:

- FISHMPABLUE2 website
- FISHMPABLUE2 GOVERNANCE TOOLKIT FOR SMALL-SCALE FISHERIES REPORT
- FISHMPABLUE2 videos

Di Franco, A. et al. (2020) Improving marine protected area governance through collaboration and co-production, in Journal of Environmental Management, n. 269 (2020) 110757, Elsevier, available **here**

Di Franco, A., Thiriet, P., Di Carlo, G. et al. (2016) Five key attributes can increase marine protected areas performance for small-scale fisheries management. Sci Rep 6, 38135 https://doi.org/10.1038/srep38135, available **here**

- More about the project

Interreg Mediterranean
FishMPABlue 2
FishMPABlue 2 PLUS

2.7

DECISION SUPPORT TOOL FOR BLUE ECONOMY IN MARINE PROTECTED AREAS (DST-MPA)

Project name and duration: PHAROS4MPAs (2018-2020)

Partners: World Wide Fund for Nature France (FR), World Wide Fund for Nature Mediterranean (IT), Priority Actions Programme/Regional Activity Centre (HR), Regional Development Funds of North Aegean Region (GR), Regional Agency of the Administration of Protected Areas in Albania (AL), Institute of the Republic of Slovenia for Nature Conservation (SL), National Research Council - Institute of Marine Sciences (Ancona) (IT), University of Girona - Institute of Aquatic Ecology at the Faculty of Sciences (SP)"

Partner countries: Albania, Belgium, Croatia, France, Greece, Italy, Malta, Slovenia, Spain, Tunisia

Target stakeholders: MPA managers and planners, public authorities and economic operators

Testimonial: "This tool is a good starter when you want to deal with a problem, it is easy to manipulate, gives interest for the topics and invites you to read the full documents." (Olivier Laroussinie, CEREMA , France)

Context

The PHAROS4MPAs project explores how Mediterranean MPAs are affected by activities from the growing blue economy, and provides a set of practical recommendations for regional stakeholders on the environmental impacts of key blue economy sectors (aquaculture, maritime transport, offshore wind energy, cruise, recreational fisheries, small-scale fisheries and leisure boating).

Objectives

This tool helps users access PHAROS4MPAs recommendations concerning the environmental impacts of economic activities in the Mediterranean. The main objective of the tool is to support the operationalisation of these recommendations, translating knowledge from capitalisation baseline reports into a user-friendly online tool.

Methodology

The first step is to select the economic sector of your interest. Secondly, you are directed to background information on the economic sector selected, followed by an explanation of the sector's impacts and its interactions with the marine environment. The next step is designed for more precision, depending on the information required. Here, you are then invited to choose the type of user you are (among Public Authorities, MPA managers and economic actors of the sector), as well as the impacts you want the tool to take into account.

Results and Implementation Challenges

The PHAROS4MPAs DST-MPA tool increases the management effectiveness of Mediterranean MPAs by supporting the inclusion of their issues in the national maritime spatial plans that the EU's Mediterranean States are developing, as well as in Integrated Coastal Zone Management Plans and maritime sectors' strategies. By capitalising on results, this tool also encourages collaboration between Mediterranean MPA and eight maritime sectors. The DST informs the analysis of cumulative effects of human activities within a given area. The recommendations are available online and can be transferred and used elsewhere.

Transfer, replicability and scaling up

Ideal scale of implementation	MPA level
Organisational capacity needed	No
Technological infrastructure required	A computer and internet connection
Training needed?	No
Estimated cost	Free

For more information

Project Coordinator:
Catherine Piante, WWF France cpiante@wwf.fr

Links:

- PHAROS4MPAs website
- Decision Support Tool for Blue Economy in Marine Protected Areas
- More about the project

Interreg Mediterranean PHAROS4MPAs

2.8

LAND-SEA INTERACTIONS IN MARINE SPATIAL PLANNING

Project name and duration: Implementation of the Ecosystem Approach in the Adriatic through Marine Spatial Planning - GEF Adriatic Project (2017-2020)

Partners: Ministry of Environment, Spatial Planning and Urbanism (MNE), Ministry of Tourism and Environment (AL), National Agency for Protected Areas (ALB), UNEP/MAP (GR), PAP/RAC (HR), SPA/RAC (TN)

Pilot sites: Montenegro

Target stakeholders: Stakeholders involved in land and sea uses, such as public authorities, businesses and civil society

Context

The **GEF Adriatic project** implemented the **Ecosystem Approach** in the Adriatic Sea through Marine Spatial Planning (MSP). Indeed, the planning and management of marine and coastal areas should address processes that link both terrestrial and marine areas. These interactions can be anthropogenic or natural, and come from coastal zones towards the sea or vice versa. This calls for encouraging harmonisation of planning processes and plans for land and sea areas.

Another GEF project, "**Promoting Protected Areas Management through Integrated Marine and Coastal Ecosystems Protection in Coastal Area of Montenegro**" also provided important support on this theme. It supported the Montenegrin Ministry of Ecology, Spatial Planning and Urbanism in producing the studies that led to the creation of three new MPAs in Montenegro: Platamuni, Katič and Stari Ulcinj. The project also contributed to the MBPC's capacity building workshops for Montenegrin stakeholders, while the MBPC participated in its steering committee to coordinate upcoming capacity building activities in the country.

Objectives

The project's main objectives were to:

- Identify and localise most relevant present and potential future LSIs (Land-Sea Interactions);
- Understand the spatial scope of LSIs and eventually localise eventual hotspots, and;
- Identify measures to be included within the MSP Plan, aimed at managing the synergies between or impacts on marine activities and ecosystems generated by LSI.

Methodology

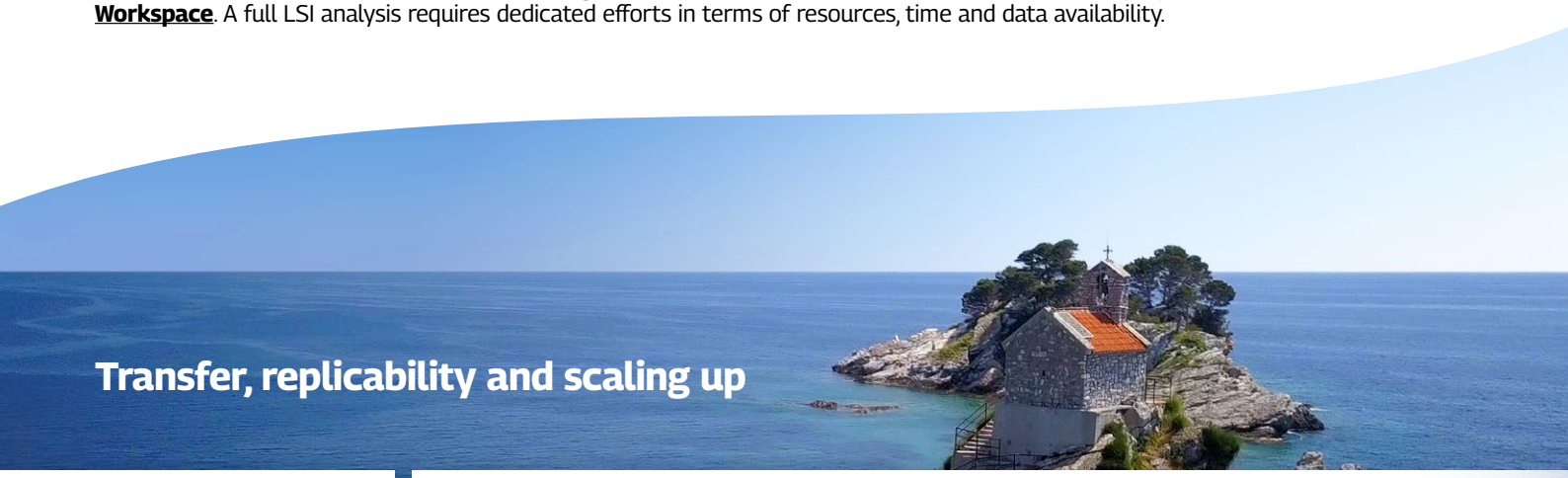
The LSI analysis consists of a tiered process that takes the following into account:

- An initial, general stocktaking and preliminary analysis that takes all known LSI in the area into account;
- An in-depth analysis of the most relevant LSIs. These interactions are those relevant for MSP key issues, identified by the planning process;
- A final phase, aimed at informing the planning process and proposing measures addressing LSI.

The active engagement of stakeholders is a crucial component of the LSI analysis, which is a useful tool for planning authorities. In order to operationalise LSI analysis, **an excel tool** was developed to facilitate the collection, presentation and valuation of synthetic information on the LSIs.

Results and Implementation Challenges

The results of the latest application in Montenegro are available on the website of the **GEF Adriatic project** and **Mediterranean MSP Workspace**. A full LSI analysis requires dedicated efforts in terms of resources, time and data availability.



Transfer, replicability and scaling up

Ideal scale of implementation	National and subnational (4)
Organisational capacity needed	No (1)
Technological infrastructure needed	A computer, an internet connection and GIS software (3)
Training required?	Capacity to use Geographic Information Systems (GIS) (4)
Estimated cost	Free (1)
Other	Data availability is a precondition for transfer (4)

For more information

Main project coordinators:
Marina Marković, PAP/RAC, marina.markovic@paprac.org

Links:

- MBPC Montenegro MPA Story Maps
- ICZM Protocol
- Conceptual framework for MSP
- GEF Adriatic project
- MSP Workspace
- MBPC Land-Sea Interactions

2.9

CLIMATE CHANGE VULNERABILITY ASSESSMENT FOR MARINE PROTECTED AREAS

Project name and duration: MPA ENGAGE (2019-2022)

Partners: Consejo Superior de Investigaciones Científicas (SP), Stazione Zoologica Anton Dohrn (IT), Università Politecnica delle Marche (IT), Universidade de Vigo – Future Oceans Lab (SP), Portofino MPA (IT), Calanques National Park (FR), Brijuni National Park (HR), Zakynthos National Marine Park (GR), Karaburun-Sazan National Marine Park (AL), Tavolara MPA - Punta Coda Cavallo (IT), Cap de Creus Natural Park (SP), Espai Litoral del Baix Empordà (SP), Department of Territory and Sustainability of the Government of Catalonia (SP), Regional Government of Liguria (IT), Albanese Ministry of Tourism and Environment (AL), MIO-ECSDE (GR), DAN Diving Alert Network Foundation (MT)

Pilot sites: Albania, Croatia, France, Greece, Italy, Malta, Spain

Target stakeholders: local communities, decision makers, civil society organisations, research bodies, and other socio-economic actors at the local, national and regional levels

Context

Climate change threatens the conservation objectives of MPAs. An urgent common effort is required to mitigate this threat and to establish adaptation strategies to prevent irreversible alterations of MPAs. To address this challenge, a socio-ecological vulnerability assessment tool has been developed by MPA Engage, among other tools.

Objectives

The ultimate goal of this project is to support and train managers to respond and manage the impacts of climate change in their MPAs. The vulnerability assessment tool aims to support local managers in the application of a standardised methodology to understand MPAs' socio-ecological vulnerabilities to the impacts of climate change. Understanding these vulnerabilities, managers can put in place additional strategic actions to increase the local resilience of the area. Extensive data collection is required to calculate the index that can help MPA managers to identify data gaps in their management practices. MPA Engage's six new protocols to monitor the effects of climate change on marine biota supplement the **five climate change monitoring protocols** developed by the **MPA Adapt project** (see Best Practice 4.3) and these sets of protocols support the development of Vulnerability Assessments.

Adopting these protocols allows MPAs to adopt a common and consolidated strategy to track climate change effects in Mediterranean MPAs. This will improve, complement or extend ongoing monitoring initiatives in different Mediterranean countries. The resulting outputs are key information to support mitigation strategies and effective adaptation plans. The final objective of this tool is to assess the vulnerability of MPAs through a multidimensional socio-ecological vulnerability index that combines the vulnerability scores of the MPA, habitat, species and stakeholder groups, in order to provide relevant information for the design and implementation of targeted adaptation strategies to face the impacts of climate change.

Methodology

A webpage with a virtual interface hosts the vulnerability assessment tool. The user can upload the template with all of the data collected to calculate the final vulnerability indices. The outcomes provided consist of a series of figures showing the final results for each index calculated. From this page, the user can also download an excel file with all of the numerical results related to the indices, figures with qualitative results and a template to write a report for the MPA recently assessed. MPA Engage recommends performing a socio-ecological vulnerability assessment every five years. However, during the first assessments, if data-poor templates are used for the calculation of the index, the assessment can be repeated as frequently as new data are collected and included in the template.

Results and Implementation Challenges

This tool allows for the collection of important data related to the physico-chemical characteristics, species and habitats that occur in MPAs. These data are crucial to understanding the sea water qualities and the status of species and habitats analysed. Quantitative results are provided as an output for each index calculated by the tool. Furthermore, qualitative data have been collected through questionnaires to compile information about stakeholders' perceptions on climate change impacts and MPA management. These data are important in order to achieve a holistic view of the MPA that combines both the knowledge of MPA managers and local stakeholders.

Key outputs include a consistent database with all of the data collected by the MPA, as well as a report in which the user can include and describe the final results. The amount and diversity of data to collect can represent a challenge for the MPA managers, and transforming them may require additional efforts to properly fill in the template in order to use the tool. Additionally, the quality of the final results is strictly dependent on the quality of the data collected. However, a specific output of the tool is dedicated to calculate the quality of the final index.

Transfer, replicability and scaling up

Ideal scale of implementation	MPA level	2
Organisational capacity needed	Extensive data collection is required.	5
Technological infrastructure required	Materials and transport for data collection at sea are required.	5
Training needed?	In-depth training for MPA managers is required.	5
Estimated cost	Due to the depth and breadth of these assessments, the cost is high.	5

For more information

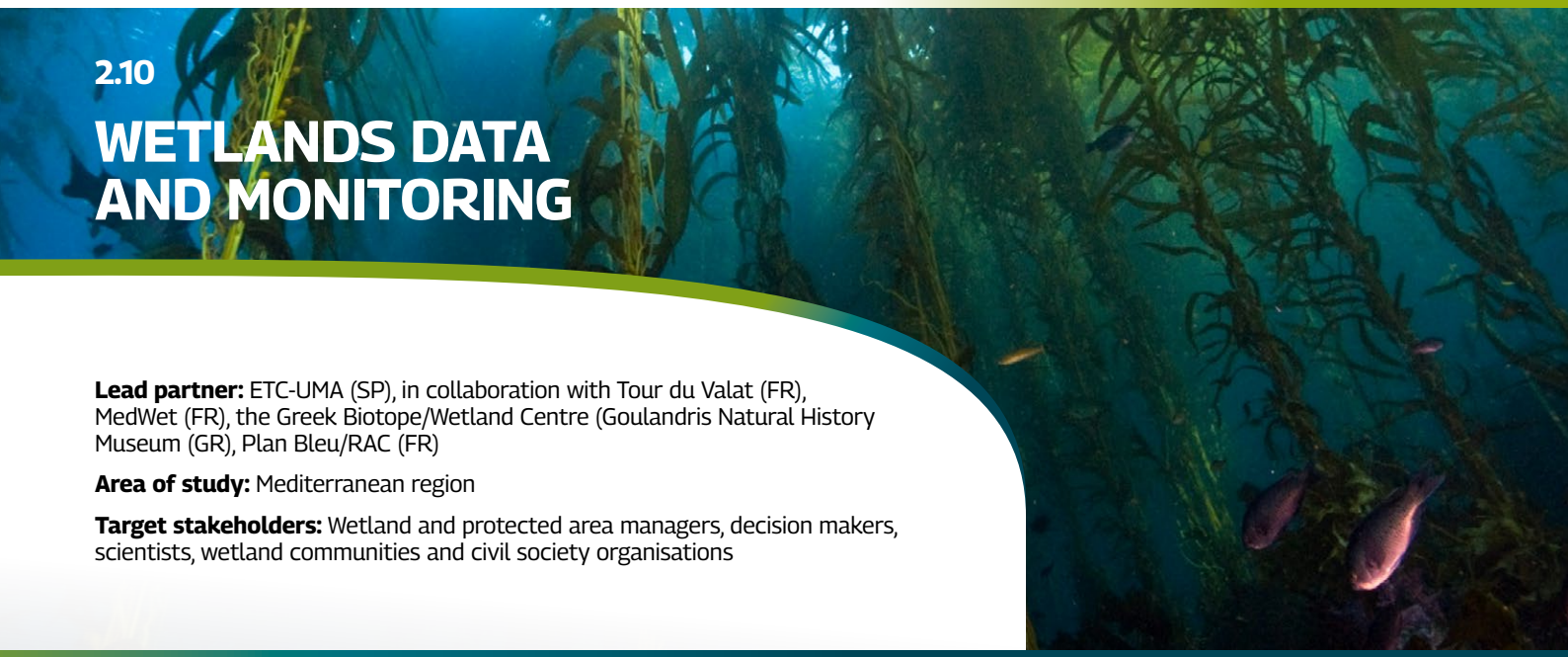
Main project coordinators:
Joaquim Garrabou, ICM-CSIC, garrabou@icm.csic.es
Elena Ojea, University of Vigo, elenaojea@uvigo.es
Francesca Barazzetta, University of Vigo, francesca.barazzetta@uvigo.es

Links:
- MPA Engage website
- MPA Engage Local Vulnerability Assessments
- Vulnerability Assessment Training Webinars (2022)
- More about the project

Interreg Mediterranean MPA Engage

2.10

WETLANDS DATA AND MONITORING



Lead partner: ETC-UMA (SP), in collaboration with Tour du Valat (FR), MedWet (FR), the Greek Biotope/Wetland Centre (Goulandris Natural History Museum (GR), Plan Bleu/RAC (FR)

Area of study: Mediterranean region

Target stakeholders: Wetland and protected area managers, decision makers, scientists, wetland communities and civil society organisations

Context

In the Mediterranean, wetlands have been suffering from habitat loss and lack of adequate management, resulting in a rapid decline of natural wetlands by 45-51% since 1970 (Mediterranean Wetlands Outlook 2, 2018). This loss of wetlands is largely correlated to the rapid socio-economic and demographic development of Mediterranean countries (especially in the southern and eastern parts of the basin), and took place despite increased commitments of local and national stakeholders in preserving wetlands and developing conservation strategies. In addition to the loss in extent, Mediterranean wetland habitats are also expected to be severely affected by climate change. Rising sea levels in particular are expected to impact coastal wetlands and estuaries, while altered precipitation and drought cycles will affect the water discharge and sediments flow of Mediterranean riversand catchments (**MedECC, 2020**). The **Ramsar Strategic Plan** (Ramsar Convention Secretariat, 2016) calls for the development of comprehensive national wetland inventories and the improvement of national wetland policies in order to promote wetland conservation, which usually involves lengthy and complex processes. In the framework of the Ramsar Convention, 397 Mediterranean Wetlands of National Importance have been designated (113 of which are mainly coastal and marine sites) and 44% of these sites have developed a management plan (UNEP/MAP and Plan Bleu, 2020).

Objectives

The establishment of a harmonised Pan-Mediterranean wetland ecosystem knowledge base coupled with a wetland biodiversity assessment seeks to support regional and national inventories. Indeed, this is a crucial step towards building a baseline of understanding on the spatial extent, distribution, and state of wetlands at the regional scale.

Methodology

Building on its experience in developing the first EU-wide wetland ecosystem condition assessment (Maes et al., 2020), ETC-UMA joined forces with MedWet's Mediterranean Policy and Advocacy Task Force (Med PATF) and regional lead organisations in wetland conservation such as Tour du Valat to develop a Mediterranean-wide spatial wetland ecosystem mapping and condition assessment.

The Pan-Mediterranean wetland ecosystem knowledge base was developed as a common data entry-point where information from different sources and different resolution, spatial and temporal accuracy was integrated and meaningfully harmonised to consitute a Mediterranean-wide geodatabase. The proposed approach relies on a general background geospatial layer of wetland habitats validated for the entire region. The background layer was developed following a different approach for the northern and southern parts of the basin. Successively, the pre-defined regional spatial data structure of the Pan-Mediterranean knowledge base was enriched with existing data from external providers, developed at various geographical scales (local, regional, or macro-regional) and with the highest possible accuracy and reliability. The baseline year of the background data layer, 2018, is the reference year that forms the backbone for the northern part of the basin. For the southern part of the basin, the different datasets used for the mapping refer to a wider temporal range.

Results and Implementation Challenges

The Pan-Mediterranean wetland ecosystem map fills a major knowledge gap in the region by proposing a Mediterranean-wide knowledge base on wetland ecosystems following the Ramsar definition of wetlands. It is complemented by an assessment of wetland biodiversity conditions that highlights priority areas for potential conservation and restoration actions in the region. This can support regional advocacy efforts for effective wetland management and nature-based solutions in the region. The outputs include:

(I) a Pan-Mediterranean wetland ecosystem knowledge base

(II) an assessment of their condition that will be used to raise awareness and advocate for a change in wetland management that promotes effective protection, conservation and restoration.

The latter also support regional and national inventories by filling a major regional gap on Mediterranean wetland habitats. Despite data gaps for some areas, this can feed regional and global agendas, such as the EU Biodiversity Strategy to 2030, the Mediterranean Strategy for Sustainable Development and the Ramsar Convention. This work will further serve as a basis for developing different types of studies/assessments and will feed other processes such as the Ramsar resolutions focusing on Mediterranean wetlands and the next Mediterranean Wetlands Outlook 3 planned for the Ramsar COP15, initially scheduled for 2024.

Transfer, replicability and scaling up

The database will be updated and further expanded to support knowledge transfer concerning wetlands in the region.

For more information

Project coordinators:
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Dania Abdul Malak, daniaabdulmalak@uma.es

Links:

- Link to the report
- Mediterranean Wetland Knowledge Base

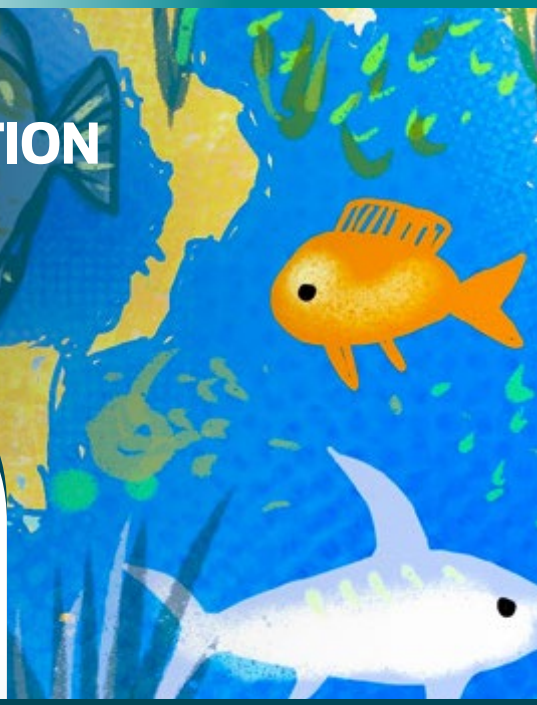
Interreg Mediterranean BIODIVERSITY PROTECTION

3

GEOSPATIAL BEST PRACTICES

3.1

THE MBPC BIODIVERSITY PROTECTION KNOWLEDGE PLATFORM



Project name and duration: PANACeA (2016-2019) and MBPC (2019-2022)

Partners: ETC-UMA, University of Malaga (SP) , Plan Bleu/RAC (FR) , CPMR (FR), MedCities (SP), Ministry of Ecology, Spatial Planning and Urbanism of Montenegro (ME), Latte Creative S.R.L. (IT), Marine Institute (HR)

Pilot sites: Mediterranean region

Target stakeholders: Marine protected area (MPA) managers, researchers, public authorities, funding programmes, conservationists

Context

This public platform is the PANACeA project's Phase 1 (2016-2019) and Phase 2 (2019-2021) communication and capitalisation tool. It provides a knowledge platform on protected areas and ecoregions with access to key documents and a visualisation tool to explore the spatial data generated by the MBPC. The platform contains story maps, for example, about the establishment of two new MPAs in Montenegro: Platamuni and Katič (see Best Practice 2.8). It also advocates for regional environmental policies to enhance biodiversity protection, natural resource management and sustainable growth in protected areas across the Mediterranean, but is also applicable to other protected areas all over the world.

Objectives

The objectives of this tool are to:

- Disseminate and showcase research, methodologies, project results and actions for biodiversity protection undertaken and achieved in the context of the MBPC's projects as well as other Interreg MED projects and partners;
- Provide public access to the MBPC's spatial data and a knowledge reference (enriched with relevant external sources) on protected areas, ecoregions and actions to support regional environmental policy on biodiversity protection, natural resource management and sustainable growth in Mediterranean protected areas and beyond;
- Disseminate scientific findings and guidelines to inform effective MPA protection.

Methodology

The Biodiversity Protection Knowledge Platform contains:

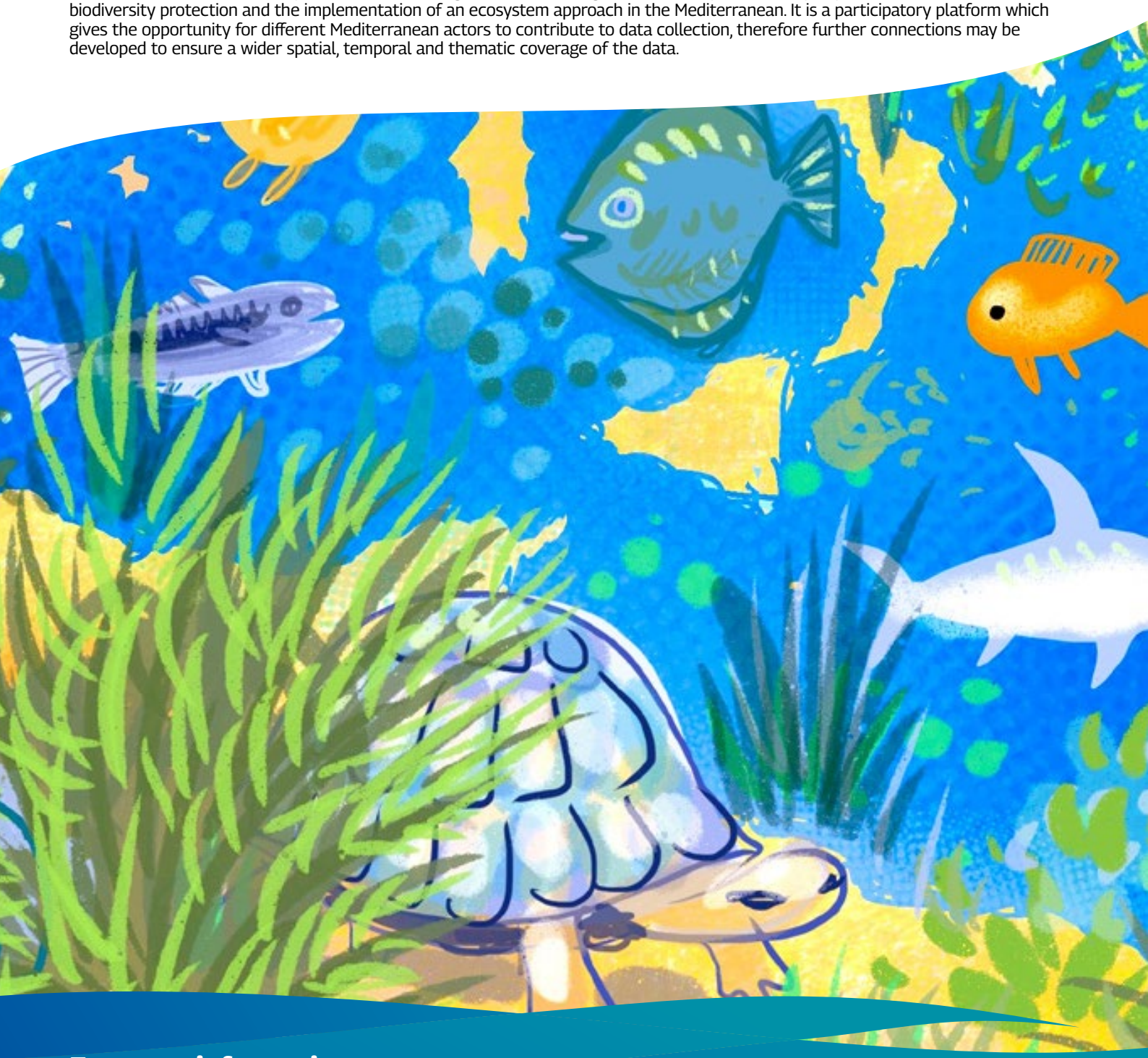
- A library, providing access to relevant project results, products, and available documentation;
- A geoportal to display biodiversity spatial data, which includes a map and catalogue viewer for users to browse geospatial data using a search engine and filters;
- Interactive story maps and statistical dashboards such as the MedBioLitter viewer on reported interactions between Mediterranean marine biodiversity and litter;
- Online version of the Mediterranean Biodiversity Protection Catalogue of Tools developed by MBPC projects and enriched in 2022 onwards with ENI CBC MED ENSERES project information.

Results and Implementation Challenges

The Platform's map viewer spatially represents data and information generated by the projects of the Community, with a strong focus on spatial data and on ensuring service interoperability and integration. Relevant external data sources include T-MEDNET, Med-IAMER, AWI, and VLIZ, among others. The Knowledge Platform showcases the results of all of the biodiversity protection projects funded by Interreg MED, involving more than 185 Mediterranean partners. Implementation challenges concern the complexity and diversity of data inputs, which may require additional efforts to better represent specific results. Generally speaking, data quality, availability and harmonisation, are also an overarching challenge in the Mediterranean region.

Transfer, replicability and scaling up

The Mediterranean Biodiversity Protection Knowledge Platform is designed to be easily accessed by anyone interested in the themes of biodiversity protection and the implementation of an ecosystem approach in the Mediterranean. It is a participatory platform which gives the opportunity for different Mediterranean actors to contribute to data collection, therefore further connections may be developed to ensure a wider spatial, temporal and thematic coverage of the data.



For more information

Project Contacts:
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Links:

- MBPC website
- Mediterranean Biodiversity Protection Knowledge Platform

Interreg Mediterranean BIODIVERSITY PROTECTION

Project co-financed by the European Regional Development Fund

3.2

MEDBIOLITTER OPEN ACCESS DATABASE AND GEOSPATIAL DASHBOARD

Project lead and duration: ETC-UMA (SP), launched in 2016 (annual updates in March and September)

Pilot sites: Mediterranean region

Target stakeholders: Researchers and academics, decision makers, general public

Context

Research efforts on marine litter are increasing our knowledge on the amount, composition and impacts of marine litter on marine ecosystems, biodiversity and humans. However, the geographical coverage of such studies is scattered and unbalanced, and data availability and quality also varies greatly in the Mediterranean. This makes it difficult for policy makers, protected area managers, the business sector and the general public to accurately understand the dimensions of the marine litter challenge and the urgency to react to it.

Objectives

Based on the Alfred Wegener Insitute's LITTERBASE global database, PANACeA developed MedBioLitter, an open access database and spatial geoportal that gathers current scientific knowledge on marine litter and biodiversity interactions in the Mediterranean region. The MedBioLitter thematic database is regularly updated to include key scientific findings of the MBPC's projects and those of a network of partner institutions that are active in marine litter research.

Results and Implementation Challenges

The MedBioLitter database includes, in addition to the geolocation of more than 470 studied areas and species, direct access to more than 100 scientific articles. Furthermore, the database allows users to upload new information to the database. Generally speaking, data availability and consistency are a challenge for this type of geospatial tool.

Transfer, replicability and scaling up

As an online tool, it can be accessed from anywhere and requires only a PC and an internet connection. This tool can thus encourage the transfer, replication and scaling up of best practices and project results at the global scale.

For more information

Project coordinators:

Dania Abdul Malak, ETC-UMA: daniaabdulmalak@uma.es
Antonio Sánchez, ETC-UMA: a__sanchez@uma.es

Links:

- MedBioLitter spatial viewer and database
- MedBioLitter statistical dashboard

3.3

THE T-MEDNET PLATFORM

Project name and duration: MPA Adapt (2016-2019)

Partners: Spanish National Research Council (ES), Italian National Institute for Environmental Protection and Research (IT), IUCN Centre for Mediterranean Cooperation (SP), Public Institution Brijuni National Park (HR), Pelagie Islands MPA– Management Body Municipality of Lampedusa and Linosa (IT), Portofino MPA (IT), National Park of Port-Cros (FR), Environment Agency of Corsica (FR)

Pilot sites: Spain, France, Italy, Croatia

Target Stakeholders: MPA managers, marine scientists, national oceanographic agencies, hydrographic offices, policy-makers, general public

Context

The effects of climate change in the Mediterranean such as shifts in species distribution and mass mortality events have been related to seawater warming. At present, there is no comprehensive overview of these effects, which hinders an in-depth analysis of climate change impacts on marine coastal biodiversity. T-MEDNet addresses this knowledge gap i.e. temperature conditions in local waters. Gaining representative data sets on *in situ* thermal regimes is crucial for:

- Describing the marine environment;
- Detecting extreme events and sharing information, "know how" and expertise on warming signals and biological impacts;
- Analysing biological impacts, in particular the onset of mass mortality events, but also changes in distribution, behaviour and phenology and assessing those conditions that species have adapted to;
- Building more realistic 21st century coastal warming scenarios to sustain the development of adaptive management strategies to tackle climate change impacts on marine biodiversity.

Objectives

T-MedNet aims to develop an observation network to observe the effects of climate change on marine coastal ecosystems by promoting data acquisition and standard monitoring protocols on seawater temperature and biological indicators, at a large-scale and in the long-term. This data can improve our understanding of past, present and future *in situ* temperature conditions, and in turn allow us to:

- Produce insights on coastal thermal regimes and seasonal stratification dynamics over extensive spatial and temporal scales in the Mediterranean;
- Analyse warming trends and marine heatwaves in nearshore surface waters (0-40m).

Methodology

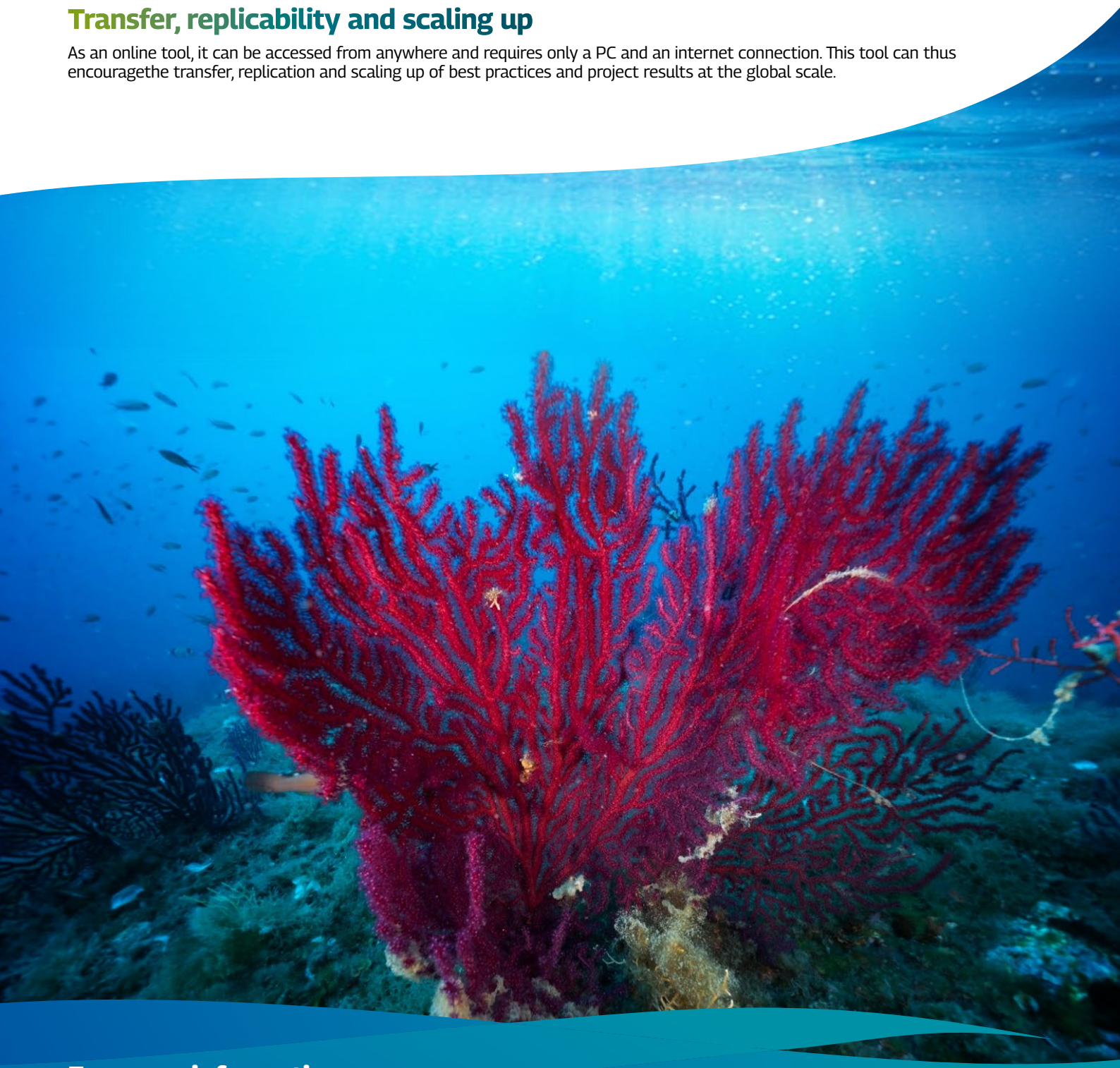
A display tool allows users to explore trends in seawater temperature, temperature anomalies and warming at the Mediterranean scale, both locally and in its different ecoregions. The database includes a network of monitoring sites and data on species status, as well as a tracking tool of long-term and large-scale mass mortality impacts. The acquisition of high-resolution T-series proved to be crucial for increasing detection, understanding and forecasting abilities on climate change effects in Mediterranean coastal ecosystems. These abilities will be key to develop realistic climate change impacts and vulnerability assessments and implement sound management plans for the conservation of the Mediterranean's rich biodiversity.

Results and Implementation Challenges

The platform supports seawater temperature data and the analysis of warming trends and marine heatwaves in nearshore surface waters (0-40m). It also supports data on biological impacts (mass mortality events over extensive spatial and temporal scales). Different factors can be checked (distribution, behaviour, phenology). To date, T-MEDNet involves 18 public research institutions and 23 MPAs from seven Mediterranean countries, under the scientific coordination of the Institute of Marine Sciences (ICM-CSIC). Continuous T-series are now undertaken in 70+ sites, mostly in the western Mediterranean, but also in the Alboran, Adriatic, Ionian, and Aegean sub basins resulting in a unified, quality checked database of more than 18 million T-samples. Sustained monitoring efforts are being conducted in a growing number of sites. However, the lack of recurrent funding for long-term observation initiatives and network coordination is a serious emerging challenge.

Transfer, replicability and scaling up

As an online tool, it can be accessed from anywhere and requires only a PC and an internet connection. This tool can thus encouragethe transfer, replication and scaling up of best practices and project results at the global scale.



For more information

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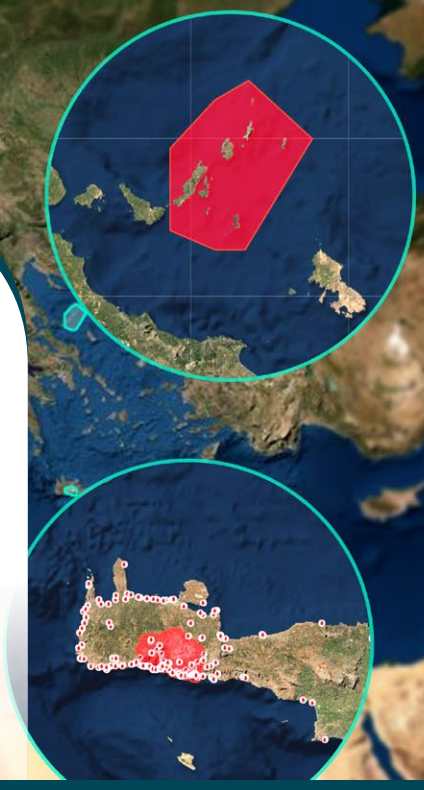
Links:

- T-MEDNet platform
- More about the project

Interreg Mediterranean BIODIVERSITY PROTECTION

3.4

AMAre WebGIS Portal



Project name and duration: AMAre (2016-2019) and AMAre Plus (2021-2022)

Partners: CoNISMa, Euro-Mediterranean Centre on Climate Change (IT), National Research Council, Institute of Marine Science – CNR-ISMAR (IT), Spanish National Research Council (ES), IFREMER (FR), Management Consortium of Torre Guaceto (CGTG), Management Body of The National Marine Park of Alonissos Northern Sporades (GR), Corsican Environment Office (FR), Hellenic Centre for Marine Research (GR), University of Malta (MT), Porto Cesare MPA (IT), Regional Government of the Balearic Islands (ES)

Pilot sites: Alonissos Northern Sporades National Marine Park (GR), Brijuni national Park (HR), Cantonnement de peche du Cap Roux (FR), Costa degli Infreschi e della Masseta Marine Protected Area (IT), Freus d Eivissa i Formentera Marine Reserve, Balearic Islands (SP), Parchi sommersi di Baia e Gaiola (IT), Pelagos Sanctuary for the Conservation of Marine Mammals, Platamuni MPA (ME), Porto Cesareo Marine Protected Area (IT), Portofino Marine Protected area (IT), Punta Campanella Marine Protected Area (IT), Regno di Nettuno Marine Protected Area (IT), Samaria National Park (GR), Santa Maria di Castellabate Marine Protected Area (IT), Secche della Meloria Marine Protected area (IT), Strunjan Landscape Park, The North-East Marine Protected Area, Maltese Islands (MT), Torre Guaceto Marine Protected Area (IT)

Target stakeholders: MPA managers, decision makers, scientists and the general public

Context

MPAs need coordinated strategies in support of sound maritime spatial planning (MSP) in coastal and marine "hotspots", which requires science-based decision-making and informed management decisions.

Objectives

The AMAre WebGIS Geoportal is an online portal that provides MPA managers, decisionmakers, scientists and the general public with a user-friendly platform for sharing spatial data and information. This tool aims to impact conservation, management and marine science, to support maritime spatial planning (notably in terms of monitoring and management plan implementation) and to disseminate information.

Methodology

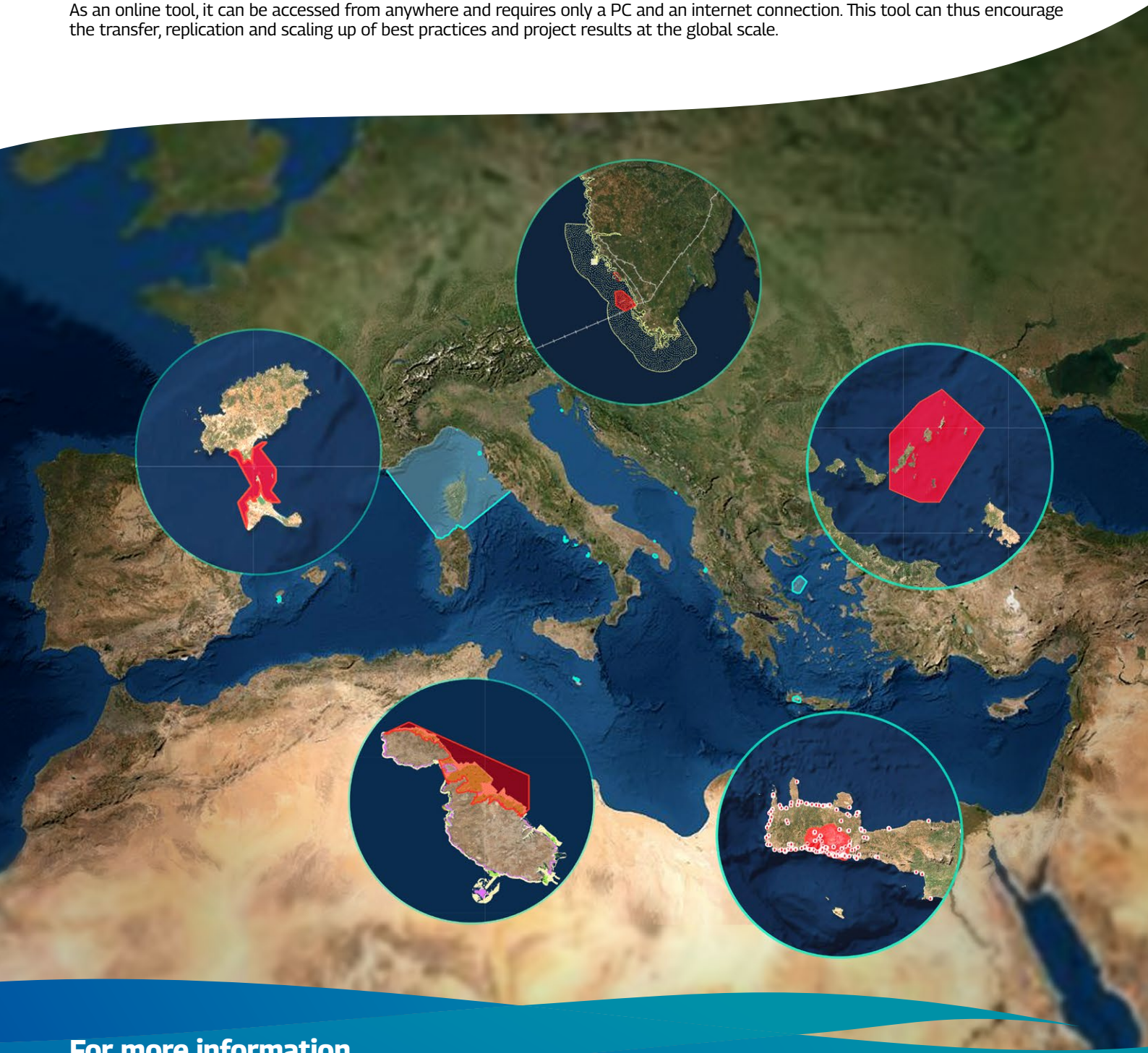
The Geoportal is an HTML5 application (ArcGIS server + Moka kit) that allows the sharing, integration and displaying of data, printing maps and other functionalities. It combines intelligent web maps with graphs, charts, wwtables and texts to unlock, thus providing access to data and enabling its transfer, which supports coordinated MPA management. The data layers are organised by themes and are described by proper metadata. Their accessibility and preservation will be guaranteed through the ISMAR Metadata Portal (ESRI Geoportal).

Results and Implementation Challenges

The main challenges to using the Geoportal are related to the implementation of more advanced functions and in the free download of the data. Spatial data are covered by a data policy defining the request protocol to retrieve data, and the community is not ready yet to meet completely the open data concept.

Transfer, replicability and scaling up

As an online tool, it can be accessed from anywhere and requires only a PC and an internet connection. This tool can thus encourage the transfer, replication and scaling up of best practices and project results at the global scale.



For more information

Project Coordinators:

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Links:

- AMAre website
- AMAre Geoportal User Manual
- AMAre project
- AMAre Plus project

Interreg Mediterranean
AMAre
AMAre PLUS

4 MONITORING BEST PRACTICES

4.1

HARMONISED MARINE LITTER MONITORING PROTOCOLS

Project name and duration: Plastic Busters MPAs (2018-2022)

Project partners: Italian National Institute for Environmental Protection and Research (IT), University of Siena, Department of Physical Sciences, Earth and Environment (IT), Corsican Agency for Environment (FR), Regional Government of the Balearic Islands. Department of Environment, Agriculture and Fisheries (SP), Management Agency of Zakynthos National Marine Park (GR), Tuscan Archipelago National Park (IT), MIO-ECSDE (GR), Spanish Oceanographic Institute, Balearic Center of Oceanography (SP), Hellenic Centre for Marine Research, Institute of Oceanography (GR), IFREMER (FR), Catalan Waste Agency - MedWaves (SP), Hellenic Ministry of Environment and Energy, Special Secretariat for Water (GR), Albanian Ministry of Environment- Directorate of Biodiversity and Protected Areas (AL), Ministry of Environmental and Nature Protection of Croatia (HR), University of Split, Faculty of Civil Engineering, Architecture and Geodesy (HR)

Pilot sites: Pelagos Sanctuary (FRMCO, IT), Tuscan Archipelago National Park (IT), National Marine Park of Zakynthos (GR), Cabrera Archipelago National Maritime-Terrestrial Park (SP)

Target stakeholders: MPA managers, national and local governments

Context

Marine litter prevention and mitigation measures are urgently needed across the Mediterranean in order to reduce its negative impacts on marine wildlife and ecosystems. To date, these impacts are poorly understood and addressed, especially concerning species inhabiting MPAs. Policy frameworks such as the Barcelona Convention's Regional Plan for Marine Litter Management in the Mediterranean and the European Union Marine Strategy Framework Directive have helped things to move in the right direction. However, more efforts are needed in implementing policy commitments and effectively reducing marine litter.

Objectives

These harmonised methodologies were tested, fine-tuned and transferred to MPAs across the Mediterranean region. This allowed for improved knowledge sharing and the consolidation of a common action framework against marine litter, thereby contributing to ecosystem preservation across the basin.

Methodology

The methodologies involve:

1. Monitoring macro- and micro-litter floating on the sea surface

2. Recording the presence of biota

3. Sampling endangered species (e.g. cetaceans) as well as commercial species (e.g. fish and invertebrates) to assess the amounts of ingested litter

4. Collection of field data to validate the project's marine litter transport and accumulation models.

Results and Implementation Challenges

The tool is still in the testing phase. Results and implementation challenges are forthcoming.

Transfer, replicability and scaling up

The tool's potential for transfer, replicability and scaling up is currently being evaluated. However, its results are already being transferred to the Southern Mediterranean via the ENI CBC Med COMMON project and ENI CBC Med PlasticBusters CAP.

For more information

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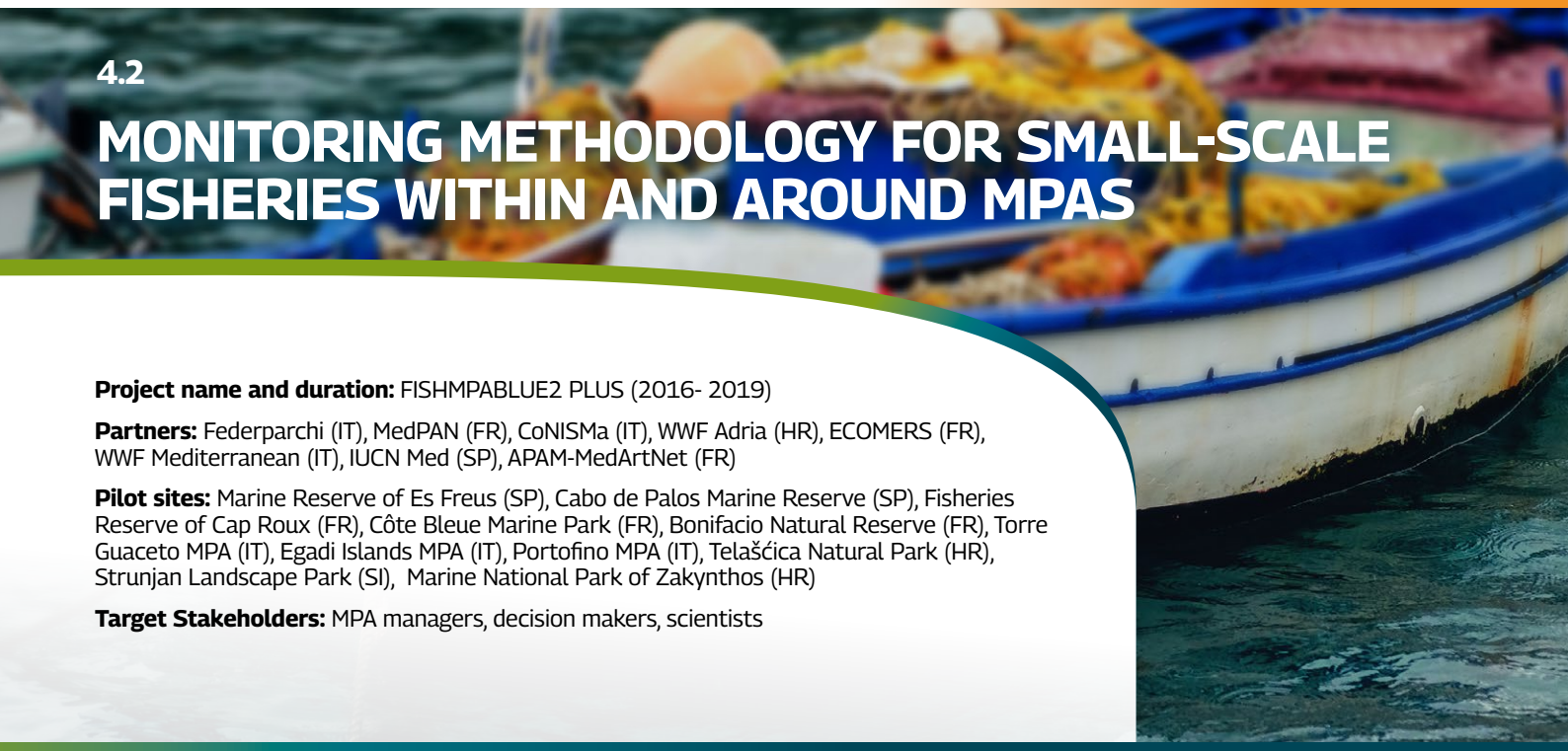
Maria Cristina Fossi, UNISI, fossi@unisi.it

Links:

- Plasticbusters MPAs website
- Plasticbusters MPAs deliverables
- More about the project

Interreg Mediterranean
PLASTIC BUSTERS MPAs



4.2

MONITORING METHODOLOGY FOR SMALL-SCALE FISHERIES WITHIN AND AROUND MPAS

Project name and duration: FISHMPABLUE2 PLUS (2016- 2019)

Partners: Federparchi (IT), MedPAN (FR), CoNISMa (IT), WWF Adria (HR), ECOMERS (FR), WWF Mediterranean (IT), IUCN Med (SP), APAM-MedArtNet (FR)

Pilot sites: Marine Reserve of Es Freus (SP), Cabo de Palos Marine Reserve (SP), Fisheries Reserve of Cap Roux (FR), Côte Bleue Marine Park (FR), Bonifacio Natural Reserve (FR), Torre Guaceto MPA (IT), Egadi Islands MPA (IT), Portofino MPA (IT), Telašćica Natural Park (HR), Strunjan Landscape Park (SI), Marine National Park of Zakynthos (HR)

Target Stakeholders: MPA managers, decision makers, scientists

Context

Successful MPA management practices should strive to address the complexity of small-scale fisheries (SSF), including their environmental impacts (extraction of fish stocks) and socio-economic returns. Indeed, ensuring the adherence of small-scale fisheries to the conservation goals of MPAs is crucial to protecting biodiversity in MPAs. By working together, small-scale fishers and MPA managers can ensure that the socio-economic needs of fishers are in harmony with biodiversity conservation objectives.

Objectives

This tool enables data collection on SFF through the adoption of different integrated methodologies and a multidimensional approach to this activity. It provides key information on a wide range of factors affecting SSF and MPAs, for example, environmental factors such as fish assemblages, potential effects of MPAs on predation intensity, related top-down control, economic factors such as comparison between catches per unit efforts, revenue per unit efforts within MPAs and outside MPAs in similar conditions and social, cultural, governance and health factors, such as human wellbeing. By implementing the methods presented in these guidelines, essential data that describes environmental, economic, and social aspects related to SSFs can be collected. In turn, this data can support effective management strategies based on sound scientific knowledge for SSF and MPAs.

Methodology

The methodology covers the monitoring of and follow-up of environmental, economic, social, cultural, governance and health factors that may influence SSF, based on an integrated set of variables and techniques. The ideal way to train individuals to use these methodologies is in the field. In 2019, the project organised a summer school in the pilot MPA of Zakynthos, during which pilot MPAs representatives were trained in using these different monitoring techniques from the theoretical and operational points of view, i.e. during practical underwater sessions.

Results and Implementation Challenges

The monitoring involves small-scale fishers both in the provision and collection of data. During the project, the methodology was tested twice (before and after implementation of the SSF management-related measures), for each of the 11 pilot MPA related measures in each of the 11 pilot MPAs. It is advisable that scientific studies and monitoring be conducted in partnership between MPA scientific or technical personnel and scientific institutions. This can ensure that the methods chosen, the way the monitoring is conducted in the field and the way data are analysed allow for proper conclusions to be drawn. Fishers may be unwilling to participate and answer in the questionnaires for various reasons. The guidelines therefore contain recommendations for interviewers, notably to adopt a neutral and objective stance, to interview fishers when they are not too busy, and to ensure the confidentiality of the interview. A similar problem could arise for monitoring small-scale fisheries catches at landing sites.

Transfer, replicability and scaling up

Ideal scale of implementation	Regional	5
Organisational capacity needed	The involvement of local communities is crucial for the successful implementation of the tool	5
Technological infrastructure required	Specific equipment has to be purchased to perform the suggested methodologies. In addition, normal costs for activities at sea should be planned	4
Training needed?	Specific training is required to design monitoring activities and to use the above-mentioned techniques.	4
Estimated cost	Costs for activities at sea and equipments should be taken into account and budgeted	4

For more information

Project coordinators:

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Links:

- FISHMPABlue 2 website
- Monitoring methodology
- More about the project

Interreg Mediterranean
FishMPABlue 2
FishMPABlue 2 PLUS

4.3

CLIMATE CHANGE MONITORING PROTOCOLS FOR MPAs

Project name and duration: MPA Adapt (2016-2019)

Project Partners: Spanish National Research Council (SP), Italian National Institute for Environmental Protection and Research (IT), IUCN Centre for Mediterranean Cooperation (SP), Public Institution Brijuni National Park (HR), Pelagie Islands MPA-Management Body Municipality of Lampedusa and Linosa (IT), Portofino MPA (IT) , National Park of Port-Cros (FR), Environment Agency of Corsica (FR)

Pilot Sites: Spain , France , Italy , Croatia

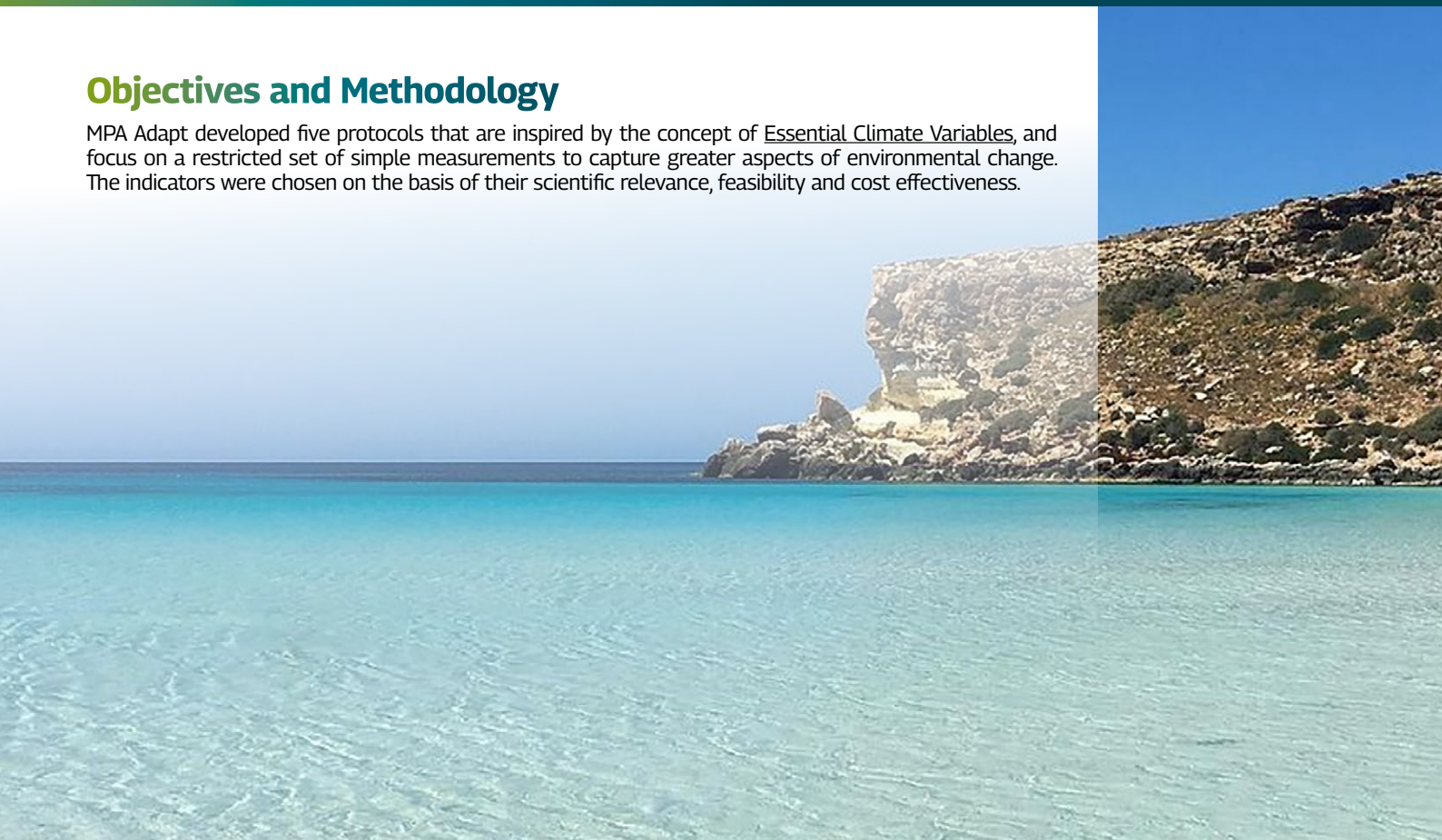
Target Stakeholders: MPA managers, policymakers, marine scientists, national oceanographic agencies, hydrographic offices, and the general public.

Context

The effects of climate change and global warming are particularly alarming for the Mediterranean Sea, which is warming faster than other oceans globally. The MPA-ADAPT project developed five standard protocols as a practical guide to track climate-related impacts in Mediterranean MPAs and beyond, following the requirements of the Ecosystem Approach (EcAp) and in the framework of the UNEP/MAP Barcelona Convention and Maritime Strategy Framework Directive (MSFD) with the overarching objective of achieving the Good Environmental Status (GES) of the Mediterranean Sea and coasts.

Objectives and Methodology

MPA Adapt developed five protocols that are inspired by the concept of Essential Climate Variables, and focus on a restricted set of simple measurements to capture greater aspects of environmental change. The indicators were chosen on the basis of their scientific relevance, feasibility and cost effectiveness.



Objectives

Methodology

Protocol 1: Monitoring sea surface temperature conditions

To acquire long-term and high-resolution information on temperature conditions along the depth gradient in coastal waters, based on the previous work developed by TMedNet. Over time, these data series will build a robust baseline and track hydrological changes (e.g. warming, heat waves, shifts in seasonality, stratification) to better understand the impacts of climate warming on marine coastal biodiversity.

Seawater temperature is recorded every hour using data loggers deployed every 5 minutes from the surface to a depth of 40 metres, and recovered on an annual or semi-annual basis. The resulting data series can be used to build robust baselines and track hydrological changes to better understand the impacts that climate warming has on marine coastal biodiversity.

Protocol 2: Assessment and monitoring of mass mortality events on benthic species dwelling in coastal waters

To track the mass mortality impacts and the general conservation status of macrobenthic species populations.

The proposed protocol stems from scientific and field experience gathered during the impact assessment of mass mortality events in different areas of the north-west Mediterranean. The protocol focuses mostly on some gorgonian species dwelling in shallow waters (0-50 m) of the north-west Mediterranean. However, it can be adapted to assess the impact on other macro benthic species (e.g. sponges, corals, bryozoans). The protocol aims to set the conservation status of surveyed populations, while gathering baseline information to assess the impacts of mass mortality events when they occur.

Protocol 3: LEK-1 (Exploring Local Ecological Knowledge to reconstruct historical changes)

To interview experienced fishermen or other sea users to gather information on historical changes in species abundances and distribution and to detect new species early on.

Local Ecological Knowledge is the information that people have about the ecosystems where they spend most of their time and during their daily activities, like fishing. This protocol can be used to interview experienced fishers or other sea users, to reconstruct historical changes in species abundances and distribution in their area. It can also be used for the early detection of new species. The same questionnaire can be used to track historical trends for species that changed the most in their abundances: new, increasing, severely declining and disappearing species.

Protocol 4: LEK-2 (Exploring Local Ecological Knowledge for periodical monitoring)

To interview experienced fishermen or other sea users and to regularly monitor climate-sensitive species of both native and exotic origin.

This protocol can be used to interview experienced fishers or other sea users, to regularly (every 12 months) monitor climate-sensitive species of both native and exotic origin.

Protocol 5: Implement a fish visual census of climate change indicators

To assess the abundance and distribution of specific fish species, chosen as reliable indicators of climate change in Mediterranean MPAs. Local species targets can be added by MPAs, based on local monitoring needs, ease of recognition, interaction with fisheries, increase/ decrease in the area, potential impacts on the environment/ fisheries/human activities.

It is suggested to track the abundance of target fish species on a regular basis and carry out an underwater visual census survey. There are nine target fish species used as indicators : *Epinephelus marginatus, Coris julis, Thalassoma pavo, Sparisoma cretense, Serranus scriba, Serranus cabrilla, Sarpa salpa, Siganus luridus, Fistularia commersonii*. Digital training videos were also developed in order to highlight effective measures for improving the integration of research and monitoring outputs into conservation projects as well as the identification of unsolved problems and further research needs.

Here is the complete list of protocols

Results and Implementation Challenges

Implementing these procols will result in the collection of important physical and biological data. These data are necessary to understand climate change and seawater warming in the Mediterranean, and to support the drafting and implementation of adequate management strategies through Mediterranean platforms and initiatives such as T-MEDNET (see Best Practice 3.4), Med-IAMER, AWI, and VLIZ, among others. The protocols can be shared, downloaded and printed as needed by Mediterranean MPAs and are available for use as non-commercial products or services, provided that appropriate acknowledgment of the MPA-ADAPT project as the source and copyright holder, is given.

Operational implementation challenges

- To ensure the continuity of temperature data series, temperature data loggers should be launched with the correct parameters, prior to being placed again in the field, and solidly attached to the substrate to avoid losing them due to rough sea conditions.
- Looking for small gorgonian colonies or specimens (less than 15 cm in height) may not be straightforward during the sampling. Hence, they should not be taken into account.

Social implementation challenges

- Fishermen may distrust researchers and practitioners. Careful attention should therefore be paid to the approach used during the interviews (see FISHMPABLUE 2 Best Practice 2.6).

Transfer, replicability and scaling up

Ideal scale of implementation	Regional 5
Organisational capacity needed	Depends on the protocols, but on average high. 4
Technological infrastructure required	Monitoring instruments are required. 5
Training needed?	Training to use the monitoring instruments, capture and interpret the data is needed. 5
Estimated cost	Depending on the protocols, from average to high. 4

For more information

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Links:

- MPA ADAPT website
- Summary of MPA Adapt's main results
- Monitoring Climate-related responses in Mediterranean Marine Protected Areas and beyond: FIVE STANDARD PROTOCOLS

1: Monitoring temperature conditions
2: Assessment and monitoring of mass mortality
3: LEK-1: exploring Local Ecological Knowledge to reconstruct historical changes
4: LEK-2: exploring Local Ecological Knowledge for periodical monitoring
5: Fish visual census of climate change indicators

- More about the project

Interreg Mediterranean MPA-ADAPT

5

COLLABORATIVE ACHIEVEMENTS OF THE MBPC

Several other activities undertaken by the MBPC itself have also supported the transfer, replication and scaling-up of its results.

They include:

- Collaborating to contribute to the draft Ramsar resolution on the protection, management and restoration of Mediterranean wetlands, based on knowledge sharing
- The MBPC Biodiversity Protection Community Declaration on Mediterranean Ecosystem-based approaches for biodiversity protection and management, available in several Mediterranean languages to foster a common vision in the region
- Co-designing joint events and publications with other projects (both inside and outside Interreg Med)
- Participation in key EU and Mediterranean events such as EU Green Week and relevant Conferences of Parties to increase the visibility and transfer of the MBPC's key messages
- The establishment of interest groups on key topics and/or regions such as the MBPC Working Groups and the SEEC the South Adriatic/North Ionian Sea (SAIS) EBSA (Ecologically or Biologically Significant Areas) Conservation Community
- The publication of the Guidelines for the sustainability of cruising and recreational boating in the Mediterranean region carried out by Plan Bleu in the framework of several Interreg Med programmes (Blue Growth, Sustainable Tourism and Mediterranean Biodiversity Protection Communities)
- The signature of a Memorandum of Understanding between the Pelagos Sanctuary, a marine area of 87,500 sq. km subject to an agreement between Italy, Monaco and France for the protection of marine mammals
- The organisation of joint events between MBPC Modular Projects (such as MPA Engage, MPA Networks, AMAre+).

- The MBPC produced a Policy Brief and Policy Paper in November 2022, aimed at fostering transformative changes in the Mediterranean region to deal with the impacts of climate change and biodiversity loss.
- The MBPC published a Catalogue of Ecosystem Restoration Sites in the Mediterranean in the context of the UN Decade on Ecosystem Restoration.

Essential conditions & environment for transfer, replicability & scaling-up activities: lessons learned

The Mediterranean Basin is a complex region characterised by numerous transboundary impacts. To address these impacts, common approaches and methodologies are instrumental. For instance, integrated coastal zone management and maritime spatial planning provide useful frameworks through which to analyse conservation issues. Moreover, governance frameworks are also needed in order to address the impacts and understand the opportunities for human activities in marine and coastal areas, based on ecological, social and economic objectives. Indeed, the entire Interreg MED programme is developing an Intercommunity Toolbox that will serve as a repository of tools developed by its Horizontal Project to inspire and inform the transition towards a sustainable Mediterranean.

The MBPC strives to provide knowledge, tools and methods that can be transferred, replicated and scaled up with this objective in mind. The best practices presented in this report are useful in illustrating several important preconditions for the transfer, replicability and scaling-up of conservation activities between different geographical scales, sectors and types of actors at the transnational level. The following recommendations are based on the MBPC experience of transferring, replicating and scaling up biodiversity conservation efforts.

Knowledge transfer between different actors working in different places is key to encouraging replication. For instance, the priority measures identified within the Action Plan for Marine Litter Management in the MPAs in the framework of the ACT4LITTER project allowed MPA management bodies participating in other Interreg MED projects (e.g. Plastic Busters MPAs) to implement targeted measures developed according to the specificity of the MPAs.

Advocacy is also a key means of transferring project results. For instance, the MBPC Advocacy Paper on Wetlands not only makes the case for Mediterranean wetlands, but also shows how knowledge and tools to improve wetlands conservation and restoration are already being shared around the Mediterranean to better protect these crucial ecosystems. Generally speaking, the MBPC aims to capitalise its tools and best practices as well as promote dialogue among key stakeholders, with the ultimate goal of supporting international conservation efforts such as:

- MBPC's contribution to the Post-2020 Roadmap for Mediterranean MPAs: striving for 30% of the Mediterranean Sea effectively protected by 2030
- Contributing to the UN Decade on Ecosystem Restoration 2021-2030 with a Catalogue of Mediterranean restoration examples

Inclusiveness is also crucial to supporting the transfer, replication and scaling up of activities. Indeed, several MBPC projects employed participatory approaches to involve local stakeholders. By involving the latter, promising co-management and participatory governance mechanisms can be developed. This also raises awareness amongst target groups (such as small-scale fishers), and can support capacity-building. In terms of governance, inclusive approaches also support more transparency in environmental governance. In this way, key local stakeholders can more easily understand their potential roles in conservation. They can also feel more involved and listened to, and ultimately provide reassurance to other similar groups elsewhere in the region concerning the benefits of participating in conservation efforts together with decision makers, researchers, protected area managers and civil society. Engage as many stakeholders as possible, including those not directly dependent on the marine environment and maintain the interest of all stakeholders through participatory processes.

Fostering more dialogue among key stakeholders and catalysing partnerships with other like-minded actors in the region delivers concrete benefits in terms of transfer, replication and scaling-up. Indeed, the Memorandum of Understanding signed with the Pelagos Sanctuary in 2021 provides a good opportunity for the MBPC to contribute to, and learn from, the Pelagos Sanctuary's conservation efforts.

Finally, monitoring and data collection are a cornerstone of transfer, replicability and scaling-up. The monitoring protocols allow interested parties to engage in concrete monitoring and data collection actions in a zone of study while sharing their results with a broader community. In this way, expert-driven research can also be complemented by "citizen science" at a regional level.

THE MEDITERRANEAN BIODIVERSITY PROTECTION COMMUNITY

A collaborative Mediterranean community representing around 300 institutions are bringing together their work to identify the most effective mechanisms to manage and protect Mediterranean biodiversity.

The results of MBPC projects (ACT4LITTER, AMARE, CONFISH, ECOSUSTAIN, FISHMPABLUE2, MEDSEALITTER, MPA-ADAPT, MPA NETWORKS, MPA ENGAGE, PHAROS4MPAS, PLASTICBUSTERSMPAS, POSBEMED, TUNE UP, WETNET) are being streamlined to offer holistic solutions that bridge science, practice and policy to priority environmental challenges through an action roadmap implemented by several working groups.

The overall aim of the Biodiversity Protection Community is to increase the current understanding, knowledge and awareness of multiple environmental threats and promote best practices and Ecosystem-based Management tools as a response to address cumulative pressures and impacts affecting protected areas and functional ecosystem units in the Mediterranean.

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Interreg Mediterranean BIODIVERSITY PROTECTION

Montenegro Ministry of Ecology Spatial Planning and Urbanism