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MSP Factsheets

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Mediterranean approach towards a maritime European Green Deal in MSP

Co-funded by the European Union

These factsheets are designed to support the dissemination of sustainable practices in maritime sectors such as aquaculture, fisheries, and ocean energy, with the overarching goal of preserving natural resources and biodiversity for future generations.

The content addresses these sectors from a Maritime Spatial Planning (MSP) perspective, highlighting how MSP can serve as a tool to guide balanced and integrated development across the Mediterranean. The factsheets aim to encourage the spread of ocean planning through versions adapted to local needs and specificities.

They also highlight opportunities for non-EU countries in the context of the Blue Economy and include a selection of key official strategies and reference documents to support further exploration and action.

What is Maritime Spatial Planning?

Maritime spatial planning (MSP) is a practical and science-based process for **managing the use of seas and oceans to ensure that human activities are conducted efficiently, safely, and sustainably**. It involves analyzing and allocating the spatial and temporal distribution of activities in marine areas, aiming to achieve ecological, economic, and social objectives. MSP helps different sectors—like fishing, tourism, transport, energy— to balance competing interests and promote the sustainable development of marine areas while protecting the environment.

Its objectives?

- reducing conflicts between users (e.g. fishermen vs tourism) and creating synergies between different activities (e.g. wind farms and aquaculture in the same area), supporting food and energy security
- Improve transparency and legal certainty to attract investment.
- increasing cross-border cooperation to develop renewable energy, allocate shipping lanes, lay pipelines,submarine cables and marine protection, etc.
- protecting marine ecosystems by assigning protected areas, conducting impact assessments and identifying opportunities for multiple uses of space

MSP works best when adapted to local governance, structures and cultures.

The state of the art in the Mediterranean - key sectors

Fisheries

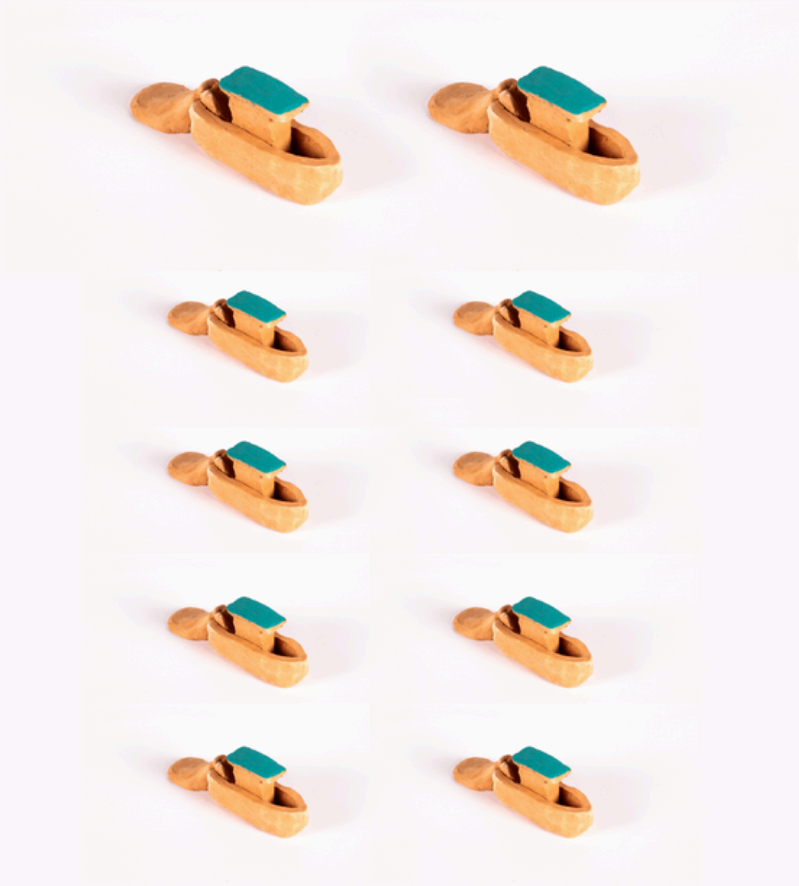
Fisheries remain a cornerstone of the Mediterranean's Blue Economy, both in terms of cultural heritage and socio-economic importance. The sector contributes over **EUR 7 billion** in revenue annually and supports around 420,000 jobs, accounting for 60% of total employment in fisheries and aquaculture combined. Small-scale fisheries dominate the landscape, representing over 80% of the fleet, particularly in the central and eastern Mediterranean.

Sustainability challenges persist: more than **75%** of assessed stocks remain fished outside biologically sustainable limits, although this percentage has slightly decreased over the past decade. Discard rates are highest among bottom trawlers, although efforts to reduce bycatch have had some positive effects. In contrast, small-scale fisheries show lower discard levels (around 10%) but lack comprehensive monitoring due to their diffuse and informal nature.

The fleet consists of approximately **75,000 vessels**, with a total capacity of **750,000 GT**. While the number of vessels has slightly declined in recent years (-1.2%), the total capacity has seen modest growth (+3%), reflecting ongoing modernisation. Key species include European anchovy, sardine, red mullet, cuttlefish, and shrimp, although catch compositions have shifted significantly over the last three decades. The fluctuations in small pelagic stocks and increasing landings of demersal species indicate both ecological change and evolving market demands.

Efforts to address overfishing include the implementation of multi-annual management plans, fishing effort controls, and the **establishment of spatially restricted fishing areas**, currently regarding about **8%** of the fleet. Despite these steps, enforcement remains uneven across subregions. The continued relevance of fisheries to coastal livelihoods, especially in areas where alternative employment is scarce, underscores the need for inclusive, community-focused transition strategies toward sustainability.

Mediterranean and Black Sea fisheries: small matters.



82%

of the fleet in the seabasin consists of small fishing vessels.

From FAO. 2023. The State of Mediterranean and Black Sea Fisheries 2023 – Special edition. General Fisheries Commission for the Mediterranean. Rome. https://doi.org/10.4060/cc8888en

The state of the art in the Mediterranean - key sectors

Aquaculture

Aquaculture has become a dynamic and rapidly expanding pillar of the Mediterranean Blue Economy, contributing around **EUR 11 billion** annually and providing approximately **280,000 jobs**—representing 40% of total employment. The sector now accounts for about **45% of aquatic production** by volume and 60% by value, with notable resilience during crises such as the COVID-19 pandemic.

Production is dominated by finfish farming, accounting for over 85% of total output, and relies heavily on marine cages (68%), followed by land-based systems and pens. While freshwater aquaculture still contributes around 70% of the volume, **marine and brackish water farming has seen dramatic growth—75% in volume and 90% in value**—since 2011. Leading producers include Egypt, Türkiye, Greece, and Italy, while smaller producers such as Albania and Algeria are showing fast-paced growth. On the other hand, countries like Slovenia and Montenegro have experienced notable declines.

Aquaculture plays a growing role in food security. In Egypt, for example, it supplies up to 20% of total animal protein consumed, indicating its critical importance in national diets and nutritional resilience. Despite its industrialisation, aquaculture cannot simply substitute for fisheries in terms of employment patterns, territorial integration, and socio-cultural value, especially in rural or island communities.

Key challenges for the future include reducing environmental impacts, improving energy efficiency, enhancing technological innovation, and ensuring equitable development. The sector must also adapt to climate change, market volatility, and regulatory gaps, while contributing to the broader goals of marine biodiversity conservation and ecosystem-based management. **Regional cooperation and knowledge sharing remain vital** to ensure aquaculture's growth aligns with sustainable and inclusive development pathways.

Mediterranean aquaculture production: a matter of fins and shells.

83%

Finfish production.

16%

Molluscs production.

2.800.000 t

8.000.000.000 $ Values in 2020.

From European Institute of the Mediterranean. (2021). Aquaculture in the Mediterranean. In IEMed Mediterranean Yearbook 2021 .
Sicuro, B. The evolution of aquaculture in the Mediterranean region: An anthropogenic climax stage? PLOS ONE, 19(8), e0290870.

The state of the art in the Mediterranean - key sectors

Marine Renewable Energy

Tidal and Wave Energy are currently at an early-stage. Only one operational tidal farm (Strait of Messina, Italy). 20 projects are in development in the Western Mediterranean—mainly in Italy, France, and the Strait of Gibraltar.

Limitations:
Growth is restricted by heavy maritime traffic and tech barriers (Francocci et al., 2019).

Offshore Wind Energy (OWE)

Trends:
Rapidly expanding, seen as the most promising renewable due to high wind potential and falling costs (50% drop projected by 2021).

Key Sites:

- Gulf of Lion (France)
- Adriatic Sea
- Straits near Sicily, Tunisia, and Malta
- Gulf of Gabès (Tunisia)

Projections:

- Up to 12 GW by 2030 in EU Med countries
- 40 GW by 2050
- 21,967 TWh/year potential in southern/eastern Med—34x higher than in the north (UfM, 2017)

Environmental Concerns:

- Impacts on marine life from noise, Electromagnetic Field (EMF), and infrastructure.
- Bird collisions and habitat disturbance during construction and operation.
- Cumulative effects are a major concern—Marine/Maritime Spatial Planning is key to mitigate this.

Renewable marine energy: ambitious targets.

32%

of electricity to be generated from renewables (Directive 2018/2001). Offshore renewable energy can contribute to reach this EU target for 2030. In terms of adoption and development, the two most advanced sources in the Mediterranean are Offshore Wind Energy (OWE) and Tidal Energy.

2.000.000 €

per megawatt (MW) of installed capacity.

is the average total investment for offshore wind farms.

From Plan Bleu. (n.d.). Marine renewable energy in the Mediterranean. Retrieved March 12, 2025, from https://planbleu.org/en/page-theme/marine-renewable-energy/
Windustry. (n.d.). What is the cost of offshore wind energy? Retrieved March 12, 2025, from https://www.windustry.com/what-is-the-cost-of-offshore-wind-energy.htm

The state of the art in the Mediterranean - key sectors

Nature Protection

The Mediterranean Sea is **a global biodiversity hotspot**, hosting approximately 7% of known marine species despite representing only 0.3% of the global ocean volume, and showing the world's highest rate of marine endemism (20–30%). However, the region faces intense and **growing environmental pressures driven by human activity**, including pollution, habitat degradation, overexploitation of resources, urbanization, maritime traffic, and climate change. Critical habitats—such as seagrass meadows, wetlands, and coastal dunes—are declining, diminishing their ability to provide essential ecosystem services like shoreline protection, carbon sequestration, and nutrient cycling. Maritime traffic poses specific threats to cetacean habitats, while offshore oil and gas activities, aquaculture, and coastal infrastructure developments increasingly overlap with and impact marine protected areas.

The Mediterranean region is subject to several national and international frameworks aimed at protecting its unique marine and coastal biodiversity. One of the main regional mechanisms is the **UNEP/MAP Barcelona Convention** and its associated protocols, particularly the Protocol concerning Specially Protected Areas and Biological Diversity (SPA/BD Protocol). Under this framework, countries have established **Marine Protected Areas (MPAs)**, which now cover **nearly 10%** of the Mediterranean Sea—close to the 2020 Aichi Biodiversity Target. However, while coverage has expanded, effective management and enforcement of MPAs remain major challenges. **Many MPAs lack adequate funding, staffing, and monitoring**, and illegal activities such as unregulated fishing and damaging maritime traffic continue in and around these areas.

Furthermore, environmental pressures often extend beyond MPA boundaries—affecting cetacean migration routes and critical habitats not yet formally protected. To address these gaps, UNEP/MAP promotes an ecosystem-based approach to marine spatial planning, encouraging countries to consider biodiversity corridors, migratory paths, and broader ecological functions in planning and regulation. Additionally, **national-level protections are uneven across the basin**, with greater implementation capacity in EU countries than in many non-EU Mediterranean states. Fon instance, some countries, such as Spain, have already more than the **21% of the EEZ protected, getting closer to the 30% goal**. Strengthening cross-border cooperation, data sharing, and local stakeholder engagement is essential to achieve Good Environmental Status (GES) and halt biodiversity loss in this critically stressed region.

Nature protection in the Mediterranean

9,68%

Of the Mediterranean designated as Marine Protected Areas (MPAs).

1,27%

Of the Mediterranean is covered by MPAs that effectively implement their management plans.

From WWF. (2019). Towards 2020: How Mediterranean countries are performing to protect their sea. World Wide Fund for Nature.

Future in the Mediterranean - key sectors
Fisheries: Towards Resilience and Sustainability

The Mediterranean fisheries sector **provides livelihoods to approximately 500,000 people**, including 158,000 onboard workers, though it faces a 6% decline in employment since 2020. Small-scale fisheries (SSF) dominate employment (62%) but generate only 26% of total revenue, indicating their social but economically fragile role. The path to 2030 demands bold action: reducing overexploitation of marine resources, scaling up regional monitoring, and **enforcing stronger IUU fishing regulations**. Critical to this is investing in **data collection, multiannual adaptive management plans, and fisheries restricted areas**.

A generational renewal is urgently needed: the **sector is aging**, often informal, and lacking digital skills. EU-supported initiatives like BAPSI and BlueAquaEdu aim to close this gap, promoting interdisciplinary training, gamified learning, and the creation of blue "skills ecosystems" across coastal communities. With the right mix of policy commitment and innovation support, fisheries can evolve into a resilient, tech-enabled and community-centered pillar of the blue economy.

Future in the Mediterranean - key sectors

Aquaculture: Circular, Tech-Driven and Food-System

Aquaculture is becoming a strategic driver of sustainable food systems in the Mediterranean, already **supporting around 300,000 jobs**, and closing in on the traditionally larger fisheries sector. However, its future growth must be environmentally sound and socially inclusive. **Emerging trends focus on the diversification of production** — especially low-trophic and high-value species like algae — and the adoption of circular economy models, such as bio-waste valorisation and microalgae-based feed. Ecosystem-based farming, **digitally optimized monitoring, and AI-supported feeding systems** are transforming aquaculture into a cleaner, smarter sector. Yet this transformation requires enabling conditions: science-based regulation, market incentives, innovation funding, and public acceptance. **Countries are increasingly supporting nature-based solutions**, sustainable feed ingredients, and digital aquafarms that align with climate goals. The sector has strong potential to contribute to nutrition security, rural employment, and the energy-food nexus, especially if investments support southern Mediterranean SMEs and local innovation hubs.

Future in the Mediterranean - key sectors
Offshore Renewable Energy (ORE): Unlocking Revolution

By 2030, **the European Union is targeting 111 GW of installed offshore renewable capacity**, nearly doubling the ambition of earlier EU strategies, and potentially reaching **317 GW by 2050**. This aligns with broader climate goals discussed at COP28, and with the revised EU National Energy & Climate Plans (NECPs). The region's electricity demand is projected to hit 2.53 PWh, with the MENA region alone consuming about 1.40 PWh — and **countries like Algeria, Egypt, and Türkiye expected to double or triple current demand**. Offshore wind, solar-at-sea, and other MRE technologies are seen as crucial to decarbonization, energy security, and job creation. However, the sectors of fisheries and aquaculture, heavily exposed to fuel price shocks, must also accelerate their energy transition. Short-term solutions include fuel-efficient technologies, while long-term strategies focus on **low-carbon energy systems**, integrated clean-energy platforms, and **renewable-powered aquaculture systems**. These efforts must be backed by regional cooperation, investment frameworks, and flexible financial tools to ensure equitable and just transitions across all shores of the Mediterranean.

Unlocking Blue Economy Opportunities in Non-EU Mediterranean Countries

Context & Strategic Importance

The Mediterranean region, home to over **800 million coastal inhabitants**, faces converging environmental and socio-economic challenges. Non-EU countries — including Morocco, Algeria, Tunisia, Libya, Egypt, Türkiye, Jordan, Lebanon, and Albania — are central to shaping a sustainable and inclusive Blue Economy. With **demand for seafood, energy, and maritime services set to rise** by 2030, this transformation presents a unique opportunity for policy innovation, investment, and job creation.

Key Sectoral Opportunities

Fisheries: Reinventing Traditional Livelihoods

- ~500,000 jobs in Mediterranean fisheries, with most in non-EU countries and small-scale operations.
- SSF (Small-Scale Fisheries) employ 62% of the workforce, vital for food security, but receive only 26% of total revenue.

Opportunities:

- Investments in data systems, digital tools, and local value chains.
- Creation of fisheries restricted areas backed by socio-environmental data.
- Funding for compliance mechanisms to reduce IUU fishing and protect biodiversity.

Policy Needs: Tailored support for SSF, capacity building, and youth and women inclusion.

Unlocking Blue Economy Opportunities in Non-EU Mediterranean Countries

Aquaculture: Scalable, Circular, and Innovation-Ready

- Estimated 300,000 direct and indirect jobs in Mediterranean aquaculture.
- Growing potential in low-impact species (e.g. algae) and circular economy models.
- **Opportunities:**
  - Investment in microalgae-based feeds, bio-waste valorisation, and digital farming systems.
  - Support for eco-certification, export compliance, and green infrastructure.
  - Development of gamified e-learning and training platforms for future professionals.
- **Policy Needs:** Harmonized licensing, innovation-friendly regulation, and regional cooperation.

Offshore Renewable Energy (ORE): Catalyzing the Blue Energy Shift

- Revised NECPs target 111 GW ORE by 2030; regional electricity demand to reach 2.53 PWh.
- MENA countries (e.g. Egypt, Algeria, Morocco) to double or triple demand by 2030.
- **Opportunities:**
  - Deployment of offshore wind, floating solar, and integrated energy–aquaculture platforms.
  - Regional interconnectivity and cross-border investment platforms.
  - Reduced fuel dependency for fisheries and aquaculture, enhancing resilience and profitability.
- **Policy Needs:** Clear permitting, grid access, and public-private financing instruments.

Cross-Cutting Enablers

- **Digital Transformation:** Tech adoption across all blue sectors to reduce inefficiencies and trace impact.
- **Skills Development:** Vocational Education and Training (VET) and higher education reform to match the needs of the new blue workforce.
- **Circular Economy:** Valorisation of marine biomass, waste reuse, and eco-design of operations.
- **Financing & Support:** Increased flexibility of funds, regional innovation clusters, and south-south collaboration.

Incentives in researching and investing in MSP

- **Strategies:** many countries, such as Tunisia and Algeria, have developed a strategic evaluation of blue economy that shows promising figures. Union for the Mediterranean (UfM) too developed a regional strategy to support local governments.
- **Demographic dividend:** Non-EU countries have younger populations and untapped talent.
- **Climate imperative:** Strong mitigation/adaptation need aligns with impact finance objectives.
- **Strategic geography:** Bridge markets between Europe, Africa, and the Middle East.

Policy momentum: Regional commitment through the FAO/GFCM 2030 Strategy, UfM Blue Economy Agenda, and EU–Southern Neighbourhood cooperation.

A list of useful documents and links

In the Mediterranean, a range of policy drivers is promoting the implementation of Maritime/Marine Spatial Planning at regional, sub-regional, and national levels. These include the implementation of the EU MSP Directive by European Union Member States, the Union for the Mediterranean's Ministerial Declaration on the Blue Economy, the Mediterranean ICZM Protocol, the Conceptual Framework for MSP developed by UNEP/MAP, and the MSPglobal pilot project in the Western Mediterranean. In addition, several initiatives support the broader diffusion and practical implementation of MSP, often providing educational and training resources, as well as opportunities for regional dialogue and networking.

MSP Platform

Since 2016, the European MSP Platform, financed by EU, provides administrative and technical support to EU countries in implementing the MSP legislation. The project manages a website featuring information on existing MSP practices, processes and projects, carries out technical studies, and provides a question and answer service. In 2023 the European Blue Forum was launched to develop synergies between maritime activities and to reconcile the various users of the sea.

EU-funded MSP cross-border projects and conferences facilitate cooperation between EU countries and non-EU countries in managing maritime space and support the implementation of the MSP legislation. The projects website on the European MSP Platform provides full details on the activities that have taken place since 2010.

Relevant sources:

https://maritime-spatial-planning.ec.europa.eu/

https://maritime-spatial-planning.ec.europa.eu/msp-resources/med-msp-cop

A list of useful documents and links

MSPglobal

MSPglobal is a joint initiative by UNESCO's Intergovernmental Oceanographic Commission (UNESCO-IOC) and the European Commission's Directorate-General for Maritime Affairs and Fisheries (DG MARE) to develop and implement international guidelines on Marine/Maritime Spatial Planning.
MSPglobal is providing the context for active and effective participation of policy-makers, scientists, citizens, and other stakeholders to improve governance at multiple levels and achieve an ecosystem-based approach in support of the blue economy. It is designed to support the implementation of the Joint Roadmap to accelerate Maritime/Marine Spatial Planning processes worldwide, adopted by the UNESCO-IOC and DG MARE.

Relevant sources:

Technical Report: Current Conditions and Compatibility of Maritime Uses in the Western Mediterranean

Technical report: Future Conditions and Scenarios for Marine Spatial Planning and Sustainable Blue Economy Opportunities in the Western Mediterranean

PAP-RAC

PAP/RAC is one the regional centres of United Nations Environment Programme (UNEP's) Mediterranean Action Plan (MAP). Established in 1977, PAP/RAC's major role today is to assist Mediterranean countries in the implementation of provisions of the Mediterranean ICZM Protocol, the first international policy on coastal zone management. As MSP became increasingly recognized as the best tool to implement the ICZM Protocol in the marine part of the coastal zone, in 2023 at the meeting of the MAP contracting parties, the "Conceptual Framework for Implementing Marine Spatial Planning in the Mediterranean" was adopted. PAP/RAC also coordinates a MSP working group, aiming to support MSP processes under the Barcelona Convention.

Relevant sources: Conceptual Framework for Implementing Marine Spatial Planning in the Mediterranean (https://wedocs.unep.org/bitstream/handle/20.500.11822/44723/23ig26_22_2610_eng.pdf)
https://msp.iczmplatform.org/

A list of useful documents and links

UfM

The UfM Working Group on Blue Economy is a technical group composed of representatives designated by the UfM countries and is co-chaired by the two co-Presidencies with the support of the UfM Secretariat; The group meets at least once a year, possibly back to back with other events.

It includes permanent observers as per Ministerial Declaration; additional participants can also be invited on an ad hoc basis or as observers, depending on the agenda and to ensure appropriate coordination with other relevant initiatives.

Relevant sources: Towards a Sustainable Blue Economy in the Mediterranean Region - 2024

WestMed initiative

The WestMED initiative is the result of years of dialogue between ten countries in the western Mediterranean region involved in the '5+5 Dialogue': five EU Member States (France, Italy, Portugal, Spain and Malta), and five Southern partner countries (Algeria, Libya, Mauritania, Morocco and Tunisia). These countries are ready and willing to work together on their shared interests for the region: to increase maritime safety and security, promote sustainable blue growth and jobs, and preserve ecosystems and biodiversity.

The WestMED Assistance Mechanism offers participating countries practical support to help meet the Blue Economy goals of the WestMED Initiative.

It consists of blue economy experts that assist stakeholders in finding project partners across borders, support with project (idea) development and share funding opportunities. It also leads discussions on key maritime topics and is often involved in policy discussions at local, national and regional level.

Relevant sources:
https://westmed-initiative.ec.europa.eu/

A list of useful documents and links

Eusair

The EU Strategy for the Adriatic and Ionian Region (EUSAIR) is a macro-regional strategy adopted by the European Commission and endorsed by the European Council in 2014. The Strategy was jointly developed by the Commission and the Adriatic-Ionian Region countries and stakeholders, which agreed to work together on the areas of common interest for the benefit of each country and the whole region.
The general objective of the EUSAIR is to promote economic and social prosperity and growth in the region by improving its attractiveness, competitiveness and connectivity. With four EU members and four non EU countries the strategy will contribute to the further integration of the Western Balkans.

Relevant sources:
https://www.adriatic-ionian.eu/

MED-MSP CoP

On 26 January 2023, CINEA and DG MARE officially launched the Mediterranean MSP Community of Practice during the kick-off meeting in Brussels where experts discussed the structure, objectives and the action plan for the first year of exchanges.

The main objective of the MED-MSP-CoP is to establish a permanent communication and dialogue across borders between experts on MSP (i.e. planners, technical experts, researchers), to exchange knowledge and relevant experiences in the region, to reach a shared perspective on topics of common MSP interests and enhance the cooperation between the northern and southern countries of the Mediterranean.

Relevant sources:
https://maritime-spatial-planning.ec.europa.eu/msp-resources/med-msp-cop

A list of useful documents and links

FAO

The General Fisheries Commission for the Mediterranean (GFCM) is a regional fisheries management organization under the Food and Agriculture Organization (FAO) of the United Nations. Its mandate is to ensure the conservation and sustainable use of marine biological resources, and the development of aquaculture in the Mediterranean and Black Sea. The GFCM works through scientific research, management measures, monitoring, and compliance frameworks.

Its work closely intertwines with Marine Spatial Planning (MSP by promoting spatial management tools and by contributing data and expertise to support ecosystem-based, multi-sectoral planning in marine and coastal areas—ensuring that fisheries and aquaculture are integrated into broader ocean governance and sustainability strategies.

Relevant sources:
Manual on the use of geographic information systems for the identification of allocated zones for aquaculture

Other useful documents:

La Stratégie Nationale de Gestion Intégrée des Zones Côtières en Algérie à 2030

L' économie bleue en Tunisie : Opportunité pour un développement intégré et durable de la mer et des zones côtières

Investmed - Blue Economy within the Mediterranean Region: the Role of Regional Collaboration

Sustainable Blue Economy Policy in Turkey: Challenges and Opportunities

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