marine spatial planning global

MSPglobal Regional Training on Marine Spatial Planning

As part of the SwAM International Training Programme

Planning for a Sustainable Blue Future in the Western Indian Ocean: Institutional Strengthening for Marine Spatial Planning

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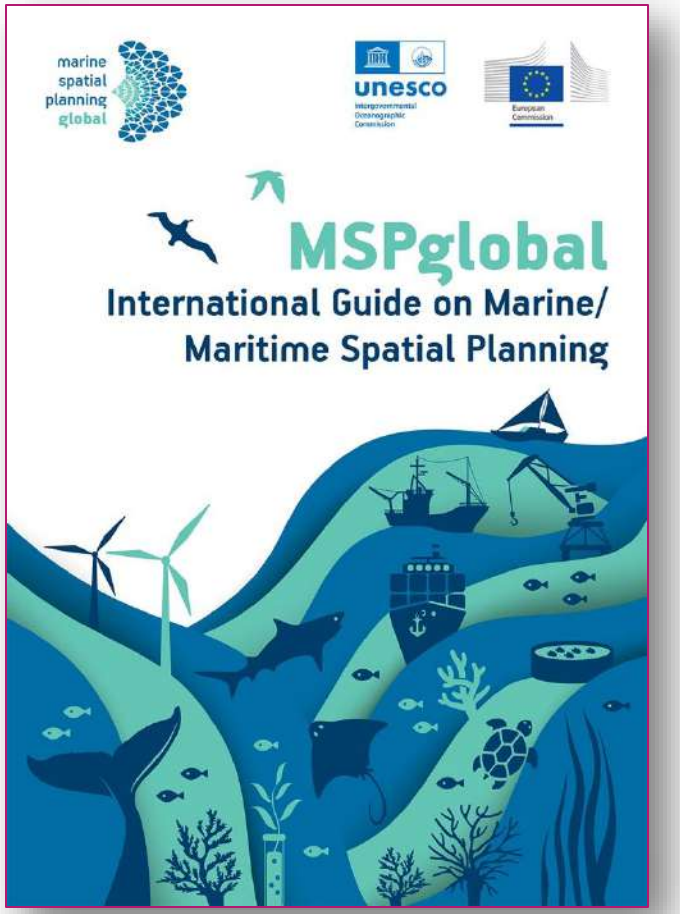
2021



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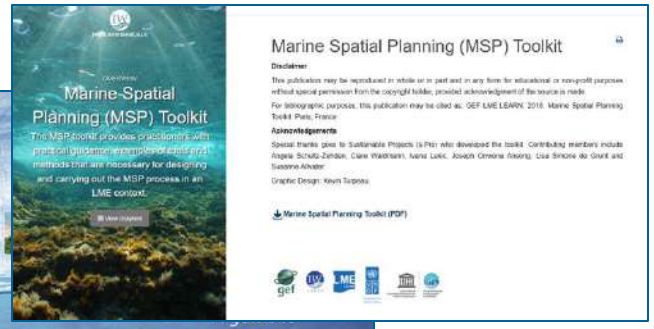

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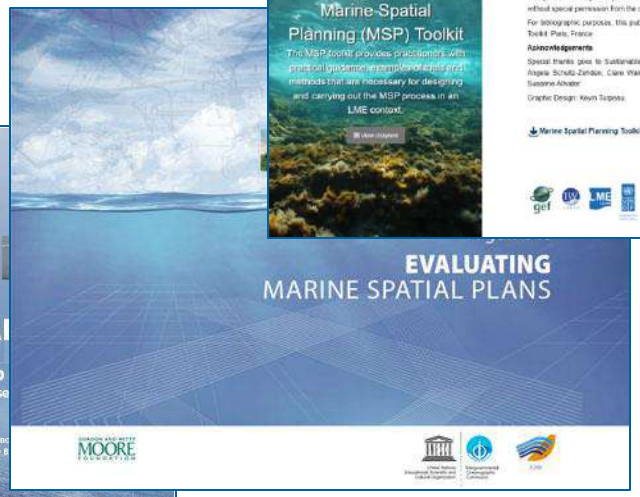

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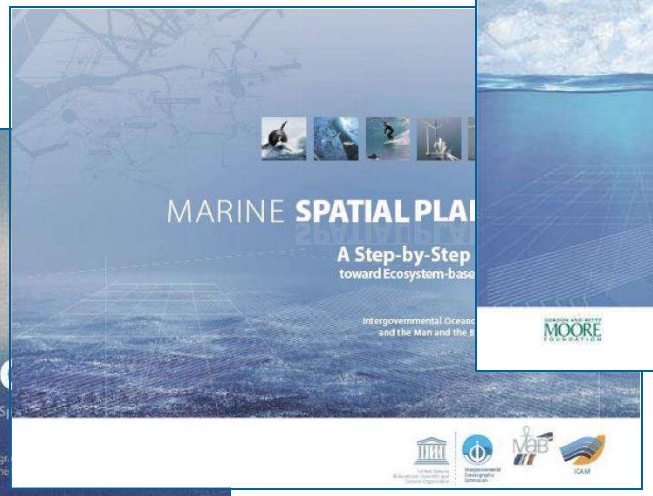

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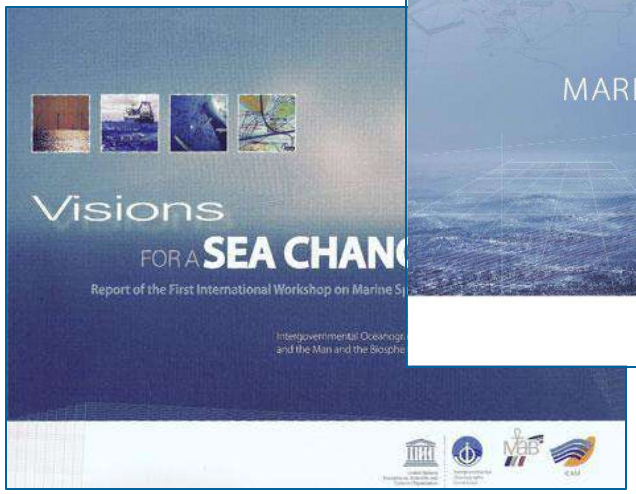


Marine Spatial Planning (MSP)

UNESCO-IOC definition:

*"The **public process** of analyzing and allocating*

*the spatial and temporal **distribution of human activities***

*to achieve **ecological, economic, and social objectives***

*that are usually specified through a **political process**."*

MSP is a multisectoral and participatory process.

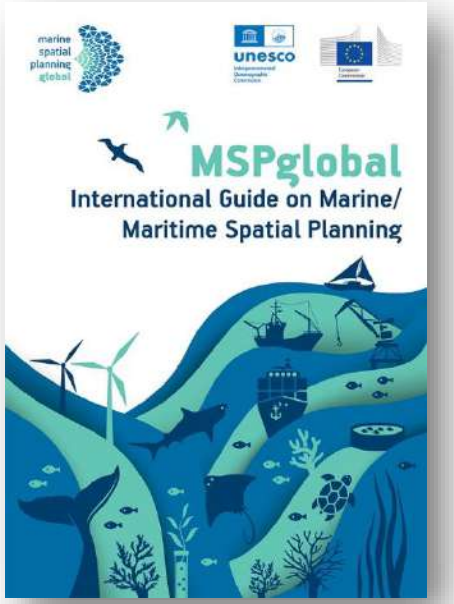
The MSP plan is the instrument.

Ch. 1 - About this guide

Showcases inspiring examples of MSP for user consideration.

- **Coordinator and Editors**
- **International Expert Group**
  - 7 experts from Americas, Africa, Asia and Europe
  - Authors of the guide
- **Thematic Expert Group**
  - 16 experts from Americas, Africa, Asia and Europe
  - Authors of policy briefs; some also contributed to and reviewed the guide

Open call:
70 applicants



\+ contributions from all stakeholders engaged in the MSProadmap, MSPglobal and MSPforum

Ch. 2 - MSP and ocean governance basics

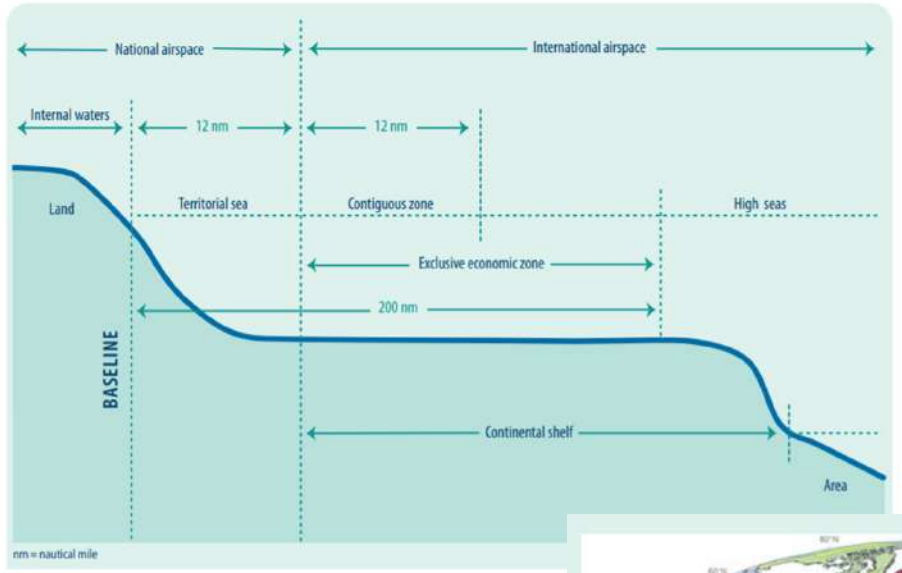


Figure 2.1
Legal boundaries of the ocean and airspace

Source: Adapted from International Institute for Law of the Sea Studies.

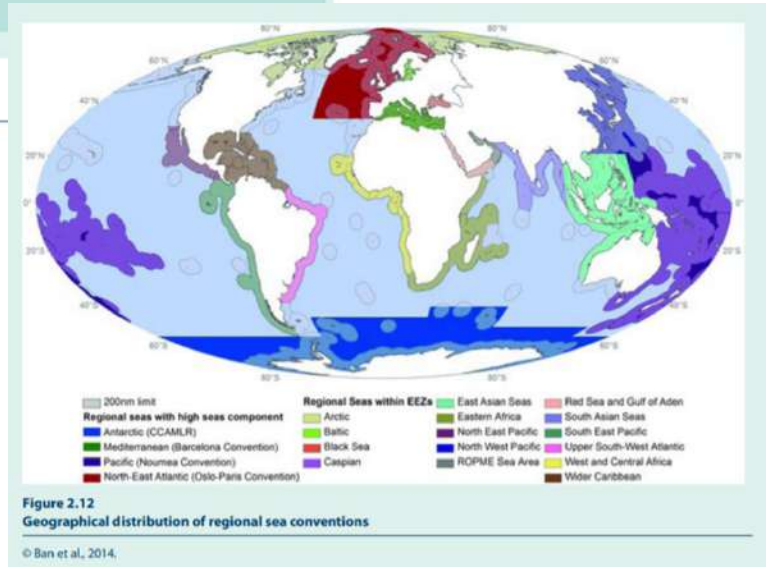


Figure 2.12
Geographical distribution of regional sea conventions

© Ban et al., 2014.

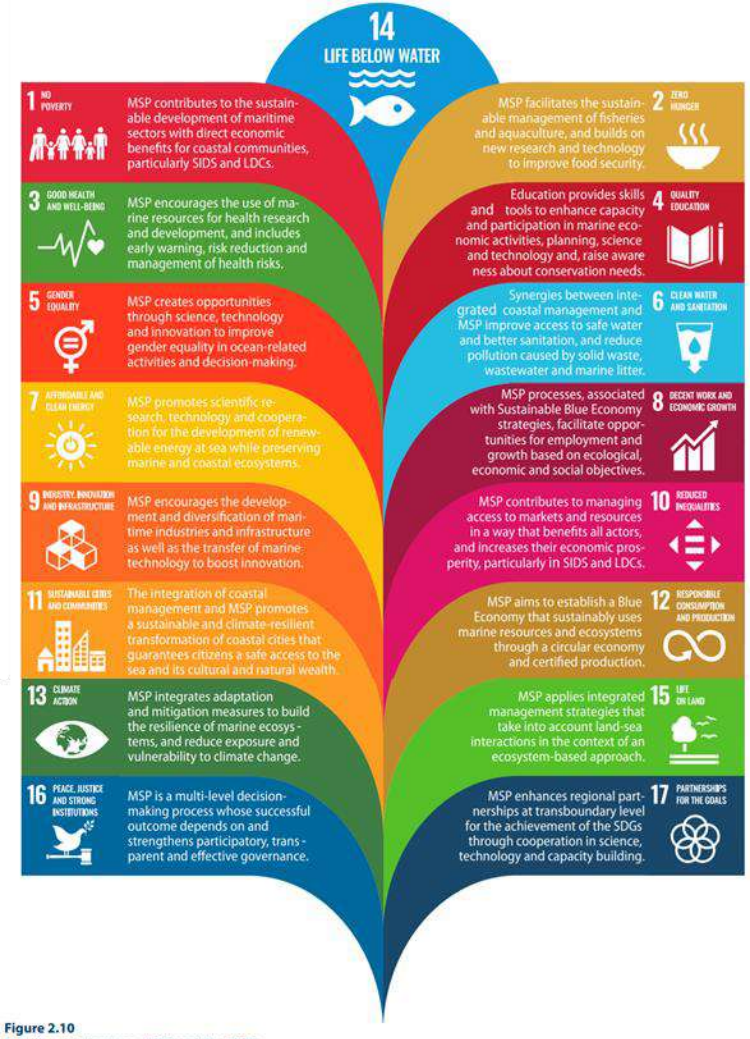


Figure 2.10
Relationship between MSP and the SDGs

Source: UNESCO-IOC/European Commission, 2021

Sustainable blue economy & Multi-uses

Figure 2.2
Factors promoting a blue economy

Source: UNESCO-IOC, 2021*b*.

Table 2.2
Recommendations from the multi-use action plans

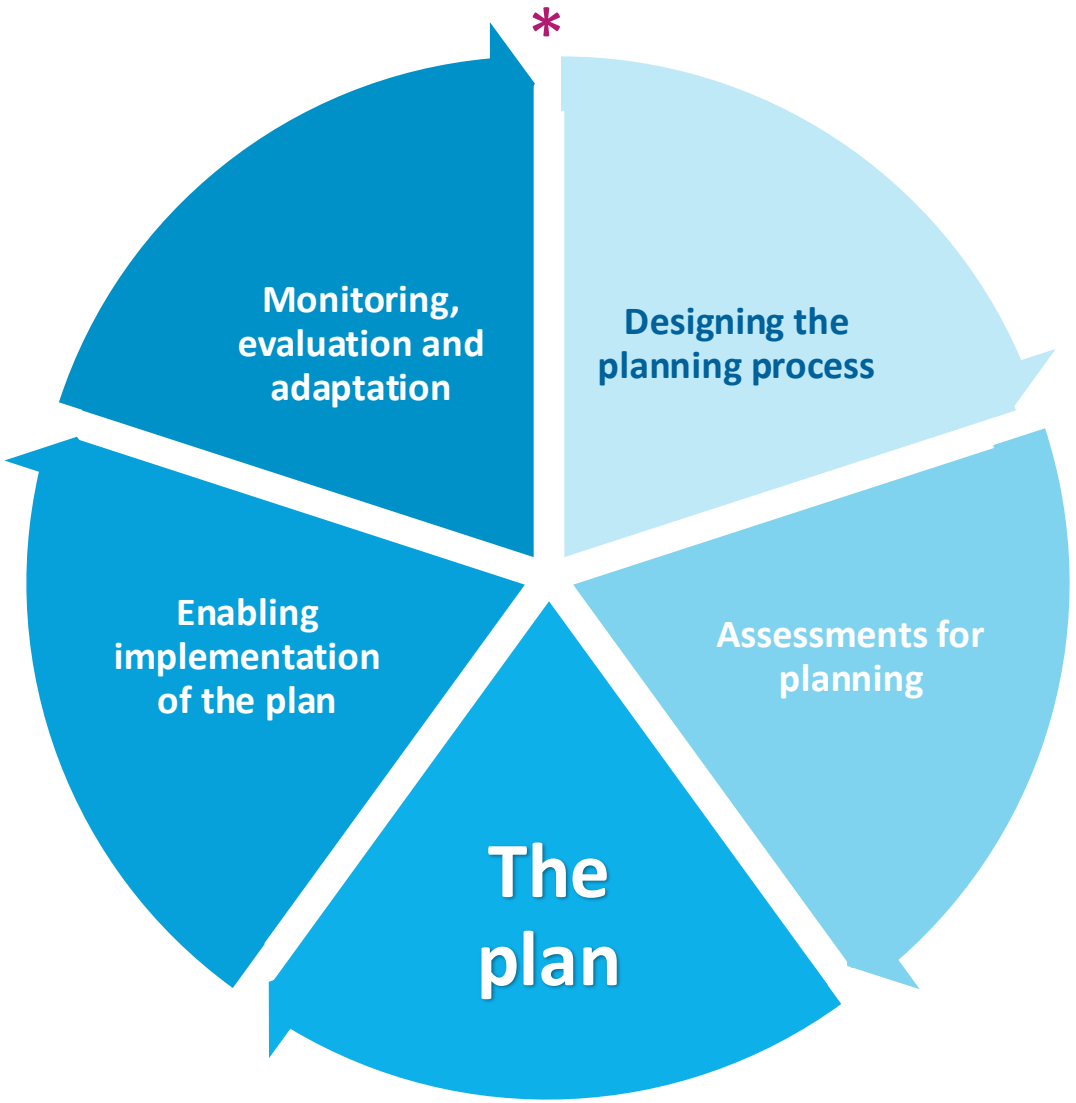
Recommendations for	Type 1 Multi-purpose/ multi-functional	Type 2 Symbiotic use	Type 3 Co-existence/ Co-location	Type 4 Subsequent use/ repurposing
Policy (macro-regions/nations/ regions)	Provide financial incentives and sureties for development of new technologies and combinations	Mainstream and include multi-use concept on all relevant policy levels	Clarify rights and responsibilities of different users to ocean space	Adopt clear legal frameworks and clarify liability rules (between current and future platform users), allowing for better management of expectations and predictability
Regulation (nations/regions)	Develop and deploy joint licensing procedures for multi-use development throughout entire life cycles	Identify and apply site selection criteria to establish viable multi-use sites in managed waters	Ensure that effective cooperation and mediation mechanism are in place between representatives of all sectors (i.e. working groups)	Develop general suitability criteria as to which sites and types of installations are suitable, for which type of reuse
Research (academia/industry)	Identify and address gaps in current knowledge about safety, benefits and drawbacks and create decision support systems	Identify operational overlaps allowing for the sharing of cost for supporting services and infrastructure	Gather and communicate data about compatibility of uses	Carry on time series research about long-term local impacts of maritime infrastructure and installations to ecosystems
Industry (corporations/ associations)	Develop pilot sites to showcase and advance new technology in the field	Formulate exemplary benefit and cost sharing agreements between involved actors	Facilitate industry wide capacity building regarding opportunities and operations	Suggest suitable investment mechanisms to facilitate re-use of installations after initial lifespan

Source: Schupp et al., 2019.

Source: UNESCO-IOC/European Commission, 2021

Ch. 3 to 8 - The MSP process: more than a plan

Setting the scene



Source: UNESCO-IOC/European Commission, 2021

Ch. 3 - How to set the scene

- **MSP working group**

  - Usually, multi-institutional or multi-agency
  - May include other key stakeholders and planning experts

- Existing legal and institutional frameworks
- Stakeholders and their planning needs
- Budget and funding

Source: UNESCO-IOC/European Commission, 2021

MSP drivers

Table 3.1
Regional and national examples of identified needs as drivers for the MSP process

Country/Cases	Driver(s) for MSP
Belgium	Small sea space, sea-use conflict, emerging offshore wind farms
USA (Rhode Island, Massachusetts)	State offshore wind farm targets
China (Xiamen's marine functional zoning)	Sea-use conflicts, marine environmental degradation, lack of institutional coordination
Australia (Great Barrier Reef)	Degradation of coral reefs and managing the impact of human activities on the ecosystem
South Africa	Need for more integrated approach to marine management, perceived conflict between uses
Grenada	Blue growth, coastal, marine tourism and sea-use conflicts
Seychelles	National marine biodiversity protection target (30% of the EEZ and Territorial Sea)
EU coastal Member States	Legal obligation under the EU MSP Directive
Coral Reef Triangle Initiative on Coral Reef, Fisheries and Food Security (Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands, Timor Leste)	Reversing degradation of coral reefs, ensuring food security through improved fisheries management, addressing climate change

Sources: European Commission, 2017; European Commission, 2019.

Source: UNESCO-IOC/European Commission, 2021

Awareness & Capacity building on MSP

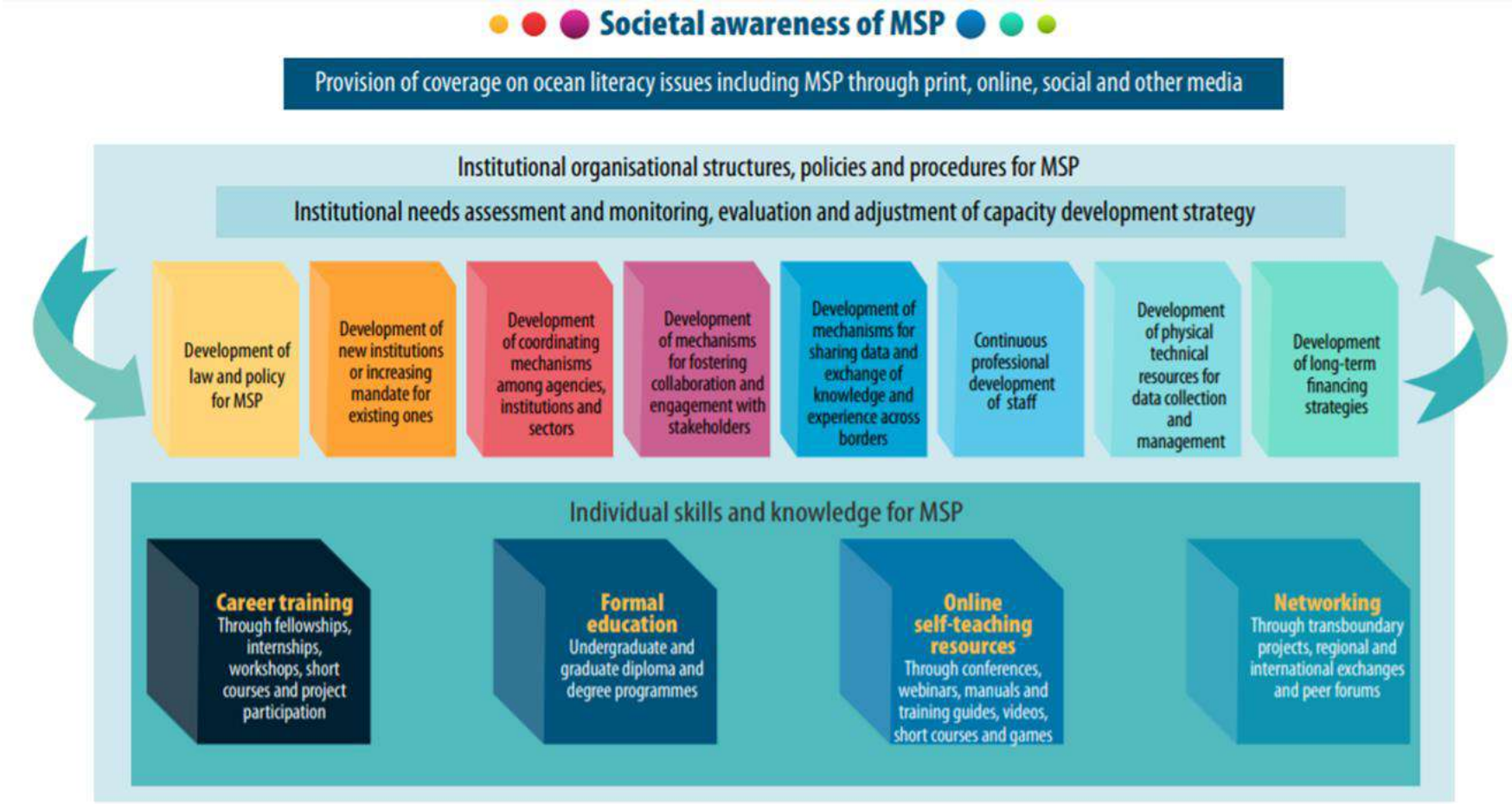


Figure 3.6
Enhancing awareness of MSP

Source: UNESCO-IOC, 2021*f*.

Source: UNESCO-IOC/European Commission, 2021

Ch. 4 - Designing the planning process

- **Planning team & Work plan**
  (including strategies for communication and participation)
- **Planning boundaries of MSP and its plan(s), as well as time frame**
- **Principles**
- **Initial vision and objectives**

- Related to the MSP drivers
- Broad but guided by some realism

- Specific

Table 4.2
Sample MSP work plan

Step	Milestone	Time frame
Pre-planning stage (how to set the scene and design the planning process)	Establish and resource MSP function by establishing a marine planning authority and team	• Immediate • Notify regional bodies and neighbouring countries about the start of the MSP process
	Identify and initiate contact with key stakeholders	• End of Year 1
Planning	Establish MSP working group	• Year 1
	Develop initial vision and objectives of the marine spatial plan	• Publish before end of Year 1
	Initiate contact with stakeholder groups (e.g. energy industry representatives, fisheries, coastal communities, etc.)	• In writing before end of Year 1 • Regional workshop/stakeholder forums Q1 of Year 2
	Prepare situational analysis and future scenarios (this phase includes collection, mapping and analysis of data on current and future conditions)	• Publish end of Year 2 • Two-month consultation
	Prepare draft marine spatial plan (including environmental assessments)	• To minister/government Q2 Year 3 • Three-month consultation
The plan	Prepare final marine spatial plan (including environmental assessments)	• To minister/government Q2 Year 4 • Publish and notify regional bodies and neighbouring countries Q3 Year 4
Implementation	Implementation	• Year 4 onwards
Monitoring, evaluation and adaptation	Monitoring, evaluation and adaptation	• Year 4 onwards

Source: Department of Housing, Planning and Local Government of Ireland, 2017.

Source: UNESCO-IOC/European Commission, 2021

Checklist for engaging stakeholders

WHO

- Are/will be affected by MSP decisions
- Are dependent on the resources of the planning area
- Have/make legal claims or obligations over areas, or resources within the planning area
- Conduct activities that impact on areas or resources of the planning area
- Have special seasonal or geographic interests in the planning area
- Have a special interest in or connection with the planning area

WHEN

- Designing the planning process
- Conducting the assessments for planning (including data collection, which can come from stakeholders)
- Developing the marine spatial plan
- Implementing the marine spatial plan
- Monitoring and evaluating the marine spatial plan and process

HOW

- Consultations (public hearing and/or written public comments)
- Questionnaires/Interviews
- Seminars
- Meetings
- Hands-on workshops (e.g. participatory mapping)
- Forums
- Working/Advisory groups
- Deliberative committees
- (Regular) E-mails providing feedback on the status of the MSP progress

Sources: Bouamrame, 2006; IOC-UNESCO, 2009; Quesada-Silva et al., 2019.

Source: UNESCO-IOC/European Commission, 2021

MSP principles

- How the process needs to be conducted in relation to stakeholders *(e.g. participative)*
- How the plan needs to be developed *(e.g. ecosystem-based approach; climate smart)*
- What the plan needs to deliver *(e.g. sustainable development; social justice)*

Box 4.3

Baltic Sea broad-scale MSP principles[1]

1. Sustainable management
2. Ecosystem approach
3. Long-term perspective and objectives
4. Precautionary principle
5. Participation and transparency
6. High-quality data and information basis
7. Transnational coordination and consultation
8. Coherent terrestrial and maritime spatial planning
9. Planning adapted to characteristics and special conditions at different areas
10. Continuous planning

Source: HELCOM-VASAB, 2010.

Box 4.4

Six indigenous principles underlying the Haida Gwaii Marine Plan, Canada[1]

1. Yahguudang or Yakguudang – Respect
2. 'Laa guu ga kanhllns – Responsibility
3. Gina 'waadluxan gud ad kwaagiida – Interconnectedness: Everything depends on everything else
4. Giid tll'juus – Balance: The world is as sharp as the edge of a knife
5. Gina k'aadang.nga gii uu tl' k'anguudang – Seeking wise counsel
6. Isda ad diigii isda – Reciprocity

Source: Council of The Haida Nation, 2017.

Source: UNESCO-IOC/European Commission, 2021

Objectives of the MSP plan

Ecological + Economic + Social

S	M	A	R	T	I	E
SPECIFIC	**MEASURABLE**	**ACHIEVABLE**	**RELEVANT**	**TIME-BOUND**	**INCLUSIVE**	**EQUITABLE**
When the objective is precise and concrete enough not to be open to varying interpretations by different people.	When the objective allows verification of its achievement through indicators. Such objectives are either quantified or based on a combination of description and scoring scales.	When the objective is set at a level which is ambitious but at the same time realistically achievable within the context, knowledge and resources available.	When the objective is directly linked to the drivers and vision.	When the objective is related to a fixed date or precise time period to allow an evaluation of its achievement.	When everyone is welcomed – particularly those most impacted – into processes, activities, and decision/ policymaking in a way that shares power.	When the elements of fairness are included seeking to address systemic injustice and inequity.

Source: UNESCO-IOC/European Commission, 2021

Planning the monitoring and evaluation of the plan

Context indicators	• Collect information on general developments in maritime sectors and marine environment • Information helps in assessing the relevance of the MSP: is it focusing on the most important issues?
Input indicators	• Collect information on actions and resources to develop plans and responsibilities • Information helps in assessing preconditions for successful planning
Process indicators	• Collect information on the planning process, and from stakeholders • Information helps in assessing the quality of the planning process, including equity and representativeness • Set the standard for a good quality process
Output indicators	• Collect information on planning decisions and studies
Outcome indicators	• Collect information on immediate, intermediate and long-term outcomes, such as licence application procedures and projects resulting from the plan (impact information) • Information will help in assessing progress in the implementation of the plan (milestones) and the results of the plan • *Note:* assess what the influence of the plan has been on the developments at sea

Source: Varjopuro et al., 2019.

Source: UNESCO-IOC/European Commission, 2021

Ch. 5 - Assessments for planning

- **Present:** Diagnose environmental, socio-economic and cultural conditions
- **Future:** Trends, new demands of ocean space, suitability maps, potential areas for biodiversity conservation, climate change
- **Alternative scenarios**
- **Public information system**

MSP Input Data required for analysing initial conditions
Oceanographic spatial information (ocean temperature, waves, currents…)
Data on marine environment (eutrophication level, benthic habitat status…)
Marine conservation (extension and objectives of Marine Protected Areas...)
Information on coastal and maritime activities (aquaculture, ocean energy facilities, harbours…)
Socio-economic information (coastal population, unemployment,
Governance information (administrative units, prospecting pe

Type	
Data catalogue	
Database or data portal	Online direct access to datasets
Data viewer or GIS mapping tool	Service to display spatial data
Knowledge platform or information service	Service which aggregates data into information product (e.g. factsheets)
Decision support tool or assessment tool	Method or specialised tool to support further analysis and interpretation

Participatory mapping as a source of data and information

Participatory mapping is a map-making process that attempts to make visible the association between land or ocean and local communities by using the commonly understood and recognised language of cartography (IFAD, 2009). Maps present spatial information at various scales, using a paper or a digital map, serve as a medium of empowerment by allowing local communities to represent themselves spatially.

Source: UNESCO-IOC/European Commission, 2021

Existing conditions

Examples of data needs to assess the existing conditions

List of spatial data to characterise the environment:

- Oceanographic features like currents, convergence zones, upwelling
- Bathymetry and depth
- Priority areas for conservation (e.g. MPAs, Biosphere Reserves, EBSAs, etc.)
- Benthic geomorphology, shallow and deep
- Deep corals and reefs
- Key ecosystems and community-forming species (e.g. coral reefs, seagrasses, mangroves)
- Distribution and abundance of key species (e.g. cetaceans, turtles, elasmobranchs, seabirds, fish, invertebrates)
- Breeding areas
- Nursery areas
- Feeding or foraging areas
- Seasonal differences, taking into consideration different life stages of species
- Sea-surface temperature (SST)

(...)

Examples of spatial data needs to assess the existing socio-cultural conditions

- Maritime and underwater cultural heritage
- Coastal features
- Sunken and buried features
- Use of coast and sea
- Past use of coast and sea
- Religious and other socio-cultural areas
- Traditional land tenure
- Cultural ecosystem services

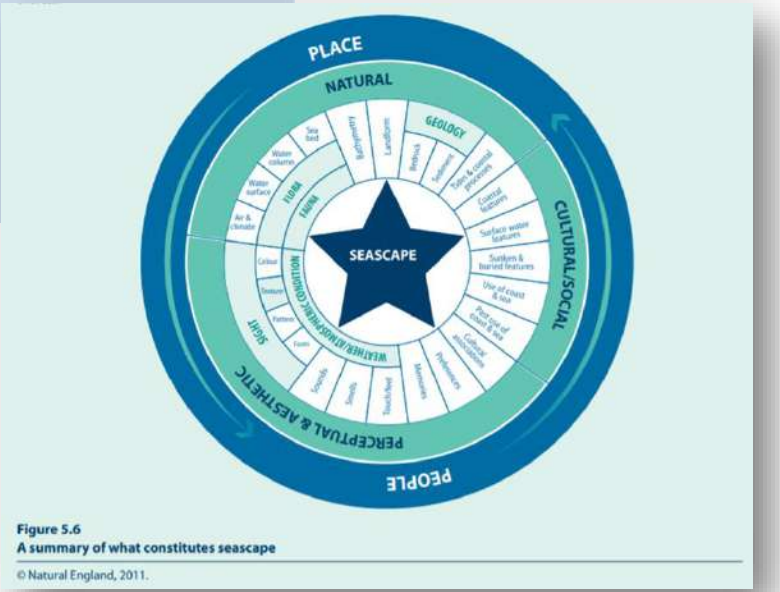


Figure 5.6
A summary of what constitutes seascape

Source: UNESCO-IOC/European Commission, 2021

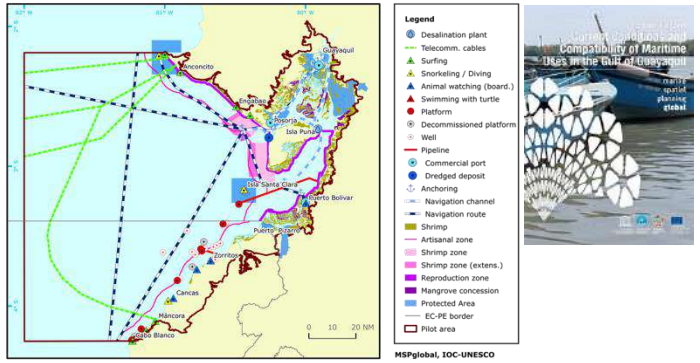
Existing conditions

Examples of data needs to assess existing sectoral conditions

List of spatial data related to maritime uses:

- Fisheries
  - Fishery areas (e.g. commercial, traditional, recreational, etc.)
  - Spawning and nursery areas
  - Important fishery ports
  - Fish migration
  - Fishing density
  - Restrictions
- Aquaculture
  - Zones
  - Installed infrastructure
- Tourism
  - Recreation and tourism areas and routes
- Maritime transport
  - Port infrastructures and protection zones
  - Anchoring areas
  - Dredging and dumping areas

(...)



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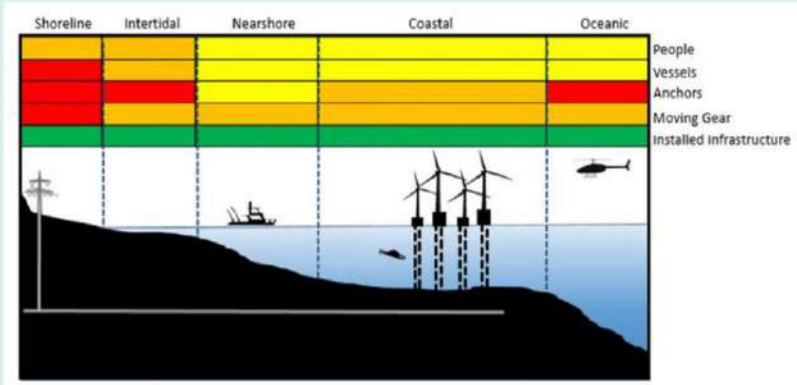


Source: UNESCO-IOC/European Commission, 2021

Future conditions

Box 5.12

Mapping suitable areas for spatial development

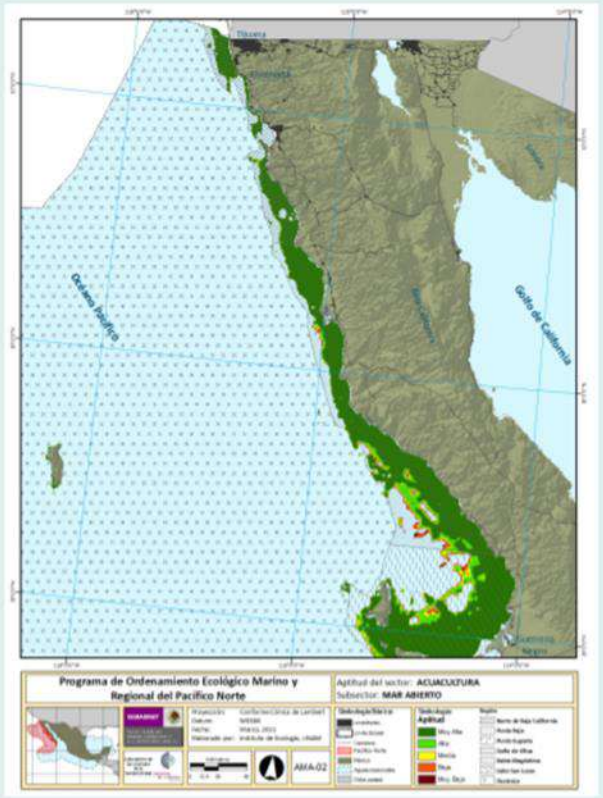
In the diagnosis phase of Mexican MSP processes, suitability maps are developed to identify areas with the best conditions for each sector (including conservation).

A multi-criteria modelling analysis is carried out according to the steps below (LANCIS UNAM, 2020):

(1) Identify the objective of the sector regarding the use of the territory
(2) Identify the attributes that the sector requires to develop its activities
(3) Identify the relative importance of the attributes
(4) Transform attributes to an equivalent scale
(5) Integrate the suitability map into the geographic information system
(6) Validate the suitability map

The results mean that areas of higher value have the best conditions for the development of the activity, while areas of less value will require some kind of technology to compensate for the lack of ideal conditions, which will create additional costs for the sector.

The North Pacific planning process developed suitability maps for aquaculture, fisheries, maritime transport and infrastructures, tourism and conservation. The combination of these sectoral suitability maps resulted in a first draft zoning for the region. The different zones identified are units with specific characteristics that are suitable for a group of sectors (SEMARNAT, 2019).



© SEMARNAT & LANCIS-UNAM, 2019.
Source: LANCIS-UNAM, 2020.

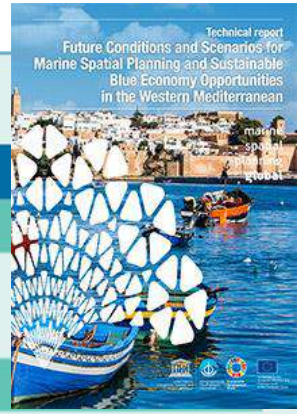
Source: UNESCO-IOC/European Commission, 2021

Scenarios

Table 5.2
Proposed visions of each scenario for the Western Mediterranean

Scenarios to 2030	Key drivers
Trend	
Assuming that no integrated maritime policy was in place, sectors grew based on their past trends and future projections. Conflicts are expected to arise in the busiest areas	• Mass tourism • Cargo and cruises • Intensification of fishing
Conservationist	
Conservation is the priority, ecological and biological areas are effectively protected, most impacting activities are reduced until the maximum possible extent and new activities development is based on ecological sustainability factors	• Eco-tourism • 'Green shipping' • Sustainable fisheries and aquaculture • Effective protection of key environmental values • Promotion of renewable energy
Integrated	
Integrated planning and management have led to the application of sustainable Blue Economy strategies at regional level where co-location of activities is a priority led by social and sustainability objectives	• Sustainable tourism • Sustainable maritime shipping • Co-location of activities • Precautionary principle for emerging sectors

Source: UNESCO-IOC, 2021*h*.



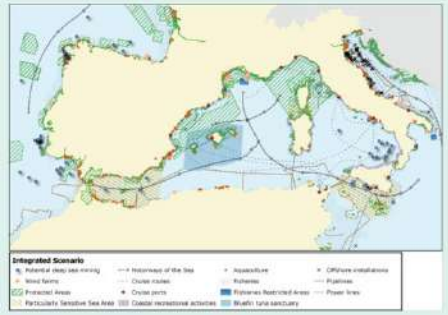


Figure 5.8
Integrated scenario for the Western Mediterranean

Trade-off analysis

Examples of questions to analyse the alternative scenarios

- What are the consequences of each alternative scenario for the different maritime sectors?
- Which steps would lead to each alternative scenario?
- Which are the most intensive and potential areas of future development?
- What kind of spatial impact would the alternative scenarios have?
- What are the possibilities and potential areas for multi-use platforms and synergies?
- How may a sustainable future be reached?
- What is the preferred scenario?
- What is the worst-case scenario? What leads to the worst-case scenario?

Source: Adapted from Plan4Blue, 2018.

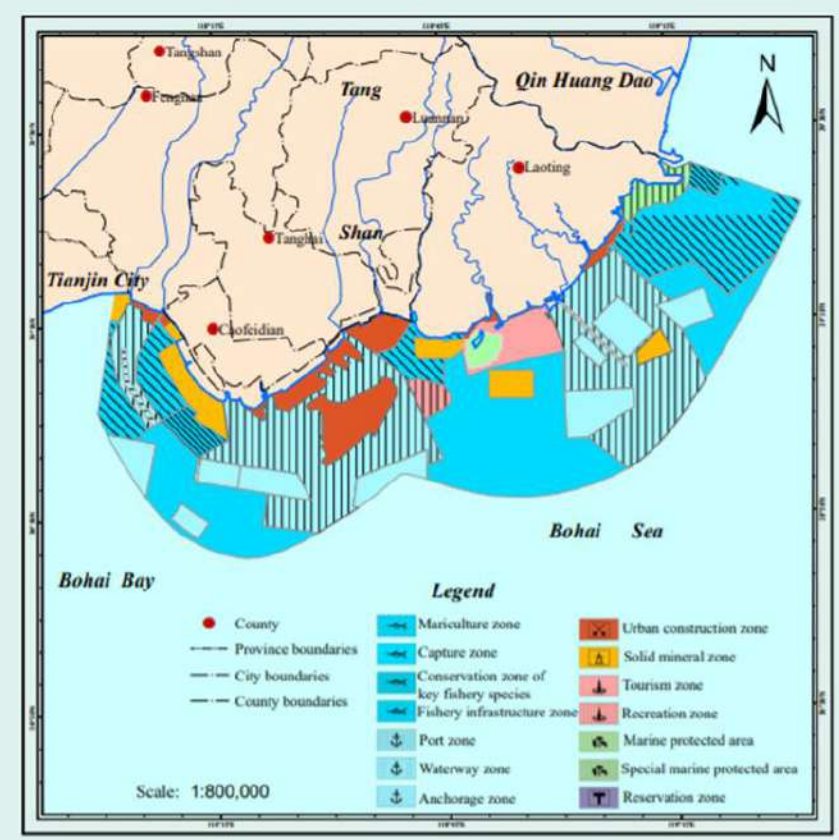
Source: UNESCO-IOC/European Commission, 2021

Ch. 6 - The plan

- **The MSP plan content:**
  - Agreed vision and objectives
  - Spatial allocation of uses (e.g. zoning)
  - Non-spatial management actions

- **Approving the MSP plan**
  - Consultation

    (ideally, incl. transboundary consultation)



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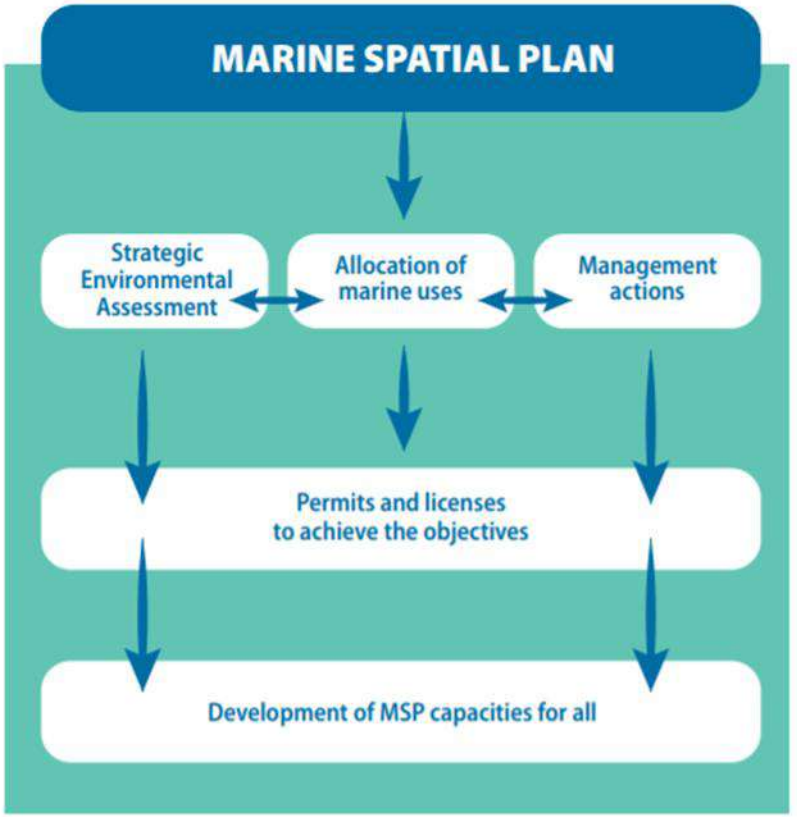


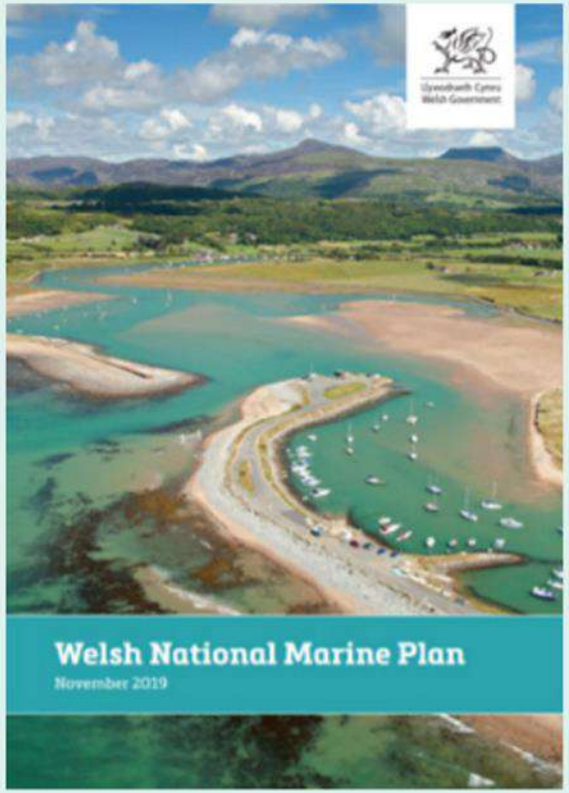
Figure 6.1
Implications of a marine spatial plan

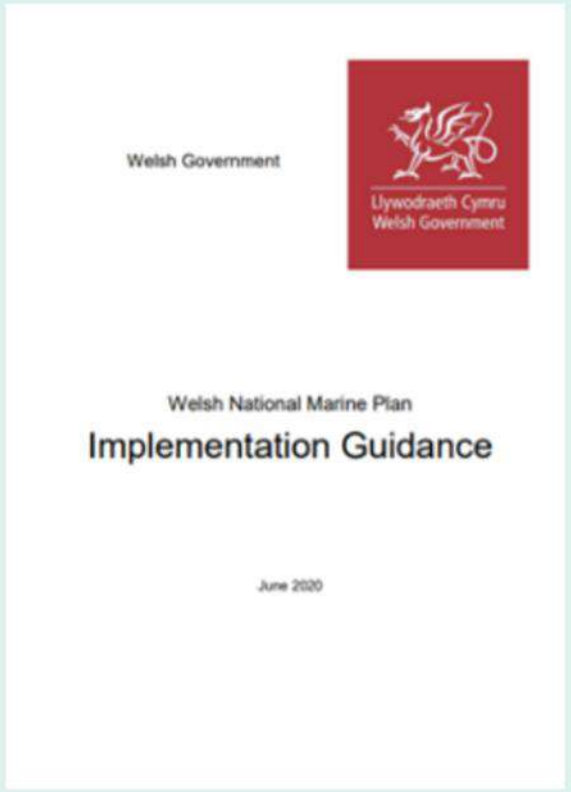
© UNESCO-IOC, 2021.

Source: UNESCO-IOC/European Commission, 2021

Ch. 7 - Enabling implementation of the plan

- Regulation to refer to the implementation of the marine spatial plan
- Regular dialogue with stakeholders to follow up and support implementation
- Capacity development for competent authorities and stakeholders on the implementation of the plan
- Compliance of sectoral authorities, regulatory bodies and stakeholders
- Enforcement of the MSP plan by the government





Source: : UNESCO-IOC/European Commission, 2021

Ch. 8 - Monitoring, evaluation and adaptation

- The MSP **processes** (including stakeholder engagement)
- The **plan** and its relevance (**final draft**)
- The **implementation** of the plan (regular and mid-term evaluation)
- The **outcomes/results** of the plan

The challenge of isolating the effects of MSP

Table 8.4
Checklist for reviewing and revision

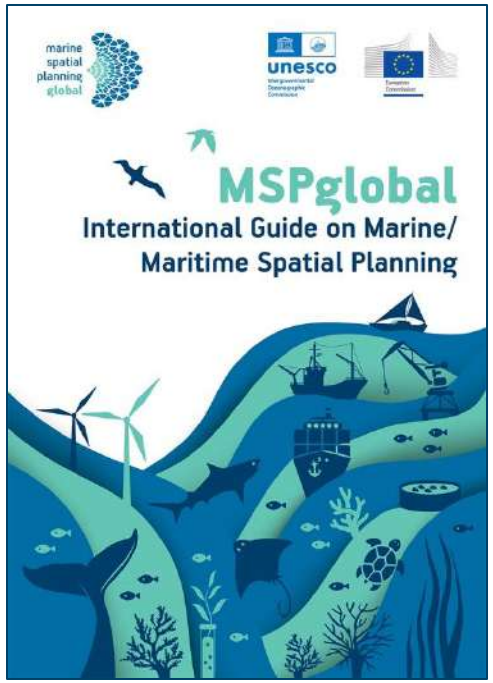
Collect results of the existing plan	• Monitoring and evaluation of results. Check status of the key indicators to see if the plan is on the right track. If not, why? • How has MSP influenced maritime sectors and decision-making? • How was the plan used to inform decision-making about development proposals? • How did proposals show compliance with the plan? • Are we on the right track in relation to the objectives? • Equity and adequacy of the process • What is the perception of different stakeholders about the existing process? • Was the budget sufficient?
Revisit the existing conditions	• How have the maritime sectors, communities and the environment changed? • Have there been major policy reviews (e.g. in sectors) or new commitments, including international? • What is the general context of the planning area (e.g. in environment, governance, technology, economy)? • Improve database and analytical methods
Revisit the future conditions and objectives	• What are the new and emerging needs? • Update the vision and specific objectives
Revisit the scope of pre-planning	• Update the vision and specific objectives • New time frame • Do the boundaries need to be rethought? • Adequacy of the team • Reorganise the planning process
Update the marine spatial plan ***Note:*** This is the final part of the review – all other parts should feed into this	• Indicate clearly which spatial policies / requirements / zones are obsolete or are no longer considered. Likewise, clearly indicate new zones or spatial policies • Update the marine spatial plan to respond to both new needs and lessons from the implementation of the previous plan(s) • Improve plan-making practices

Source: : UNESCO-IOC/European Commission, 2021

Ch. 9 - Next steps

Source: : UNESCO-IOC/European Commission, 2021

Thank you!



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(Resources -> Key references)

Languages:
EN, FR, ES, AR

marine spatial planning global

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