



Macaronesian Maritime Spatial Planning

GUIDELINES FOR MARITIME SPATIAL PLANNING IN THE EUROPEAN MACARONESIA POLICY-ORIENTED

Azores - Canaries - Madeira

MarSP Deliverable:

D.4.11 Implementation guidelines I - Policy-oriented to guide decision-makers in the long-term maritime strategy

December 2019

WP name	WP4. Development of the Marine Spatial Planning processes
Task name	MSP Roadmaps
Deliverable Name	Implementation guidelines I - Policy-oriented to guide decision-makers in the long-term maritime strategy
Due Date of deliverable	30.11.2019
Actual submission Date	31.12.2019
Citation	Caña Varona M, González Gil S, Kramel D, Pegorelli C, Vergílio M, Hipólito C, Silva A, Calado H, Lopes I, Coelho N, Ara Oliveira M, Jorge V, Tello Antón O. 2019. Guidelines for Maritime Spatial Planning in the European Macaronesia: Policy-oriented. Deliverable - D.4.11., under the WP4 of <i>MarSP: Macaronesian Maritime Spatial Planning</i> project (GA n° EASME/EMFF/2016/1.2.1.6/03SI2.763106).

Document Information	
Document Name	Guidelines for Maritime Spatial Planning in the European Macaronesia: Policy-oriented.
Document ID	D.4.11
Version	1
Version Date	30.12.2019
Author(s)	Mario Caña Varona, Olvido Tello Antón, Sonsoles González Gil
Dissemination Level:	Public

Document Information	
Document Name	Recommendations for future decision-making in the Azores
Document ID	D.4.11 (Annex A)
Version	1
Version Date	17.12.2019
Author(s)	Diogo Kramel, Camila Pegorelli, Marta Vergílio, Cláudia Hipólito, Aida Silva, Helena Calado
Dissemination Level:	Public

Document Information	
Document Name	Recommendations for future decision-making in the Canaries
Document ID	D.4.11. (Annex B)
Version	1
Version Date	18.11.2019
Author(s)	Mario Caña Varona; Olvido Tello Antón, Sonsoles González Gil
Dissemination Level:	Public

Document Information	
Document Name	Recommendations for future decision-making in Madeira
Document ID	D.4.11. (Annex C)
Version	1
Version Date	28.11.2019
Author(s)	Isabel Lopes, Nádía Coelho, Manuel Ara, Vítor Jorge
Dissemination Level:	Public

History section			
Version	Date	Modification	Author(s)
1	01.09.2019	Document structure	Mario Caña Varona, Olvido Tello, Sonsoles González Gil
2	18.11.2019	Draft version 1: Guidelines (General document) and Recommendations for future stakeholder engagement in Canaries (Annex B)	Mario Caña Varona, Olvido Tello, Sonsoles González Gil
3	28.11.2019	Recommendations for future decision-making in Madeira (Annex C)	Isabel Lopes, Nádía Coelho, Manuel Ara, Vítor Jorge.
4	05.12.2019	Comments from DGRM	André Couto
5	16.12.2019	Comments from MITECO	Sagrario Arrieta
6	16.12.2019	Comments from DGPM	Inês Trigo
7	17.12.2019	Draft version: Recommendations for future decision-making in the Azores (Annex A) delivered to FRCT and DRAM	Diogo Kramel, Camila Pegorelli, Marta Vergílio, Cláudia Hipólito, Helena Calado
8	17.12.2019	Revision from DRAM	Aida Silva
9	17.12.2019	Draft version: Recommendations for future decision-making in the Azores (Annex A) delivered to FRCT	Marta Vergílio
10	30.12.2019	Integration of contributions and final document	Mario Caña Varona

Summary

The Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishes a framework for Maritime Spatial Planning (MSP) with the aim to promote the growth of maritime economies, the development of marine areas and the use of marine resources in a sustainable way. Portugal and Spain are now developing their first maritime spatial plans, including the Macaronesian archipelagos (Azores, Canary Islands and Madeira).

The Guidelines for Maritime Spatial Planning in the European Macaronesia intends to inform and support the development of MSP in these Macaronesian regions. The guide targets two groups with a fundamental role in the planning process: general stakeholders and policy-makers. This document is intended to be a guide for policy-makers, facilitating an improved understanding and follow-up of MSP as well as informing the development of MSP for Macaronesia.

This document has been elaborated in the frame of the MarSP (Macaronesian Maritime Spatial Planning) project. MarSP aims to develop concrete actions for the implementation of the MSP Directive in the outermost regions of Macaronesia. The guide was developed under Task 4.5 “MSP Roadmaps”. A similar guide targeting general stakeholders has been also elaborated under this same task.

Sumário (Português)

A Diretiva 2014/89/EU do Parlamento Europeu e do Conselho, de 23 de julho de 2014, estabelece um quadro para o ordenamento do espaço marítimo (OEM) com o objetivo de promover o crescimento sustentável da economia marítima, o desenvolvimento sustentável das zonas marinhas e a utilização sustentável dos recursos marinhos. Portugal e Espanha estão atualmente a desenvolver os seus primeiros planos de OEM, incluindo aqueles que se referem aos arquipélagos na região biogeográfica da Macaronésia (Açores, Madeira e Canárias).

O *guia para o processo de OEM da Macaronésia Europeia* pretende informar e apoiar o desenvolvimento do OEM nestas regiões da Macaronésia. O guia encontra-se direcionado a dois públicos-alvo que desempenham um papel fundamental no processo de planeamento: as partes interessadas e os decisores políticos. Este documento corresponde ao guia direcionado aos decisores políticos, que tem como objetivo disponibilizar recomendações informadas e úteis para a compreensão e acompanhamento dos planos de OEM na Macaronésia.

Este documento foi elaborado no contexto do projeto MarSP (*Macaronesian Maritime Spatial Planning*). O Projeto MarSP pretende desenvolver ações concretas para apoiar a implementação da Diretiva do OEM nas regiões ultraperiféricas da Macaronésia. Este guia foi desenvolvido no âmbito da Tarefa 4.5 “MSP Roadmaps”. Um guia semelhante direcionado aos principais atores e partes interessadas foi também elaborado no enquadramento desta tarefa.

Resumen (Español)

La Directiva 2014/89/EU de la Unión Europea establece el marco para la Ordenación del Espacio Marítimo (OEM) con el objetivo de promover de forma sostenible el desarrollo de las economías marítimas, de las áreas marinas y el uso de los recursos marinos. Portugal y España están elaborando en la actualidad sus primeros planes de OEM, incluidos los correspondientes a los archipiélagos de la Macaronesia (Azores, Canarias y Madeira).

Este documento de *Directrices para la Ordenación del Espacio Marítimo en la Macaronesia europea* pretende informar y apoyar el desarrollo de la OEM en estas regiones de la Macaronesia. Las directrices se dirigen a dos de los grupos con un papel fundamental en el proceso de ordenación: las partes interesadas y los decisores políticos. Este documento corresponde a las directrices dirigidas a los decisores políticos, proporcionando la guía necesaria para comprender, realizar el seguimiento y aportar consejo a los planes de OEM desarrollados en la Macaronesia.

Este documento ha sido elaborado en el marco del proyecto MarSP (*Macaronesian Maritime Spatial Planning*). MarSP tiene como objetivo desarrollar acciones concretas para la implementación de la directiva de OEM en las regiones ultraperiféricas de la Macaronesia. Se ha desarrollado bajo el paquete de trabajo 4 dedicado al desarrollo de los procesos de OEM. Bajo esta misma tarea se ha desarrollado una guía similar dirigida a las partes o agentes interesados.

Acknowledgments

Our sincerest thanks to the MSP competent authorities in Portugal (DRAM, DROTA, DGRM, DGPM) and Spain (MITECO) for the review and comments given on this document. Special thanks to Sarah Mahadeo for assistance with editing. Finally, and most importantly, thank you to the numerous Macaronesian stakeholders for contributing to this guide through their participation in the several workshops organised under the project.

Table of contents

1. Introduction.....	10
1.1. About this document	10
1.2. About the MarSP project	10
1.3. Who is this document for?	11
2. European Macaronesia	12
2.1. Macaronesian Facts.....	12
3. Maritime Spatial Planning.....	17
3.1. From the origins to global promotion.....	17
3.2. The European Directive.....	17
3.3. National frameworks	20
4. The planning process	23
4.1. Phases	23
4.2. Current status.....	24
5. Informed decision-making	31
5.1. Guiding principles	31
5.2. Involvement of policy-makers	32
6. Towards efficient Maritime Spatial Planning in Macaronesia.....	35
7. References.....	36
Annex A. Recommendations for future decision-making in the Azores	38
Annex B. Recommendations for future decision-making in the Canaries	40
Annex C. Recommendations for future decision-making in Madeira	41

List of figures

Figure 1. Islands of Corvo and Flores in the Azores	13
Figure 2. Dolphins in Madeira	13
Figure 3. European Macaronesia in the context of the North Atlantic	14
Figure 4. Approach to the maritime area surrounding the European Macaronesia	14
Figure 5. Regional flags of Azores, Madeira and Canarias	15
Figure 6. Outermost regions of the European Union.....	15
Figure 7. Port of Mogán in Gran Canaria	16
Figure 8. Authorities responsible for MSP in Portugal.....	21
Figure 9. Authorities responsible for MSP in Spain and Canarias.....	22
Figure 10. The status of the Macaronesian archipelagos in the first planning cycle	24
Figure 12. MSP guiding principles of Macaronesia	32

List of tables

Table 1. Basic data for European Macaronesian archipelagos.....	12
Table 2. Alignment of MSP guiding principles between the Macaronesian archipelagos	31

List of text boxes

Box 1. The UNCLOS.....	17
Box 2. Integrated Maritime Policy.....	18
Box 3. The Marine Strategy Framework Directive.....	18
Box 4. Blue Growth	18
Box 5. Seven common misunderstandings about MSP	19
Box 6. TUPEM.....	20

List of acronyms

CEDEX	Centre for Public Works Studies and Experimentation (Spain) / <i>Centro de Estudios y Experimentación de Obras Públicas</i>
CIAMA	Interdepartamental Commission of Maritime Affairs of the Azores / <i>Comissão Interdepartamental para os Assuntos do Mar dos Açores</i>
CIEM	Interministerial Commission of Marine Strategies (Spain) / <i>Comisión Interministerial de Estrategias Marinas</i>
CSIC	Higher Council for Scientific Research (Spain) / <i>Consejo Superior de Investigaciones Científicas</i>
DGPM	Directorate-General for Maritime Policy (Portugal) / <i>Direção-Geral de Política do Mar</i>
DGRM	Directorate-General for Natural Resources, Safety and Maritime Services (Portugal) / <i>Direção-Geral de Recursos Naturais, Segurança e Serviços Marítimos</i>
DG MARE	Directorate General for Maritime Affairs and Fisheries (European Commission)
DRAM	Regional Directorate for Sea Affairs (Azores) / <i>Direção Regional dos Assuntos do Mar</i>
DROTA	Regional Directorate of Spatial Planning and Environment (Madeira) / <i>Direção Regional do Ordenamento do Território e Ambiente</i>
EBA	Ecosystem-Based Approach
ECS	Extended Continental Shelf
EEZ	Exclusive Economic Zone
EMMF	European Maritime and Fisheries Fund
EU	European Union
FRCT	Regional Fund for Science and Technology (Azores) / <i>Fundo Regional para a Ciência e Tecnologia</i>
GDP	Gross Domestic Product
GES	Good Environmental Status
GT-OEM	Working Group of Maritime Spatial Planning (Spain) / <i>Grupo de Trabajo de Ordenación del Espacio Marítimo</i>
ICM	Integrated Coastal Management
IEO	Spanish Institute of Oceanography / <i>Instituto Español de Oceanografía</i>
IMP	Integrated Maritime Policy
IOC	Intergovernmental Oceanographic Commission of UNESCO
MarSP	Macaronesian Maritime Spatial Planning project
MITECO	Ministry for Ecological Transition (Spain) / <i>Ministerio para la Transición Ecológica</i>
MU	Multi-Use
MS	Member States
MSFD	Marine Strategy Framework Directive
MSP	Maritime Spatial Planning
NGO	Non-Governmental Organisation
PSOEM	Situation Plan of the National Maritime Spatial Planning (Portugal) / <i>Plano de Situação do Ordenamento do Espaço Marítimo Nacional</i>
PSOEMA	Situation Plan of the Maritime Spatial Planning of the Azores / <i>Plano de Situação do Ordenamento do Espaço Marítimo dos Açores</i>
OEMA	Maritime Spatial Planning of the Azores / <i>Ordenamento do Espaço Marítimo dos Açores</i>
OR	Outermost Region
SDG	Sustainable Development Goal
SEA	Strategic Environmental Assessment
TUPEM	Title for Private Use of the national Maritime Space / <i>Título de Utilização Privativa do Espaço Marítimo nacional</i>
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNESCO	United Nations Educational, Scientific and Cultural Organization

1. Introduction

The Directive 2014/89/EU of the of the European parliament and of the council, of 23 July 2014¹ establishes a framework for Maritime Spatial Planning (MSP) with the aim to promote the growth of maritime economies, the development of marine areas and the use of marine resources in a sustainable way. European Union (EU) Member States transposed the directive into their domestic contexts, setting up the national frameworks for the continuous process of MSP as well as the format and contents of the maritime spatial plans. Portugal and Spain are now developing their first plans, including those for the Macaronesian archipelagos of the Azores and Madeira, and the Canary islands, respectively.

1.1. About this document

The Guidelines for Maritime Spatial Planning in the European Macaronesia intends to inform and support the development of MSP in the European Macaronesian regions. The guide targets two groups with a fundamental role in the planning process: general stakeholders and policy-makers. Engaging a range of stakeholders is crucial for the successful design and implementation of plans. Policy-makers have an important role in charting the course of MSP through the follow-up and advice given to the process. This guide is comprised of two documents, one for stakeholders and the other for policy-makers. Several chapters are common to the both documents while some content has been adapted for the targeted audiences. This document details the guidelines for policy-makers.

This document has been elaborated in the frame of the MarSP (Macaronesian Maritime Spatial Planning) project. It belongs to Work Package 4 of the project “Development of the Marine Spatial Planning processes”. The guide was developed under Task 4.5 “MSP Roadmaps”. A similar guide targeting general stakeholders has been prepared under this same task.

1.2. About the MarSP project

The MarSP project aims to develop concrete actions for the implementation of the MSP Directive 2014/89/EU in the archipelagos of the Macaronesia region (Azores, Canaries and Madeira). MarSP provides EU Member States (Portugal and Spain) with the necessary capacities and tools to develop MSP, including mechanisms for cross-border cooperation. The management tools given are adapted to the environmental and socio-economic settings of each archipelago. MarSP also aims to strengthen the position of Macaronesia in the international governance context. MarSP is a two-year project (January 2018 – December 2019) co-funded by the European Maritime and Fisheries and Fund (EMMF). The consortium of the project involves ten partner organisations from Spain and Portugal, coordinated by the Regional Fund for Science and Technology of the Azores (FRCT).

For more information visit the
website <http://marsp.eu/>

¹ Directive 2014/89/EU <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0089>

1.3. Who is this document for?

This document aims to provide policy-makers with the needed guidance to understand, follow-up and give informed advice in developing maritime spatial plans for the region of Macaronesia. Their important role in the planning process requires an understanding of Macaronesia as a marine region, Maritime Spatial Planning as a new policy, the legal framework in each country, the basic contents and stages of the plans, and the challenges and opportunities of the region for MSP.

This document also provides an overview of the principles guiding MSP in Macaronesia, and the role and composition of the advisory bodies set up in each region to develop MSP process. It concludes with recommendations for future decision-making in each archipelago (Azores, Canaries and Madeira), where the lessons learnt from both the MarSP project and the MSP process can inform the future development of plans.

2. European Macaronesia

European Macaronesia refers to the three archipelagos in the Northeast Atlantic Ocean within the biogeographical province named Macaronesia. These are the archipelagos of Azores and Madeira (Portugal) and the Canaries (Spain), together with their jurisdictional waters. The Macaronesian region is completed by the archipelago of Cape Verde. Cape Verde is an African country outside the scope of the MarSP project.

2.1. Macaronesian Facts

The European archipelagos of Macaronesia share various features that provide uniqueness to this region and its maritime space. The distinct geo-political, environmental, and socio-economic characteristics of Macaronesia are fundamental not only to better understand the region but also the common challenges and opportunities on its path to sustainable development. Having due regard to the specificities of marine regions is also of great importance when undertaking the Maritime Spatial Planning (MSP)¹ since they influence the ways to undertake the process. The basic data of the Macaronesian archipelagos are summarized in Table 1:

Table 1. Basic data for European Macaronesian archipelagos
 (based on MAC 2014-2020; INE, 2019a; INE, 2019b)

	Azores	Canaries	Madeira
Country	Portugal	Spain	Portugal
Number of inhabited Islands	9	8	2
Population (2018)	242.846	2.127.685	253.945
Distance to the country capital (km)	1.500	3.000	1.040

Insularity



Photo © Está en tu Mundo

Figure 1. Islands of Corvo and Flores in the Azores

Macaronesia comprises four archipelagos of small islands. The archipelagos share a volcanic origin and similar physical-natural features such as geomorphology, flora, fauna, climate (a large subtropical or tropical part) (Suarez de Vivero, 2019), which shapes the biogeographical province.

Biodiversity hotspot



Photo © Descubre Madeira

Figure 2. Dolphins in Madeira

Macaronesia comes from the Greek *makarios* (blissful) and *nessos* (islands) (Fernandez-Palacios, 2011). The isolation of the islands from the continent and the influence of the ocean have resulted in a high level of endemism. More than 5,600 endemic species among 23,000 marine and terrestrial species have been identified, making Macaronesia one of the most prominent biodiversity hotspots in Europe (Madruga et al., 2016).

Geostrategic location

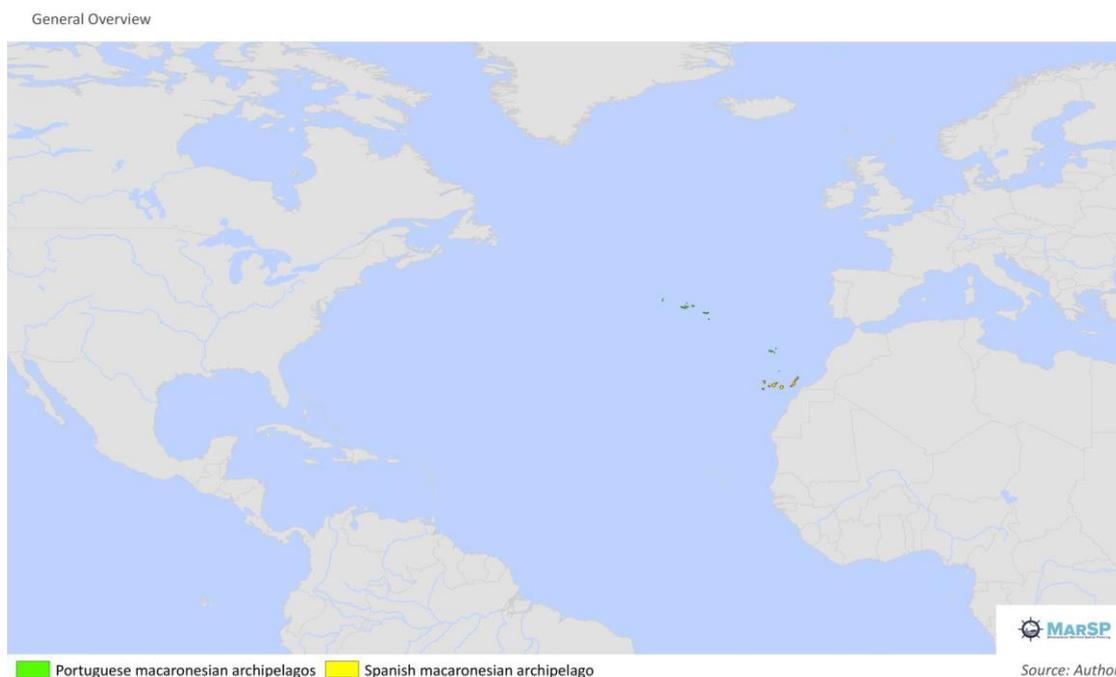


Figure 3. European Macaronesia in the context of the North Atlantic (Suarez de Vivero, 2019)

The archipelagos of Macaronesia have a strategic position in the North Atlantic between Europe, America and Africa, which explains political, geographical and cultural links with these continents. The archipelagos also serve a geostrategic function in several aspects (Suarez de Vivero, 2019).

Large maritime dimension

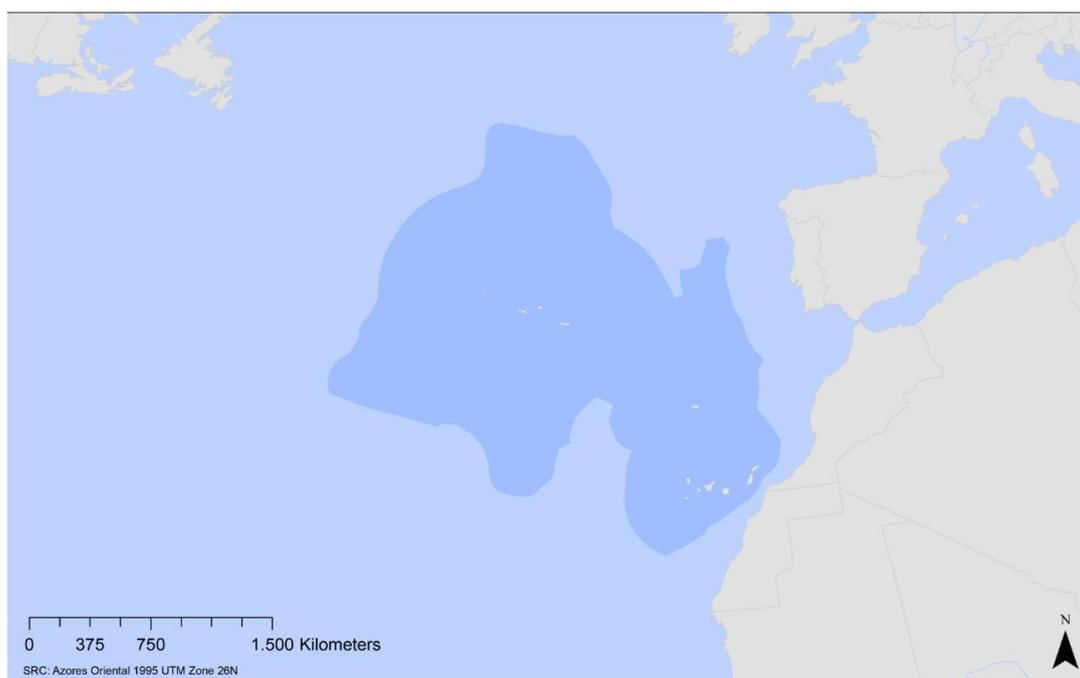


Figure 4. Approach to the maritime area surrounding the European Macaronesia

(Suarez de Vivero, 2019)

Macaronesian islands have small terrestrial surfaces and vast surrounding maritime waters. The jurisdictions over maritime spaces are extended from the Exclusive Economic Zones (EEZ) to the outer edges of the Extended Continental Shelf (ECS) delimitations submitted to the Commission on the Limits of the Continental Shelf of the United Nations (UN) (Suarez de Vivero, 2019).

Political entity



Figure 5. Regional flags of Azores, Madeira and Canarias

The three European Macaronesian archipelagos is autonomous regions. They constitute political-administrative units endowed with political powers in their respective countries (Suarez de Vivero, 2019). Competences can be either conferred to the national or regional governments, or shared by both.

Outermost regions



Figure 6. Outermost regions of the European Union

The European archipelagos of Macaronesia are given the special status of Outermost Regions (ORs) (Menini et al., 2018). The Treaty on the Functioning of the European Union recognises in Article 349 the constraints arising from the geographical characteristics of remoteness, insularity, small surface area, adverse topography and climate, and economic dependency (MAC 2014-2020). The OR status is intended to compensate these constraints by supporting regional development with specific programmes and measures (European Parliament, 2019).

Service-oriented economy



Photo © Descubre Madeira

Figure 7. Port of Mogán in Gran Canaria

Macaronesia is highly economically reliant on the services sector, particularly on tourism. Maritime transport and port services have strategic importance for regional development. The primary sector is fundamental for food security and culture, although having a limited presence in the Gross Domestic Product (GDP) (EC, 2017). The secondary sector has remained largely undeveloped (Madruga et al., 2016).

3. Maritime Spatial Planning

3.1. From the origins to global promotion

Maritime Spatial Planning (MSP) is progressively becoming the approach by which coastal countries of the world manage uses and activities in their marine waters (Jay, 2017). The increasing use of maritime space for different activities, such as fisheries, shipping, tourism, environmental conservation, aquaculture, renewable energy and oil and gas is exceeding the capacity of certain marine areas to meet all demands simultaneously. The United Nations Convention on the Law of the Sea (UNCLOS) establishes the obligation to protect and preserve the marine environment worldwide (Pyc, 2019) (see Text Box 1). However, access to marine spaces is not usually restricted, which may lead to multiple pressures, overuse of marine resources, and conflicts among uses (Friess & Grémaud-Colombier, 2019). It is in this context where MSP emerges as a tool to implement a rational organisation in the use of maritime space (Ehler and Douvère, 2009). MSP is therefore about managing human uses at sea to achieve environmental, economic and social objectives while reducing conflicts (Ehler et al., 2019).

MSP is globally promoted by different international organisations such as United Nations (UN) agencies (e.g. Intergovernmental Oceanographic Commission (IOC) of UNESCO) and environmental NGOs (e.g. The Nature Conservancy) to use marine resources sustainably, develop effective solutions to ocean issues, and plan for the future (TNC, 2019). IOC-UNESCO, together with the Directorate General for Maritime Affairs and Fisheries of the European Commission (DG MARE), jointly adopted a *Roadmap to accelerate Maritime/Marine Spatial Planning processes worldwide*² as a way to support the implementation of the Agenda 2030 for Sustainable Development, and particularly the Sustainable Development Goal (SDG) 14, devoted to the conservation and sustainable use of the oceans and marine resources.

Box 1. The UNCLOS

The United Nations Convention on the Law of the Sea (UNCLOS) is considered the constitution for the oceans (Wright et al. 2018). The UNCLOS is an international legal framework containing the rights and obligations of States in the use and conservation of the marine environment and its natural resources (Hoagland et al., 2019). It also defines the legal regimes of different maritime spaces and the basis for global ocean governance (Pyc, 2019). The UNCLOS entered into force in 1994. As of September 2019, 167 countries and the EU have joined in the Convention¹. MSP represents an advancement in the use of rights granted under UNCLOS and a tool to comply with its obligations¹.

3.2. The European Directive

The EU has a legally binding framework to bring MSP to marine waters of the Union (Friess & Grémaud-Colombier, 2019). The Directive 2014/89/EU was adopted in 2014 with the aim to promote the sustainable growth of maritime economies, the sustainable development of marine areas, and the sustainable use of marine resources. The MSP Directive supports the development of maritime sectors and their coexistence applying an Ecosystem-Based Approach (EBA). The Directive sets the obligation for the 23 coastal EU Member States (MS) to deliver MSP plans by March 2021¹.

Maritime Spatial Planning (MSP) is defined as the process by which Member States' authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives¹.

² Joint Roadmap to accelerate Maritime/Marine Spatial Planning processes worldwide: http://www.mspglobal2030.org/wp-content/uploads/2019/03/Joint_Roadmap_MSP_v5.pdf

The MSP Directive falls under the Integrated Maritime Policy (IMP) of the EU (see Text Box 2). The IMP seeks to coordinate maritime sectoral policies by promoting cross-cutting issues and policies. Within the IMP, the economic priorities are set by the Blue Growth Strategy (see Text Box 3), as the strategy supporting sustainable growth in the maritime sectors (EC, 2019a). In parallel, the Marine Strategy Framework Directive (MSFD) represents the IMP’s environmental pillar¹ (see Text Box), which aims to protect coasts and marine waters of the EU and achieve a Good Environmental Status (GES) (Gee, 2019).

Box 2. Integrated Maritime Policy

The Integrated Maritime Policy (IMP) seeks to provide a more coherent approach to maritime issues (EC, 2019b), promoting coordinated decision-making to maximise the sustainable development, economic growth and social cohesion¹. The IMP was launched in 2007 with the “Communication on an Integrated Maritime Policy for the European Union”, commonly known as the Blue Paper¹. The IMP covers several cross-cutting policies of the EU: blue growth, integrated maritime surveillance, sea basin strategies, marine data and knowledge, and maritime spatial planning. MSP is conceived by the IMP as a means to balance sectoral interests and achieve sustainable use of marine resources (Friess & Grémaud-Colombier, 2019).

Box 3. Blue Growth

The Blue Growth Strategy was initiated in 2012 as a long-term economic strategy to support sustainable growth and jobs in the maritime sectors. The strategy was launched in the *Communication on Blue Growth Opportunities for Marine and Maritime Sustainable Growth*, being the maritime contribution to achieving the objectives of the Europe 2020 Strategy for smart, sustainable and inclusive growth. The strategy aims to develop maritime sectors with high potential, provide knowledge and legal certainty and foster cooperation through sea basin strategies (EC, 2019a). MSP represents one of the components providing knowledge, legal certainty and security in the blue economy by ensuring the efficient and sustainable management of activities at sea¹.

Box 4. The Marine Strategy Framework Directive

The EU Directive 2008/56/EC, known as the Marine Strategy Framework Directive (MSFD)¹, was approved in 2008 to protect and preserve the marine environment. This Directive establishes a common framework to achieve or maintain a Good Environmental Status (GES) in EU marine waters by 2020. The GES refers to an overall state of the environment that provides ecologically diverse, dynamic, clean, healthy and productive seas, including their sustainable use. The MSFD represents the environmental pillar of the Integrated Maritime Policy. MSP applies an Ecosystem-Based Approach (EBA) to the management of human activities supporting the achievement of a GES¹.

Requirements

The MSP Directive lays down a set of minimum common requirements to be fulfilled by Member States (MS) when carrying out the MSP processes (Friess & Grémaud-Colombier, 2019). The directive does not provide specific guidance on how MS need to develop their plans. MS were required to transpose the directive but had the chance to shape this policy and adapt it to the domestic needs and context as long as the basic requisites contained in the Directive are satisfied.

The Directive states that plans need to identify the spatial and temporal distribution of relevant existing and potential uses. Other common requirements set by the Directive are¹:

- take into account land-sea interactions;
- take into account environmental, economic, social and safety aspects;
- promote coherence with other processes, such as Integrated Coastal Management (ICM) or similar practices;
- ensure the involvement of stakeholders, which includes informing all interested parties and consulting authorities, stakeholders and the general public in early phases of the plan and that they have access to plans once finalised;
- use the best available data, which may include environmental and socio-economic data related to uses and activities, and marine physical data;
- ensure transboundary cooperation between MS, through coherence and coordinated planning across the marine region. Cooperation can be facilitated through the existing governance mechanisms such as regional sea conventions, sea basin strategies and other regional networks or structures;
- and promote cooperation with third countries where possible and based in international or regional cooperation mechanisms.

Box 5. Seven common misunderstandings about MSP
(based on Ehler et al., 2019)

1. **MSP cannot solve all problems at sea.** The spatial actions and measures taken within the MSP process may contribute to solutions but may not resolve the original issues (e.g. plastic pollution, high unemployment)
2. **MSP does NOT affect** sovereign rights and jurisdiction of States over marine waters. It does not influence either the delineation or delimitation of maritime boundaries.
3. **MSP is not exclusively about protecting the environment.** MSP seeks to promote the sustainable growth of maritime economies under the ecosystem approach, while balancing economic, social and ecological objectives.
4. **MSP does NOT replace sectoral planning.** MSP requires an understanding of the various sectoral policies and balancing of diverse sectoral interests.
5. **MSP is something else other than zoning.** MSP is a planning process that encompasses all the various actions, rules and measures that lead to rational spatial development.
6. **MSP does NOT imply licensing or granting permission to use the maritime space.** Requesting permits is necessary for new maritime users even where MSP is in place.
7. **MSP is NOT a one-time choice.** Socio-economic preferences regarding maritime space change over time and these will be reflected in future plans.

3.3. National frameworks

The EU Directive urges MS to establish competent authorities responsible for designing and determining, within their marine waters, the format and contents of the plans. Setting up the national MSP processes may build on existing national policies, regulations or mechanisms that have been established before the Directive¹. But transposing the Directive may include institutional arrangements such as designing new legislation that creates or modifies the MSP systems, establishing new organisations or developing new policies (Kelly et al., 2019). The frameworks set up in Portugal and Spain for MSP are explained in the following sections.

Portugal

Portugal was the first country to initiate MSP in South Europe. Prior to the EU Directive, the Portuguese Government launched a national MSP plan in 2008. Despite the initial intentions, this plan was not approved as a plan but as a study about maritime uses intended to inform future MSP. In 2014, Law no. 17/2014 set the basis for planning and management of the Portuguese national maritime space (*Lei de Bases do Ordenamento e Gestão do Espaço Marítimo Nacional* in Portuguese)³. Decree-Law no. 38/2015⁴ developed the provisions of Law no. 17/2014 while transposing the recently approved EU Directive into Portuguese law. Two main policy instruments compose MSP in Portugal (Giret et al., 2019):

- Situation Plan (*Plano de Situação do Ordenamento do Espaço Marítimo Nacional* or PSOEM): identifies the temporal and spatial distribution of current and potential maritime uses and activities as well as areas for marine environment protection. PSOEM is the main MSP instrument and covers the whole Portuguese maritime space. The plan is divided in four marine subregions or subdivisions: mainland Portugal, Azores, Madeira and the Extended Continental Shelf (ECS). Plans are reviewed every five years after adoption.
- Allocation Plans: allocate private maritime uses in areas not previously considered by the situation plan. These plans are an instrument granting flexibility to the process since new activities can be assigned afterwards by public or private initiative. Allocation plans are integrated into the situation plan once approved by the Council of Ministers.

Box 6. TUPEM

PSOEM allows the competent authorities the granting of licensing for private uses in the national maritime space through the title of private use TUPEM (in Portuguese, *Título de Utilização Privativa do Espaço Marítimo nacional*). Uses subject to TUPEM are: aquaculture, marine biotechnology, marine mineral resources, renewable energy, oil & gas, scientific research, recreation, sport and tourism, waste dumping and dredging, infrastructure and equipment, sinking ships, and other industrial activities (PSOEM, 2019b). Three types of TUPEM can be granted (concession, license or authorization) depending on the type of use and time granted. When the maritime area requested is foreseen for that use by the Situation Plan, issuing of the TUPEM only needs to comply with the necessary requirements of the TUPEM issuance process. If the area requested is not designated for the activity in the Situation Plan, the promoter needs to submit an allocation plan. The allocation plan, where duly justified, will be approved by the Council of Ministers, and automatically included in the Situation Plan^{3 4}.

³ Lei n.º 17/2014: <https://dre.pt/pesquisa/-/search/25343987/details/maximized>

⁴ Decreto-Lei n.º 38/2015: https://dre.pt/home/-/dre/66727183/details/maximized?p_auth=OpSPQzt9

Order 11494/2015⁵ launched the development of PSOEM and the designation of the competent authorities for the Portuguese system. The Directorate-General for Natural Resources, Safety and Maritime Services (*Direção-Geral de Recursos Naturais, Segurança e Serviços Marítimos* or DGRM) coordinates the whole process at the national level and develops the parts of the PSOEM corresponding to mainland Portugal and the ECS. At the regional level, the Regional Directorate of Spatial Planning and Environment (*Direção Regional do Ordenamento do Território e Ambiente* or DROTA) of the Regional Government of Madeira; and the Regional Directorate for Sea Affairs (*Direção Regional dos Assuntos do Mar* or DRAM) of the Regional Government of the Azores⁶ are responsible for the development of the PSOEM for their respective archipelagos (Giret et al., 2019).

Order 11494/2015 also created the Advisory Commission for PSOEM, which supports and monitors the development of PSOEM by promoting conciliation of multisectoral interests. PSOEM Advisory Commission for the Portuguese maritime space (excluding the Azores and Madeira subregions) was chaired by the Directorate-General for Maritime Policy (*Direção-Geral de Política do Mar* or DGPM).

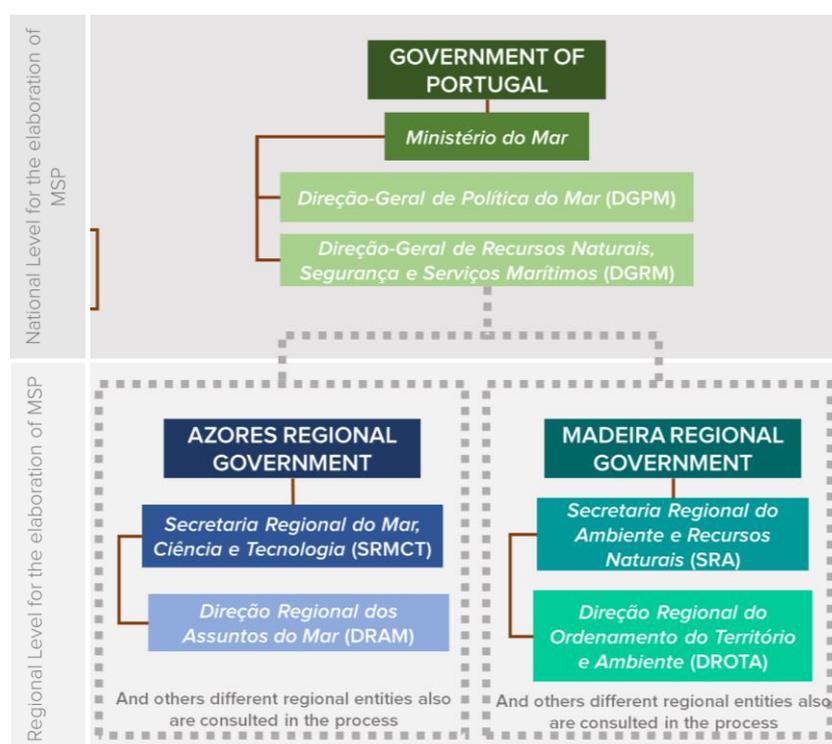


Figure 8. Authorities responsible for MSP in Portugal (García-Sanabria et al., 2019)

Spain

Spain participated in several pilot projects but did not launch the MSP process until 2017, when the EU Directive was transposed into Spanish law by Royal Decree 363/2017. The Royal Decree establishes the General Directorate for the Sustainability of the Coast and the Sea (*Dirección General de Sostenibilidad de la Costa y del Mar*) from the Ministry for the Ecological Transition (*Ministerio para la Transición Ecológica* or MITECO) as the competent authority for MSP. One plan will be developed for each of the five marine subregions (*demarcaciones marinas* in Spanish) established by Law 41/2010 for the protection of the

⁵ Despacho n.º 11494/2015: https://www.dgrm.mm.gov.pt/documents/20143/89103/DESP_11494_2015.pdf/agfaf758-e9co-6bd6-afd4-8b607cc79090

⁶ Decreto Regulamentar Regional n.º 4/2015/A: <https://dre.pt/pesquisa/-/search/66558700/details/maximized>

marine environment. These regions are: North Atlantic, Levantine-Balearic, Alboran Sea and the Strait, South Atlantic, and Canary Islands. The plans will be reviewed at least every ten years⁷. Spanish authorities proposed to review the plans every 6 years (still subject to public consultation).



Figure 9. Authorities responsible for MSP in Spain and Canarias (García-Sanabria et al., 2019)

MSP in Spain is particularly linked to the marine strategies. A working group on MSP (*Grupo de Trabajo de Ordenación del Espacio Marítimo* or GT-OEM) was created in 2017 within the Inter-Ministerial Commission on Marine Strategies (*Comisión Interministerial de Estrategias Marinas* or CIEM) to coordinate the drafting of the plans (MITECO, 2019). The CIEM has a special role in the elaboration of the MSP plans.

The coordination between central and regional governments is regulated by the Royal Decree. In the case of the Canary marine subregion, a specific Monitoring Committee (*Comité de seguimiento de la demarcación marina canaria*) was created for the implementation of marine strategies, which is also being used for the maritime spatial plan.

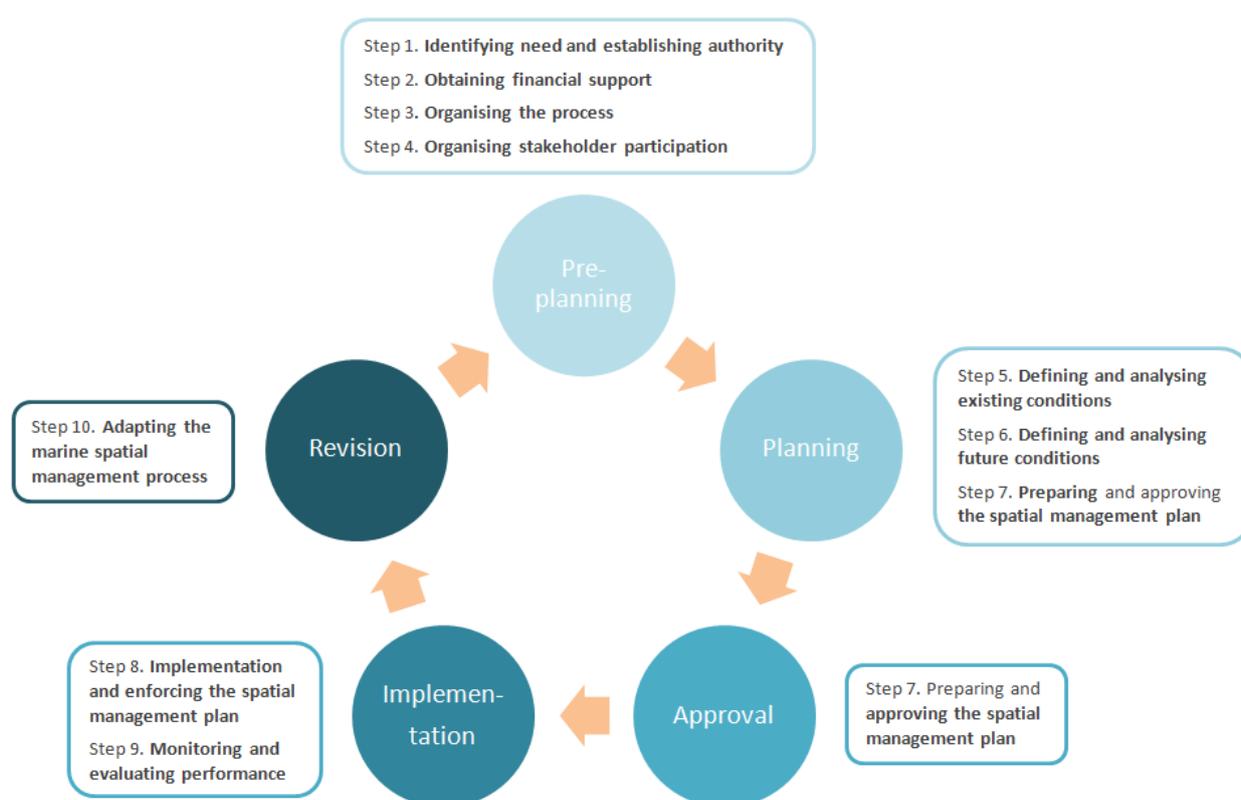
⁷ Real Decreto 363/2017: <https://www.boe.es/boe/dias/2017/04/11/pdfs/BOE-A-2017-3950.pdf>

4. The planning processes

MSP goes beyond a one-time plan. It is a continuing and iterative planning process, involving a number of phases, steps and tasks that ensure its effective development (Santos et al., 2019). The guide “Marine spatial planning: a step-by-step approach toward ecosystem-based management” launched by IOC-UNESCO in 2009 has served as the reference document for developing the MSP policy context in the EU (Pyc, 2019) and worldwide. This guide provides a step-by-step approach to set up and implement MSP processes (Ehler & Douvère, 2009).

4.1. Phases

Despite that MSP differs from place to place, some fundamental phases and steps in the process can be established:



MSP planning cycle including the step-by-step approach
(based on Ehler & Douvère, 2009; Santos et al., 2019)

- Pre-planning:** MSP starts with a preliminary phase that includes establishing MSP authorities; defining planning boundaries and timeframes; establishing vision, principles and objectives; and developing a work plan. It also comprises the organization of stakeholder involvement throughout the process.

Regional reports on MSP vision and objectives (deliverable 2.6 of the project) were elaborated under MarSP. These included a methodology to determine MSP objectives through compliance with policy objectives. An engagement strategy for the MarSP project was also developed, including a methodology for stakeholder involvement (deliverable 2.1).

- Planning:** this phase consists of the definition and analysis of present and future conditions, together with the future spatial vision. This phase begins with the data collection and mapping of environmental, socioeconomic and geopolitical aspects, including the current maritime uses and activities. Conflicts and synergies among maritime activities and with the environment are also analysed. Future conditions are mapped based on the present conditions. This includes the spatial and temporal needs of existing and potential human activities. The use of decision-support tools (e.g. Geographic Information Systems, SeaSketch, Marxan) and the development of scenarios helps the evaluation of alternatives and the selection of the future spatial vision (Agardy, 2015). Zoning of the maritime space supported by specific management actions or regulations are the usual means to lead to the selected spatial vision (Agardy, 2010).

A complete report on current maritime uses and constraints in each region of Macaronesia was developed under MarSP project (deliverable 2.5 of the project)
- Approval:** once the planning is completed, it needs to go through the formal adoption process. The time from the plan completion to its final approval will depend on the intricacies of the approval system.
- Implementation:** once the plan is approved, it should be implemented, monitored and evaluated. Implementation comprises the compliance and enforcement of the plan, where management actions are put in place. A monitoring and evaluation system to assess performance of the plan needs to be developed. This implies the systematic collection of data on selected indicators to assess the progress and achievement of management objectives.
- Revision:** this phase concludes the first cycle of the plan. Results from monitoring and evaluation are used to revise the planning process. This will result in amendments to the objectives, strategies, etc. for the next planning cycle, within a process of adaptive management.

4.2. Current status

The Macaronesian regions are at different stages of the MSP process. Madeira is the most advanced of the three archipelagos in the process, with the plan completed pending to the final approval by the Council of Ministers (as of October 2019). Azores is completing the two volumes of the Situation Plan that are exclusive to its marine region. The volumes of PSOEM common to all Portuguese marine subregions have passed the second round of public consultation and are about to be approved. Spain has started the MSP process setting the pre-planning and planning basis at the national level that will be common to all marine subregions, including Canarias.



Figure 10. The status of the Macaronesian archipelagos in the first planning cycle (as of October 2019) (authors)

The following sections provide an overview of the progress and documents developed in the context of MSP in Portugal and Spain, and particularly in the three Macaronesian regions.

Portugal

Order 11494/2015 launched the development of PSOEM. PSOEM consists of several documents or volumes⁴. Four of them (Volumes I, II, V and VI) are common to all marine subregions in Portugal while two (Volumes III and IV) are operational documents specific to the each of the four Portuguese marine subregions⁸. Volumes I and II were jointly prepared by DGRM, DROTA and DRAM in a participatory process by the national and regional administrations⁹. Between April and July 2018, the documents for mainland Portugal and the ECS were subject to a second round of public consultation. The most recent versions of the common volumes of the plan, applicable to all Portuguese marine subregions including the Azores and Madeira regions, are in the second draft for public consultation (PSOEM, 2019a). A brief explanation of the goals and contents of each of the PSOEM volumes common to all marine subregions is provided:



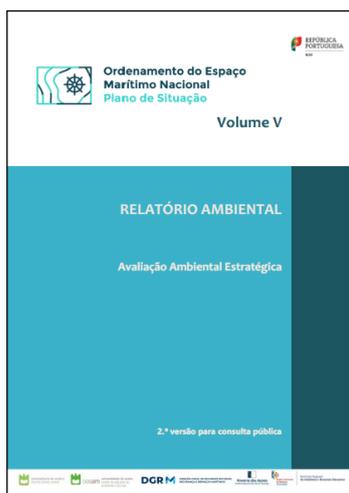
Volume I
Framework,
structure and
dynamics⁹

The first volume of the Situation Plan presents the common framework and structure of MSP in Portugal. This includes the description of the Portuguese seas, MSP policy, international agreements and EU directives applicable to the maritime space, and maritime jurisdictions. It also provides the frame, principles, methodology, development and management characteristics of the Situation Plan. Finally, the document gives indications about the dynamics, monitoring and governance of plan.



Volume II
General
methodology:
Spatial
distribution of
easements,
uses and
activities¹⁰

This document contains the common methodology for all Portuguese maritime space to allocate uses and activities. This methodology promotes Multi-Uses (MU) and the coexistence among activities. The volume also describes the requirements and typologies of geographic information and associated infrastructure, together with the identification of strategic policy and management documents applying to the national maritime space.



Volume V
Environmental
report:
Strategic
Environmental
Assessment¹¹

This volume corresponds to the Strategic Environmental Assessment (SEA) related to the preparation of the Situation Plan. It comprises the objectives, methodology, subject, decision-making critical factors and scenario of the SEA. It also focuses on the analysis and strategic assessment of each marine region in Portugal and provides monitoring and governance guidelines.



Volume VI.
Non-technical
summary of
the
environmental
report¹²

This document is a summary of the environmental report aimed to facilitate public dissemination. It uses simple language that allows the general public to obtain knowledge about the risks and opportunities associated with the implementation of the Situation Plan.

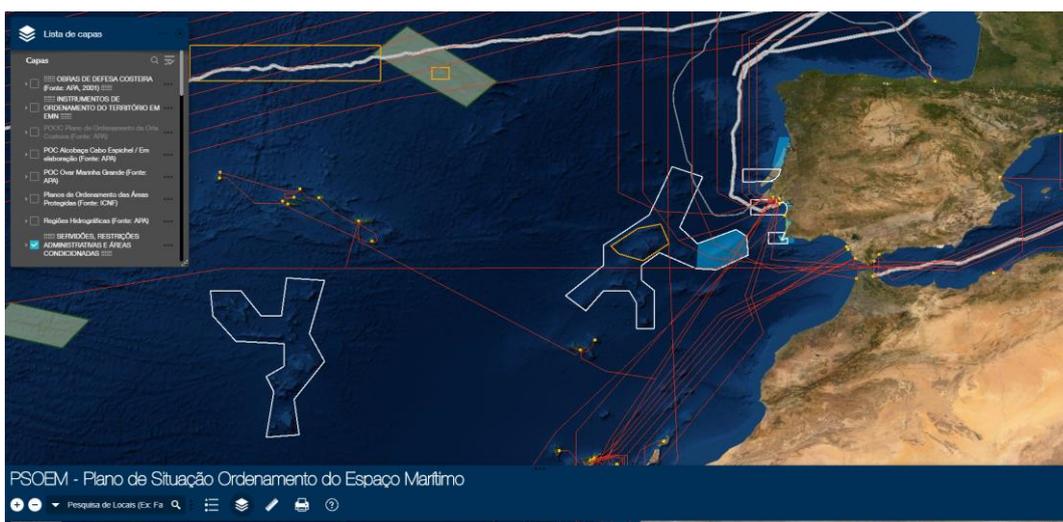
The website of the PSOEM provides information about the plan, its preparation, constraints, uses and activities and integrates a geoportal. The website gives access to the general volumes (vol. I, II, V and VI) of the Situation Plan, common to the four Portuguese marine subregions.



Check the website at www.psoem.pt/

¹¹ Volume V: http://www.psoem.pt/wp-content/uploads/2018/12/PlanoSituacao_Volume_V_RA.pdf

¹² Volume VI: http://www.psoem.pt/wp-content/uploads/2018/12/PlanoSituacao_Volume_VI_RNT_RA.pdf



The geoportal of the PSOEM incorporates the spatial data contained in the Situation Plan.

Check the website at
http://www.psoem.pt/geoportal_psoem/

Azores

Regional Decree 4/2015/A¹³ establishes that the development of the Situation Plan for maritime space contiguous to the archipelago of the Azores (commonly referred as *Plano de Situação para o Ordenamento do Espaço Marítimo dos Açores* or PSOEMA) is the responsibility of the Regional Directorate for Sea Affairs (DRAM) on behalf of the Regional Secretariat of the Sea, Science and Technology (SRMCT). PSOEMA comprises the maritime area from the baselines to the outer limit of the Territorial Sea, the Azores subarea of the Portuguese Exclusive Economic Zone (EEZ) and the continental shelf up to 200 nautical miles.

In addition to the volumes common to all marine subregions in Portugal (Volumes I, II, V and VI), PSOEMA has the operational documents specific to the Azores marine region (Volumes III and IV), which are being developed by DRAM⁸. Both documents are under development taking into consideration the MarSP project (Governo dos Açores, 2019):

- Volume III – Azores. Spatial distribution of easements, uses and activities: the document will identify existing and potential uses and activities, including details about each activity with maps and examples of good practices. The volume will also include the applicable constraints, administrative easements and restrictions of public utility, while also taking into consideration sector-sector interactions and land-sea interactions (conflicts and synergies⁸) as well as environmental impacts.
- Volume IV – Azores. Report of characterisation of the maritime space: this document will present the biophysical features and ecological characteristics of the region, its ecosystems, habitats and species, which condition the development of maritime activities⁸.

¹³ Decreto Regulamentar Regional n.º 4/2015/A: <https://dre.pt/pesquisa/-/search/66558700/details/maximized>

The website OEMA (Ordenamento do Espaço Marítimo dos Açores) is the MSP portal of the Government of the Azores. It provides information about the process, the Situation Plan and public participation. It also gives access to the geoportal SIGMAR containing spatial data on biodiversity, uses and activities.



Check the website at
sigmar.azores.gov.pt/

Madeira

Order 11494/2015 establishes that the Regional Directorate for Spatial Planning and Environment (DROTA) of the Regional Secretariat of Environment and Natural Resources of the Government of Madeira has the competence to develop the Situation Plan for the maritime space contiguous to the archipelago of Madeira. This comprises from the baselines to the outer limit of the continental shelf up to 200 nautical miles.

The Situation Plan for the Madeira region (volumes III and IV) were subject to public consultation between April and July 2018. The versions for public consultation remained unchanged (PSOEM, 2019a). The aim and contents of these volumes are described here:



Volume III: – Madeira.

Spatial distribution of easements, uses and activities¹⁴

This document firstly identifies the spatial planning instruments, programmes and plans having an impact on the maritime space, including protected areas management plans, and strategic and financial instruments. The spatial distribution of private uses and activities is presented, outlining the general information of the activity and large scale mapping representing existing and potential areas. Some activities are not mapped because they either are present throughout the entire maritime space or may be defined by allocation plans in a later stage (e.g. biotechnology potential areas). Also presented are examples of good practice in the use and management of the maritime space and compatibility aspects with other uses, activities or easements to encourage Multi-Use (MU) of the maritime space.

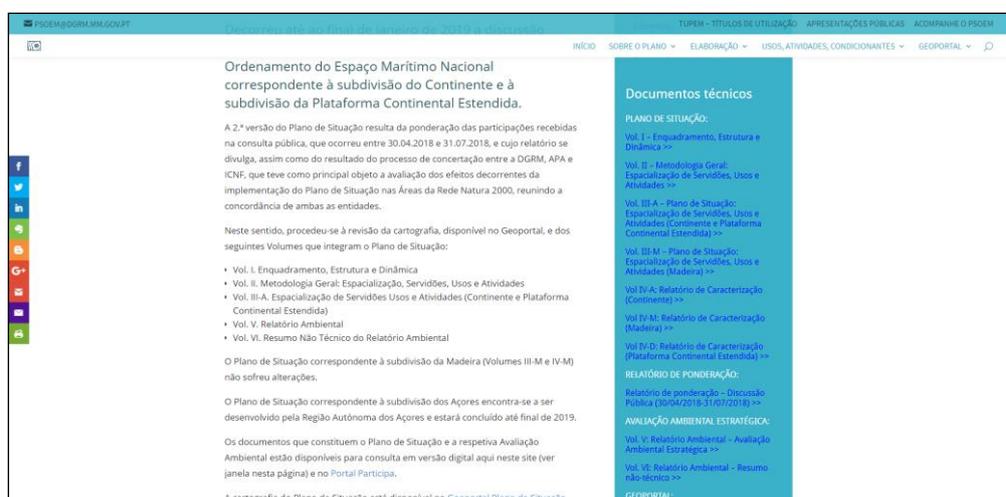
¹⁴ Volume III-Madeira: http://www.psoem.pt/wp-content/uploads/2018/05/PlanoSituacao_volume_III-M-Espacializa%C3%A7%C3%A3o-de-Servid%C3%B5es-Usos-e-Atividades-Madeira.pdf



Volume IV – Madeira.
Report of characterisation of the maritime space¹⁵

This document presents the characterization of the Madeira marine region on the basis of the marine strategy. The characterisation comprises the physical and chemical aspects, biodiversity, nature conservation areas and the main pressures and impacts. It also includes a characterisation of economic activities at sea.

The website of the PSOEM gives access to the general volumes (vol. I, II, V and VI) of the PSOEM as well as vol. II and III, corresponding to the Madeira region.



Check the website at www.psoem.pt/

Spain

The General Directorate for the Sustainability of the Coast and the Sea, as the department responsible for MSP in Spain, created a roadmap to guide the tasks needed at the national level to develop MSP. This roadmap addresses the steps and technical documents of the MSP process and set a timetable for future tasks. The roadmap has been discussed and improved within the national MSP Working Group (GT-OEM)¹⁶.

GT-OEM has also presented a proposal of planning objectives to guide the development of MSP plans in Spain. The proposal has been prepared within a broad consultation process with ministries, coastal regional administrations and stakeholders. This document firstly identifies the existing objectives in cross-cutting policies, sectoral policies, and marine strategies. The analysis of the identified objectives allows formulating the planning objectives, which are divided into general, cross-cutting and sectoral aspects¹⁷.

¹⁵ Volume IV-Madeira: http://www.psoem.pt/wp-content/uploads/2018/05/PlanoSitua%C3%A7%C3%A3o_Volume_IV-M-Relat%C3%B3rio-de-Characteriza%C3%A7%C3%A3o-Madeira.pdf

¹⁶ Hoja de ruta de los trabajos necesarios a nivel nacional para la elaboración de los planes de ordenación del espacio marítimo. Versión 4. 24 de mayo de 2018. Ministerio de Agricultura y Pesca, Alimentación y Medio Ambiente.

¹⁷ Objetivos de la Ordenación del Espacio Marítimo. Versión para consulta pública. Ministerio para la Transición

Another of the documents jointly prepared in the frame of GT-OEM is the inventory of current and future uses and activities. This document presents a brief description of the sectors, together with the identification, analysis and recommendations about the spatial data available and needed in the context of MSP for each sector¹⁸.

These documents, together with other technical works developed by MITECO and GT-OEM, are being integrated in the draft plan common to all marine subregions in Spain, which will be the basis for the development of the plan for each marine region. The draft plan, together with a scoping document, will be launched at the beginning of 2020, initiating the Strategic Environmental Assessment (SEA).

MITECO has the general information about the MSP process in Spain in its webpage.



Check the website at <https://www.miteco.gob.es/en/costas/temas/proteccion-medio-marino/ordenacion-del-espacio-maritimo/>

Canaries

The tasks developed so far have been common for the five marine subregions. Technical reporting will continue for each of the five marine subregions once the SEA is initiated. The plan for the marine subregion of Canarias will therefore be built on the basis of these technical reports. The reports developed under the MarSP project will be taken into account and serve as preliminary or complementary studies for this marine subregion.

Ecológica.

¹⁸ Inventario de usos y actividades a efectos de la ordenación espacial marítima. Primer borrador. Ministerio de Agricultura y Pesca, Alimentación y Medio Ambiente.

5. Informed decision-making

Maritime Spatial Planning (MSP) brings a new governance regime under the public choice mechanism. The maritime space is not traded in the market and risks of overexploitation are always present (Elher et al., 2019). Public choice entails joint decision-making in a democratic manner, where selected representatives reach agreements on how the maritime space is managed, encompassing multiple interactions between various policy-makers and stakeholders (Zaucha, 2019).

MSP provides guidance to policy-makers so that the sum of all decisions goes towards an integrated management of the ocean (Elher & Douvère, 2009). Policy-makers participate in the planning process in different ways. Their contribution to the process goes from engaging in stakeholder events to the development and follow-up of the process through the planning advisory commissions.

5.1. Guiding principles

MSP is guided by a set of principles that determine the nature and characteristics of the process and reflect its desired results. Guiding principles are critical to a successful process. They give transparent and defensible means of making challenging decisions (Elher & Douvère, 2009).

Each Macaronesian region has set a number of principles guiding the regional MSP process. Table 2 shows the alignment of principles among the three archipelagos.

Table 2. Alignment of MSP guiding principles between the Macaronesian archipelagos (based on Governo dos Açores, 2019; ⁷; ⁹).

Azores	Canaries (<i>general for all Spain</i>)	Madeira
Ecosystem-based management	Ecosystem-based management	Ecosystem-based approach
Adaptive management	Adaptive management	Adaptive management
Sustainable development	Sustainable development	Enhancing economic activities
Public participation and stakeholder engagement	Stakeholder engagement	Participation and use of simple language
Sustainable use	Better use of the environment	-
Accessibility and use of a plain language	Access to, and update data and information	-
Coherence and science-based approach	Use of the best scientific information available	-
Intra and inter-generational responsibility	Ecological and fair transition	-
Integrated and multidisciplinary management	-	Integrated management
Precautionary approach	-	Precautionary approach
Cooperation and coordination	-	Regional and cross-border cooperation and coordination
Compatibility of uses	-	-
-	Improved governance	Responsible governance
-	Enhanced sectors competitiveness	-
-	Economic diversification	-
-	Circular economy	-
-	Inclusion of gender perspective	-
-	Pursuit of objectives of general interest	-
-	-	Subsidiarity

The comparison of MSP principles shows how four of the principles (ecosystem-based approach, adaptive management, sustainable development and public participation) are common to all Macaronesian regions. Another seven guiding principles are shared at least by two of the regions while nine others are only considered by one of the regions (see Figure 11).

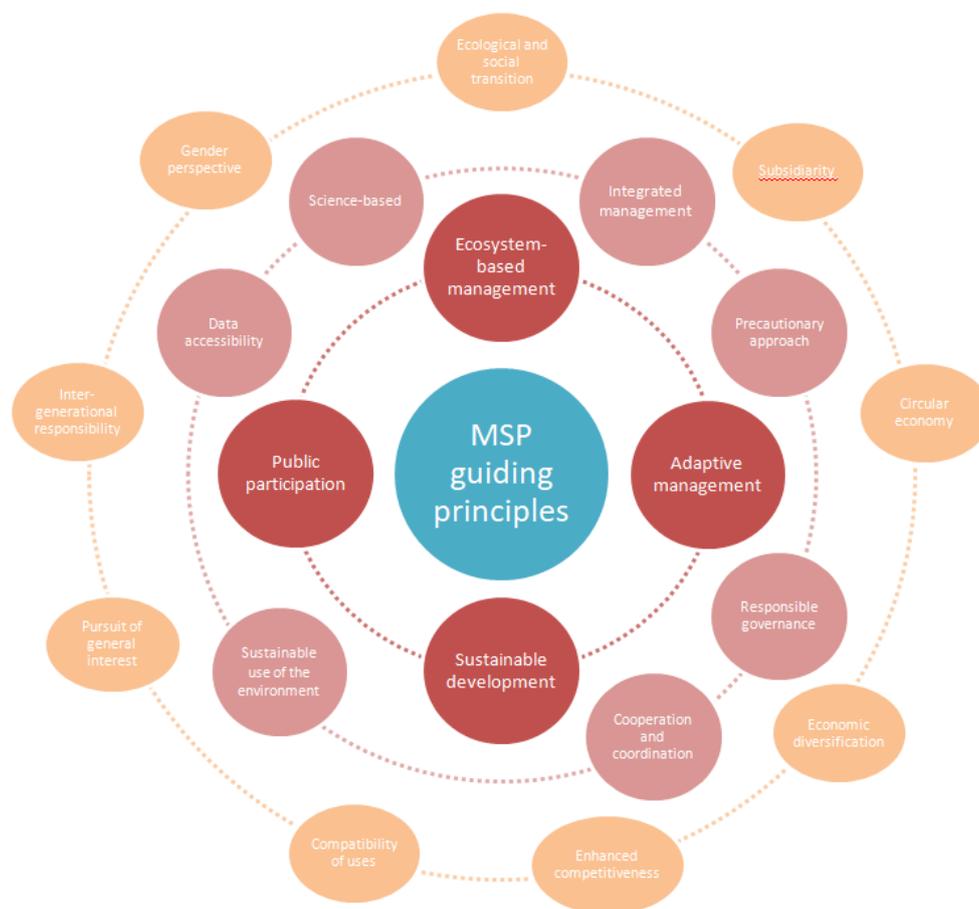


Figure 11. MSP guiding principles of Macaronesia
 (common principles for all archipelagos in red; shared principles by two of the archipelagos in pink; and rest of the principles in orange)
 (based on Governo dos Açores, 2019; ¹⁷; ⁹).

5.2. Involvement of policy-makers

The organisations administrating maritime sectors and cross-cutting marine policies should have equal powers concerning decision-making and advice when developing the maritime spatial plans (Elher and Douvere, 2009). Sectoral policy-makers participate in the planning process in different ways, such as providing data and information to the process, being informed and consulted on the advancements of the plan, and participating in stakeholder events. They also have an important role in the development of the plans as part of the advisory body. The three Macaronesian regions have indeed established interdepartmental bodies to contribute to the advancement and follow-up of the plans.

Azores

Government Council Resolution no. 47/2017 created the Interdepartmental Commission for Sea Affairs of the Azores (*Comissão Interdepartamental para os Assuntos do Mar dos Açores* or CIAMA) which acts as a consultative commission to follow-up and assess the development of MSP in the Azores and the PSOEMA (Governo dos Açores, 2019). CIAMA is chaired by the Regional Secretary of the Sea, Science and Technology. It is composed by eight permanent members (regional directors or presidents) of these organizations⁸:

- Regional Directorate of Investment and Competitiveness Support
- Regional Directorate of Fisheries
- Regional Directorate of Sea Affairs
- Regional Directorate of Science and Technology
- Regional Directorate of the Environment
- Regional Directorate of Tourism
- Regional Directorate of European Affairs
- Civil Protection and Fire-fighters of the Azores.

Other representatives of the regional administration, public and private entities, NGOs, etc. may be invited to participate in CIAMA. To accompany the development of PSOEMA, the invited entities which also compose the consultative commission are: the Regional Directorate for Transport; the Regional Directorate for Culture; the Regional Directorate for Sport; the Maritime Department of the Azores (National Maritime Authority); and Portos dos Açores S.A.. The consultative commission has also deliberated that the development of PSOEMA will be supported by seven thematic working groups, namely: living marine resources (fisheries and aquaculture); non-living marine resources (marine mineral resources and energy resources); environment and conservation; research, technology and knowledge transfer; tourism, recreation, sport and culture; ports, navigation and transport; safety, defence, surveillance and civil protection⁸.

Canaries

The Spanish MSP working group (GT-OEM) created within the Inter-Ministerial Commission on Marine Strategies (CIEM) coordinates the drafting of the five Spanish MSP plans (MITECO, 2019). GT-OEM is composed of the following administrative departments:

- General Directorate of Sustainability of the Coast and Sea (and its three general sub-directorates) (MITECO)
- General Directorate of Energy Policy and Mines (MITECO)
- Spanish Office for Climate Change (MITECO)
- General Directorate of Biodiversity and Environmental Quality (MITECO)
- General Sub-Directorate of Heritage Protection (Ministry of Culture and Sport)
- General Directorate of Fisheries Resources (Ministry of Agriculture, Fisheries and Food)
- General Directorate of Fisheries and Aquaculture Planning (Ministry of Agriculture, Fisheries and Food)
- Ports of the State (Ministry of Development)
- Merchant Navy (Ministry of Development)
- Centre of Coastal and Port Studies (CEDEX) (Ministry of Development)
- Division of Planning of the Navy (Ministry of Defence)
- Spanish Institute of Oceanography (IEO) (Ministry of Science, Innovation and Universities)
- Higher Council for Scientific Research (CSIC) (Ministry of Science, Innovation and Universities)
- Research State Agency (Ministry of Science, Innovation and Universities)
- General Directorate of Internal Market Coordination and EU Policies (Ministry of External Affairs, European Union and Cooperation)
- State Secretary of Tourism (Ministry of Industry, Commerce and Tourism)
- Technical General Secretary (Ministry of Industry, Commerce and Tourism)
- Division of Health Quality Waters (Ministry of Health, Consumption and Social Welfare)
- National Security Department (Ministry of Presidency)

The regional government of Canarias and the Monitoring Committee of the Marine Strategy of Canarias are consulted and follow the development of the plan for the Canarian marine subregion. The Monitoring Committee of the Marine Strategy of Canarias¹⁹ is coordinated by the General Director of Sustainability of the Coast and Sea and the Technical Director of the Sea Protection Division. The composition of the monitoring committee includes one representative of each Coastal Service of the Canarian provinces (Santa Cruz de Tenerife and Las Palmas de Gran Canaria) and two representatives from the autonomous government of Canarias.

Madeira

The composition of the advisory commission was established by Order 11494/2015 to support and follow the development of the Situation Plan for the Madeiran marine subregion. This commission is composed by public organisations and entities with responsibility on maritime affairs, environment, nature conservation, and maritime uses and activities. The commission is constituted by a representative of these 17 organisations²⁰:

- General Directorate of Natural Resources, Safety and Maritime Services (DGRM)
- National Maritime Authority
- Ministry of the Environment
- Ministry of Energy
- Association of Municipalities of Madeira
- Regional Directorate of Forests and Nature Conservation
- Regional Directorate of Fisheries
- Regional Directorate of Economy and Transports
- Regional Directorate of Tourism
- Regional Directorate of Culture
- Regional Directorate of Parliament Affairs and External Cooperation
- Regional Directorate of Innovation and Entrepreneurship
- Regional Directorate of Youth and Sports
- Port Administration of Madeira
- Oceanic Observatory of Madeira
- Regional Agency of Energy and Environment of Madeira
- Association of Industry and Commerce of Funchal – Chamber of Commerce and Industry of Madeira.

The advisory commission had five meetings between 2016 and 2018 with different purposes. The last meeting, held on 2nd May 2018, delivered the final opinion and approval of the plan²⁰. Five thematic working groups were also established within the advisory commission of Madeira to advance the Situation Plan: defence, security and navigation; nature conservation, tourism and recreation; scientific research and emergent uses; and regional development. The working groups had four meetings coordinated by DROTA⁹.

¹⁹ Orden AAA/705/2014: <https://www.boe.es/boe/dias/2014/05/03/pdfs/BOE-A-2014-4665.pdf>

²⁰ Parecer final da comissão consultiva. <http://www.psoem.pt/wp-content/uploads/2018/05/Parecer-Final-da-Comiss%C3%A3o-Consultiva-Madeira.pdf>

6. Towards efficient Maritime Spatial Planning in Macaronesia

Maritime Spatial Planning (MSP) is still in the initial stages in many countries of Europe and beyond. The implementation of this policy in different geographical contexts has shown that some major challenges are widespread. These include difficulties related to the inclusion of MSP in political and institutional frameworks, balancing economic development with environmental conservation, engaging stakeholders, including social dimensions, ensuring effective monitoring and evaluation, addressing transboundary issues, and adapting to climate change (Santos et al., 2019).

The distinct environmental, socio-economic and geopolitical context of Macaronesia also leads to particular challenges for MSP, which are mainly related to insularity. The economies of islands, and more particularly small islands, are fundamentally linked to the marine environment, with most of the economic activities relying heavily on the sea. Small islands often present specialised domestic economies, with limited potential for expansion and diversification and which are generally more vulnerable to external market fluctuations. The market potential is limited due to the restricted regional demand and the low availability of terrestrial resources and space to develop activities and infrastructure. The economies are also highly dependent on tourism, which is a fundamental activity for income and employment, together with traditional fisheries. Prices of goods are generally higher because of transportation costs, which often require external financial support, and consequently, entails external dependency. The availability of human resources is also limited as there might be a lack or loss of skilled labour together with difficulties to recruit elsewhere (Greenhill, 2018).

Despite the various challenges when implementing MSP, Macaronesia also presents a variety of opportunities. Islands have a strong link to the sea built throughout history, which is evident on their maritime culture, commerce and industry. Integrating land-sea interactions in MSP could be easier due to the close land-sea relationship and dependency. MSP provides chances to implement a bottom-up approach and a supportive stakeholder engagement based on the close links among authorities, stakeholders and communities. The involvement of regional authorities in MSP can also enhance these more participatory approaches. Macaronesia can benefit from its prominent biodiversity not only as a coastal and maritime tourism destination but also to strengthen the strong links with the sea to become maritime hubs (Greenhill, 2018). The vast maritime space and the increasing cooperation among archipelagos -including Cape Verde- can certainly contribute to it.

The MarSP project had an important role in the advancement and implementation of the MSP Directive in the three archipelagos of the European Macaronesia. Policy-makers have a fundamental role in the progress of the planning process. Informed decision-making gives more chances to better charting the course of maritime spatial plans. The experience of the MarSP project certainly provide lessons to inform future decision-making for MSP in the European Macaronesia. These lessons learnt have been converted into recommendations for each of the archipelagos -Azores, Canaries and Madeira-, which are included in the annexes.

7. References

- Agardy T. 2010. *Ocean zoning: Making marine management more effective*. Washington, DC and London: Earthscan.
- Agardy T. 2015. Marine protected areas and marine spatial planning. In H. D. Smith, J. L. Suárez de Vivero, & T. Agardy (Eds.), *Routledge handbook of ocean resources and management* (Chapter 31). Abingdon and New York: Routledge.
- Ehler C & Douvère F. 2009. Marine spatial planning: a step-by-step approach toward ecosystem-based management. Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. IOC Manual and Guides No. 53, ICAM Dossier No. 6. Paris: UNESCO.
- Ehler C, Zaucha, J, Gee, K. 2019. Maritime/Marine Spatial Planning at the Interface of Research and Practice. In J Zaucha. and K Gee (Ed.) *Maritime Spatial Planning: past, present and future* (pp. 1-22). <https://doi.org/10.1007/978-3-319-98696-8>
- EC. 2017. European Commission - Executive Agency for Small and Medium-sized Enterprises (EASME). Realising the potential of the Outermost Regions for sustainable blue growth FINAL REPORT http://ec.europa.eu/regional_policy/sources/policy/themes/outermost-regions/pdf/rup_2017/rup_sust_blue_growth_en.pdf
- EC. 2019a. Blue growth. European Commission. https://ec.europa.eu/maritimeaffairs/policy/blue_growth_en [Accessed on 23 September 2019]
- EC. 2019b. Integrated maritime policy. European Commission. https://ec.europa.eu/maritimeaffairs/policy_en [Accessed on 6 September 2019]
- European Parliament. 2019. Fact Sheets on the European Union: Outermost regions (ORs). <http://www.europarl.europa.eu/factsheets/en/sheet/100/outermost-regions-ors-> [Accessed on 19 September 2019]
- Fernandez-Palacios JM, Nascimento L, Otto R., Delgado JD, García-del-Rey, E, Arévalo JR., Whittaker, RJ. 2011. A reconstruction of Palaeo-Macaronesia, with particular reference to the long-term biogeography of the Atlantic island laurel forests. *Journal of Biogeography*, 38, p. 226–246.
- Friess B & Grémaud-Colombier M. 2019. Policy outlook: recent evolutions of maritime spatial planning in the European Union. *Marine Policy* (In Press). <https://doi.org/10.1016/j.marpol.2019.01.017>
- García-Sanabria J. García-Onetti J. Pallero Flores C., Cordero Penín V. de Andrés García M., Arcila Garrido M. 2019. MSP Governance Analysis of the European Macaronesia. MarSP project. July 2019.
- Gee K. 2019. The Ocean Perspective. In J Zaucha. and K Gee (Ed.) *Maritime Spatial Planning: past, present and future* (pp. 23-45). <https://doi.org/10.1007/978-3-319-98696-8>
- Giret O, Morel C, Gimard A, Alloncle N, Le Moing E, Quentric A, Quintela A, Lloret A, Lopes Alves F, Gomez Ballesteros M, Buceta JL, Marques M, Plaza M, Silva A, Sousa L. 2019. Initial Assessment. Supporting Implementation of Maritime Spatial Planning in the European Northern Atlantic (SIMNORAT). Cerema – Agence Française pour la Biodiversité. 91 pp. DOI: 10.5281/zenodo.2609165
- Governo dos Açores. 2019. Elaboração do PSOEMA. <https://sigmar.azores.gov.pt/oema/23/elaboracao-psoem> [Accessed on 2 October 2019]
- Greenhill L. 2018. Workshop Report “Maritime Spatial Planning for Islands”. European MSP Platform. Las Palmas de Gran Canaria, Spain. November 2018.
- Hoagland P, Jacoby J, Schumacher ME. 2019. Law of the Sea, *Encyclopedia of Ocean Sciences* (Third Edition), Earth Systems and Environmental Sciences, pp. 526–537.

- INE. 2019a. Cifras oficiales de población resultantes de la revisión del Padrón municipal a 1 de enero. Instituto Nacional de Estadística. <https://www.ine.es/jaxiT3/Datos.htm?t=2910> [Accessed on 19 November 2019]
- INE. 2019b. Estimativas anuais da população residente. Instituto Nacional de Estatística. https://ine.pt/xportal/xmain?xpid=INE&xpgid=ine_indicadores&contecto=pi&indOcorrCod=0008273&selTab=tabo [Accessed on 19 November 2019]
- Jay SA. 2017. Marine Spatial Planning: assessing net benefits and improving effectiveness: Issue paper for OECD Greening the Ocean Economy Conference 2017.
- Kelly C, Ellis G, Flannery W. 2019. Unravelling Persistent Problems to Transformative Marine Governance. *Frontiers in Marine Science* 6:213. <https://doi.org/10.3389/fmars.2019.00213>
- MAC 2014-2020. Programa de Cooperación Madeira-Açores-Canarias (MAC) 2014 – 2020. RegioPlus Consulting. Diagnóstico Territorial y Analysis DAFO del espacio de cooperación MAC, p. 1-119.
- Madrugá L, Wallenstein F, Azevedo JMN. 2016. Regional ecosystem profile–Macaronesian Region. EU Outermost Regions and Overseas Countries and Territories. BEST, European Commission, p. 1– 324.
- Menini E., Halim F., Gabriel, D., Suarez de Vivero, JL., Calado, H., Moniz, F., Caña Varona, M. 2018. Geopolitical framework of the Macaronesia region. GPS Azores project: Ponta Delgada. http://www.gpsazores.com/media/Geopolitical_framework_of_the_Macaronesia_region_draft1-compressed.pdf
- MITECO. 2019. Ordenación del espacio marítimo. Ministerio para la Transición Ecológica. <https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/ordenacion-del-espacio-maritimo/> [Accessed on 26 September 2019]
- Pyc D. 2019. The Role of the Law of the Sea in Marine Spatial Planning. In J Zaucha and K Gee (Ed.) *Maritime Spatial Planning: past, present and future* (pp. 375-395). <https://doi.org/10.1007/978-3-319-98696-8>
- PSOEM. 2019a. Plano de Situação do Ordenamento do Espaço Marítimo Nacional. Discussão Pública. http://www.psoem.pt/discussao_publica-2-2/ [Accessed on 4 October 2019]
- PSOEM. 2019b. Plano de Situação do Ordenamento do Espaço Marítimo Nacional. TUPEM – Títulos de utilização privativa do espaço marítimo. <http://www.psoem.pt/tupem-2/> [Accessed on 13 November 2019]
- Santos CF, Ehler C, Agardy T, Andrad F, Orbach, MK, Crowder LB. 2019. Marine Spatial Planning. In C. Sheppard (Ed.), *World Seas: An Environmental Evaluation, Second Edition, Volume Three: Ecological Issues and Environmental Impacts* (pp. 571–592). London, San Diego, Cambridge MA, Oxford: Academic Press.
- Suarez de Vivero JL. 2019. Macaronesia MarSP Atlas. Universidad de Sevilla. MarSP project.
- TNC. 2019. Marine Spatial Planning: Balancing the needs of nature and people. The Nature Conservancy. <https://www.nature.org/en-us/what-we-do/our-priorities/protect-water-and-land/land-and-water-stories/marine-spatial-planning-1/> [Accessed on 27 September 2019]
- Wright G, Gjerde KM, Johnson DE, Finkelstein A, Ferreira, MA, Dunn DC, et al. 2018. Marine spatial planning in areas beyond national jurisdiction. doi: 10.1016/j.marpol.2018.12.003 [in press]. *Mar. Policy*
- Zaucha J. 2019. Can Classical Location Theory Apply to Sea Space?. In J Zaucha. and K Gee (Ed.) *Maritime Spatial Planning: past, present and future* (pp. 97-120). <https://doi.org/10.1007/978-3-319-98696-8>

Annex A. Recommendations for future decision-making in the Azores

The MarSP project in the Azores, throughout its implementation, promoted public participation and continuous engagement with stakeholders, in order to address their needs and concerns, ensuring the legitimacy of the process. The participation occurred in the form of three rounds of workshops organized simultaneously in the islands of São Miguel, Terceira and Faial, with the participation of 53, 78, and 78 stakeholders respectively from all the key maritime sectors, with all sectors represented in at least one of the workshops. The stakeholder engagement process also included individual interviews with sectoral stakeholders in order to collect additional information on the stakeholders' perspective for the sector they were representing.

In the workshops, participants were asked to collaboratively build a vision that would guide the maritime spatial planning process in the Azores, to analyze the current and potential sectors in a comprehensive manner, suggesting examples of good practice and validating the cartography developed during the planning stage. Additionally, an opportunity to pose questions directly to the MarSP committee was created through the interactive tool Sli.do. At the end of this participatory process, the stakeholders' perception of the participation process was assessed by a satisfaction survey, gathering a total of 93 answers, most of which were ranked 4 and above (on a scale of 1 to 5 with satisfaction increasing with ascending numbers), highlighting showcasing their general satisfaction with the process.

Out of the stakeholder engagement came several recommendations for the decision-makers, including:

- Apply the principles of Ecosystem-Based Management to ensure that social, ecological and economic aspects are duly acknowledged when analyzing Marine Ecosystem Services in the Azores.
- Establish an Environmental Impact Assessment (EIA) baseline, specific for the marine environment for each sector, in order to safeguard marine life and biodiversity. Perform EIA for marine activities licensing especially for potential new areas and new activities that have been prioritized by the Blue Growth policy, as well as those potentially impacting sensitive habitats and species, particularly marine mammals, reptiles and birds (e.g. cetaceans, bird colonies), hydrothermal vent fields and seamounts.
- Implement the use of indicators and monitoring for sustainability and continuous environmental impact assessment especially when licensing is attributed to new areas, in partnership with the scientific community to obtain the best science-based knowledge, creating means to support the decision-making process.
- Work closely with academia and research centers to increase the collection of data on marine ecology and socio-economic aspects of the uses and activities, and, at the same time, promote the establishment of a set of examples of best practice to ensure that research is streamlined with accurate and efficient procedures.
- Improve the communication between policy-makers and stakeholders, policy-makers and the general public, and promote communication between researchers and stakeholders, using accessible and understandable language to provide a common ground for information flow, which may consist of relevant news, legal implications, management reports, among other subjects related to maritime spatial planning and sectoral management.
- Promote awareness and education among stakeholders, local communities, and students, to improve their understanding of the impacts and consequences of their actions, as well as the relevance of their participation in safeguarding the sea, thus focusing on fostering ocean literacy.
- Allow and promote the involvement of other segments of the society and local communities in the planning process.
- Recognize and value the companies, organizations, and institutions that take positive action to promote a more sustainable use of the sea through awards and certifications, besides encouraging social responsibility.

- Ensure transparency and clear communication in the process of licensing for uses and activities on the sea. In addition, it is important to further clarify competences at local, regional, and national levels whilst promoting a wider understanding of the legislation in force for each sector.
- Ensure the sustainable use of the sea and a Good Environmental Status, particularly in the context of the extractive uses, balancing sustainability and blue economy.
- Create an effective network of Marine Protected Areas that best safeguard the natural resources without jeopardizing the local economy, following one of the targets of the SDG14.
- Address climate change and the expected impacts in the planning process, including mitigation measures that could be adopted to align the Azores with the global and European guidelines.
- Promote the blue economy in the Azores, analyzing the potential development of aquaculture, marine biotechnology, coastal tourism, and renewable energies; aligned with strategies to foster innovation, competitiveness and diversify the economic activities on sea.
- Stimulate the maintenance of traditional uses in the Azores, especially in the fisheries sector, to preserve local values and traditions, in particular the activities that have a lower impact on the environment, instead of activities that may overload the carrying capacity of the local infrastructure and the ecological capacity.
- Promote synergies and multi-uses between the sectors to integrate multiple uses and activities on the sea and maximize their potential, by preventing and mitigating conflicts and promoting harmonious relationships amongst the agents.
- Ensure that a monitoring program is implemented to continuously evaluate the MSP planning process and plan.
- Establish clear and concise action to achieve short, medium and long term goals that can be evaluated, measured and tracked, applying in this context the concept of Adaptive Management.
- Put into effect a surveillance program to avoid illegal, unregulated and undeclared activities by means of preventive and *in loco* inspections, that could be assisted by an online platform developed to allow stakeholders to readily report irregularities and contribute to surveillance of the maritime space.
- Develop a protocol of biosecurity in the ports of the Azores in order to prevent invasive species to proliferate and endanger the local marine life.
- Prospect the seabed in ports searching for valuable underwater cultural heritage such as historical artifacts and ancient shipwrecks worthy of being preserved.
- Ensure the continuous improvement of the MSP geographic information system and the associated geoportal (SIGMAR-Açores), including mapping the legal framework for each maritime sector, especially for fisheries.

More detailed recommendations, focused on each maritime sector, are listed and available in respective sector briefings, which gather recommendations from stakeholders and were developed under the MarSP project to support the characterization of each sector.

Annex B. Recommendations for future decision-making in the Canaries

The tasks developed in the frame of the MarSP project for the Canaries support the development of the maritime spatial plan in this marine region. The MarSP project placed strong emphasis on stakeholder engagement and public participation in this archipelago with the organisation of four workshops in Las Palmas de Gran Canarias and two in Santa Cruz de Tenerife.

The last MarSP stakeholder event in the Canaries was held in Las Palmas de Gran Canaria on 6th November 2019. This event aimed to inform, discuss and build capacities on Maritime Spatial Planning (MSP) in the context of the Canaries. The draft documents of these Guidelines for Maritime Spatial Planning in the European Macaronesia were presented. The following open question was launched at the end of the presentation: “What issues should policy-makers take into account when charting the course for Maritime Spatial Planning in the Canaries marine subregion?”. The participants present at the event were invited to reply to that question based on their experience and knowledge about the Canarian marine region and the knowledge acquired in the MarSP stakeholder events. The question was launched through the audience interactive tool “Sli.do”. The consultation was extended to the rest of stakeholders participating in the previous workshops. An email with an invitation to participate was sent to more than 100 stakeholders. Twenty responses were received which provided the basis for the recommendations to inform future decision-making for MSP in the Canaries. These are:

- Pursue the general interest in a cross-generational and long-term vision.
- Balance environmental, social and economic objectives under an ecosystem approach.
- Preserve marine ecosystems and minimise the adverse impacts of uses.
- Take into account the future effects that climate change will have on the marine environment.
- Ensure the transition to a green economy and sustainable development.
- Foster synergies and compatibilities between maritime uses and activities.
- Bear in mind the strategic importance of certain sectors for the region (e.g. maritime transportation).
- Pay particular attention to coastal areas, where most intensity of use and conflicts happen.
- Preserve traditional maritime activities as part of the cultural and ethnographic heritage (e.g. artisanal fisheries).
- Ensure the effective implementation and monitoring of the plan (e.g. reinforce human resources in charge).
- Coordinate with other related policies and processes (e.g. Marine Strategies).
- Foster public participation and dissemination of outputs to the general public.

Annex C. Recommendations for future decision-making in Madeira

The tasks developed in the frame of the MarSP project for Madeira permitted focus on knowledge of the seabed, specifically in terms of geomorphology and the identification of new species and habitats. This will assist the future revision of the PSOEM, which will take place in the coming years.

In line with the drafting the PSOEM, it was decided that the work with the Consultative Committee defined by the national diplomas would continue. The Consultative Commission intended to work on activities or uses where information was scarce in order to try to overcome the existing constraints to the development of these activities and find beneficial solutions for all stakeholders.

During the meetings and workshops several recommendations were put forward which can contribute to the future revision of the Situation Plan. The main ones are:

- Balance environmental, social and economic objectives under an ecosystem approach.
- Preserve marine ecosystems and minimise the adverse impacts of uses.
- Take into account the future effects that climate change will have on the marine environment.
- Coordinate with other related policies and processes (e.g. Marine Strategies).
- Continuing to invest in knowledge in order to detect new areas for potential uses, especially on the north coast of Madeira and Porto Santo.
- Need to focus on continued cooperation with other regions of Macaronesia, especially with the Azores and Canary Islands regarding the MSP process and the definition of strategies to enhance this Region.
- Pursue the general interest in a cross-generational and long-term vision.
- Coordinate the different interests in the maritime space always based on the long-term vision.
- Focus on blue growth activities that have great potential for growth in the Region (e.g. tourism and aquaculture).
- Ensure the effective implementation and monitoring of the plan (e.g. reinforce human resources in charge).
- Foster public participation and dissemination of outputs to the general public.

In Madeira, the work on MSP will continue with meetings and workshops that will contribute to the future revision of the Situation Plan.