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Working Paper

Marine Spatial Planning as a public policy management tool for Brazil's Blue Amazon

Texto para Discussão, No. 3187

Provided in Cooperation with:
Institute of Applied Economic Research (ipea), Brasília

Suggested Citation: Andrade, Israel de Oliveira; Carvalho, Andrea Bento (2026) : Marine Spatial Planning as a public policy management tool for Brazil's Blue Amazon, Texto para Discussão, No. 3187, Instituto de Pesquisa Econômica Aplicada (IPEA), Brasília, https://doi.org/10.38116/td3187-eng

This Version is available at:
https://hdl.handle.net/10419/339270

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DISCUSSION PAPER

3187

MARINE SPATIAL PLANNING AS A PUBLIC POLICY MANAGEMENT TOOL FOR BRAZIL'S BLUE AMAZON

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Institute for Applied Economic Research

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3187
Rio de Janeiro, March 2026

MARINE SPATIAL PLANNING AS A PUBLIC POLICY MANAGEMENT TOOL FOR BRAZIL'S BLUE AMAZON

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Discussion Paper

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A552 Andrade, Israel de Oliveira
Marine Spatial Planning as a public policy management tool for Brazil's Blue Amazon / Israel de Oliveira Andrade, Andrea Bento Carvalho. – Rio de Janeiro : Ipea, Mar. 2026.
40 p. – (Discussion Paper ; n. 3187).

Inclui referências bibliográficas.

1. Economia Azul. 2. Amazônia Azul. 3. Planejamento Espacial Marinho. 4. Atlântico Sul. 5. Meio Ambiente. I. Carvalho, Andrea Bento. II. Instituto de Pesquisa Econômica Aplicada. III. Título.

CDD 333.91

Ficha catalográfica elaborada por Elizabeth Ferreira da Silva CRB-7/6844.

How to cite:
ANDRADE, Israel de Oliveira; CARVALHO, Andrea Bento. **Marine Spatial Planning as a public policy management tool for Brazil's Blue Amazon**. Rio de Janeiro: Ipea, Mar. 2026. (Discussion Paper, n. 3187). DOI: http://dx.doi.org/10.38116/td3187-eng.

JEL: Q001, Q25, Q28.

This study is the translated and updated version of TD 3088, originally published by Ipea in March 2025, entitled "Planejamento Espacial Marinho como ferramenta de gestão de política pública para a Amazônia Azul".

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ABSTRACT

Marine Spatial Planning (MSP) is an internationally known tool for organizing and governing marine spaces and activities, economic or otherwise, carried out in these spaces. Being a public process of mapping and analyzing the maritime area that involves multiple interests, actors and factors, it proves to be a complex task. The MSP is a necessity for the Brazilian State in line with the commitment made by the country to the international community. This text seeks to begin the discussion of MSP within a theoretical framework of organization of the Brazilian maritime space and the economic importance of activities carried out in this space. As a public policy tool, MSP can contribute to the organization of state actions in the development of the coastal and marine region, including encouraging the transition to the blue economy in the country. Its dynamic character could mitigate marine pollution, eutrophication, water acidification, lost of biodiversity and climate changes, among other issues.

Keywords: blue economy; blue amazon; marine spatial planning; south atlantic; environment.

1 INTRODUCTION

Marine Spatial Planning (MSP) is inherently a cross-sectoral public process that involves the systematic mapping and analysis of maritime spaces. It aims to organize human activities in marine environments in a way that balances economic, environmental, social, and climatic interests – an endeavor that has become increasingly urgent considering accelerating global changes. As population[1] and economic[2] demands grow, resource exploitation is progressively expanding into marine territories, thereby calling for integrated and coordinated governance. This responsibility rests with the State, which must reconcile the sustainable use of resources, the preservation of marine biodiversity, and the support of local communities. Effective planning requires spatial and temporal zoning that prioritizes ecological significance and socio-economic value.

The development of MSP was originally motivated by concerns over the sustainable use of marine environments, particularly the protection of ecologically sensitive areas under pressure from economic interests. Environmental public policies play a pivotal role within MSP by identifying, regulating, and protecting these vulnerable zones. Moreover, the incorporation of ecosystem services – critical to maintaining planetary health – has become a central component of contemporary marine spatial planning.

Recognizing ocean's fundamental importance, the United Nations (UN) established Sustainable Development Goal (SDG) 14, Life Below Water, which seeks to conserve marine ecosystems and promote sustainable use of oceanic resources.[3] In parallel, the UN proclaimed the period from 2021 to 2030 as the Decade of Ocean,[4] Science for Sustainable Development, thereby reinforcing the international agenda for marine protection and scientific advancement.

1. According to the Brazilian Institute of Geography and Statistics (IBGE), the 2022 Census recorded a total resident population of 203,080,756 people in Brazil, representing an increase of 12,324,957 individuals compared to the 2010 Census. Population estimated for 2024 is 212,583,750 million inhabitants. It is important to highlight that the coastal population grew by approximately 5 million people between 2010 and 2022. Information available at: https://censo2022.ibge.gov.br/panorama/; and https://ftp.ibge.gov.br/Estimativas_de_Populacao/Estimativas_2024/POP2024_20241230.pdf. Accessed on: August 19th, 2025. The statistics differ from the first text on the subject in the Portuguese version, because when it was published, the consolidation of the census had not yet been finalized yet.

2. See Andrade *et al*., 2024.

3. Available at: https://brasil.un.org/pt-br/sdgs/14. Accessed on: Jul. 10, 2024.

4. Available at: https://oceandecade.org/pt/. Acessed on: Jul. 10, 2024.

This paper investigates the strategic role of MSP within Brazil's public policy landscape by asking: to what extent is Marine Spatial Planning an essential management tool for coastal and ocean governance by the Brazilian State? Effective marine governance must integrate resource extraction, biodiversity conservation, socio-economic support for coastal communities, recreational and cultural uses, and national defense considerations. Brazil's MSP approach emphasizes transparent, participatory, and equitable decision-making processes, aiming to balance the multiple, and often competing, uses of maritime space.

The discussion unfolds across five sections, following this introduction: i) a theoretical framework that situates MSP in global and national contexts; ii) a conceptual analysis of its core principles and methodologies; iii) an exploration of its practical application and relevance within Brazilian public policy; and iv) final considerations highlighting future directions and challenges for MSP in Brazil.

2 THEORETICAL FRAMEWORK

The ordering of space – whether terrestrial or marine – does not conform to a single, universally accepted definition. Nonetheless, there is a broad consensus that spatial ordering arises from the imperative to regulate, organize, and direct the use, occupation, and transformation of territory.[5] This process seeks to balance the sustainable use of natural resources with the spatial distribution of economic activities and the interventions of multiple stakeholders (Ruckert, 2005; PNOT, 2006). According to Moraes (2005), the State has historically functioned as the principal agent of spatial production through territorial policies. However, over time, private actors and civil society organizations have assumed increasingly prominent roles in shaping spatial arrangements.

The implementation of territorial ordering is carried out through various policy instruments. As outlined by the Brazilian Ministry of the Environment and Climate Change, these instruments must take into account the numerous factors intrinsic to, or exerting influence upon, the target areas. This enables more informed and appropriate territorial management. Examples include Municipal Master Plans, Municipal Plans for the Conservation and Recovery of the Atlantic Forest, Management Plans for Conservation Units, and Watershed Plans. Given this framework, it is reasonable to infer that the principles underpinning terrestrial spatial ordering are also applicable to MSP, albeit adapted to the unique characteristics of marine environments.

5. According to Nicolodi et al. (2018), the marine environment is an integral part of the national territory.

Australia is widely regarded as a pioneer in what is now recognized as MSP, according to Day (2016). This leadership is due to the designation of the Great Barrier Reef – one of the world's largest coral reef systems –, in 1976, as a world heritage. For many years, the reef constituted the world's largest marine protected area, catalyzing early initiatives in ecosystem-based planning and integrated marine and coastal management.

The rationale for organizing ocean space is as compelling as that for terrestrial spatial management. As Ehler and Douvere (2007) observe, some maritime uses are inherently incompatible with the ecological integrity of marine ecosystems – these are categorized as *use–environment* conflicts. Additionally, many maritime activities compete, generating *use–use* conflicts. Managing these tensions and regulating the use of ocean resources lie at the very core of MSP's mission.

From a policy perspective, MSP can originate as a national-level initiative, reflecting deliberate actions aimed at defined policy objectives. Like any public policy, MSP encompasses a continuum of stages – formulation, implementation, monitoring, and evaluation. The case of the Netherlands exemplifies this approach: in 2005, the Ministry of Housing, Spatial Planning, and the Environment incorporated specific guidelines for North Sea management into its National Spatial Planning Policy. As highlighted by Moraes, Araújo, and Queiroz (2023, apud Andrade et al., 2024), MSP is a comprehensive process that integrates social, political, economic, and governance dimensions, culminating in the structured use of marine space. In this regard, it can – and should – be understood as a set of interconnected public policies.

Additionally, the economic dimensions of MSP warrant careful consideration. According to the World Bank,[6] conducting economic analyses throughout all stages of the MSP process can significantly improve stakeholder adherence – particularly for long-term plans. Furthermore, such analysis has the potential to stimulate the growth of the *blue economy* and attract sustainable financing mechanisms tied to ocean-based capital.

3 WHAT IS MSP?

The definition of MSP has undergone significant evolution, shaped by its implementation across diverse national contexts. Initially, MSP was closely linked to fisheries science, focusing primarily on the regulation and sustainability of marine resource extraction. Over time, however, the concept expanded to embrace a broader, ecosystem-based

6. The World Bank website hosts a series of studies dedicated to MSP. Available at: https://www.worldbank.org/en/programs/problue/publication/marine-spatial-planning-for-a-resilient-and-inclusive-blue-economy-toolkit. Accessed on: Dec. 14, 2024.

approach to marine governance (Issifu et al., 2024). Under this framework, ecosystem-based MSP seeks to harmonize ecological, economic, and social objectives, all oriented toward the overarching goal of sustainable development. The scope of MSP can vary considerably across spatial and temporal dimensions. Spatially, it may be implemented at local, regional, national, or even transboundary and continental scales. Temporally, planning efforts can be designed for the short, medium, or long term, depending on the goals and complexities involved (Ehler and Douvere, 2007).

In response to emerging environmental challenges and the dynamic character and the need to adapt spatial planning processes to shifting climatic conditions, Santos et al. (2024) introduced the concept of "climate-smart marine spatial planning". The authors identify ten essential components that should inform climate-resilient MSP strategies (figure 1).

In this context, the authors highlight the importance of incorporating both current and projected climate scenarios into MSP processes. The primary aim is to maintain the sustainability of ocean ecosystems, mitigate adverse environmental impacts, and optimize long-term benefits for society.

Silva et al. (2024) define MSP as a public policy instrument focused on the sustainable governance of human activities within marine environments, including areas designated for the protection and restoration of coastal and marine ecosystems. Ehler and Douvere (2009, p. 18) offer a widely recognized definition, describing MSP as a "public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives, generally guided by a political process." This definition has been officially adopted by the Intergovernmental Oceanographic Commission of Unesco (IOC/Unesco).

FIGURE 1
Climate aspects of MSP



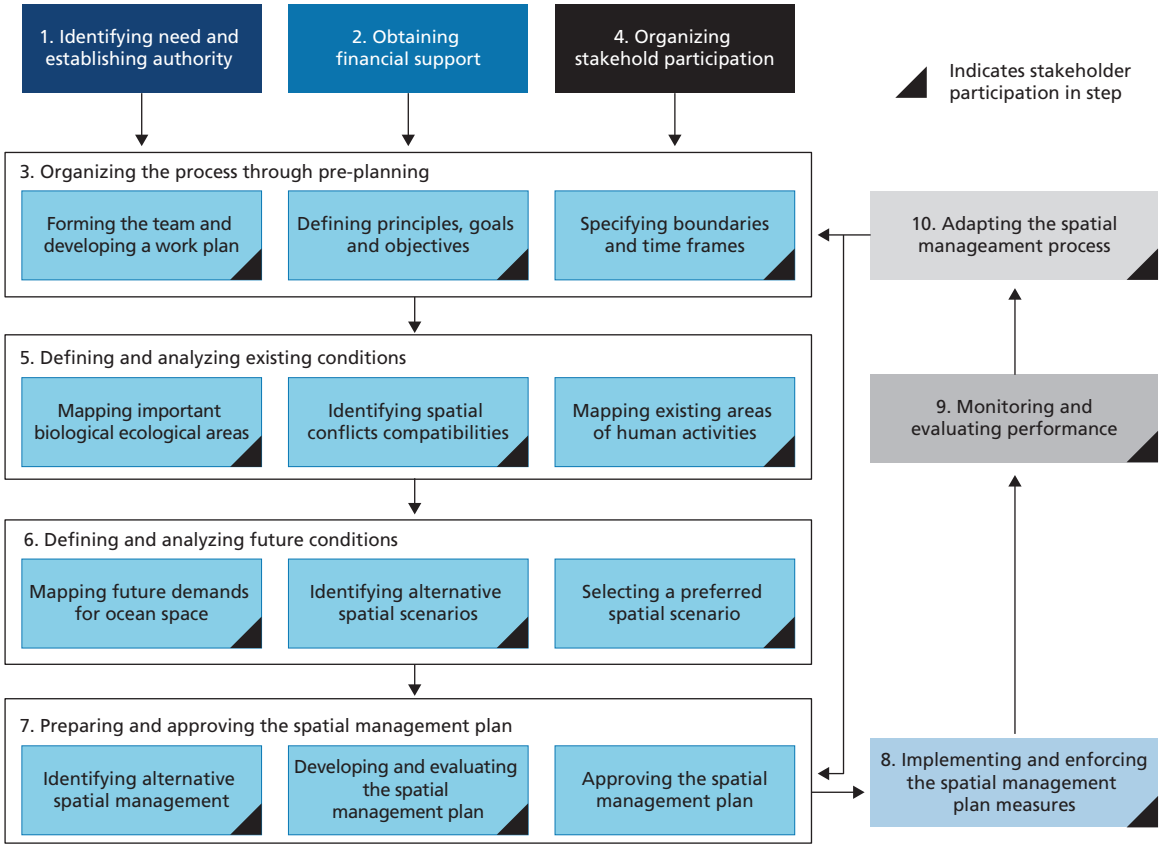
Source: Santos et al. (2024), p. 2.

Similarly, Issifu et al. (2024, p. 2) describe MSP as "an approach used to manage and allocate various activities and uses in marine and coastal areas in a systematic and sustainable way." Despite variations in terminology, these definitions converge around a common purpose: the coordinated, equitable, and sustainable management of marine spaces.

Due to its dynamic and complex nature, MSP is best understood as an ongoing process and its implementation can be presented in stages, as illustrated in figure 2.

FIGURE 2

A Step-by-step approach to MSP



Source: Ehler and Douvere (2009).

Moreover, MSP is closely aligned with initiatives promoted by the United Nations, including the Decade of Ocean Science for Sustainable Development (2021-2030). MSP significantly contributes to the advancement of SDG 14 (Life Below Water), while also intersecting with several other Sustainable Development Goals (SDGs). According to IOC/Unesco (Ansong et al., 2021), the contributions of MSP can be summarized as follows:

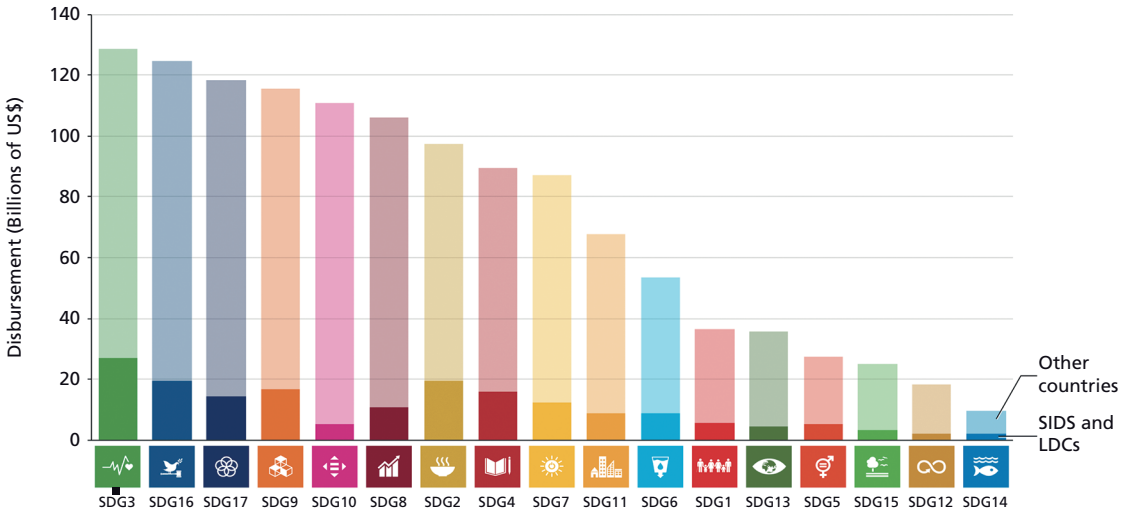
- SDG 1 – No Poverty: the sustainable economic development of ocean-based sectors provides vital support to the livelihoods of coastal communities;
- SDG 2 – Zero Hunger: technologically supported sustainable management of fisheries and aquaculture strengthens global food security;
- SDG 3 – Good Health and Well-being: encourages the exploration and use of marine biodiversity in health and biomedical research;

- SDG 4 – Quality Education: enhances capacity-building and knowledge transfer through skills development and increased participation in ocean-related economic activities;
- SDG 6 – Clean Water and Sanitation: improves access to clean water and sanitation when MSP is used to improve marine coastal management, reducing pollution;
- SDG 7 – Affordable and Clean Energy: supports scientific research, innovation, and international cooperation for the development of offshore renewable energy sources;
- SDG 8 – Decent Work and Economic Growth: when integrated with blue growth, MSP fosters sustainable employment and inclusive economic growth, aligned with ecological and social objectives;
- SDG 9 – Industry, Innovation and Infrastructure: stimulates the development and diversification of ocean-based industries and infrastructure, while promoting technological innovation and knowledge exchange;
- SDG 13 – Climate Action: incorporates climate adaptation and mitigation measures into marine planning to enhance the resilience of ecosystems and reduce their vulnerability to climate-related risks;
- SDG 15 – Life on Land: encourages an integrated land-sea management approach, recognizing the interdependence between terrestrial and marine ecosystems through an ecosystem-based planning framework.

However, despite the critical role of MSP in advancing these global goals, Joffray et al. (2021) highlight that, between 2015 and 2019, SDG 14 received the lowest levels of funding – from both public and private sources – among all the SDGs, as illustrated in the figure 3.

Ehler and Douvere (2009) emphasize that certain ecosystem services lack direct monetary valuation and are often classified as common property resources – assets characterized by open or unrestricted access. As a result, these services are particularly susceptible to overexploitation and environmental degradation, manifesting in issues such as overfishing and marine pollution. In this context, MSP serves as a critical public process for ensuring the efficient allocation and governance of open-access marine resources, helping to prevent their depletion and to promote sustainable use.

FIGURE 3
Funding (public and private) by SDG



Source: Joffray et al. (2021), p. 32.
Obs.: *SIDS – Small Island Developing States; LDC – Least Developed Coastal Countries.

The range of human activities addressed by MSP is extensive.[7] It typically includes commercial and recreational fishing, aquaculture, maritime transport, oil and gas exploration and production, offshore renewable energy generation, and marine mining – which may involve the extraction of materials such as sand, gravel, barium, cerium, cobalt, copper, lead, manganese, nickel, thorium, tellurium, titanium, vanadium, and zinc, depending on national contexts. Additional activities include dredging and disposal of dredged material, tourism and recreation, installation of submarine cables, defense and security operations, scientific research, marine biotechnology, cultural and historical conservation, and the designation and management of marine protected areas.

According to IOC/Unesco (Ansong et al., 2021), MSP also allows for the planning and coordination of multiple-use scenarios, demonstrating the potential for coexistence and synergy among diverse ocean uses. Illustrative examples include:

- Tourism and fishing: small-scale fishers offering guided tourism experiences aboard fishing vessels, promoting cultural immersion in traditional fishing practices;

7. Each country or region may establish its own methodology for the classification and regulation of activities.

- Tourism and aquaculture: recreational visits to aquaculture sites, sometimes involving activities such as snorkeling in or around the facilities;
- Offshore wind farms and tourism: development of tourism activities centered around visits to offshore wind farm installations;
- Offshore wind farms and aquaculture: co-location of aquaculture operations within the infrastructure or safety zones of offshore wind farms;
- Offshore wind farms and fishing: regulated fishing permitted within designated areas of offshore wind installations;
- Offshore wind farms and marine conservation: the integration of inclusive, nature-oriented design features into offshore wind infrastructure.

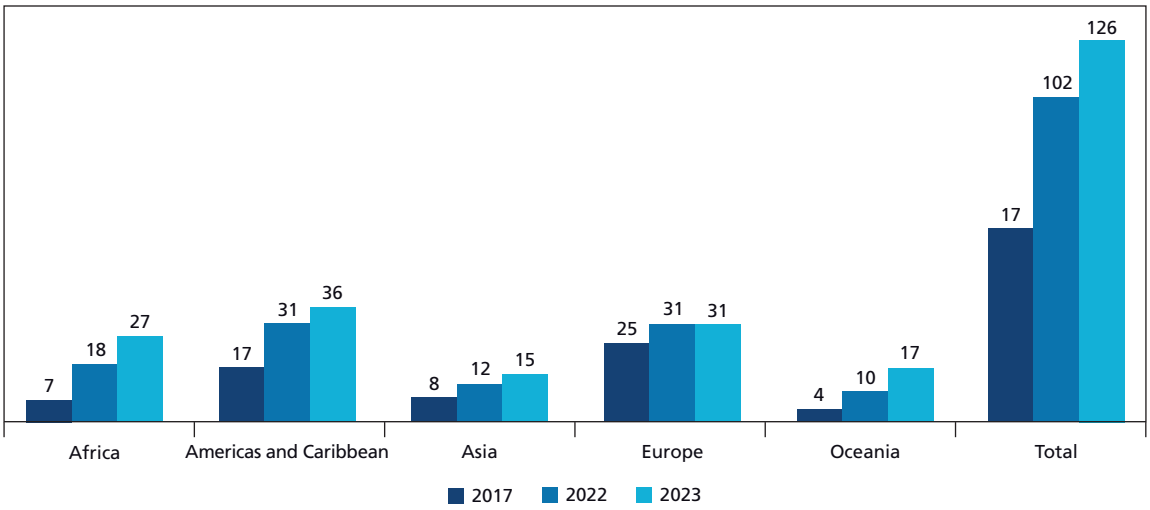
As of the end of 2023, a total of 126 countries and territories were engaged in MSP initiatives. A noteworthy development is the increasing involvement of African nations, including those situated along the Gulf of Guinea, the Benguela Current, the western Mediterranean Sea, and the Indian Ocean. Similarly, countries across Oceania have demonstrated growing interest. However, many of these MSP efforts are not endogenous in origin; rather, they are largely driven by international organizations and cooperation frameworks (Silva et al., 2024).

An illustrative case is Mozambique, whose MSP strategy prioritizes maritime activities that yield the greatest social and economic benefits while aiming to maximize coexistence among ocean users. In situations involving conflicting uses, the full cost of relocation must be borne by the proponent of the new activity, thereby reinforcing accountability and incentivizing responsible planning (Ansong et al., 2021).

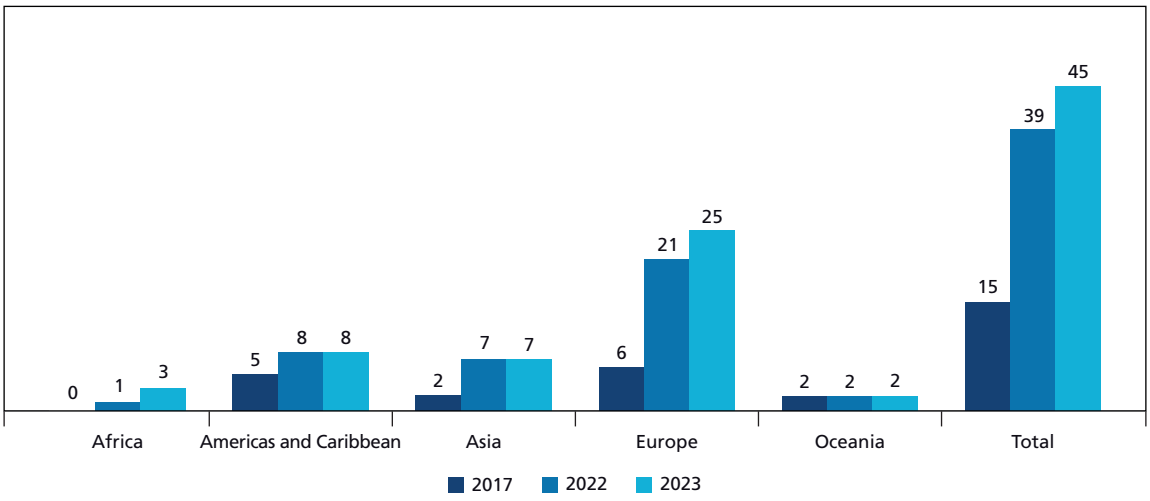
FIGURE 4

Countries involved in MSP

1A – Countries/territories engaged in MSP



2B – Countries/territories with approved MSP



Source: Ahern et al. (2024, p. 35). Avalaible at: https://doi.org/10.25607/4wbg-d349.

3.1 Marine Spatial Planning in Brazil

Understanding the evolution of MSP in Brazil requires a brief historical overview of its institutionalization. As observed in many other national contexts, the impetus to adopt MSP emerged from the growing need to manage marine space amid intensifying local interests, as well as in response to international obligations and frameworks.

FIGURE 5
Blue Amazon in Brazil



Source: IBGE. Available at: https://atlasescolar.ibge.gov.br/images/mapas/pdf/brasil-federacao-e-territorio-politico-p-92.pdf. Accessed on: Oct., 3, 2024.

Brazil is endowed with an extensive marine territory commonly referred to as the "Blue Amazon",[8] in recognition of its strategic, ecological, and economic value. Initially comprising approximately 3.6 million Km², adjacent to a coastline stretching over 7,000 km, Brazil's maritime jurisdiction is undergoing expansion. Following a formal submission to the United Nations Commission on the Limits of the Continental Shelf (CLCS), Brazil

8. The Blue Amazon® refers to the region encompassing the ocean surface, the waters above the seabed, as well as the marine soil and subsoil within the Atlantic extension that projects from the Brazilian coastline to the outer limit of the continental shelf. Available at: https://www.mar.mil.br/hotsites/amazonia_azul/. Accessed on: Oct. 10, 2024.

seeks to extend its continental shelf boundaries, which could enlarge its marine domain to an estimated 5.7 million km^2.[9]

The scale and ecological significance of this marine area underscore the urgent need for integrated and strategic planning. Effective MSP in this context is essential not only to safeguard ecosystem integrity but also to maximize sustainable benefits from ocean resources, while minimizing environmental and social impacts.

In addition, the conceptual framework of the Blue Amazon promotes the maritime consciousness, encouraging Brazilian society to reestablish a socio-cultural and economic connection with the ocean. This perspective seeks to shift public perception and policy focus toward recognizing the sea as a strategic national asset. Box 1 below presents the conceptual underpinnings of this important premise.

BOX 1
Maritime Mentality

According to the Brazilian Navy, maritime mentality is "the conviction or belief, individual or collective, in the importance of the sea for the survival and prosperity of the country, developing among Brazilians habits and attitudes of rational and sustainable use of marine resources". This is the concept that guides the Action for the Promotion of Maritime Mentality – Promar. Maritime mentality is the Brazilian term for ocean literacy, whose concept was developed in the United States in 2004 (Costa et al., 2020), a few years after the start of Promar (1997).

Source: Marinha do Brasil (disponível em https://www.marinha.mil.br/secirm/promar).

According to Violante, Costa, and Leonardo (2020), Brazil's first formal initiative addressing MSP was the organization of the *Conference on Coastal Management and Marine Spatial Planning* in 2014, jointly promoted by Unesco and the Brazilian Ministry of the Environment and Climate Change. This is an important moment in the national dialogue on MSP. Brazil further solidified its commitment by pledging, during the 2017 United Nations Ocean Conference, to implement MSP by 2030, aligning this objective with the culmination of the UN Decade of Ocean Science for Sustainable Development.

Institutionally, the Brazilian Navy indicates that formal concern with MSP began to materialize with the incorporation of Objective 0563 into the 2016–2019 Multi-Year Plan (Plano Plurianual – PPA) – "Promote the shared use of the marine environment and manage the coastal zone sustainably." The responsibility for developing the first

9. According to IBGE, the area of the Brazilian Legal Amazon comprises 772 municipalities and covers a total of 5,015,146 km². Available at: https://www.ibge.gov.br/geociencias/cartas-e-mapas/mapas-regionais/15819-amazonia-legal.html. Accessed on: Oct. 3, 2024.

version of the Shared Use Plan of the Marine Environment through MSP[10] was assigned to the Secretariat of the Interministerial Commission for Marine Resources, with financial support from the Ministry of Defense.

Following its initial inclusion in the national budgetary planning instruments, MSP was further institutionalized in the 10th Sectoral Plan for Marine Resources (Plano Setorial para os Recursos do Mar – PSRM), published in 2020.[11] In this document, MSP is recognized as one of nine strategic thematic areas, interconnected with a range of cross-cutting objectives, thereby reinforcing its importance in Brazil's broader marine governance framework.

TABLE 1
Objectives of the PSRM related to MSP

Contribute to the achievement of Brazil's goals established by the National Policy for Marine Resources (PNRM).
Promote scientific research, technological development, conservation, and the sustainable use of living and non-living resources and ocean observation and monitoring systems, expanding Brazil's presence in the Blue Amazon and in international areas of interest.
Establish scientific bases and integrated actions capable of supporting policies, actions, and strategies for the conservation and sustainable use of biodiversity.
Contribute to reducing environmental, social, and economic vulnerabilities in the coastal zone.
Expand and consolidate monitoring systems of the oceans, the coastal zone, and the adjacent atmosphere, including the installation of meteo-oceanographic observatories, in order to improve scientific knowledge and help reduce vulnerabilities and risks resulting from extreme events, thus enabling responses to emergency situations.
Foster the creation of databases and integrated systems, and improve existing ones, to make available the meteo-oceanographic and marine natural resource data collected and produced under the PSRM for public access, promoting the inclusion of systems intended for the collection of biogeochemical, biological, and ocean ecosystem data.
Encourage institutions related to Marine Sciences to provide data and metadata collected during expeditions carried out by the national scientific community to the National Oceanographic Data Bank and the Brazilian Biodiversity Information System.

(Continues)

10. See Action from the 2016–2019 Multi-Year Plan (PPA). Available at: https://www.gov.br/mma/pt-br/acesso-a-informacao/acoes-e-programas/programa-projetos-acoes-obras-atividades/plano-plurianual/programas-tematicos-2016-2019/3.8_Oceanos_zona_costeira_e_antartica_2046.pdf. Accessed on: Sept.19, 2024.

11. This text is based on the tenth edition of the Sectoral Plan for Marine Resources (PSRM), which was in effect at the time of the Portuguese version of this study's publication. The decree 12.363 was published in the beginning of 2025 with the text of the eleventh edition (XI PSRM).

(Continuation)

Promote the development of technology and national production of materials and equipment necessary for research, monitoring, and exploration activities at sea.
Support updates to Brazilian legislation, aiming at its application in all aspects concerning marine resources, integrated coastal and ocean management, and national maritime interests.
Promote the establishment of shared use of the marine environment in the country through the implementation of MSP.
Contribute to the development and consolidation of a sustainable blue economy in the country.
Encourage the institutions that make up the Interministerial Commission for Marine Resources, as well as their subordinate and peer agencies at other levels of government, to store or share their geospatial data and metadata within the National Spatial Data Infrastructure, in accordance with Decree Nº. 6.666 of 2008, for the benefit of the country's development.
Contribute to the implementation, in Brazil, of the goals of SDG 14 (Life Below Water) of the 2030 Agenda.
Stimulate the establishment of national and international partnerships to develop research, personnel training, and technology transfer, and to enable the provision of extra-budgetary resources, such as those from research, development, and technological innovation projects.

Source: Brasil (2020).

This set of objectives illustrates the interconnectedness between policy goals and actions related to the conservation and sustainable use of marine resources, with MSP assuming a central role. Within this framework, MSP is characterized as a cross-cutting initiative and is described in the plan as a "solution for mediating conflicts over marine space use, contributing to the orderly development of the Blue Amazon and fostering a sustainable blue economy."[12]

Due to the importance of this topic, Brazilian government established the Blue Economy Executive Committee, within the Interministerial Commission for Marine Resources, and coordinated by the Ministry of Science, Technology and Innovation. This Committee aims to " coordinate the multisectoral debate, in an inclusive and participatory manner, in order to acquire the necessary knowledge to formulate a national strategy based on science, technology, and innovation for the blue economy, centered on the principles of sustainability and social justice, and that promotes the country's economic development synergistically, with a view to preserving marine ecosystems and ensuring the fair distribution of the benefits generated for Brazilians, now and in the future." (Marinha do Brasil).[13]

12. See 6.5 from X PSRM.

13. Retrieved from: https://www.marinha.mil.br/secirm/pt-br/psrm/economiaazul. Accessed on: Aug. 19th, 2025.

The 10th Sectoral Plan for Marine Resources (PSRM) includes a dedicated section on MSP (item 7.9), which underscores the planning tool's importance as a mechanism for strengthening governance and asserting national sovereignty over the Blue Amazon. This section outlines nine expected deliverables from MSP implementation:

- Compilation of current legislation and identification of existing legal constraints;
- Development of a marine spatial management plan (including a national vision and government guidelines);
- Creation of diagnostic maps;
- Production of marine zoning maps;
- Update of the vade mecum for the marine environment;
- Establishment of the National Marine Spatial Data Infrastructure;
- Delivery of MSP training and capacity-building programs;
- Preparation of a technical and scientific report analyzing key elements required for MSP implementation in Brazil;
- Execution of a pilot MSP project in a selected region of the country.

According to the Brazilian Navy,[14] the legislative review is over and the update of the marine *vade mecum* are currently in progress. An Executive Committee for MSP was formally established by Ordinance No. 235/MB, dated July 30, 2020, which defines the composition and responsibilities of the committee.

In late 2023, Resolution No. 7 of the Interministerial Commission for Marine Resources (CIRM) was issued, establishing a national vision and guiding principles for MSP. As part of its implementation strategy, the Brazilian coastline was divided into four regions: South, Southeast, Northeast, and North, each with designated implementation processes. BNDES Azul[15] is responsible for advancing MSP in the South, Southeast, and

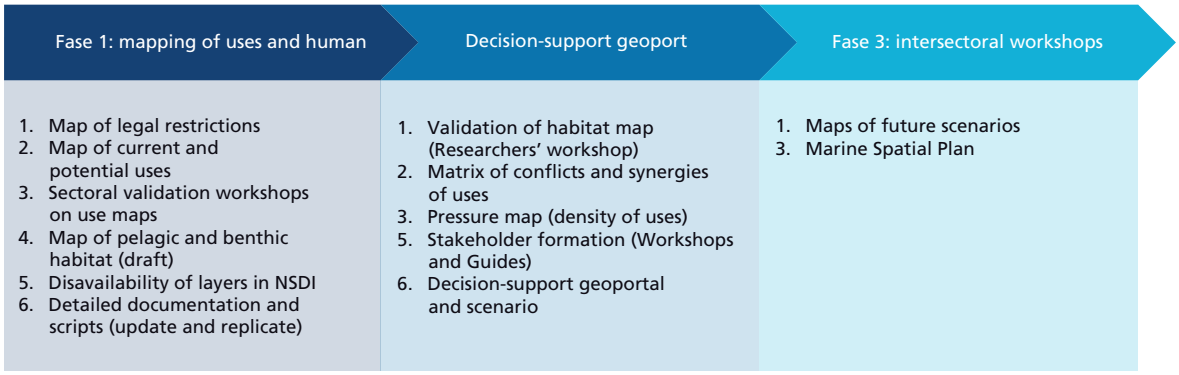
14. Available at: https://www.marinha.mil.br/secirm/psrm/pem.

15. BNDES Azul is a program led by the Brazilian National Bank for Economic and Social Development (Banco Nacional de Desenvolvimento Econômico e Social – BNDES) focused on the maritime domain, with initiatives structured around four key pillars: marine spatial planning; fleet decarbonization, through the renewal of vessels with an emphasis on renewable energy; port infrastructure investments; and support for the Climate Fund in matters related to water resource management. Retrieved from: https://agenciadenoticias.bndes.gov.br/detalhe/noticia/BNDES-avança-no-apoio-a-economia-azul-em-quatro-frentes-estrategicas/. Accessed on: Sep. 18th, 2024.

North regions, while the Brazilian Biodiversity Fund[16] (Funbio) is managing the process in the Northeast.

According to Violante, Albuquerque, and Carvalho (2022), the pilot project for the Southern region of Brazil has been structured into three distinct phases, which are expected to serve as a replicable model for subsequent implementation across the other regions.

FIGURE 5
Phases of the MSP Pilot Project



Source: Violante, Albuquerque, and Carvalho (2022), p. 239.

4 WHY IS IT IMPORTANT FOR MSP TO BE TREATED AS A PUBLIC POLICY MANAGEMENT TOOL?

To understand the importance of MSP as a public policy instrument, it is essential to begin by identifying the underlying factors that have driven the growing international attention to oceans and seas over the past two decades.

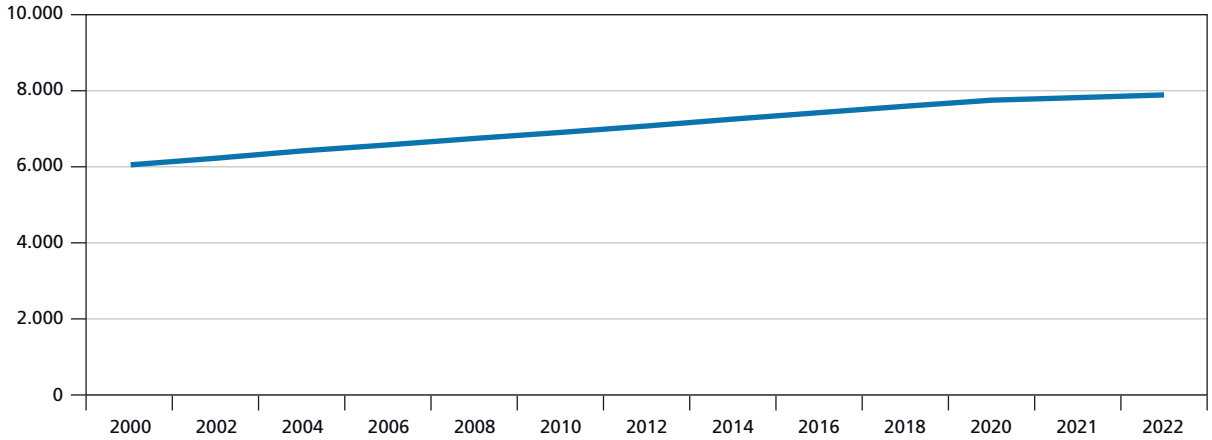
One of the most pressing drivers is global population growth. According to projections by the United Nations (2022), the world population is expected to reach 10.4 billion by the 2080s. As of now, the global population stands at approximately 8 billion, having grown at an average annual rate of 1.2% between 2000 and 2020.

Although certain regions, such as Brazil, are experiencing a deceleration in demographic growth, with an estimated annual rate of 0.41%, other parts of the world, particularly in Africa and Asia, continue to grow at significantly higher rates, nearing 2.5% per year (UN, 2024).

16. The Brazilian Biodiversity Fund (Funbio) is a non-governmental, non-profit organization that supports initiatives aimed at biodiversity conservation.

Countries in Asia experiencing significant population growth are also among Brazil's principal trade partners. Notably, China stands out, accounting for more than half of Brazil's trade surplus and ranking as the eighth-largest foreign investor in the country.

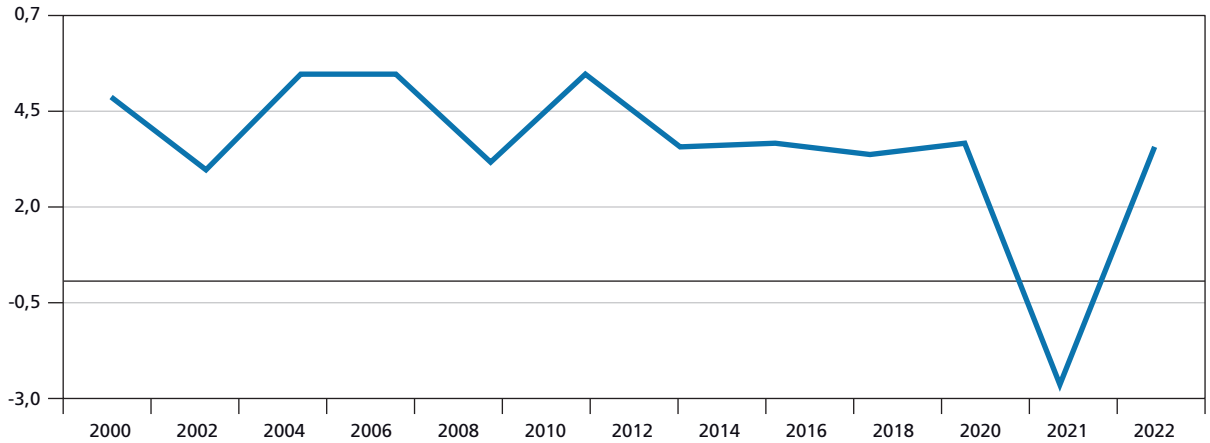
FIGURE 6
Global population growth
(In million)



Source: IMF (2024).
Authors' elaboration.

Moreover, global economic performance plays a critical role in shaping the demand for a diverse range of goods and services, including those derived from marine environments.

FIGURE 7
Global GDP Growth
(In %)



Source: IMF (2024).
Authors' elaboration.

4.1. From an Economic Perspective

Over the past two decades, global economic growth has fluctuated between 2% and 5%, marked by two major downturns: the 2009 global financial crisis and the 2020 SARS-CoV-2 pandemic. During this same period, Asian countries maintained a consistently elevated growth trajectory, with annual real GDP growth rates ranging from 5% to 8% between 2000 and 2020.

In this context, population growth and global economic performance emerge as critical explanatory variables in the planning and governance of marine resources. An expanding global population intensifies demand for food, energy, raw materials, and ecosystem services – many of them are intrinsically linked to the ocean. According to the Intergovernmental Panel on Climate Change (IPCC) 2024, projected demographic trends will necessitate a 70% increase in global food production by 2040. However, evidence suggests that food supply remains insufficient to meet rising global demand, further aggravated by regional declines in total factor productivity, climate disruptions, and international conflicts. Marine living resources are thus considered a possible solution. However, these resources are already overexploited, many are in decline, and are equally affected by climate change impacts such as ocean acidification, requiring protective measures.

Urban growth presents additional governance challenges, particularly in coastal zones. Over 40% of the global population currently resides in coastal zones. In Brazil, 17 states and 280 municipalities are located along the coast – accounting for only 5% of the country's territory, but home to approximately 40 million people, or 17% of the national population. Among these municipalities, 120 (43%) form part of metropolitan regions and urban agglomerations with high industrial concentrations, intensifying competition for coastal and marine space across sectors.

In parallel, economic growth drives increased demand for food, goods, and services, thereby accelerating international trade and the expansion of maritime transport – both for cargo and passenger (leisure) traffic. These dynamics often stimulate tourism and attract investments in ocean-based assets, which may include both financial market instruments (still underdeveloped in the marine sector) and physical infrastructure. As trade volumes grow, seaports must adapt to larger vessels while also accommodating traditional fishing fleets and industrial ships. Ports must be equipped to manage vessel congestion during peak demand and unforeseen global events, such as those observed during the Covid-19 pandemic.

Additionally, the shipbuilding and decommissioning industries rely on complex supply chains involving thousands of companies from multiple economic sectors. Energy security remains a critical concern, and ocean-based energy sources are undergoing significant global expansion. These include wave energy, tidal currents, thermal and salinity gradients, and particularly offshore wind energy. According to Shadman and Stefan (2022), the expansion of renewable energy infrastructure in marine environments has the potential to generate spatial conflicts with existing oil and gas activities.

These illustrative examples – though not exhaustive – underscore the expansive scope of the blue economy and the inherent complexities involved in governing the multiplicity of uses within marine territories. According to Acselrad (2004), societal reproduction processes often generate competing visions for the use and meaning of environmental resources, resulting in conflict over these resources. Although the governance of marine and coastal resources involves significant complexity and competing interests, it holds substantial potential for advancing socioeconomic development.

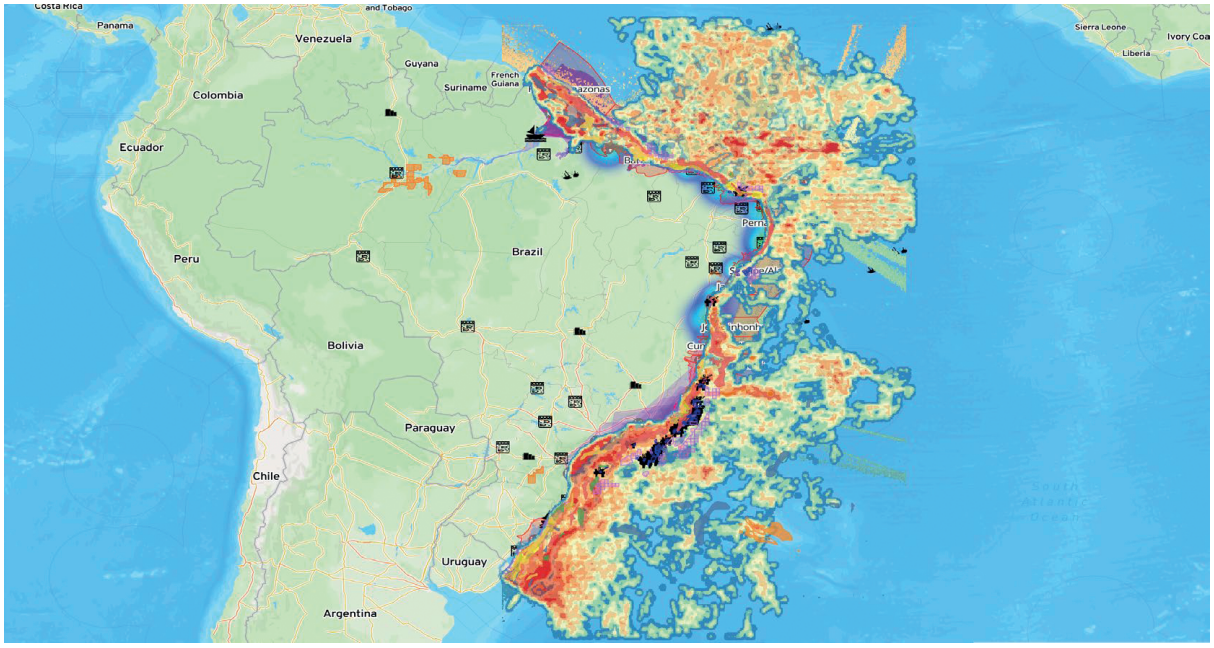
Understanding the contribution of ocean-related sectors to the national economy is essential for informed public policy. It enables strategic allocation of financial resources and the formulation of long-term development plans. So, it is important to mesure the sea contribution to national economy. According to Carvalho (2022), in 2018, the gross domestic product (GDP) of ocean-related activities in Brazil was estimated at R$ 212.3 billion, representing 3.0% of national GDP (up from 2.6% in 2015). For coastal-related activities,[17] GDP reached approximately R$ 1.1 trillion, or 16.5% of Brazil's GDP in both 2015 and 2018. Combined, the ocean and coastal economy contributed R$ 1.36 trillion in 2018, equivalent to 19.4% of national GDP (up from 18.9% in 2015).

In terms of employment, ocean-related activities – both formal and informal – accounted for over 2 million jobs, or 2.2% of total national employment (compared to 2.1% in 2015). When coastal-related sectors are included, this number rises substantially to 17.6% of national employment. Thus, in 2018, Brazil's ocean and coastal economy supported nearly 21 million workers, amounting to 19.8% of the national labor force, a slight decrease from 20% in 2015.

17. It is important to emphasize that the activities classified as indirectly related to the sea are not the same as those categorized under the scope of directly related marine activities. Therefore, there is no double counting in intermediate consumption or in the components of final demand.

MAP 1

Spatial distribution of economic activities in Brazil's maritime territory



Source: Available at: https://www.seasketch.org/brasil/app. Access on: Sept. 19, 2024.

For illustrative purposes only, we present the map 1, that is available through the SeaSketch platform (software tool designed to support the participatory and collaborative development of spatial planning maps). In this visualization of the Brazilian maritime territory, focused specifically on economic activities, one can observe the diversity of ocean-based sectors and their spatial overlaps. The figure highlights a range of activities, including offshore wind energy projects, mineral resource zones (both active and prospective), and areas designated for oil and gas exploration and production, among others.

4.2 From an evironmental perspective

Considering the growing global interest in ocean resources over recent decades, it is imperative to also account for environmental conservation and climate change, particularly considering the rapid and exponential expansion of coastal and marine resource exploitation. As noted by Joffray et al. (2021), the increasing demand for marine resources – accompanied by the accelerated development of related sectors, such as aquaculture – has given rise to what the authors named "blue acceleration." This phenomenon has resulted in intensified occupation of coastal and marine areas, thereby exacerbating spatial conflicts among competing uses.

Beyond these conflicts, it is important to recognize that all human activities in marine and coastal zones generate environmental consequences. As such, there is an urgent need to organize and coordinate these activities, managing not only competing interests and conflicts but also their associated ecological impacts. The rationale for conserving ecosystems extends beyond their intrinsic biodiversity or environmental characteristics; it rests fundamentally on the ecosystem services they provide. Ecosystem services refer to the benefits that natural systems offer to both nature and human societies, such as atmospheric carbon sequestration. For instance, mangrove ecosystems are at least twice as effective as the Amazon rainforest in sequestering carbon, according to Kauffman et al. (2018) – a process widely recognized as blue carbon.

The European Environment Agency[18] classifies ecosystem services into three categories: provisioning, regulating, and cultural. In contrast, Brazilian legislation (Brasil, 2021a) recognizes four categories: provisioning, supporting, regulating, and cultural.

- Provisioning services refer to tangible goods and products derived from ecosystems that can be consumed or traded, such as water, fish, oil, and gas;
- Supporting services relate to essential life-sustaining processes, including nutrient cycling carried out by phytoplankton and macroalgae (Gerling et al., 2016);
- Regulating services pertain to ecosystem functions that maintain environmental stability, such as carbon sequestration and climate regulation;
- Cultural services encompass non-material benefits, including recreation, spiritual value, and the cultural identity of coastal communities.

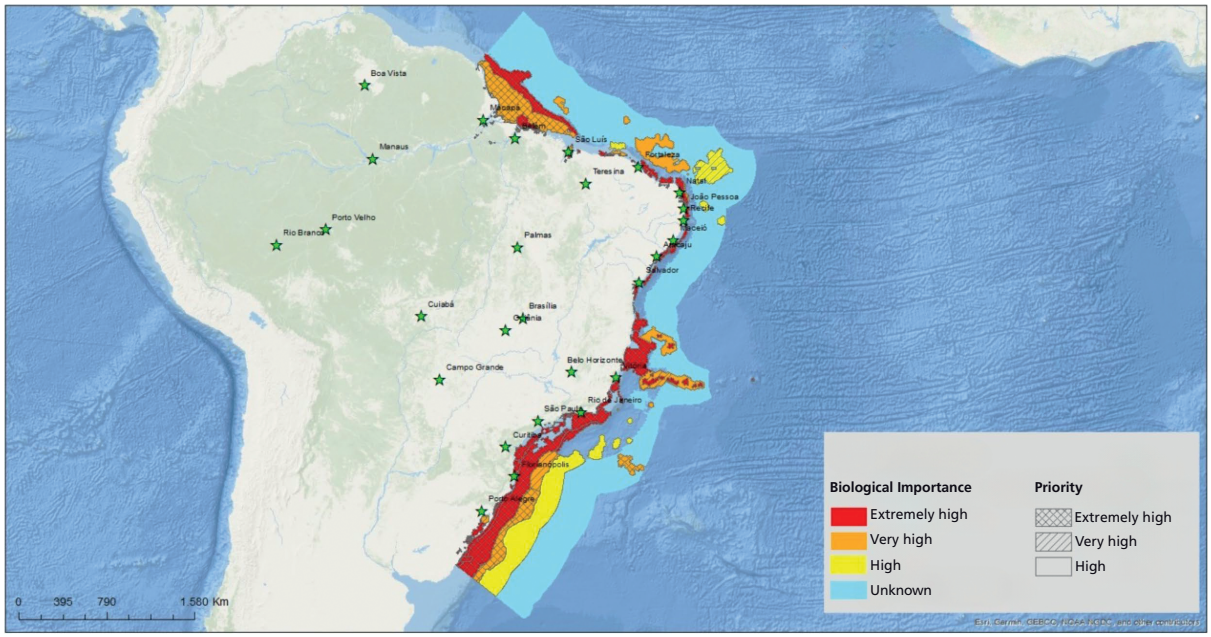
Concerns over sustainability, biodiversity, and socioeconomic activities on Brazil's marine and coastal zones are also reflected in the priorities of Sustainable Development Goal 14 of the United Nations 2030 Agenda. These concerns were recently addressed in Brazil's Voluntary National Review[19] presented to the UN. The report indicates that while modest progress has been made since the previous edition in 2018, substantial efforts are still needed to ensure that the use of oceans, seas, and marine resources is aligned with the principles of sustainable development and conservation.

18. This information is available at: https://www.eea.europa.eu/pt/sinais-da-aea/sinais-2021/infograficos/o-que-sao-servicos-dos-ecossistemas/view. Accessed on: Sept. 7, 2024.

19. See: Brazil (2024).

In this context, MSP acts as a strategic framework for advancing Brazil's commitments under SDG 14, by providing a structured approach to balancing economic activities, ecological protection, and social well-being within marine spaces.

FIGURE 9
Priority areas for coastal zone conservation



Source: Ministry of the Environment and Climate Change. Available at: https://www.gov.br/mma/pt-br/assuntos/biodiversidade-e-biomas/biomas-e-ecossistemas/conservacao-1/areas-prioritarias/zona_costeira.jpg.

In addition to resource extraction, economic and recreational activities significantly impact vulnerable coastal and marine environments, with pollution identified as a principal environmental concern. Marine pollution originates from multiple sources, including nutrient-rich effluents from domestic, industrial, and agricultural waste entering the sea via river systems; ballast water discharged by vessels, which introduces non-native invasive species; underwater noise generated by offshore infrastructure such as wind farms; and widespread contamination by oil and plastics.

One of the most pressing pollution-related challenges is artificial eutrophication, which occurs when excess nutrients are discharged into aquatic ecosystems. As explained by Luiz Cotovicz,[20] eutrophication results from an overgrowth of

20. Interview with Luiz Carlos Cotovicz Junior for O Eco. Available at: https://oeco.org.br/reportagens/entenda-como-a-atividade-agricola-e-a-falta-de-saneamento-afetam-a-biodiversidade-dos-oceanos/. Accessed on: Sept. 18, 2024.

phytoplankton and aquatic plants, leading to reduced oxygen levels and degradation of water quality.[21] While this process can occur naturally, when accelerated by the amplified discharge of these nutrientes it is called artificial eutrophication. Moreover, eutrophication is considered an indicator of ocean health under SDG 14. However, as noted by Andrade et al. (2024), Brazil currently lacks a comprehensive data collection and monitoring system for assessing eutrophication levels in its marine waters.

Maritime transport contributes to atmospheric pollution and ocean acidification, as most vessels use hydrocarbon fuels. They also generate underwater noise that disrupts marine life. The discharge and intake of ballast water at different global locations introduces invasive species into new ecosystems, causing ecological imbalances, as discussed by Collyer (2007). To address this, BNDES launched a 2024 project focused on decarbonizing the Brazilian fleet.[22]

Plastic waste is recognized as the most prevalent form of marine pollution, with far-reaching ecological implications. According to Diógenes and Mont'Alverne (2020), approximately 90% of surface marine litter is composed of plastic, which poses severe threats to both flora and fauna. For example, microplastics have been detected in species as remote as Antarctic penguins, indicating the global reach of plastic contamination (Fragão et al., 2021). The implications of such pollution extend beyond ecological degradation; they compromise the usability of marine spaces and undermine the legitimate rights of coastal populations to benefit from ocean resources. Jambeck et al. (2015) estimate the cumulative volume of plastic waste in the ocean, as illustrated in the figure below. Thus, pollution has far-reaching implications for the sustainability of coastal communities, economic activities like tourism and aquaculture, and the rights of people to use the ocean legitimately.

Therefore, it can be recognized that pollution directly undermines the sustainability of life in coastal communities, as well as the viability of key economic activities in these areas, such as tourism and aquaculture. Fundamentally, it affects individuals and communities who hold a legitimate right to access and benefit from the sea.

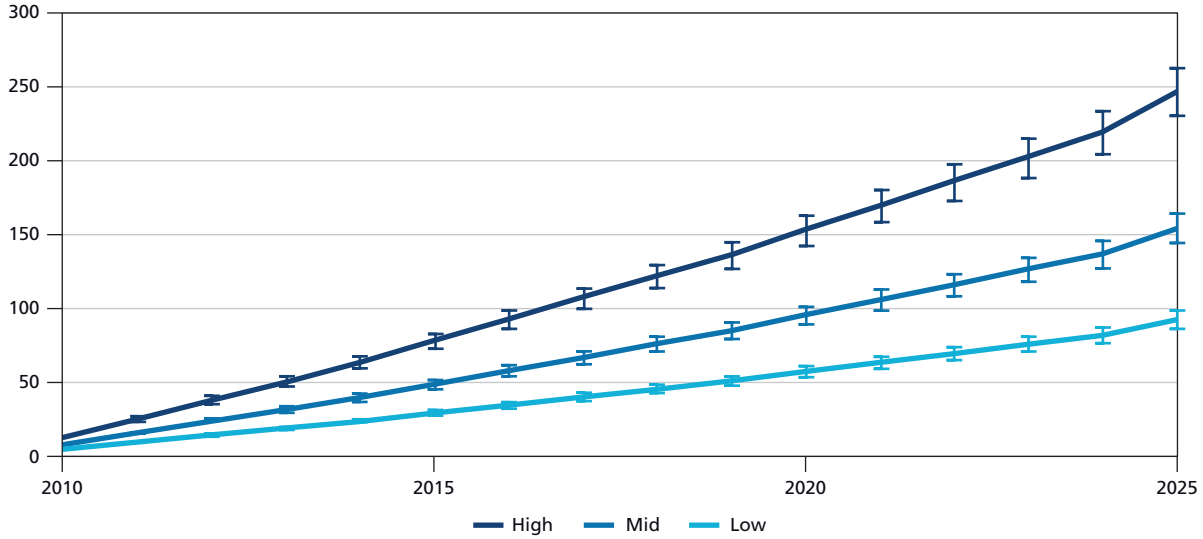
21. According to Paulino, França, and Ferreira (2007).

22. The actions of BNDES Azul can be found at: https://agenciadenoticias.bndes.gov.br/detalhe/noticia/BNDES-avanca-no-apoio-a-economia-azul-em-quatro-frentes-estrategicas/. Accessed on: Sept. 18, 2024.

FIGURE 10

Accumulated Plastic Waste in the Ocean

(In millions of metric tons)



Source: Jambeck *et al*., (2015), p. 770.

Obs. : In this figure, Jambeck et al. (2015) present an estimate of marine pollution based on mismanaged plastic waste from 192 countries located within 50 km of the coastline. The authors also assign percentage values to different levels of waste mismanagement: 15% for low, 25% for moderate, and 40% for high levels of mismanagement.

Overall, the challenges reflect the intersection of environmental, economic, and demographic pressures. Population growth – as a matter of human survival in all its dimensions; global economic growth – which places increasing pressure on demand for goods and services, thereby affecting coastal environments – the urgent conservation of resources is already in decline, and the complex management of multiple resource uses shed light on the varied interests and conflicts surrounding coastal and marine resources.

In this scenario, it is the responsibility of planners, managers, and society to make efforts to mediate conflicts among stakeholders and economic actors with divergent interests, mitigate harmful impacts on marine ecosystems, reduce informational asymmetries that hinder investment, and identify and foster sustainable economic activities – i.e., the blue economy – related to the sea, which generate employment and income.

From this perspective, public policies that internalize the demands associated with marine and coastal resources – including the blue economy – are most effective, especially when designed with a long-term orientation.

5 PUBLIC POLICIES

Lasswell (1936; 1951), considered one of the pioneers of policy sciences, noted that decisions and analyses about public policy must answer the questions: who gets what, why, and what difference does it make. Pereira (1994) classifies public policy as the transformation of private decisions into public decisions and actions that affect everyone. A report by the Federal Court of Accounts of Brazil (Brasil, 2021b, p. 10) defines public policies as "a set of guidelines and interventions issued by the State, executed by individuals and legal entities, public and/or private, aimed at addressing public problems and requiring, using, or affecting public resources." Bucci (2002, p. 39) states that in the legal sphere, public policy can be understood as "a government action program resulting from a set of legally regulated processes[23] aimed at coordinating the means available to the State and private activities to achieve socially relevant and politically determined objectives."

In this context of public policy, Issifu et al. (2024, p. 2) argue that MSP "has become one of the most appropriate management tools to deal with severe damage in marine areas, while improving the well-being of people whose livelihoods are directly linked to these areas." Silva et al. (2024) add that MSP is currently assigned mandates for social inclusion and justice, especially for indigenous peoples and local communities, as well as the inclusion of gender and poverty-related issues. Considering that public policies are primarily guided by ensuring social well-being – for example, health, employment, food, and leisure – and that these aspects depend on a healthy, conflict-free ocean, it is entirely reasonable to designate MSP as a state public policy. Given that social issues are essential for public policy in general, and for MSP – which aims to balance ecological, economic, and social objectives – it is worth highlighting a few points. First, mapping coastal communities engaged in marine-related activities is fundamental to planning maritime space distribution in ways that sustain their economic activities. Such distribution should organize and stimulate the economies of these communities. It may also establish future scenarios accounting for the impacts that changes such as water pollution, warming, acidification, and sea level rise may have on these coastal populations.

23. The processes outlined by the authors are organized as follows: i) electoral process – the election of representatives by the people; ii) planning process – guides the future actions of public authorities and private actors; iii) budgetary process – focused on the allocation of resources; iv) legislative process – the exercise of governmental initiative in the drafting of laws; v) administrative process – the organization of decision-making within the public administration; vi) judicial process – the judiciary serves as the final forum for resolving conflicts related to the implementation of the rights established by public policies.

Environmental preservation is essential for sustaining these populations not only economically, but also through the diverse ecosystem services they depend on. For instance, mangrove ecosystems are vital for their rich biodiversity and the various ecosystem services they provide for humanity, such as carbon sequestration, coastal protection, and climate regulation (Bochove, Sullivan and Nakamura, 2014). They are especially important for coastal communities whose survival is linked to them. According to the Mangrove Atlas published by the Chico Mendes Institute for Biodiversity Conservation (Instituto Chico Mendes de Conservação da Biodiversidade – ICMBio, 2018), these ecosystems are fundamentally tied to popular culture through stories, legends, and folklore. They are also sources of food, income, and housing for many families. Threats to these zones – whether from pollution or sea level rise – present social problems affecting thousands of people.

Similarly, other activities also contribute to the livelihood of families living near the coast, such as shrimp farming, for instance. It can be said that this activity, when unsupervised, competes with the activities carried out in mangroves, as its establishment can harm that ecosystem. Therefore, it is important that MSP considers all issues involving coastal communities through the transparency of its actions and dialogue with public agencies that maintain policies related to this population, as well as with civil society, especially with the involved communities.

Pereira (1994) and Bucci (2002) emphasize that a policy is public when it addresses public interests, and by public one should not only understand the State but also incorporate private decisions that can be controlled by citizens as an expression of a public process. Thus, Nahuelhual et al. (2024) states that public contribution to policy formulation processes ensures that regulations resonate with the needs and aspirations of communities, increasing their effectiveness and promoting broad acceptance.

In Brazil, laws,[24] decrees, and complementary measures are sectoral, that is, they are dispersed and disintegrated, and in many cases appear disconnected among federal entities and levels of government. There is a lack of a single regulatory framework from which specific regulations can emerge, considering that it is appropriate for each state or region to have its own strategy given the heterogeneity of the national coastline.

24. For over ten years, Bill No. 6,969/2013 – commonly known as the “Law of the Sea” – has been under consideration. The bill aims to establish the National Policy for the Integrated Management, Conservation, and Sustainable Use of the Coastal-Marine System. This bill was approved in May, 2025, by the Chambers of Deputies, and now is under consideration of the Federal Senate - PL 2674/2025.

According to the Federal Constitution of 1988:

> Article 20. The Union owns the following properties:
>
> (...)
>
> III – the lakes, rivers and any watercourses in lands within its domain, or that flow through more than one State, that serve as boundaries with other countries, or that extend into foreign territory or proceed therefrom, as well as riverbanks and river beaches;
>
> IV – the river and lake islands in zones bordering with other countries; sea beaches; ocean and off shore islands, excluding those which are the seat of Municipalities, with the exception of areas assigned to public services and to federal environmental units, and those referred to in Article 26, item II; (CA 46, 2005)
>
> V – the natural resources of the continental shelf and of the exclusive economic zone;
>
> VI – the territorial sea;
>
> (...)
>
> IX – mineral resources, including those of the subsoil;
>
> (...)
>
> Article 225. Everyone has the right to an ecologically balanced environment, which is an asset of common use and essential to a healthy quality of life, and both government and community shall have the duty to defend and preserve it for present and future generations." (Brasil, 2022)

Given that they are Union properties, even though legislative competence overlaps among federal entities, it is once again understood that, in the Brazilian case, MSP is a viable strategy of state public policy, as it is conceived as a strategic tool in the organization and even in the governance and management of the ocean, possessing the necessary premises to fill the regulatory gaps and needs for conservation, strategic business plans related to the sea, and to reduce uncertainties for investors. Silva et al. (2024) states that in countries without an established legal framework, plans may be used as guiding principles but may result in implementation gaps.

The use of MSP will be very important for the formulation, implementation, and evaluation of many public policies. Firstly, it can contribute to security and defense policies of the Brazilian sea. The organization of maritime activities, the establishment, and recognition of areas of natural wealth can attract the attention of third parties, and it is important that the Armed Forces can defend the maritime space from threats.

In this regard, the National Defense Strategy includes in its text the strengthening of Naval Power. According to Violante, Costa, and Leonardo (2020), the contribution that MSP can offer to defense and security policies is related to the consolidation of maritime spaces, being an auxiliary instrument in the task of conserving, protecting, and defending Brazilian jurisdictional waters from different threats. As these authors affirm:

> It is possible to think of an association that involves the development of national Marine Spatial Planning with the protection, conservation, and defense of living and non-living resources under jurisdiction, safeguarding national interests in the maritime areas under the country's responsibility (Violante, Costa, and Leonardo, 2020, p.61).

Regarding environmental policies, MSP can help make them more efficient. One of the MSP phases is to identify and map areas of environmental interest. To illustrate the importance of this mapping, we can mention the National Program for the Conservation and Sustainable Use of Brazil's Mangroves - ProManguezal. Mangroves, as mentioned earlier, provide, among other ecosystem services, carbon sequestration (in which they are 70% more efficient than other ecosystems). Although Decree 12.045/2024 (Brasil, 2024a), which created ProManguezal, does not explicitly mention a possible relationship with MSP, mapping mangrove areas in order to protect them and prevent harmful activities in those ecosystems is a relevant task that can be supported by MSP. The preservation of local biodiversity and sustainability (economic and social) for coastal communities is both a goal of ProManguezal and MSP.

Organizing economic activities in maritime space presents a challenge. With the expansion of activities at sea (blue acceleration), every space becomes important. This alignment of activities and the conservation of the marine environment is the major challenge. Since there are highly profitable activities that contribute significantly to GDP, it is often difficult to coordinate conflicts and interests in these spaces. For example, a maritime traffic zone cannot coincide with an environmental preservation zone. However, if a route deviation is necessary, it can cause economic losses to shipping companies with the aim of ensuring environmental conservation. Issues such as these and even more conflicting ones must arise and be resolved in the MSP process, which must involve discussions with all parties representing the interests involved.

It is important to emphasize the dynamic nature of MSP. Stages 9 and 10 indicated in figure 1 of this text reflect this need. The action guidelines defined by the State and the activities carried out in maritime space may be modified due to economic, environmental, or even technological innovation interests. However, one cannot forget

that maritime space is also dynamic and has been undergoing significant and rapid changes. Some factors have already been mentioned earlier, such as the increase in ocean pollution, which can be a factor in altering fishing areas, in addition to the quality of fish, for example.

Likewise, ocean acidification[25] also brings consequences for the conservation of marine life and the preservation of biodiversity. This change in seawater pH due to excess carbon dioxide in the atmosphere directly impacts marine species that have shells and corals.

Rapid artificial eutrophication in areas of higher urban concentration does not prevent these areas from being dedicated to aquaculture, for example. However, for that to happen, the space must be treated so that oxygenation levels of the water return to acceptable levels.

As a final point to highlight, but which does not exhaust the issue, is the rise in sea level. Some coastal cities are already suffering from these changes and have already begun to take measures.[26] In the face of this challenge, MSP should be considered a strategic instrument of public policies.

6 FINAL REMARKS

The current moment is marked by the expansion of ocean industrialization, simultaneously with the need to preserve the health of this resource. As a supplier of scarce resources, it is essential to ensure governance and regulation of the ocean.

The MSP, a tool already adopted by several countries, responds to the demand for organizing the maritime space through the coordination of the spatial and temporal distribution of maritime activities and the conservation of the marine environment. Its objective is to secure benefits from marine resources while simultaneously preserving ecosystem services.

MSP is a dynamic instrument, and its definition has evolved over the years. As a public policy management tool, it reflects the concerns of governments and international organizations regarding the ocean. As addressed throughout this paper, one widely

25. Available at: https://semil.sp.gov.br/educacaoambiental/prateleira-ambiental/acidificacao-oceanica-3/. Access on: Oct. 10, 2024.

26. Available at: https://www.diariodolitoral.com.br/diario-mais/avanco-do-oceano-pode-eliminar-tradicional-cidade-do-litoral-de-sp-do/183200/. Access on: Oct. 10, 2024.

used approach to MSP is the ecosystem-based one, which aims to balance ecological, economic, and social goals while promoting sustainable development. This approach is aligned with SDG 14 and the Ocean Decade.

Brazil's process has already begun. Since 2014, the topic has been under discussion and has increasingly gained attention. In 2016, it was included for the first time in the Multi-Year Plan (PPA) 2016 – 2019 and has been maintained in subsequent versions. With the assumption of the international commitment in 2017, Brazil began concentrating efforts on its implementation. Thus, the Interministerial Commission for Marine Resources was tasked with coordinating this action. The first steps have already been taken, such as the creation of an Executive Committee and the issuance of public tenders for the projects related to the four regions (South, Southeast, Northeast, and North). However, this stage of MSP has mainly been executed using resources from BNDES and Funbio.

Brazil's marine and coastal space is home to biodiversity that has been subjected to significant disruptions, such as rapid eutrophication, water acidification, sea warming, sea level rise, and pollution from oil, plastics, and other pollutants. These issues, resulting from human actions on the planet, must be considered in the spatial and temporal organization of the MSP.

Global population and economic growth have also impacted the exploitation of marine resources. Increasing population growth rates put pressure on the search for food resources in the sea, which, in some ocean regions, are already overexploited. Additionally, economic growth intensifies consumption and market dynamics, including those related to the sea, such as hydrocarbon extraction and other energy sources, tourism, maritime transport, among others.

In the pursuit of coordinating all these activities to ensure economic growth while maintaining a healthy ocean capable of delivering effective ecosystem services, it is vital to have an instrument that can contribute to this balancing task. Globally, MSP has been adopted for this purpose. It is also important to highlight the need for long-term public funding for this project. The current phase of project contracting is mostly financed by BNDES resources, i.e., non-budgetary. For the continuity of the MSP, it is essential that the Brazilian State provide the necessary resources to ensure its integrity and democratic character by balancing interests and resolving conflicts.

Thus, MSP may become an opportunity to serve as a public policy management tool and to integrate the formulation of policies and regulatory frameworks, aligning public

processes (understandings and conceptions) with the goals of MSP as a regulation concerning the Brazilian sea, indicating opportunities for multiple uses and increasing the potential for political effectiveness.

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Roboto regular, bold, black 12/14 (titles)
Roboto regular font 10 (graphs and tables)
Rio de Janeiro-RJ

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ISSN 1415-4765



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