

REPUBLIC OF TÜRKİYE
ANKARA UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF MARITIME, TRANSPORTATION LAW AND
POLITICS

THE MARINE SPATIAL PLANNING OF INDONESIA AND
CHINA: A COMPARATIVE STUDY

Master's Thesis

SYIFA NUR AINI

Ankara, 2024

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I state that all the information in my master's thesis titled “The Marine Spatial Planning of Indonesia and China: A Comparative Study (Ankara.2024)”, which I prepared under the supervision of Dr. Öğr. Üyesi Kübra Var Türk was collected and presented in accordance with academic rules and ethical behavior principles, I fully indicated the information I received from other sources in the text and in the bibliography, I declare that I have acted in accordance with the ethical rules, and I will accept any legal consequences in case the contrary arises.

Date: 23.07.2024

SYIFA NUR AINI

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ABBREVIATIONS

GDP	: Gross Domestic Product
GOP	: Gross Ocean Product
KAW	: Kawasan Antar Wilayah
KSN	: Kawasan Strategis Nasional
KSNT	: Kawasan Strategis Nasional Tertentu
MFZ	: Marine Functional Zoning
MLR	: Ministry of Land and Resources
MNR	: Ministry of Natural Resources
MSP	: Marine Spatial Planning
PPKT	: Pulau-Pulau Kecil Terluar
RZ KAW	: Rencana Zonasi Kawasan Antar Wilayah
RZ KSN	: Rencana Zonasi Kawasan Strategis Nasional
RZ KSNT	: Rencana Zonasi Kawasan Strategis Nasional Tertentu
RZWP-3-K	: Rencana Zonasi Wilayah Pesisir dan Pulau-Pulau Kecil
SOA	: State Oceanic Administration
UN	: United Nations
UNCLOS	: United Nations Conventions on the Law of the Sea
UNESCO	: United Nations Educational, Scientific and Cultural Organization
TSS	: Traffic Separation Scheme
RTRW	: Rencana Tata Ruang Wilayah

INTRODUCTION

A) SUBJECT MATTER, AIM AND QUESTIONS

1- Subject Matter

Indonesia is a maritime and the largest archipelagic country in the world. Based on data, Indonesia's total area is 8,300,000 km² with a shoreline length of 108,000 km² and a total water area of 6,400,000 km².¹ Indonesia has 17,504 islands, and 16,056 islands have been submitted to the United Nations (UN).² Geographically, Indonesia is situated between two continents, which are the Australian Continent and the Asian Continent. In addition, Indonesia is sandwiched between the Pacific and Indian Oceans, thus makes Indonesia very rich in potential marine resources for both biological and non-biological resources.³ Indonesian seas have the richest biodiversity in the world at the genetic, species, and ecosystem levels.⁴

In accordance with Decree of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 19 of 2022 on the Estimation of Potentials of Fish Resources, the Total Allowable Catch, Utilisation of Fish Resources Level in the Fisheries Management Zone of the Republic of Indonesia, Indonesia consists of 375,842 tons of small pelagic fish, 114,621 tons of large pelagic fish, 202,510 tons of demersal fish, 138,306 tons of reef fish, 50,267 tonnes of penaeid shrimp, 734 tonnes of lobster, 1,694 tonnes of crab, 4,902 tonnes of flower crab and 22,658 tonnes of squid.⁵ As the given data shows, due to its rich resources, it can greatly support Indonesia's economic

¹ 'Menko Maritim Luncurkan Data Rujukan Wilayah Kelautan Indonesia' (*Coordinating Ministry for Maritime and Investments Affairs*, 03 November 2019)
<<https://kkp.go.id/brsdm/poltekkarawang/artikel/14863-menko-maritim-luncurkan-data-rujukan-wilayah-kelautan-indonesia>> accessed 30 November 2022.

² Ibid.

³ Abdunnur, *Pengelolaan Wilayah Pesisir dan Laut Kalimantan Timur* (1st edn, PT. Rajagrafindo Persada 2021).

⁴ Zainul Arifin, Fredinan Yulianda, Zulhamsyah Imran, 'Analysis of Marine Biodiversity as Underwater Macro Photography (Ump) Tourism Objects in Tulamben Waters, Bali' (2019) 11 *Jurnal Ilmu dan Teknologi Kelautan Tropis* 335.

⁵ Decree of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 19 of 2022 on the Estimation of Potentials of Fish Resources, the Total Allowable Catch, Utilisation of Fish Resources Level in the Fisheries Management Zone of the Republic of Indonesia.

and sustainable development. In order to protect resources and utilise, the potential of those resources, marine spatial management is needed. Based on Law of the Republic of Indonesia Number 32 of 2014 on Marine Affairs states that marine spatial management includes planning, utilisation, monitoring, and control.

Moreover, planning is a very complex activity that includes many aspects and elements in the preparation process.⁶ The goal of developing the planning of marine areas is to promote the sustainable administration and governance of marine resources.⁷ In this case, the planning will produce a marine spatial planning. Marine spatial planning (MSP) is one of the goals in maintaining, preserving, and sustainably utilising marine resources for sustainable development.⁸ Obviously, Indonesia is interested in maintaining sustainable development, however, the state also aims to adopt MSP for effective protection and preservation of the resources and the optimal use of the sea by accommodating all interests to avoid conflicts over the use of marine space.⁹

According to the United Nations Convention on the Law of the Sea (UNCLOS), the state has its rights, freedoms and obligations in respect of the exploration, exploitation, conservation, management, and preservation of natural resources.¹⁰ The language of the UNCLOS embraces the state's competencies over its natural resources and indicates that the state has the right to protect the marine environment and the right to exploit its natural resources. UNCLOS also clarifies the concept of natural resources and indicates that the term encompasses not only living organisms found in the seabed and subsoil but also minerals and other non-living resources.¹¹

⁶ 'Perencanaan Ruang Laut' (*Office of Public Housing, Residential Areas & Urban Settlements of Bali Provincial Government*) <<https://tarubali.baliprov.go.id/daftar-informasi-publik/>> accessed 19 November 2023.

⁷ Catarina Frazão Santos, Charles N. Ehler, et al., 'Marine Spatial Planning' in Charles Sheppard (ed), *World Seas: An Environmental Evaluation* (Academic Press, 2019)

⁸ 'Sustainable Development Goals' (*Jogja Dataku*) <<https://bappeda.jogjaproprov.go.id/dataku/sdgs/detail/14-menjaga-ekosistem-laut>> accessed 19 November 2023.

⁹ 'Tata Ruang Laut vs Tata Ruang Darat' (*Office of Public Housing, Residential Areas & Urban Settlements of Bali Provincial Government*, 28 October 2021) <<https://tarubali.baliprov.go.id/tata-ruang-laut-vs-tata-ruang-darat/>> accessed 20 November 2022.

¹⁰ Articles 56, 77, 79, 145, 193, 194, 246, 249 UNCLOS.

¹¹ Article 77 UNCLOS.

Importantly, with natural resources, the state can create capital that will help to catalyse the process of significant development. Its role in economic development is undeniable. Natural resources are viewed as key assets driving real wealth creation of nations as well. Given the fundamental importance of natural resources, they need to be managed in a sustainable manner. Well-managed natural resources can improve the welfare of the Indonesian nation as well.¹² Therefore, the state is always interested to play an important role in establishing policies to ensure that resources contribute to countries' long-term development and not just generate short-term income. Therefore, due to its importance, Indonesia is interested in implementing mechanisms for the effective protection, preservation, exploration, exploitation, and management of natural resources.

MSP is generally defined as “a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that have been specified through a political process. It is a practical way to create and establish a more rational use of marine space and the interactions among its uses, to balance demands for development with the need to protect the environment, and to deliver social and economic outcomes in an open and planned way”.¹³

Furthermore, MSP is a thorough and strategic process that involves analysing and allocating the use of sea areas. The goal is to decrease conflicts between the activities of humans and enhance advantages while guaranteeing the strength of marine ecosystems. MSP encompasses various sectors, their interrelationships, and cumulative impacts. It also provides for temporal and spatial measures to guide different uses of the sea areas or resources. Further, MSP is an all-inclusive process that strives to address the demands of society as a whole within the limits of the environment. It is an essential tool for attaining

¹² Gerald Alditya Bunga, ‘Pembentukan Undang-Undang Tentang Zona Tambahan Sebagai Langkah Perlindungan Wilayah Laut Indonesia’ (2015) 2 *Jurnal Ilmu Hukum SELAT* 262.

¹³ ‘Marine Spatial Planning’ (UNESCO) <<https://ioc.unesco.org/our-work/marine-spatial-planning>> accessed 20 December 2022.

sustainable development and the protection of the environment as well.¹⁴ Due to this reason, MSP is relevant for Indonesia.

The elaboration of Indonesia's MSP is regulated in the Law of the Republic of Indonesia Number 32 of 2014 on Marine Affairs. Indonesia's MSP includes national marine spatial planning, marine area zoning plan, and coastal area and small island zoning plan.¹⁵ Indonesia already has a National MSP which is regulated in Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning. The existence of this MSP indicates that there is a reference in the utilisation of national marine space in territorial waters and jurisdictional areas. Furthermore, gradually the documents elaborating the MSP are followed up by the preparation and stipulation such as Inter-Regional Area Zoning Plan, National Strategic Zoning Plan, Specific National Strategic Zoning Plan.¹⁶ In 2020, Indonesia determined to create:¹⁷

- 20 Inter-Regional Area Zoning Plan in 20 inter-regional areas, but only 10 Inter-Regional Area Zoning Plan were established.
- 28 National Strategic Zoning Plan, but only 16 National Strategic Zoning Plan were established.
- 111 Specific National Strategic Zoning Plan, but only 57 Specific National Strategic Zoning Plan were established.
- 34 Coastal Area and Small Island Zoning Plan in 34 provinces, but only 27 were established.

¹⁴ Joseph Onwona Ansong et al., *MSP Global International Guide on Marine/Maritime Spatial Planning* (the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the Directorate-General for Maritime Affairs and Fisheries of the European Commission, 2021).

¹⁵ Article 43 of Law of the Republic of Indonesia Number 32 of 2014 on Marine Affairs.

¹⁶ Rasman Manafi, Yogi Yanuar, et. al., *Integrasi Tata Ruang Darat dan Laut, Satu Rencana, Satu Tata Kelola* (Deputy for Maritime Resources of the Coordinating Ministry for Maritime and Investment Affairs of the Republic of Indonesia 2021).

¹⁷ Rahman Manafi, Yogi Yanuar, Andreas A. Hutahean, et al., *Menata Ruang Laut Indonesia* (the Coordinating Ministry for Maritime and Investment Affairs of the Republic of Indonesia 2021).

On the other hand, China has been implementing MSP since 1989,¹⁸ and has completed all its MSP since 2002 at national, provincial, and country levels.¹⁹ Due to the MSP, China has reaped many economic, environmental, and social benefits. Evidently, the marine economy of China has experienced superior growth compared to the national economy. Based on the Statistics Bulletin of China's Marine Economy, in 2016, China reached 7 trillion yuan, equivalent to one trillion US dollars for their Gross Ocean Product (GOP). Also, the proportion of GOP to the Gross Domestic Product (GDP) increased to 9.5%,²⁰ whereas Indonesia's marine sector contributes only 6% to GDP.²¹ Furthermore, since 1990, China's total marine product production has been the highest in the world.²²

From the Master's thesis perspective, the experience of China's MSP will be carefully researched, and it will be analysed from the comparative perspective as a solution that Indonesia might employ for the effective implementation of the MSP. The research specifically analysed the technical and legal view of the MSP and does not deal with the political view. The paper might be a legal guide for the relevant state organs and/or organisations of Indonesia to undertake relevant mechanisms and steps for the effective implementation of MSP mechanisms. In order to effectively achieve the goals of the study, the available examples and practice, the legal and fundamental instruments will be analysed, and relevant advice and recommendations will be developed for Indonesia to regulate the policy related to this matter.

¹⁸ Qinhua Fang, Ran Zhang, et al., 'Marine Functional Zoning in China: Experience and Prospects' (2011) 39 *Taylor & Francis* 656.

¹⁹ Subandono Diposaptono, *Membangun Poros Maritim Dunia Dalam Perspektif Tata Ruang Laut* (3rd edn, Minister of Marine and Fisheries of the Republic of Indonesia 2017).

²⁰ Xin Teng, Qiwei Zhao, Panpan Zhang, et al., 'Implementing Marine Functional Zoning in China' (2021) 132 *Marine Policy* 1.

²¹ 'Indonesia Bisa Sejahtera dari Sektor Ekonomi Kelautan' (*Kantor Komunikasi Publik*, 31 August 2020) <<https://www.unpad.ac.id/2020/08/indonesia-bisa-sejahtera-dari-sektor-ekonomi-kelautan/>> accessed 19 November 2023.

²² B. Zhang, Y.j. Li, *Marine Development and Management Manual* (China Ocean Press, 2007).

2- Aims

In this thesis, the purpose is to provide a legal analysis of Indonesia's MSP. The study will investigate the practice available in this matter for Indonesia to implement MSP effectively. Also, to lead the advice and the ideal concept that Indonesia may apply to implement MSP.

3- Research Questions

1. How is Indonesia's concept and regulations of Marine Spatial Planning?
2. How is China's concept and regulations of Marine Spatial Planning?
3. What is the ideal concept of Marine Spatial Planning and its legal framework that can be implemented in Indonesia?

B) SCOPE, STRUCTURE

As for the scope of the research thesis, the main objective of this thesis is to present Indonesia's MSP and the ideal concept of MSP, which Indonesia may apply to implement in their MSP.

The structure of the paper is as follows: the first chapter discusses Indonesia's MSP. This chapter aims to examine the legal rules regarding MSP in Indonesia and how Indonesia regulates its MSP. The second chapter explores China's MSP and analyses the legal regulations concerning MSP in China. The third chapter combines the MSP of Indonesia and China and analyses the ideal concept of China's MSP that Indonesia may apply to implement their MSP for the effective implementation of the MSP. Lastly, the fourth chapter concludes the main findings of the paper and comes with recommendations.

C) APPROACH AND METHODOLOGY

Legally comparative approach has been applied to reach the main goals of the paper. The paper analyses the framework of the available international and national legal instruments and related literature based on those primary and secondary resources. The paper combines black letter law and relevant legal theory related to the formulation of the problem in this study. Although this research approach is doctrinal, it will be supported by relevant facts, different experiences, available precedents, and initiatives that Indonesia may employ to succeed in the implementation of MSP.

In particular, in order to perform the fundamental research, descriptive, analytical, qualitative, comparative, and conclusive methods are used, which try to answer the research questions and aim of the present paper. The paper also involves the research of available case studies.

1. INDONESIA'S MARINE SPATIAL PLANNING

1.1. NATIONAL MARINE SPATIAL PLANNING

The sea is one of the sources and objects that fulfil the needs of human life. Indonesia has a large sea area. Therefore, Indonesia's sea area is one of the great assets of the Indonesian nation that must be utilised in a coordinated, integrated, and effective manner, as well as the preservation of environmental capabilities to sustain national development for the achievement of a fair and prosperous society. In this case, it is necessary to manage marine space. Marine spatial management is a system that prioritises the planning aspect as the basis for the utilisation, supervision and control of marine spatial utilisation.²³ According to Article 42 Paragraph (2) of Law of the Republic of Indonesia Number 32 of 2014 on Marine Affairs, it is mentioned that marine spatial management is the planning, utilisation, monitoring, and control of marine space.

²³ Maret Priyanta, 'Implikasi Konsep Kesesuaian Kegiatan Pemanfaatan Ruang Laut dalam Pengelolaan Sumber Daya Kelautan Berkelanjutan' (2021) 5 *Wawasan Yuridika* 20.

Planning in marine spatial management in Indonesia is the first step in conducting marine spatial management. Spatial planning is a very important stage in the implementation of spatial planning because spatial plans are the basis for space utilisation and control of space utilisation.²⁴ On the other hand, in general, spatial planning law can be defined as a law that regulates procedures, aspects that should be considered, the process of spatial planning, the utilisation that should be monitored, and the control of spatial utilisation.²⁵ There are several categories of areas in spatial planning, one of which is marine area. Spatial planning in marine areas is referred to as MSP.

MSP is a product of spatial planning that can serve as a basis for the utilisation of marine resources as well as a guideline, reference, and direction to determine the success of marine resource management.²⁶ MSP is a practical approach to managing ocean space utilisation, including the interactions between human uses (such as shipping, marine mining, fisheries, tourism, etc) as well as between uses and the marine environment.²⁷ MSP can be conceptualised as the practical formulation of plans and policies that outline the utilisation of marine space.²⁸ In Indonesia, MSP is mandated by the Law of the Republic of Indonesia Number 32 of 2014 on Marine Affairs. Based on Article 43 Paragraph (1) of Law of the Republic of Indonesia Number 32 of 2014 on Marine Affairs, MSP includes national marine spatial planning, coastal area and small island zoning plan, and marine area zoning plan.

Indonesia's national marine spatial planning is regulated in the Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning. The territorial scope of that MSP consists of the territorial sea, inland sea, archipelagic

²⁴ Dina Sunyowati, 'Penataan Ruang Laut Berdasarkan Integrated Coastal Management' (2008) 20 *Mimbar Hukum* 425.

²⁵ Yunus Wahid, *Pengantar Hukum Tata Ruang* (Kencana, 2016).

²⁶ Subandono Diposaptono, *Membangun Poros Maritim Dunia Dalam Perspektif Tata Ruang Laut* (3rd edn, Minister of Marine and Fisheries of the Republic of Indonesia 2017).

²⁷ Catarina Frazão Santos, Charles N. Ehler, et al., 'Marine Spatial Planning' in Charles Sheppard (ed), *World Seas: An Environmental Evaluation* (Academic Press, 2019).

²⁸ Duncan Vaughan, Tundi Agardy, 'Marine protected areas and marine spatial planning – allocation of resource use and environmental protection' in John Humphreys and Robert W.E. Clark (eds), *Marine Protected Areas* (Elsevier, 2020).

waters, contiguous zone, continental shelf, and exclusive economic zone.²⁹ That scope is divided into two: the waters area and the jurisdiction area. The water area consists of the territorial sea, inland sea, and archipelagic waters.³⁰ Meanwhile, the jurisdiction area consists of a contiguous zone, continental shelf, and exclusive economic zone.³¹

The MSP in the waters area consists of policies and strategies for MSP in the waters area, marine spatial structure plan in the waters area, marine spatial pattern plan in the waters area, and determination of public utilisation areas that have national strategic value. Policies and strategies for MSP of waters area consist of policies and strategies for the development of marine spatial structure plan and marine spatial pattern plan for the waters area. The marine spatial structure plan of the waters area consists of the marine growth centre and the network system of marine infrastructures and facilities. Meanwhile, the marine spatial pattern plan of the waters area is the allocation of sea area in the waters area into the main function along with the direction of its utilisation. The marine spatial pattern plan comprises three components: public utilisation area, conservation area, sea lanes and particular national strategic area- commonly abbreviated as *Kawasan Strategis Nasional Tertentu* (KSNT).

Furthermore, the material scope of MSP in the jurisdiction area contains the policies and strategies for MSP, marine spatial structure plan, and marine spatial pattern plan.³² Policies and strategies for the development of marine spatial patterns in the jurisdiction area consist of development policies and strategies for conservation areas and public utilisation areas.³³ Further, the marine spatial structure plan in the jurisdiction area consists of the network system of marine infrastructures and facilities. In contrast, the marine spatial pattern plan in the jurisdiction area consists of public utilisation and

²⁹ Article 2 Paragraph (1) and (2) of Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning.

³⁰ Abdul Muthalib Tahar, 'Penegakan Hukum Di Perairan Indonesia' in Khaidir Anwar (eds), *Hukum Laut Internasional Dalam Perkembangan* (1st edn, Justice Publisher 2015).

³¹ Muh. Khozinatul Asror, Elisabeth Septin Puspoayu, 'Harmonisasi Peraturan Perundang-Undangan Terkait Kewenangan Penyidikan oleh Lembaga Penegak Hukum di Wilayah Zona Ekonomi Eksklusif Indonesia' (2023) *Novum: Jurnal Hukum* 69.

³² Article 4 of Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning.

³³ Article 51 of Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning.

conservation areas. In detail, the following is the content of the context in the national marine spatial planning of Indonesia:³⁴

➤ The Waters Area

1. Policies and strategies for MSP in the waters area
2. Marine spatial structure plan in the water area
 - Structure of marine and fisheries growth centres
 - Marine and fisheries growth centres
 - Marine industry centre
 - The network system of marine infrastructures and facilities
 - National port arrangements
 - Fisheries port arrangements
3. Marine spatial pattern plan in the waters area
 - Public utilisation area
 - Fishing zone
 - Tourism zone
 - Marine industry zone
 - Mining zone
 - Energy management zone
 - Defence and security zone
 - Transport zone
 - Conservation area
 - Coastal and small island conservation area
 - Maritime conservation area
 - Waters conservation area
 - Other conservation areas which are designated according to the provisions of laws and regulations
 - Sea lanes
 - Shipping lanes
 - Pipelines route/submarine cable

³⁴ Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning.

- Migration of marine biotas route
- KSNT
- 4. Determination of public utilisation areas that have national strategic value
 - National fisheries industry development area
 - Integrated Marine and Fisheries Centre
 - Sustainable fish production area
 - Strategic industry area
 - Location for strategic infrastructure and/or activity that has national strategic value
- The Jurisdiction Area
 - 1. Policies and strategies for MSP in the jurisdiction area
 - 2. The marine spatial structure plan in the jurisdiction area
 - The network system of marine infrastructures and facilities
 - 3. The marine spatial pattern plan in the jurisdiction area
 - Public utilisation area
 - Fishing zone
 - Mining zone
 - Energy management zone
 - Conservation area

Although the territorial scope of the National MSP is divided into waters area and jurisdiction area, the marine spatial structure plan map of both is not separated, and neither is the marine spatial pattern plan map. The marine spatial structure plan map is regulated in Annex IV of Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning. The following is a map of the marine spatial structure plan:

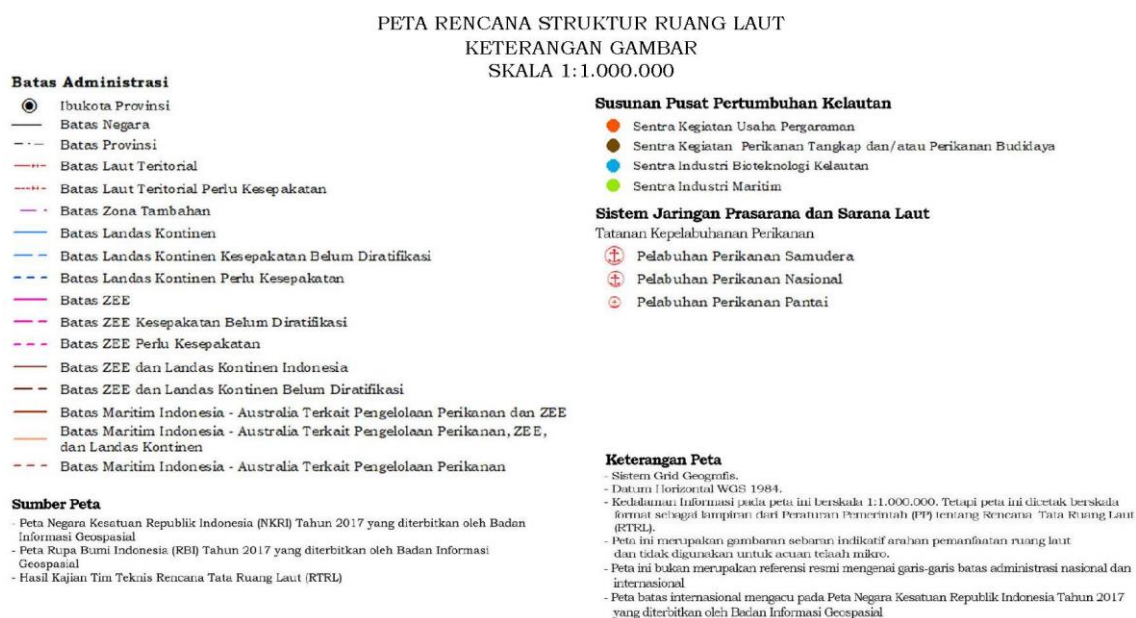


Figure 1. Image Description on the Marine Spatial Structure Plan Map of Indonesia's National Marine Spatial Planning.³⁵

³⁵ Annex IV of Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning.



The map above shows the location of marine growth centres and the network system of marine infrastructures and facilities. The location of marine growth centres is described by four different colours of dots:

1. red dots for salt business activity centres
2. brown dots for capture fisheries and/or aquaculture activity centres
3. blue dots for marine biotechnology industry centres
4. green dots for maritime industry centres

In addition, the network system of marine infrastructures and facilities on that map consists of three kinds of fishing ports: oceanic fishing ports, national fishing ports, and coastal fishing ports. Those three fisheries port arrangements' locations are depicted with the red round symbol within a red-coloured sea anchor.

The sea territory of Indonesia is bordered by several countries such as Malaysia, Thailand, Vietnam, Singapore, etc. With such borders, a country can also have problems with other countries in terms of their sea territory. There are several maritime boundaries between Indonesia and other countries that have not yet reached an agreement. The Marine Spatial Structure Plan Map of Indonesia's National MSP also shows the

³⁶ Annex IV of Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning.

administrative boundaries of the National MSP. The administrative boundaries that have not yet reached agreement are marked as follows:

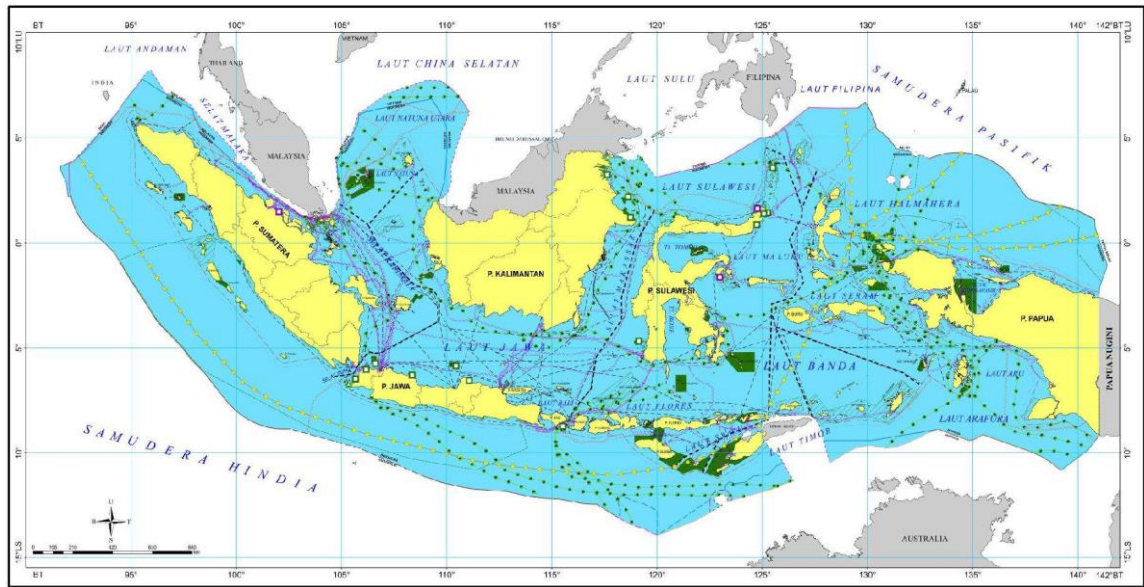
1.  : territorial sea boundaries that need agreement
2.  : continental shelf boundaries that need agreement
3.  : EEZ boundaries that need agreement

Furthermore, the map of the marine spatial pattern plan is regulated in Annex VIII of Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning. The following is a map of the marine spatial pattern plan:



Figure 3. Image description on the Marine Spatial Pattern Plan Map of Indonesia's National Marine Spatial Planning.³⁷

³⁷ Annex VIII of Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning.



The map above shows the location of public utilisation areas, conservation areas, KSNT, and sea lanes. Public utilisation areas are marked in blue colour, conservation areas are marked in green colour, and for conservation areas that are still possible to become public utilisation areas, KSNT and/or sea lanes are marked with green diagonal lines. In addition, KSNT is divided into three, namely environmental control in the form of blue carbon stock areas marked by a square within a purple outline, world heritage sites in the form of natural world heritage sites marked by a square within a green outline, and environmental control in the form of ecologically and biologically significant areas marked by a green dashed line. Moreover, there are six kinds of sea lanes on that map, namely:

1. shipping lanes marked with black dashed lines
2. submarine pipelines marked with dots connected by straight lines
3. submarine cables marked with purple wavy lines
4. submarine cable corridor recommendations marked with orange zigzag lines
5. cetacean migration routes marked with yellow lines with yellow circles on it
6. turtle migration routes marked with green lines with green circles on it.

³⁸ Annex VIII of Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning.

The marine spatial structure plan and marine spatial pattern plan are used as guidelines in implementing the direction of marine spatial utilisation both in the waters area and jurisdiction area. Also, both plans are drawn on the map with a scale of 1:1.000.000.

Indonesia's National MSP is valid for 20 years. The spatial planning was established in 2019, which means that the spatial planning is valid from 2019 to 2039. The National MSP is used as a guide for both central and local governments in drafting regulations of spatial utilisation for marine area zoning plan, and/or coastal area and small island zoning plan. Moreover, Article 123 paragraph (1) of Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning states that the national marine spatial plan is further elaborated in the marine area zoning plan, and coastal area and small island zoning plan.

In 2020, Indonesia established Law of the Republic of Indonesia Number 11 of 2020 on Job Creation, hereinafter referred to as the Job Creation Law. That law amended several laws, such as the Law of the Republic of Indonesia Number 32 of 2014 on Marine affairs. That law is one of the legal foundations for implementing spatial planning nationally.³⁹ Article 43 Paragraph (2) of Law of the Republic of Indonesia Number 32 of 2014 on Marine Affairs states that National MSP is a planning process to produce a national marine spatial plan. Meanwhile, the Law of the Republic of Indonesia Number 11 of 2020 on Job Creation states that the National MSP is planning to produce a national marine spatial plan that is integrated into national spatial planning. The Job Creation Law instructs the integration of national marine spatial planning into national spatial planning.

In addition, that regulation is clarified in Article 253 of Government Regulation of the Republic of Indonesia Number 21 of 2021 on the Implementation of Spatial Planning, which states that when this government regulation comes into force, the Marine Spatial Planning prepared based on Government Regulation of the Republic of Indonesia Number 32 of 2019 on the Marine Spatial Planning shall be integrated into the National Spatial Planning during the revision of Government Regulation of the Republic of

³⁹ Explanation of Government Regulation of the Republic of Indonesia Number 21 of 2021 on the Implementation of Spatial Planning.

Indonesia Number 13 of 2017 on the Amendment of Government Regulation of the Republic of Indonesia Number 26 of 2008 on the National Spatial Planning. Although Article 253 instructs the integration, Article 254 states that the Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning is still valid.

1.2. MARINE AREA ZONING PLAN

The marine area zoning plan is one of the documents that elaborate the National MSP. The legal regulation that the government uses to create the marine area zoning plan is the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan. The technical content of the Marine Area Zoning Plan consists of the marine spatial structure plan and the marine spatial pattern plan.⁴⁰ The marine spatial structure plan consists of the following:⁴¹

- The composition of the marine growth centre includes the marine and fisheries growth centres, and the marine industry centre.
- The network system of marine infrastructure and facilities includes the national port arrangements and fisheries port arrangements.

In addition, the marine spatial pattern plan consists of public utilisation areas, conservation areas, and/or sea lanes.⁴² Public utilisation areas are parts of the sea that are designated for various sectors of activities. The public utilisation area is elaborated in several zones, namely:⁴³

- Tourism
- National port

⁴⁰ Article 3 of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan.

⁴¹ Article 4 Paragraph (1) of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan.

⁴² Article 5 Paragraph (1) of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan.

⁴³ Article 7 of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan.

- Fisheries port
- Oil and gas mining
- Mineral and coal mining
- Capture fisheries
- Aquaculture
- Industry
- Airport
- Energy management
- Defence and security
- Settlement
- Salting
- Trade in goods and/or services
- Public facilities
- Coastal ecosystem management
- Utilisation of seawater other than energy
- Other utilisation in accordance with the biogeophysical characteristics of the environment.

After the establishment of the Law of the Republic of Indonesia Number 11 of 2020 on Job Creation, which mandates the integration of MSP into national spatial planning, the legal regulation used by the government to integrate the marine area zoning plan is regulated in the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 28 of 2021 on Organising Marine Spatial Planning. Furthermore, based on Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning, the marine area zoning plan consists of the National Strategic Zoning Plan, the Specific National Strategic Zoning Plan, and the Inter-Regional Area Zoning Plan.

1.2.1. National Strategic Zoning Plan

National Strategic Zoning Plan - commonly being called as *Rencana Zonasi Kawasan Strategis Nasional* (RZ KSN) is a plan designed in national strategic areas to decide the direction of spatial utilisation. National strategic areas – commonly called as

Kawasan Strategis Nasional (KSN) is an area that has a significant impact on culture, social, economy, defence and security, state sovereignty, and/or environment. It also includes areas that have been recognised as world heritage sites.⁴⁴

Moreover, the boundary of the RZ KSN area is determined based on the coastline of the KSN planning administrative area to the waters area of the provincial management authority by considering objects or activities that have important values and strategies for the national interest. Indonesia decided to create 28 RZ KSN, but based on data in 2020, only 16 RZ KSN have been completed.⁴⁵ In preparing the RZ KSN document, there are several stages, namely:

1. Collecting and processing data

This stage is carried out to get basic maps and thematic data. The basic map at least includes the coastline, bathymetry and maritime boundaries. Meanwhile, thematic data at least includes the network system of marine infrastructure or marine utilities, buildings and installations at sea, oceanography, ecosystems of coastal and small islands, fish resources, and existing marine space utilisation and utilisation plans.

2. Preparing the preliminary document

This stage is carried out through analysis. Furthermore, the preliminary document contains several things such as introduction, description of potential marine resources in KSN and utilisation activities, strategic issues of RZ KSN, objectives, policies and strategies of RZ KSN, and annexes of the preliminary document of RZ KSN.

3. Public consultation of the preliminary document

This stage is conducted in order to verify data, identify issues that have important and strategic national values, get feedback, responses and/or suggestions for improvements to the preliminary document of the RZ KSN from related stakeholders, etc. The stakeholders mentioned consist of local government,

⁴⁴ Siti Hilyana, Gigentika Soraya, et. al, 'Aglomerasi Industri Kelautan melalui Penataan Zonasi Kawasan Strategis Nasional Bima dan Sumbawa Andalan' (2021) 28 *JSTL* 267.

⁴⁵ Rahman Manafi, Yogi Yanuar, Andreas A. Hutahean, et al., *Menata Ruang Laut Indonesia* (the Coordinating Ministry for Maritime and Investment Affairs of the Republic of Indonesia 2021).

government agencies, mass organisations, non-governmental organisations, business actors, academics, and community representatives.

4. Preparing intermediate documents

The process of preparing the intermediate document is based on the revision of the preliminary document of RZ KSN in accordance with feedback, responses and/or suggestions that were collected from the public consultation of the preliminary document.

5. Public consultation of intermediate document

This stage is conducted in order to obtain feedback, responses and/or suggestions for improvement of the intermediate document of RZ KSN from related stakeholders. This stage is conducted at least one time.

6. Preparing final document

This stage is carried out based on the improvement of the intermediate document of RZ KSN in accordance with the feedback, responses, and/or suggestions that were collected from the public consultation of the intermediate document.

Additionally, the RZ KSN is outlined on a map with a minimum scale accuracy of 1:50,000. One of the RZ KSN that has been completed is Jabodetabekpunjur. Jabodetabekpunjur is the abbreviation of seven cities, namely Jakarta, Bogor, Depok, Tangerang, Bekasi, Puncak, and Cianjur. The following is the RZ KSN Jabodetabekpunjur:⁴⁶

⁴⁶ 'Rencana Zonasi Kawasan Strategis Nasional' (*Directorate of Marine Spatial Planning of Ministry of Marine Affairs and Fisheries of the Republic of Indonesia*, 2019) <https://surajis.files.wordpress.com/2019/02/2019-progres-dan-pembelajaran-ksn_feb_secured.pdf> accessed 24 November 2023.

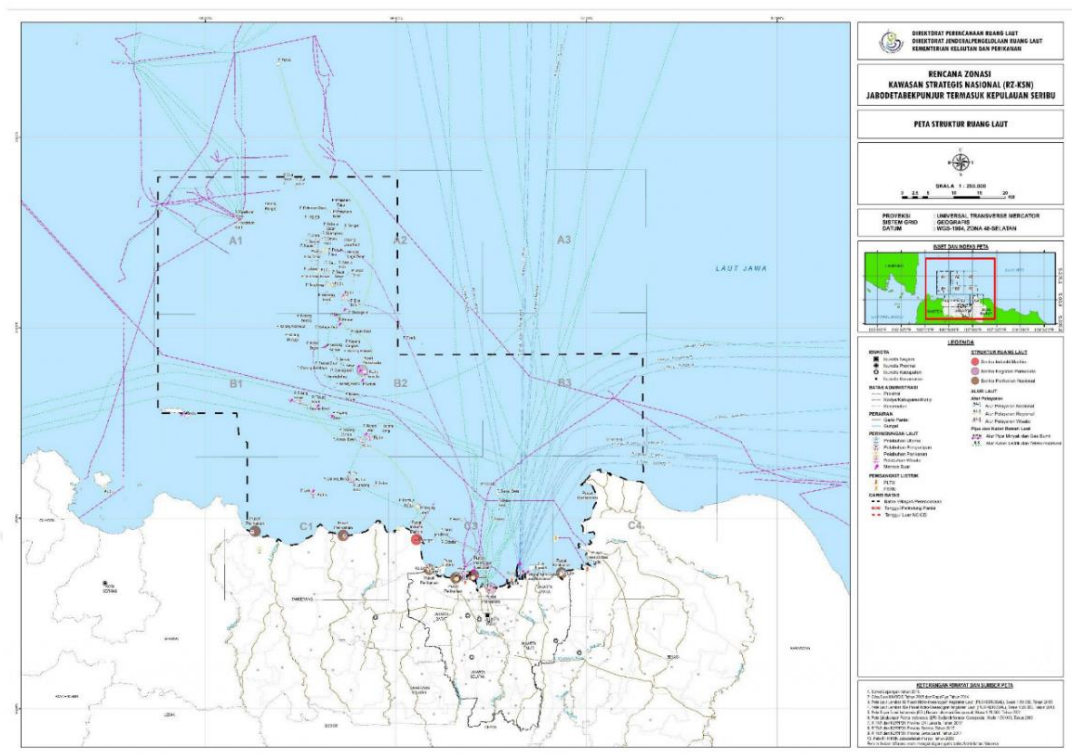


Figure 5. Map of Marine Spatial Structure Plan of RZ KSN Jabodetabekpuncur.⁴⁷

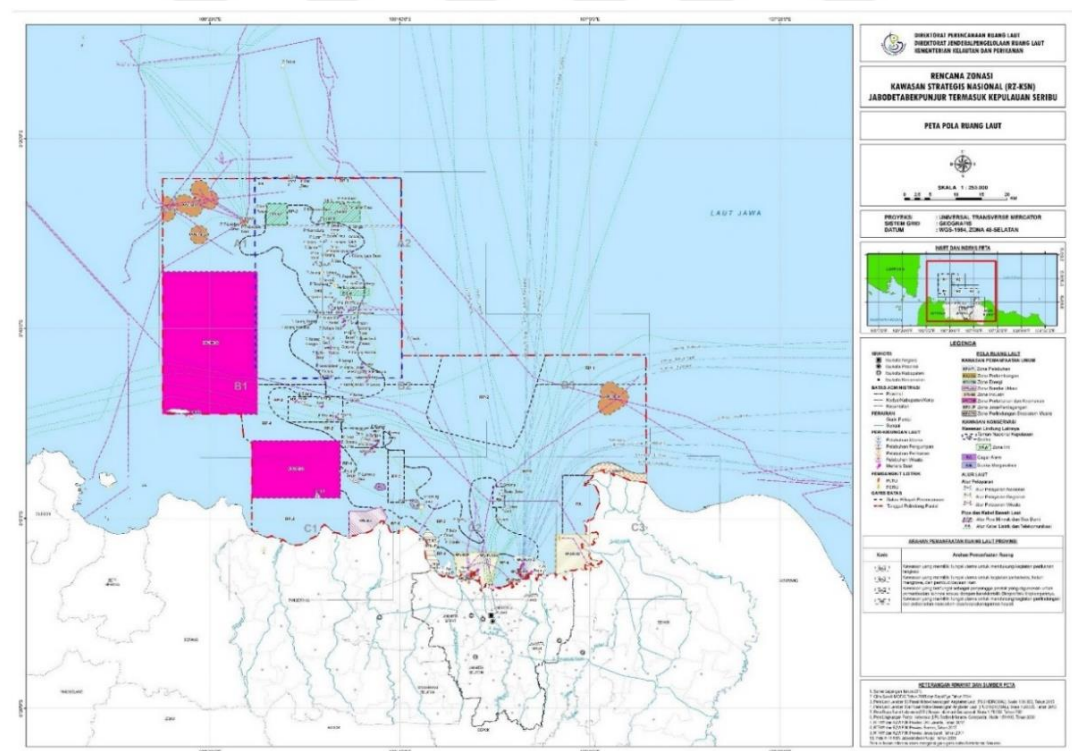


Figure 6. Map of Marine Spatial Pattern Plan of RZ KSN Jabodetabekpuncur.⁴⁸

⁴⁷ Ibid.

⁴⁸ Ibid.

According to Law of the Republic of Indonesia Number 11 of 2020 on Job Creation, the RZ KSN will be integrated into the National Strategic Area Spatial Plan. The integration will be carried out during the review of the National Strategic Area Spatial Plan.⁴⁹ The legal framework that is used as a guideline in drafting the RZ KSN is the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan. However, after the establishment of the Job Creation Law, that ministerial regulation was repealed and replaced with the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 28 of 2021 on Organising Marine Spatial Planning.

1.2.2. Specific National Strategic Zoning Plan

The Specific national strategic zoning plan – commonly called as *Rencana Zonasi Kawasan Strategis Nasional Tertentu* (RZ KSNT), is a plan designed to arrange the area in a specific national strategic area. The boundaries of the RZ KSNT include the waters around the outermost small islands. Outermost small islands – commonly called as *Pulau-Pulau Kecil Terluar* (PPKT) are small islands that have basic geographic focal points that link the baseline of the archipelagic sea according to national and international legislation. The utilisation of PPKT is regulated in more detail in Government Regulation of the Republic of Indonesia Number 62 of 2010 on Utilisation of Outermost Small Islands. PPKT utilisation is conducted for three things:⁵⁰ First, defence and security. This utilisation aims for the placement of several things, such as defence posts, security posts, navigational aids, state symbols and/or national boundaries, as well as the development of other potential maritime.

Second, the welfare of the community. The utilisation of PPKT for community welfare is carried out for several things, such as marine and fisheries businesses, marine ecosystems, education and research, subsistence agriculture, maritime service industries,

⁴⁹ Article 7A of Law of the Republic of Indonesia Number 11 of 2020 on Job Creation.

⁵⁰ Article 5 Paragraph (1) of Government Regulation of the Republic of Indonesia Number 62 of 2010 on Utilisation of Outermost Small Islands

and the placement of socio-economic facilities and infrastructure. Third, environmental conservation. The utilisation of PPKT for environmental conservation is carried out by determining PPKT as a protected area.

Indonesia is planning to create 111 RZ KSNT, but based on data in 2020, Indonesia has only completed 57 RZ KSNT. In the preparation of the RZ KSNT document, there are several stages such as collecting and processing data, preparing the preliminary document, public consultation of the preliminary document, preparing the intermediate document, public consultation of the intermediate document, and preparing the final document. Furthermore, RZ KSNT is outlined on a map with a minimum scale accuracy of 1:50,000. One of the RZ KSNT that has been completed is Berhala Island. The following is the RZ KSNT of Berhala Island:

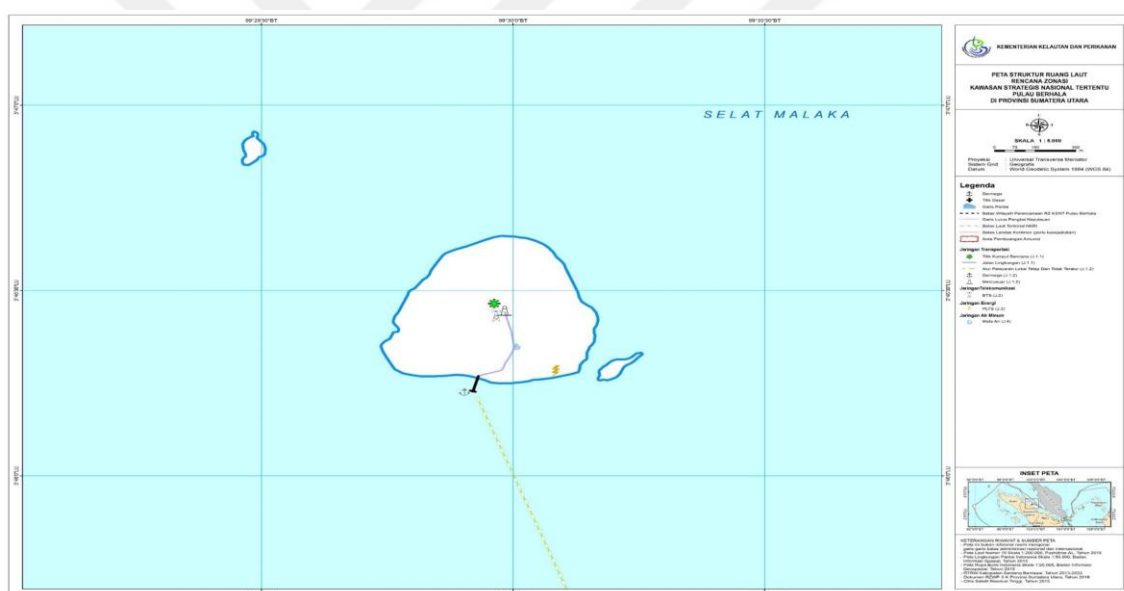


Figure 7. Map of Marine Spatial Structure Plan of RZ KSNT Berhala Island.⁵¹

⁵¹ Annex I of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 21 of 2020 on RZ KSNT of the Outermost Small Islands of Berhala Island.

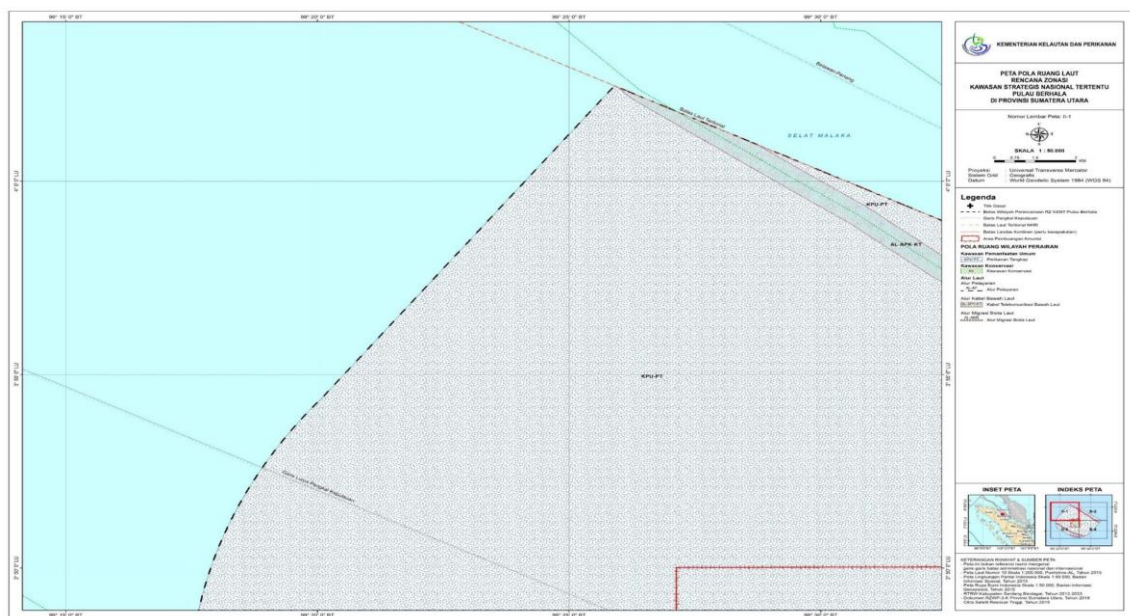


Figure 8. Map of Spatial Pattern Plan 1 of RZ KSNT Berhala Island.⁵²

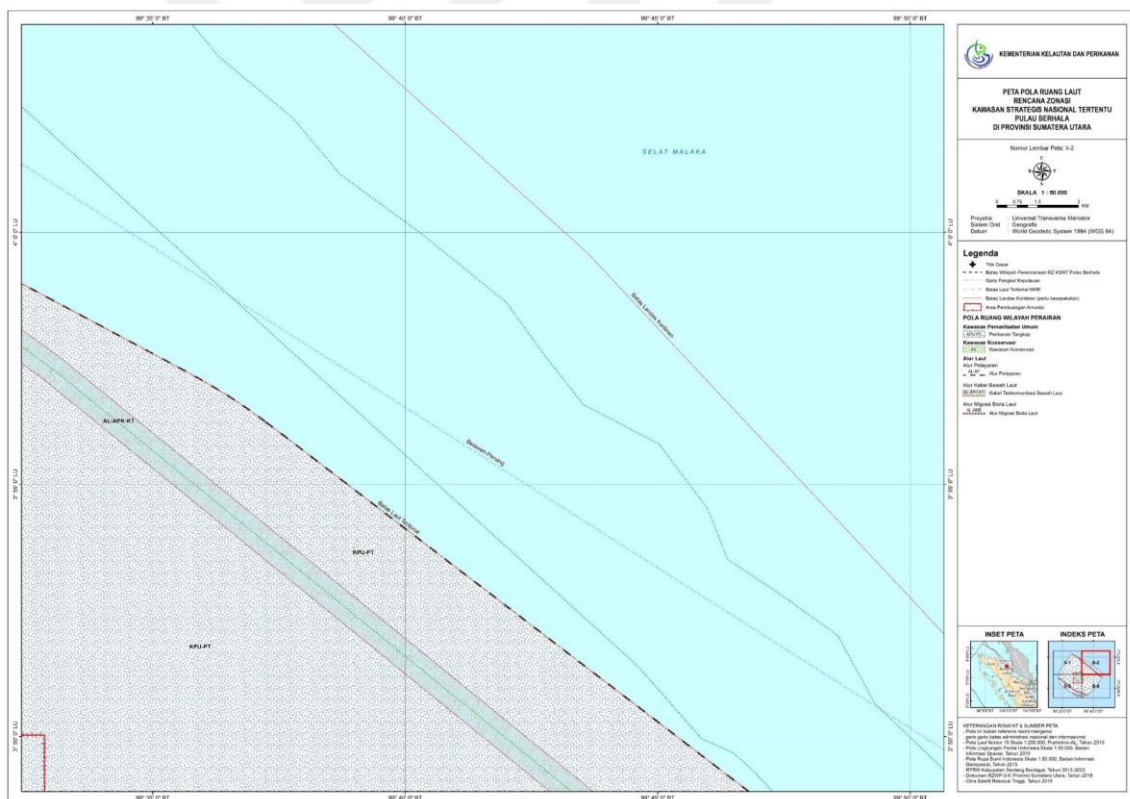


Figure 9. Map of Spatial Pattern Plan 2 of RZ KSNT Berhala Island.⁵³

⁵² Map IV-1 in Annex IV of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 21 of 2020 on RZ KSNT of the Outermost Small Islands of Berhala Island.

⁵³ Map IV-2 in Annex IV of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 21 of 2020 on RZ KSNT of the Outermost Small Islands of Berhala Island.

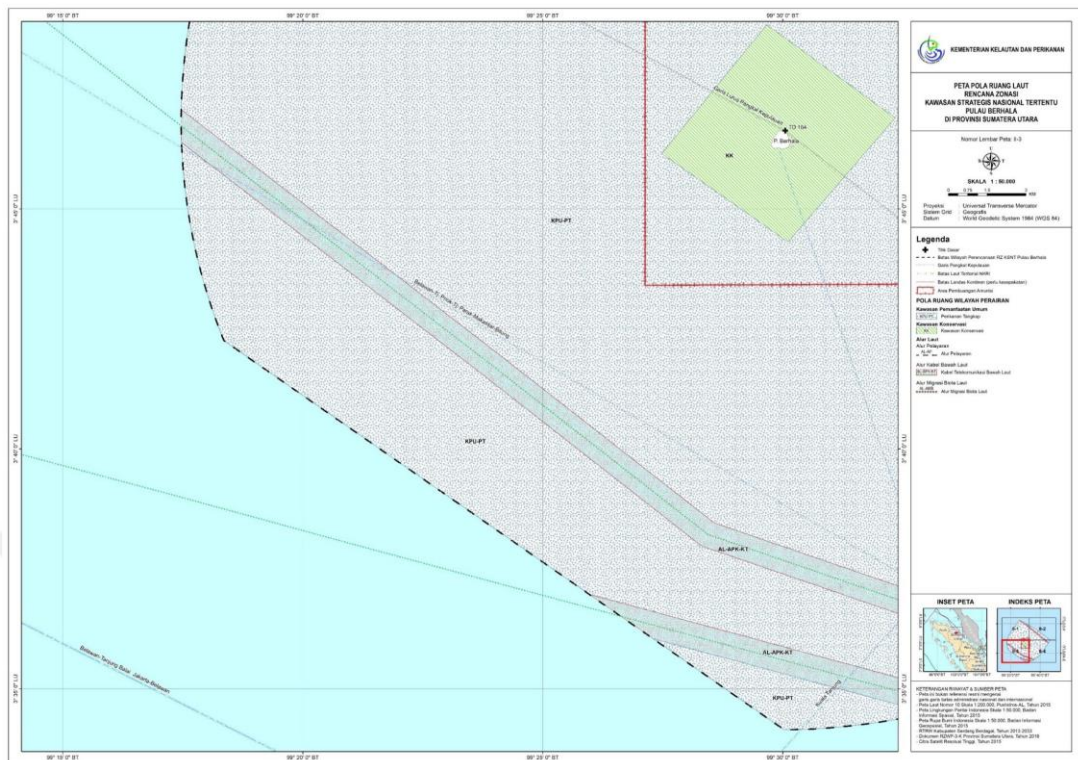


Figure 10. Map of Spatial Pattern Plan 3 of RZ KSNT Berhala Island.⁵⁴

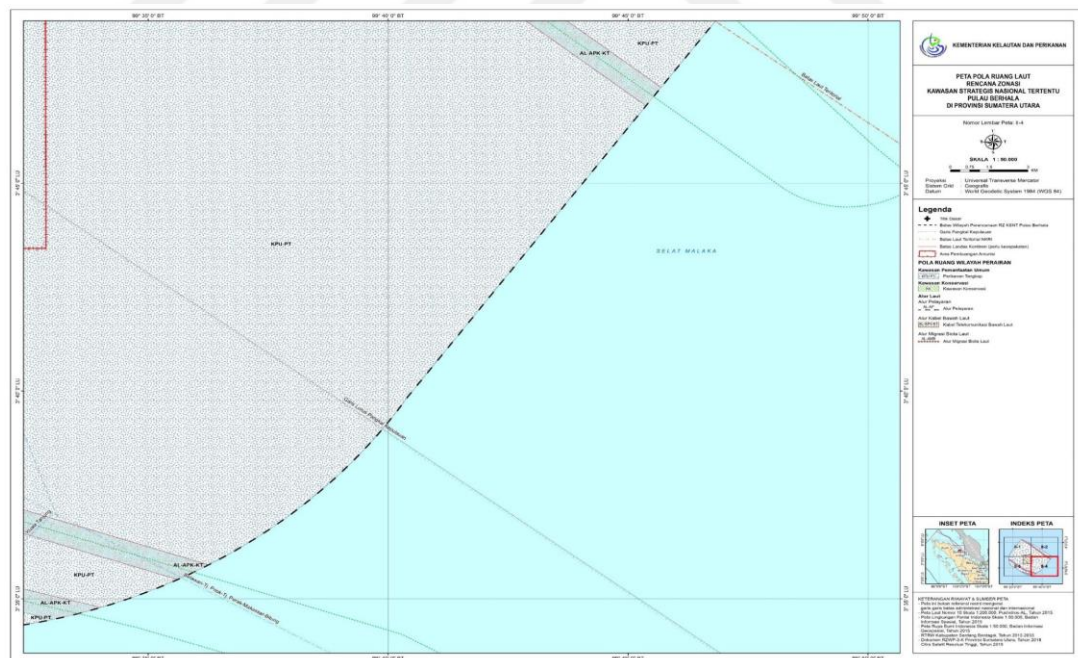


Figure 11. Map of Spatial Pattern Plan 4 of RZ KSNT Berhala Island.⁵⁵

⁵⁴ Map IV-3 in Annex IV of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 21 of 2020 on RZ KSNT of the Outermost Small Islands of Berhala Island.

⁵⁵ Map IV-4 in Annex IV of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 21 of 2020 on RZ KSNT of the Outermost Small Islands of Berhala Island.

1.2.3. Inter-Regional Area Zoning Plan

Inter-Regional Area Zoning Plan - commonly called as *Rencana Zonasi Kawasan Antar Wilayah* (RZ KAW) is a plan in inter-regional areas designed to decide the direction of Marine Spatial Utilisation.⁵⁶ Inter-regional areas - commonly called as *Kawasan Antar Wilayah* (KAW) is the marine areas covering two or more provinces that can be in the form of straits, bays, and seas.⁵⁷ RZ KAW regulates bays, straits, and seas beyond the 12-mile limit of local government jurisdiction, all the way up to the central government's maximum claim boundary, which includes the Exclusive Economic Zone and/or Continental Shelf.

Based on the National MSP, there are 20 KAW, and Indonesia is planning to create 20 RZ KAW in 20 of those locations. The names of those 20 locations of KAW consist of the Natuna and North Natuna Seas, Java Sea, Bali Sea, Banda Sea, Aru Sea, Sulawesi Sea, Halmahera Sea, Seram Sea, Maluku Sea, Flores Sea, Sawu Sea, Makassar Strait, Strait of Malacca, Sunda Strait, Bone Bay, Tomini Bay, Cendrawasih Bay, West Sea of Sumatra, South Sea of Java Bali and Nusa Tenggara, and North Sea of Papua. In 2020, from those 20 KAW Indonesia completed 10 RZ KAW which has been enacted, and nine documents are still in the legislative process. The RZ KAW which has been completed and enacted is the RZ KAW of Makassar Strait. RZ KAW Makassar Strait is regulated in the Regulation of the President of the Republic of Indonesia Number 83 of 2020. The following is the RZ KAW Makassar Strait.⁵⁸

⁵⁶ Article 1 paragraph 17 of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 28 of 2021 on Organising Marine Spatial Planning.

⁵⁷ Article 1 paragraph 11 of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan.

⁵⁸ Annex II and III of Regulation of the President of the Republic of Indonesia Number 83 of 2020 on Inter-Regional Area Zoning Plan of Makassar Strait.

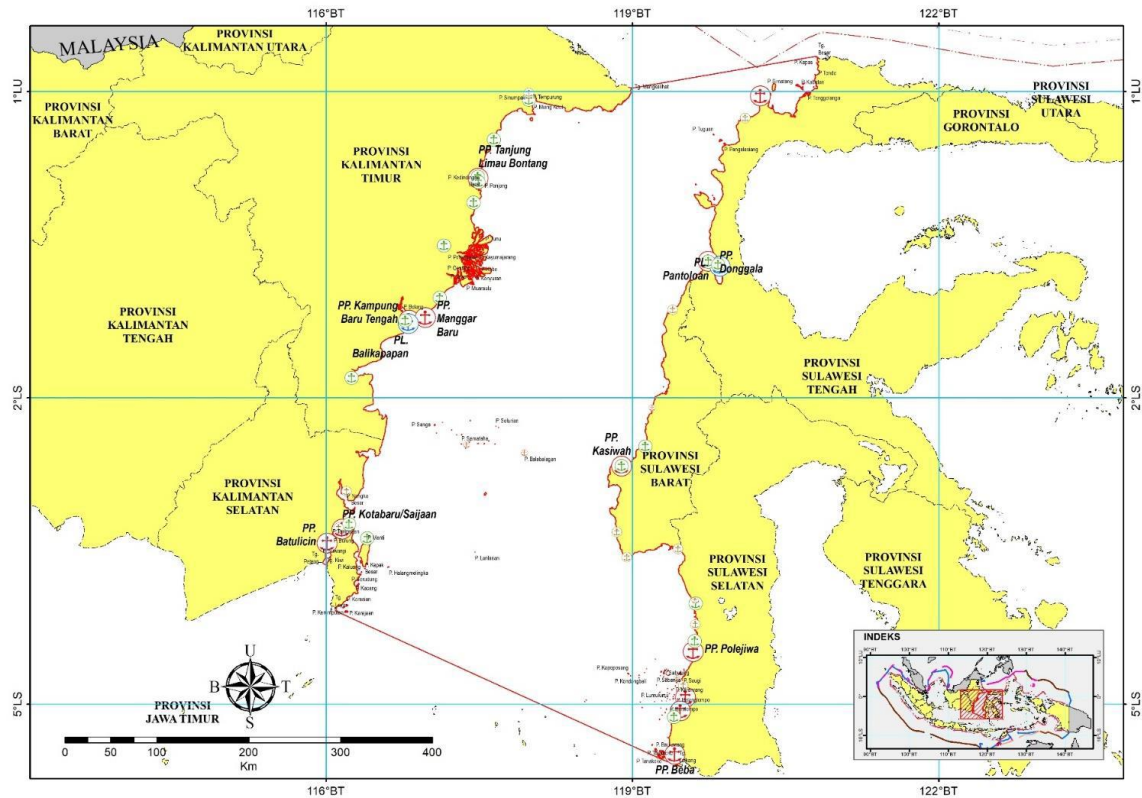


Figure 12. Map of Marine Spatial Structure Plan of RZ KAW Makassar Strait.⁵⁹

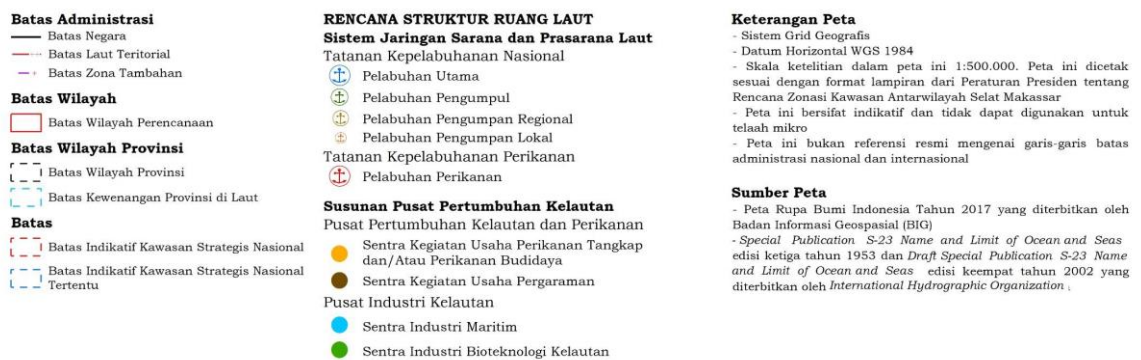


Figure 13. Image Description of Marine Spatial Structure Plan Map of RZ KAW Makassar Strait.⁶⁰

⁵⁹ Annex II of Regulation of the President of the Republic of Indonesia Number 83 of 2020 on Inter-Regional Area Zoning Plan of Makassar Strait.

⁶⁰ Ibid.

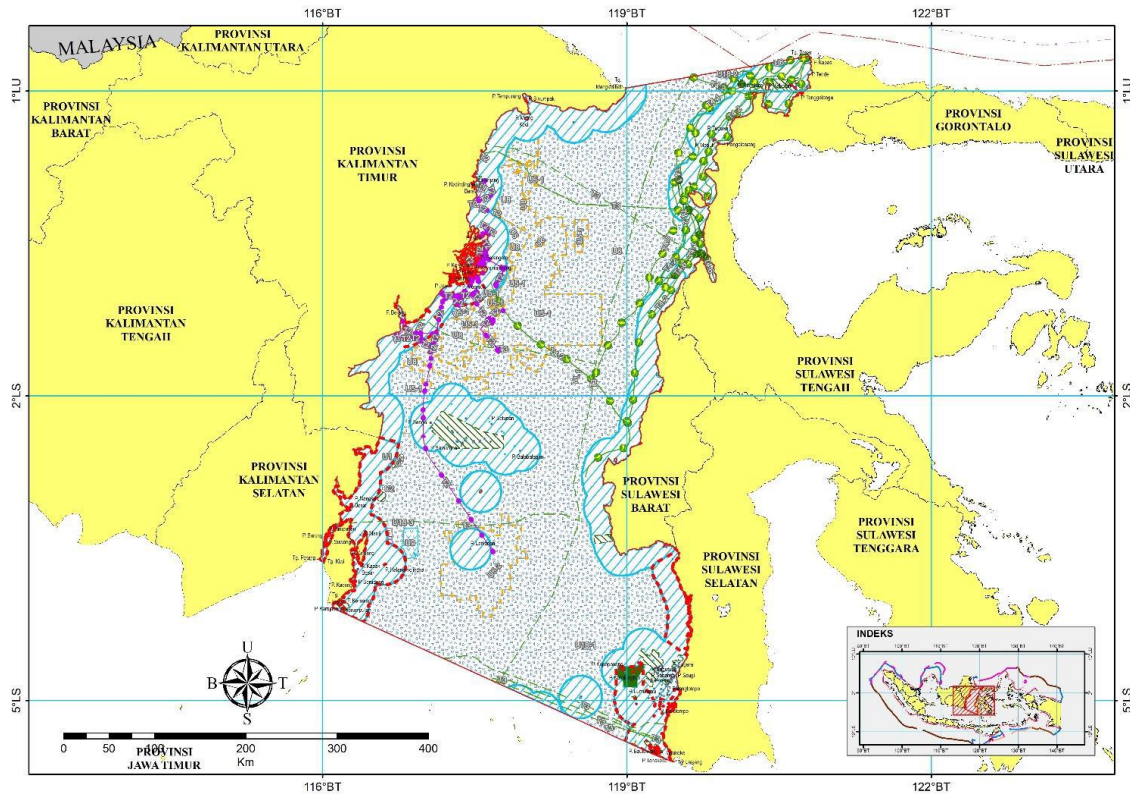


Figure 14. Map of Spatial Pattern Plan of RZ KAW Makassar Strait.⁶¹

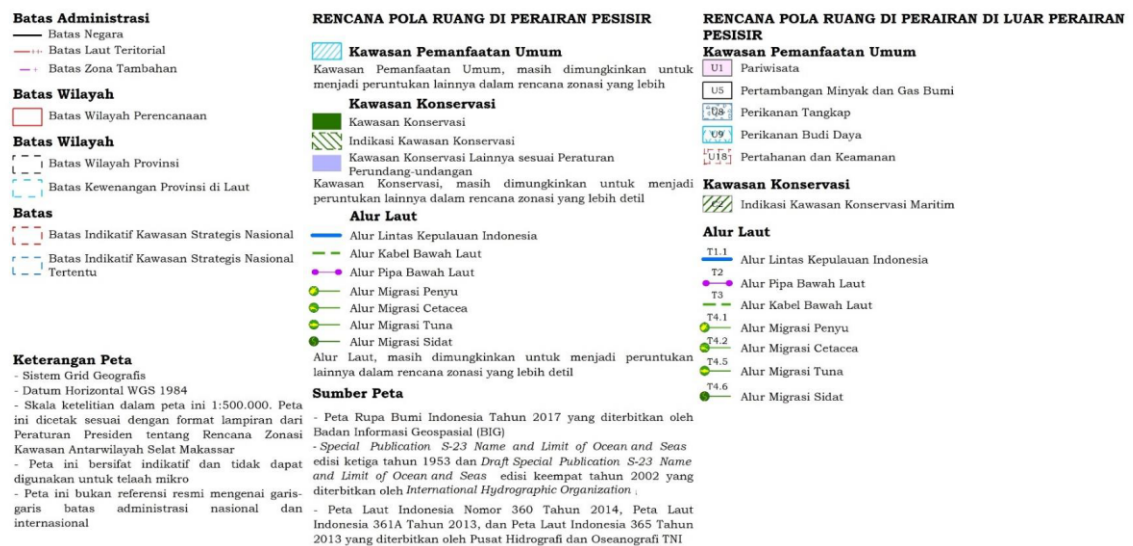


Figure 15. Image Description of Marine Spatial Structure Plan Map of RZ KAW Makassar Strait.⁶²

⁶¹ Annex III of Regulation of the President of the Republic of Indonesia Number 83 of 2020 on Inter-Regional Area Zoning Plan of Makassar Strait.

⁶² Ibid.

1.3. COASTAL AREA AND SMALL ISLAND ZONING PLAN

Coastal Area and Small Island Zoning Plan, commonly called as *Rencana Zonasi Wilayah Pesisir dan Pulau-Pulau Kecil* (RZWP-3-K) is a plan that identifies the direction of resource utilisation along with the allocation of the area within a designated planning area that contains permitted and prohibited activities, and permitted activities that may only be carried out with permission.⁶³ The scope of this RZWP-3-K is the transition area between land and marine ecosystems which are influenced by alterations occurring on sea and land; landward includes the administrative region of the sub-district and extends 12 nautical miles towards the sea from the coastline on the seaward side.

RZWP-3-K is one of the planning activities in the management of coastal area and small island. Also, if we look at the scope of RZWP-3K, this management is the authority of the province in accordance with what is written in Article 27 Paragraph (3) of Law of the Republic of Indonesia Number 9 of 2015 on the Amendment of Law of the Republic of Indonesia Number 23 of 2014 on local government. However, in preparing the RZWP-3-K document, the governor assigns the Marine Affairs and Fisheries Office to prepare it.⁶⁴ Furthermore, the stages in preparing the RZWP-3-K document consist of: firstly collecting and processing data, secondly drafting the preliminary document, thirdly public consultation, fourthly drafting the intermediate document, fifthly public consultation, then drafting the final document, and lastly determination.

The legal basis for preparing the RZWP-3-K is regulated in Law of the Republic of Indonesia Number 1 of 2014 on Amendment to Law of the Republic of Indonesia Number 27 of 2007 on Management of Coastal Zone and Small Islands. Besides that law, there is also a Regulation of the Minister of Marine Affairs and Fisheries which becomes the legal basis for drafting RZWP-3-K, namely Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 23 of 2016 on Planning for the

⁶³ Parjito, Henrie Buchari, et al., 'Analisis Alokasi Ruang Laut Dalam Rencana Zonasi Wilayah Pesisir dan Pulau-Pulau Kecil (RZWP3K) Provinsi Lampung' (2022) 6 *Jurnal Sumberdaya Akuatik Indopasifik* 11.

⁶⁴ Article 23 Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 23 of 2016 on Planning for the Management of Coastal Areas and Small Islands.

Management of Coastal Area and Small Island. According to Article 10 of Law of the Republic of Indonesia Number 1 of 2014, the RZWP-3-K consists of:

- Allocation of spatial areas for public utilisation areas, conservation areas, KSNT, and sea lanes
- Connections between land and marine ecosystems within a bioecoregion
- Determination of marine spatial utilisation, and
- Determination of priority marine areas for socio-cultural, conservation, marine transportation, economic, strategic industry, defence and security purposes.

From the explanation above, especially in the first point related to the allocation of spatial areas for public utilisation areas, conservation areas, KSNT, and sea lanes, there is the allocation of zones and sub-zones of those areas. Public utilisation areas are divided into 16 zones, and some of those zones have sub-zones as follows:

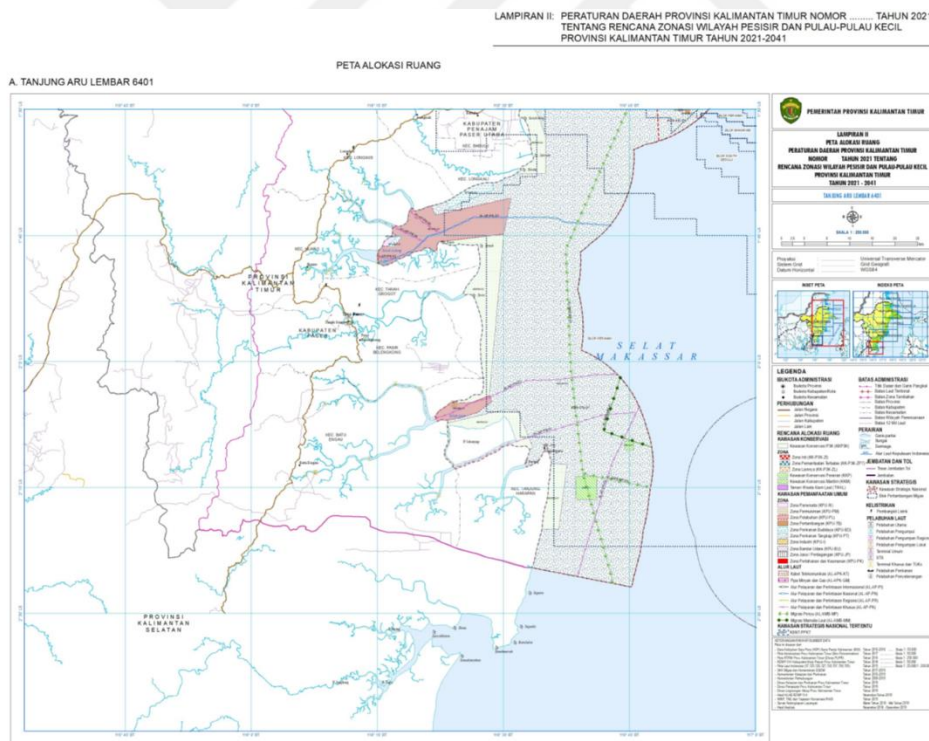
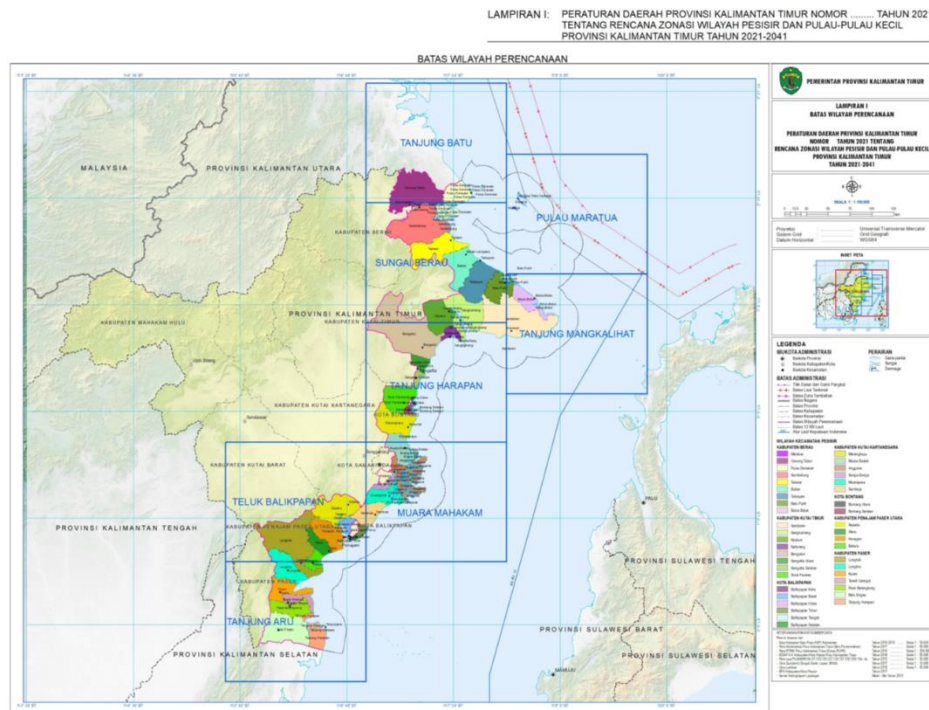
1. Tourism zone
 - a. nature tourism of seascape
 - b. nature tourism of beaches/coastal and small islands
 - c. nature tourism of the underwater sea
 - d. historical tourism
 - e. cultural tourism, and/or
 - f. water sports tourism
2. Settlement zone
 - a. fishermen settlements and/or
 - b. non-fishermen settlements
3. Port zone
 - a. working environment area and interest environment area and/or
 - b. working area and operating area of the fishing port
4. Mangrove forest zone
5. Mining zone
 - a. minerals
 - b. sea sand
 - c. petroleum
 - d. natural gas and/or

- e. geothermal
- 6. Capture fisheries zones
 - a. pelagic
 - b. demersal and/or
 - c. pelagic and demersal
- 7. Aquaculture zones
 - a. mariculture and/or
 - b. brackish water aquaculture
- 8. Salting Zone
- 9. Industry Zone
 - a. fish processing industry
 - b. maritime industry
 - c. manufacturing industry
 - d. biopharmacology industry and/or
 - e. biotechnology industry
- 10. Airport zone
- 11. Aircraft landing zone
- 12. Service/trade zone
- 13. Energy Zone
- 14. Public facilities zone
 - a. education
 - b. sports and/or
 - c. religious
- 15. Seawater utilisation zones other than energy and/or
- 16. Other utilisation zones in accordance with the biogeophysical characteristics of the environment.

Moreover, conservation areas in the RZWP-3-K are divided into three areas, namely coastal and small islands conservation areas, the maritime conservation area and the water conservation area. Furthermore, the sea lanes area in the RZWP-3-K is utilised for shipping lanes, submarine pipes/cables and marine biota migration. Furthermore, the RZWP-3-K has a validity span of 20 years and undergoes a review every five years. The

completed RZWP-3-K document will be enacted by Regional Regulation. Indonesia is planning to create 34 RZWP-3-K in 34 provinces. Based on data in 2020, Indonesia has completed and implemented 27 RZWP-3-K, and 5 RZWP-3-K documents have been completed but are still in the legislative process. On the other hand, in 2021, Indonesia has completed and implemented 28 RZWP-3-K, 4 RZWP-3-K documents have been completed but are still in the legislative process, and two provinces have compiled final documents of RZWP-3-K.⁶⁵ East Kalimantan province is one of the provinces that has completed its RZWP-3-K, and it is regulated in the Regulation of the Province of East Kalimantan Number 2 of 2021 on Coastal Area and Small Island Zoning Plan of East Kalimantan Province in 2021 – 2041. The following is the RZWP-3-K of East Kalimantan province:

⁶⁵ ‘KKP Gelar Rakerteknas Percepat Penyelesaian Materi Teknis Perairan Pesisir/RZWP-3-K Integrasi dengan RTRW Provinsi’ (Marine Affairs and Fisheries Office of West Nusa Tenggara Province, 2022) <<https://dislutkan.ntbprov.go.id/kkp-gelar-rakerteknas-percepat-penyelesaian-materi-teknis-perairan-pesisir-rzwp-3-k-integrasi-dengan-rtrw-provinsi/>> accessed 21 February 2024.

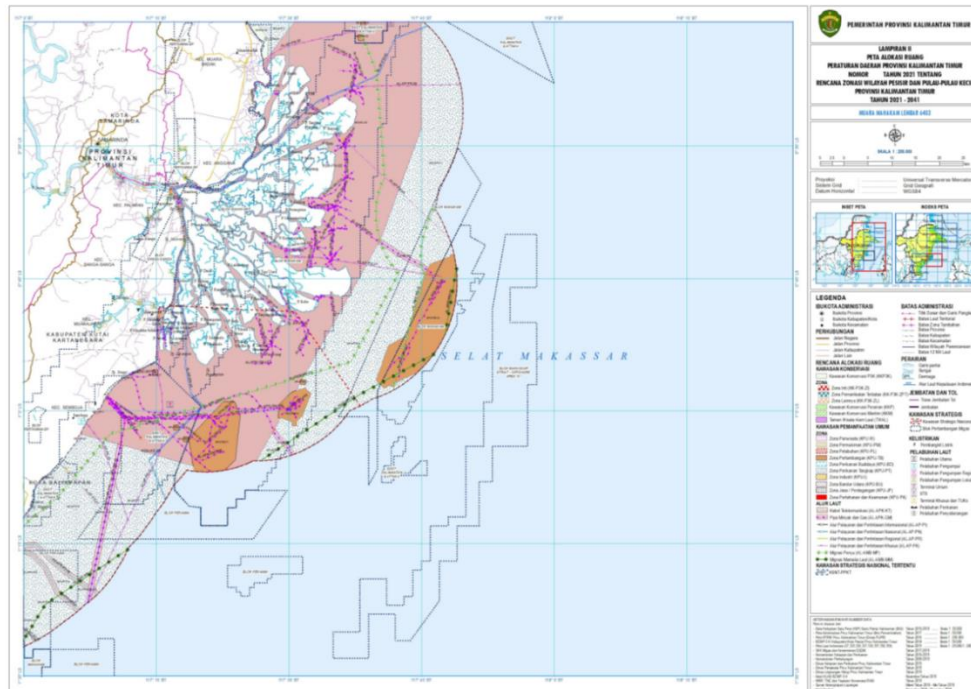


⁶⁶ Annex I of Regulation of the Province of East Kalimantan Number 2 of 2021 on Coastal Area and Small Island Zoning Plan of East Kalimantan Province in 2021 – 2041.

⁶⁷ Annex II of Regulation of the Province of East Kalimantan Number 2 of 2021 on Coastal Area and Small Island Zoning Plan of East Kalimantan Province in 2021 – 2041.

[illegible]

C. MUARA MAHAKAM LEMBAR 6403



⁶⁹ Annex II of Regulation of the Province of East Kalimantan Number 2 of 2021 on Coastal Area and Small Island Zoning Plan of East Kalimantan Province in 2021 – 2041.

D. TANJUNG HARAPAN LEMBAR 6404

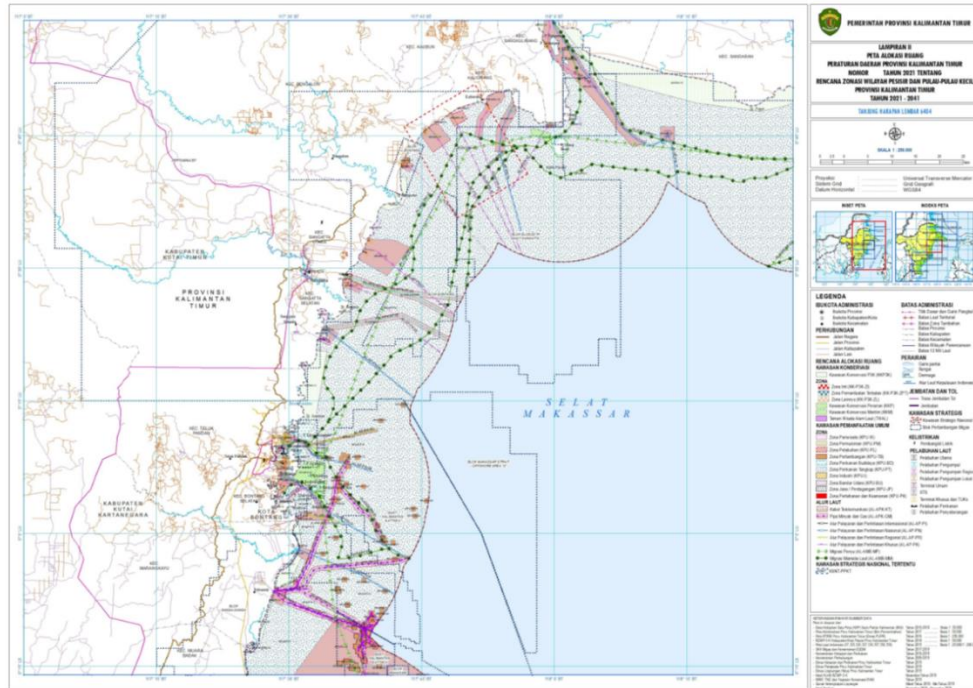


Figure 20. Spatial Allocation Map of Tanjung Harapan in RZWP-3-K of East Kalimantan Province.⁷⁰

E. SUNGAI BERAU LEMBAR 6405

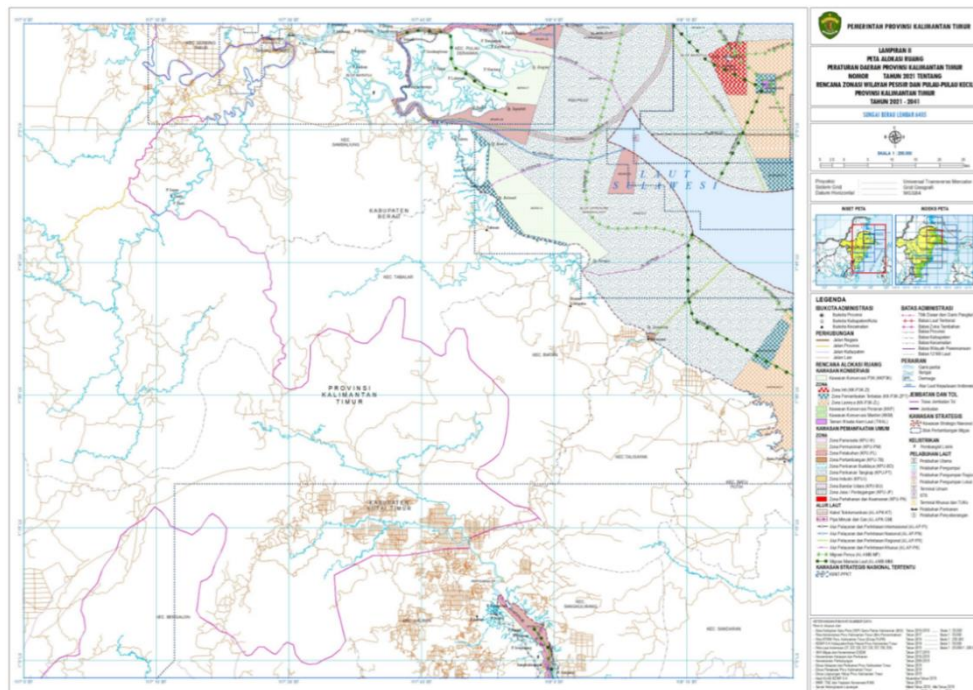


Figure 21. Spatial Allocation Map of Sungai Berau in RZWP-3-K of East Kalimantan Province.⁷¹

⁷⁰ Annex II of Regulation of the Province of East Kalimantan Number 2 of 2021 on Coastal Area and Small Island Zoning Plan of East Kalimantan Province in 2021 – 2041.

⁷¹ Annex II of Regulation of the Province of East Kalimantan Number 2 of 2021 on Coastal Area and Small Island Zoning Plan of East Kalimantan Province in 2021 – 2041.

F. TANJUNG BATU LEMBAR 6406



Figure 22. Spatial Allocation Map of Tanjung Batu in RZWP-3-K of East Kalimantan Province.⁷²

G. TANJUNG MANGKALIHAT LEMBAR 6407

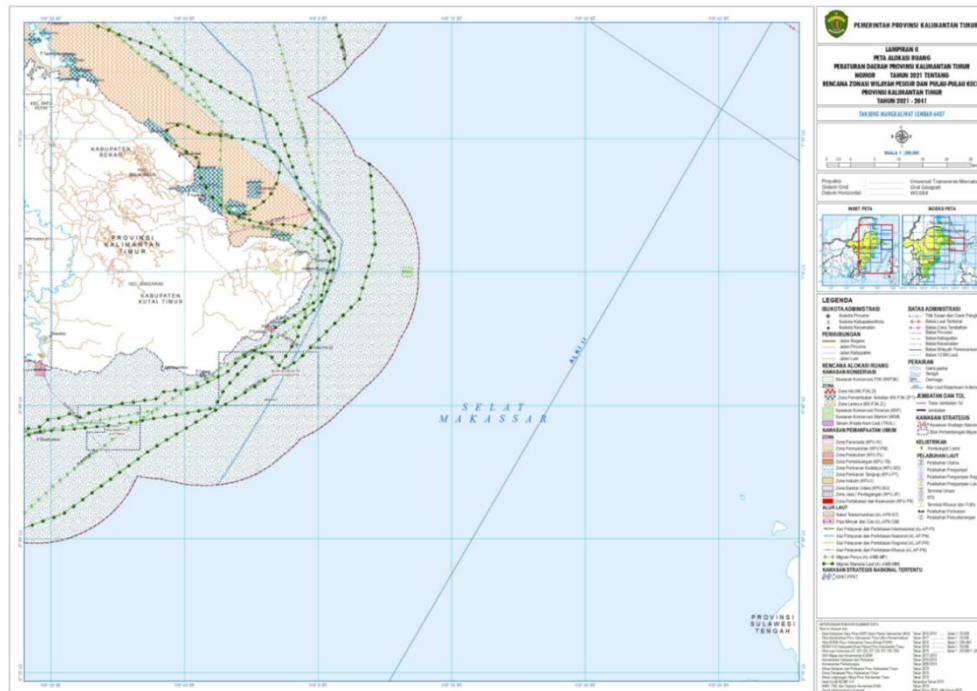


Figure 23. Spatial Allocation Map of Tanjung Mangkalihat in RZWP-3-K of East Kalimantan Province.⁷³

⁷² Annex II of Regulation of the Province of East Kalimantan Number 2 of 2021 on Coastal Area and Small Island Zoning Plan of East Kalimantan Province in 2021 – 2041.

⁷³ Annex II of Regulation of the Province of East Kalimantan Number 2 of 2021 on Coastal Area and Small Island Zoning Plan of East Kalimantan Province in 2021 – 2041.

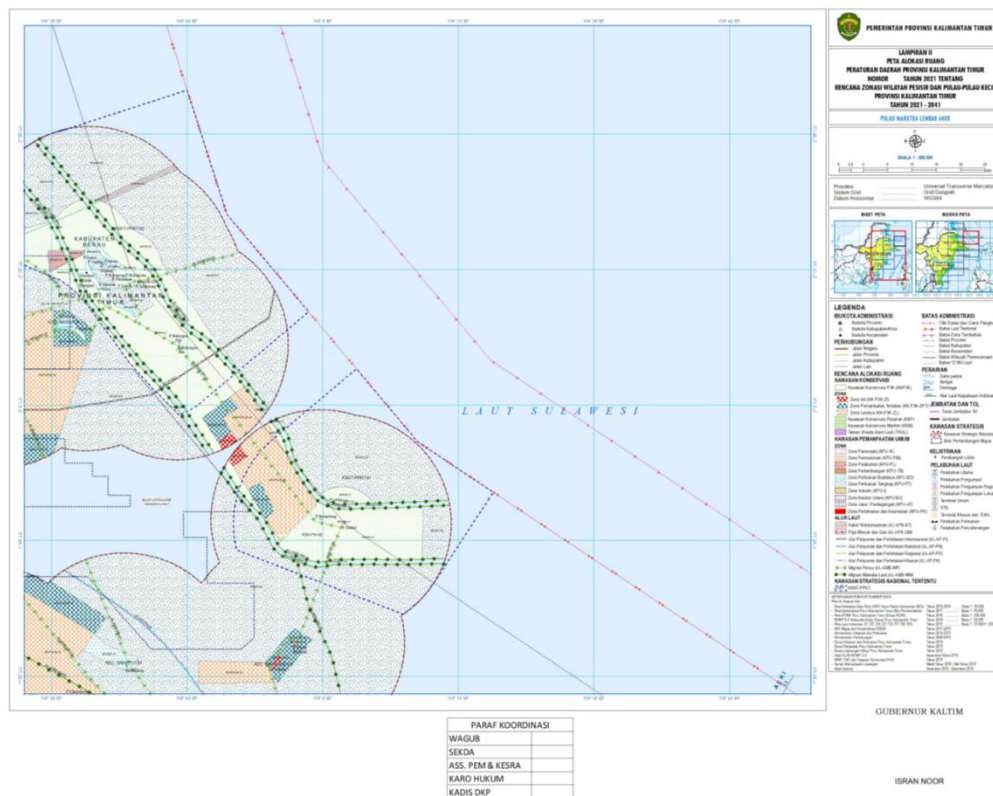


Figure 24. Spatial Allocation Map of Pulau Maratua in RZWP-3-K of East Kalimantan Province.⁷⁴

According to Law of the Republic of Indonesia Number 11 of 2020 on Job Creation, the RZWP-3-K will be integrated into the Province Spatial Plan. The integration will be conducted during the review of the Province's Spatial Plan.⁷⁵ After the establishment of the Law on Job Creation, the government also established the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 28 of 2021 on Organising Marine Spatial Planning. That ministerial regulation is used as a new guideline in drafting some MSP, including RZWP-3-K, and repeals Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 23 of 2016 on Planning for the Management of Coastal Areas and Small Islands.

⁷⁴ Annex II of Regulation of the Province of East Kalimantan Number 2 of 2021 on Coastal Area and Small Island Zoning Plan of East Kalimantan Province in 2021 – 2041.

⁷⁵ Article 7A of Law of the Republic of Indonesia Number 11 of 2020 on Job Creation.

2. CHINA'S CONCEPT OF MARINE SPATIAL PLANNING

2.1. OVERVIEW OF MARINE FUNCTIONAL ZONING

MSP in China is called Marine Functional Zoning (MFZ).⁷⁶ MFZ has been characterised as a practice of MSP.⁷⁷ MFZ is an instrument or tool to coordinate various human activities and sustainable utilisation of marine resources and as a tool to manage various allocations in the marine area by considering the preservation of marine ecosystems. China is at the forefront of progress in the development of MSP,⁷⁸ and among Asian nations, China stands out as having the most advanced development of MSP.⁷⁹ One of the first nations to implement MSP is China. Also, China has been implementing it for over 20 years. China has been practising the MFZ since the late 1980s. Currently, China's MFZ represents the zoning system of the third generation.⁸⁰ For the first generation of China's MFZ, it was compiled from 1989 to 1995 and implemented to 1998. In this generation, MFZ identifies the dominant functions of the marine area that has been designated, which natural attributes are a prerequisite. These natural attributes are resources, environment, and location.

Furthermore, the second generation of MFZ began in 1998 and completed in 2003. Its implementation period lasted until 2010.⁸¹ That MFZ established MFZ architecture at three levels, namely the country, provincial and national levels. In 2002, the National MFZ was approved by the state council after the zoning system was recognised in the Law of the People's Republic of China on the Administration of the Use of Sea Areas. The second generation of MFZ established a new framework of marine development

⁷⁶ Stephen Jay, Wesley Flannery, et al, 'International Progress in Marine Spatial Planning' in Aldo Chircop, Scott Coffen-Smout, and Moira McConnel (eds), *Ocean Yearbook 27* (Martinus Nijhoff Publishers 2013).

⁷⁷ Fanny Douvere, 'The importance of marine spatial planning in advancing ecosystem-based sea use Management' (2008) 32 *Marine Policy* 762.

⁷⁸ Charles N. Ehler, 'Present and future of marine spatial planning around the world' (2013) 65 *Marine Ecosystems and Management* 45.

⁷⁹ Catarina Frazão Santos, Charles N. Ehler, et al., 'Marine Spatial Planning' in Charles Sheppard (ed), *World Seas: An Environmental Evaluation* (Academic Press, 2019).

⁸⁰ Xin Teng, Qiwei Zhao, Panpan Zhang, et al., 'Implementing Marine Functional Zoning in China' (2021) 132 *Marine Policy* 1.

⁸¹ 'Marine Spatial Planning Global' (UNESCO, 2021) <https://www.mspglobal2030.org/wp-content/uploads/2021/04/MSPglobal_Seminar_MSPpractices_China.pdf> accessed 4 December 2023.

following the MFZ and has attained rational development and sustainable use of marine areas to a certain extent.

In 2005, China started to adjust its existing projects based on the provisions of the MFZ. Besides, it also ensures the development and utilisation of important areas to align with the MFZ, as well as control the damage to the quality of the coastal environment. In 2007, the State Oceanic Administration (SOA) published a regulation on MFZ management schemes by providing differentiated regulation of development, review, enactment and revision, and implementation of MFZ. One year after that, the SOA created the MFZ national expert group consisting of 28 MSP experts. In 2010, the third generation of MFZ was established. The SOA released the design of this generation of MFZ. In March 2012, the National Marine Functional Zoning (2011 – 2020) was approved by the state council. At present, all coastal provinces and all coastal countries have successfully finished and implemented their MFZ.

MFZ refers to the division of the marine spatial area, including islands into several functional zones. The functional zone is a maritime area that has been set aside for human activity based on its current usage, natural resources, demand of socioeconomic development, geographical and ecological features.⁸² MFZ is the principal tool used to regulate the use of marine areas, protect the marine environment and promote the rational and sustainable use of China's territorial sea and exclusive economic zone. MFZ was established by regarding environmental conditions, natural resources, development conditions, geographical location, and utilisation of marine areas and islands, as well as demands at the regional or national level for sustainable development.⁸³

Moreover, MFZ is mandated by the Law of the People's Republic of China on the Administration of the Use of Sea Areas. The law also mandates autonomous region, provincial, and municipal governments to establish the MFZ. The department assigned

⁸² Shawn M. MacDonald, 'Exploring the Potential for Performance Zoning Within the Practice of Marine Spatial Planning' (LLM Master Thesis, Dalhousie University 2013).

⁸³ Qinhua Fang, Ran Zhang, et al., 'Marine Functional Zoning in China: Experience and Prospects' (2011) 39 *Taylor & Francis* 656.

with the task of creating the MFZ is the SOA under the state council.⁸⁴ Through the implementation of MFZ, China intends to fulfil the goals of preserving the marine ecological environment, enhancing the efficiency of the use of marine resources, and sustaining the steady expansion of the marine economy.⁸⁵

China has six basic principles in developing the MFZ. First, the fundamental of natural attributes. This aims to define the function of the seabed scientifically through a comprehensive assessment of its carrying capacity and development in line with natural resources, location and environmental conditions. Second, scientific development as a guideline. This principle aims to ensure ecological needs, production and guidelines for optimisation of the distribution for industrial and economic activities. Third, fisheries development as a priority. The aim is to protect fish stocks and the environment which are the basis of fisheries production and fishermen's livelihoods.

Fourth, environmental protection as a prerequisite. This principle aims to strengthen environmental protection, improve the supervision of waste dumping into the sea, preventive control arrangements for waste dumping into the sea, and protect ecosystems in estuaries, bays and coastal areas. Fifth, coordination of land-sea spatial planning as criteria. The aims of this principle are to coordinate development and utilise conservation in waters and land based on land-sea connectivity. Sixth, national security is the main key. This principle aims to ensure the security of marine communications (transport), submarine cables and pipelines. It also aims to adjust the needs of marine space utilisation to the interests of defence and security.

In the planning process, MFZ has three different hierarchy levels: national, provincial and country. However, in 2002, China completed all of its MFZ at the national, provincial and country levels. Furthermore, in the preparation of MFZ, there is a classification system, and the system has undergone revisions and enhancements three times in line with the three generations of MFZ. The zoning of the first generation of zoning is divided into five types, namely:

⁸⁴ Subandono Diposaptono, *Membangun Poros Maritim Dunia Dalam Perspektif Tata Ruang Laut* (3rd edn, Minister of Marine and Fisheries of the Republic of Indonesia 2017).

⁸⁵ State Oceanic Administration, *National Marine Functional Zoning (2011-2020)* (Ocean Press 2012).

1. Remediation zone
2. Special purpose zone
3. Marine protection zone
4. Reservation zone
5. Development and utilisation zone.

Further, under the Technical Guideline on Marine Functional Zoning, the second generation of zoning classifies MFZ into ten types, namely:

1. Conservation zone of fisheries species
2. Marine energy zone
3. Tourism zone
4. Seawater utilisation zone
5. Mineral zone
6. Marine protection zone
7. Reservation zone
8. Sea-use project zone
9. Special purpose zone
10. Port and navigation zone.

However, the third-generation MFZ classification system is determined by sea uses and the main marine industries with the status of marine development at present, technical assessment of the jurisdictional waters' quality, and consideration of utilisation and environmental protection. This generation of zoning classifies zones into eight zones, which are further divided into 22 subzones, namely:

1. Mariculture and fishery zone
 - Mariculture reclamation zone
 - Fishery infrastructure zone
 - Mariculture zone
 - Nursery zone
 - Capture zone
 - Conservation zone of key fishery species
2. Port and navigation zone
 - Port zone

- Waterway zone
- Anchorage zone
- 3. Industry and urban use zone
 - Industrial construction zone
 - Urban construction zone
- 4. Minerals and energy zone
 - Oil and gas zone
 - Solid mineral zone
 - Salt pan
 - Renewable energy zone
- 5. Tourism and entertainment zone
 - Tourism zone
 - Recreation zone
- 6. Marine protection zone
 - Marine protected area
 - Special marine protected area
- 7. Special purpose zone
 - Military zone
 - Other special purpose zones
- 8. Reservation zone

In the utilisation of the marine spatial area, the Law on the Administration of the Use of Sea Areas regulates the maximum duration of the utilisation rights and the duration is divided based on the utilisation, for example, for aquaculture the validity period is limited to 15 years, shipping dismantling 20 years, tourism and recreation 25 years, public welfare undertakings 40 years, salt and mining industries 30 years, and construction projects such as ports and shipyards 50 years.⁸⁶ Moreover, the Ministry of Natural Resources (MNR) was founded in 2018 to integrate the spatial planning functions of the former planning departments, namely the Ministry of Land and Resources (MLR) and the

⁸⁶ Article 25 of Law of the People's Republic of China on the Administration of the Use of Sea Areas, 2001.

SOA.⁸⁷ All kinds of spatial planning in China, such as the MFZ and terrestrial spatial planning will be integrated into territory spatial planning by MNR. The process of territory spatial planning began in 2019 by MNR, and it's still in process until now.

2.2. NATIONAL MARINE FUNCTIONAL ZONING

National MFZ is defined as a strategic policy guideline. Also, the National MFZ provides direction and restrictive documents. The scope of this planning area includes territorial sea, inland waters, islands, exclusive economic zone, and continental shelf.⁸⁸ For the implementation and management of the zoning scheme at the national level, the state council provided comprehensive guideline. The guideline emphasises that the MFZ scheme is the legal basis of marine spatial management, and its protection also has to be strictly implemented.

⁸⁷ Honghao Tang, Mingyue Lin, et al., 'New development of marine spatial planning in China: problems and policy suggestions on the implementation of National Plan for Main Functional Zones of Oceans' (2022) 5 *Emerald Publishing Limited* 34.

⁸⁸ Subandono Diposaptono, *Membangun Poros Maritim Dunia Dalam Perspektif Tata Ruang Laut* (3rd edn, Minister of Marine and Fisheries of the Republic of Indonesia 2017).

2.3. PROVINCIAL MARINE FUNCTIONAL ZONING

The zoning scope of the Provincial MFZ includes the sea and islands under the jurisdiction of the province government which is from the shoreline to the territorial sea's boundaries. The basis for preparation for the Provincial MFZ is the National MFZ. The Provincial MFZ is drafted by the Provincial SOA in coordination with appropriate technical agencies and must be presented to the state council for approval. In formulating MFZ at provincial level, the government is guided by the Technical Requirements for the Design and Formulation of Provincial Marine Functional Zoning. In addition, the Provincial MFZ addresses provincial issues in general.⁹²

Also, the contents of the Provincial MFZ divide the National MFZ into more specific sub-regions and determine the purpose of each sub-region.⁹³ The main tasks for the provincial-level MFZ are based on the requirements of the local characteristics and National MFZ, confirming the objectives of provincial marine development, zoning targets and strategic space allocations.⁹⁴ The approval authority of Provincial MFZ is the state council. There are 11 Provincial MFZ consisting of the provinces of Liaoning, Hebei, Tianjin, Shandong, Jiangsu, Shanghai, Zhejiang, Fujian, Guangdong, Guangxi, and Hainan.⁹⁵ The following is a Provincial MFZ map of one of the provinces in China, namely Hebei Province:

⁹² Subandono Diposaptono, *Membangun Poros Maritim Dunia Dalam Perspektif Tata Ruang Laut* (3rd edn, Minister of Marine and Fisheries of the Republic of Indonesia 2017).

⁹³ Qinhua Fang, Ran Zhang, et al., 'Marine Functional Zoning in China: Experience and Prospects' (2011) 39 *Taylor & Francis* 656.

⁹⁴ Xin Teng, Qiwei Zhao, Panpan Zhang, et al., 'Implementing Marine Functional Zoning in China' (2021) 132 *Marine Policy* 1.

⁹⁵ 'China' (UNESCO, June 2020) <<https://www.mspglobal2030.org/msp-roadmap/msp-around-the-world/asia/china/>> accessed 29 December 2023



Figure 26. Hebei Province MFZ map.⁹⁶

2.4. COUNTRY MARINE FUNCTIONAL ZONING

The zoning scope for country-level MFZ consists of the sea and islands which are included in the administration of municipal and regional governments. In the preparation process, the country-level MFZ is prepared by the SOA in the city/district together with relevant technical agencies which the provincial government approves. The country-level MFZ addresses local issues. Further, the focus of the country-level MFZ is the implementation of the objectives that have been formulated by the state and the provinces. The main tasks of the country-level MFZ are to enforce the improved provincial zoning targets, propose advice to ensure the implementation of MFZ and determine the marine

⁹⁶ Ibid.

functional subzones with distinct requirements for both environmental protection and sea use.⁹⁷

In formulating MFZ at country levels, the government is guided by the Technical Guideline on the Design and Formulation of Marine Functional Zoning at the Municipal or County Level. SOA issued that guideline. The MFZ at this level includes about 60 country MFZ.⁹⁸ The following is a country-level MFZ map of one of the cities in China, namely Tangshan City in Hebei Province:

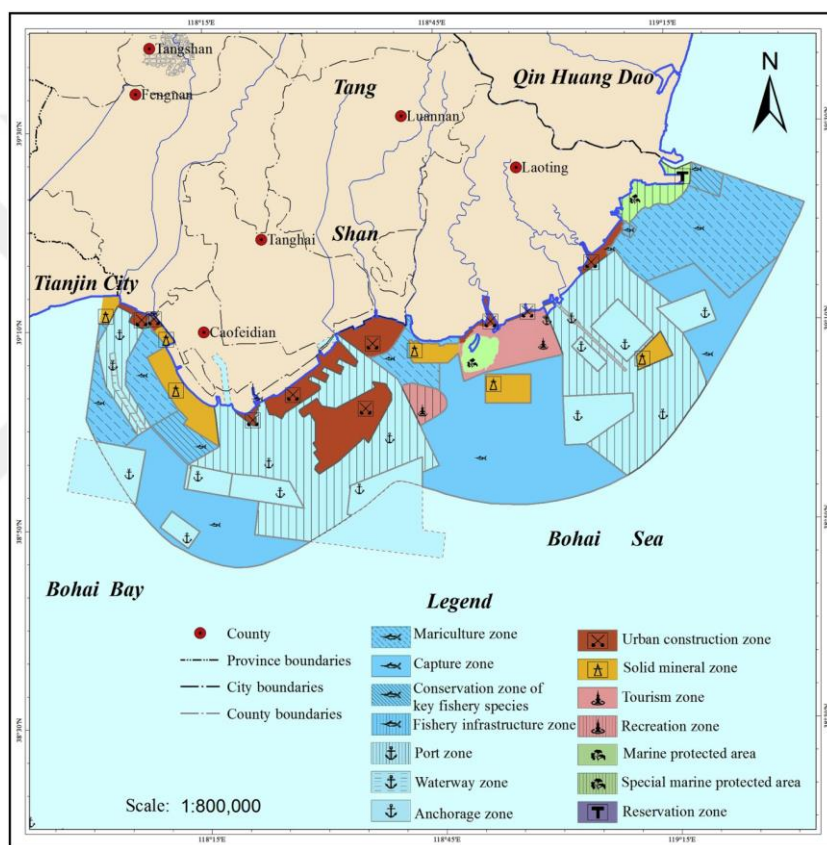


Figure 27. Country-level MFZ Map of Tangshan city⁹⁹

⁹⁷ Xin Teng, Qiwei Zhao, Panpan Zhang, et al., 'Implementing Marine Functional Zoning in China' (2021) 132 *Marine Policy* 1.

⁹⁸ 'China' (UNESCO, June 2020) <<https://www.mspglobal2030.org/msp-roadmap/msp-around-the-world/asia/china/>> accessed 29 December 2023

⁹⁹ Xin Teng, Qiwei Zhao, Panpan Zhang, et al., 'Implementing Marine Functional Zoning in China' (2021) 132 *Marine Policy* 1.

3. THE IDEAL CONCEPT OF MARINE SPATIAL PLANNING THAT CAN BE IMPLEMENTED IN INDONESIA

3.1. COMPARISON OF INDONESIA'S MARINE SPATIAL PLANNING AND CHINA'S MARINE SPATIAL PLANNING

MSP focuses on managing the spatial and temporal patterns of human uses in the ocean, aiming to reduce conflicts and promote harmonious coexistence among various uses, as well as between uses and the marine environment.¹⁰⁰ Over the past decade, MSP has become significantly important, prompting numerous countries globally to initiate the development of their spatial planning processes. This is attributed to its relevance and potential and in executing effective operational ocean management and governance.¹⁰¹ In August 2018, around 70 countries were in the process of developing or had already prepared approximately 140 MSP plans at various levels, such as the national, regional, or local levels.¹⁰² Approved MSP currently encompass nearly 10% of the world's Exclusive Economic Zones.¹⁰³ Indonesia is one of those countries which is developing MSP.

Indonesia is an archipelagic country with a vast sea area of 6.400.000 km².¹⁰⁴ Meanwhile, China's sea area is 3.685.000 km².¹⁰⁵ The sea contains abundant natural resources. If it is managed properly, the abundance of natural resources can ensure the welfare of the community. One of the efforts to manage the abundance of natural resources is by preparing MSP. Through MSP, there will be a legal force that plays a

¹⁰⁰ Charles Ehler, Fanny Douvère, *Marine Spatial Planning: A Step-By-Step Approach Toward Ecosystem-Based Management* (UNESCO, 2009).

¹⁰¹ Catarina Frazão Santos, Charles N. Ehler, et al., 'Marine Spatial Planning' in Charles Sheppard (ed), *World Seas: An Environmental Evaluation* (Academic Press, 2019).

¹⁰² Duncan Vaughan, Tundi Agardy, 'Marine protected areas and marine spatial planning – allocation of resource use and environmental protection' in John Humphreys and Robert W.E. Clark (eds), *Marine Protected Areas* (Elsevier, 2020).

¹⁰³ UNESCO, '2nd International Conference on Marine/Maritime Spatial Planning' (2017).

¹⁰⁴ Nurhidayat, *Menata Ruang Laut Dengan Peta Laut Indonesia* (Buku Kompas 2023).

¹⁰⁵ Maryam Mazaya, '6 Laut dan Samudra Terbesar di Dunia, Ada Segitiga Bermuda di Salah Satunya!' (*Detikedu*, 16 June 2023) <<https://www.detik.com/edu/detikpedia/d-6776000/6-laut-dan-samudra-terbesar-di-dunia-ada-segitiga-bermuda-di-salah-satunya>> accessed 13 December 2023.

role.¹⁰⁶ Also, it ensures sustainability, including the sustainability of natural resources and maritime professions. Regarding MSP, Indonesia and China have different concepts for preparing it. There are not only differences in the drafting but also many other differences, such as the terms used to mention MSP, clarification of zones, MSP levels, etc.

In mentioning MSP, China uses the term MFZ with three levels of hierarchy, namely national, provincial and country. On the other hand, Indonesia uses the term MSP, which consists of several types, namely national MSP, national strategic zoning plan, specific national strategic zoning plan, inter-regional area zoning plan, and coastal area and small island zoning planning. The following is a comparison table of Indonesia and China's MSP concepts in detail:

Comparison	Indonesia	China
Term of mention	Marine Spatial Planning	Marine Functional Zone
The legal basis	○ Law of the Republic of Indonesia Number 32 of 2014 on Marine Affairs ○ Law of the Republic of Indonesia Number 11 of 2020 on Job Creation	Law of the People's Republic of China on the Administration of the Use of Sea Areas
The levels and scope of MSP	1. National MSP The scope consists of the territorial sea, inland sea, archipelagic waters, contiguous zone, continental shelf, and exclusive economic zone.¹⁰⁷	○ National MFZ The zoning scope includes territorial sea, inland waters, islands, exclusive economic zone, and continental shelf.¹¹²

¹⁰⁶ Artanti Hendriyana, 'Tata Ruang Laut Jadi Salah Satu Strategi Pembangunan Perikanan dan Kelautan Indonesia' (*Kantor Komunikasi Publik*, 17 November 2016) <<https://www.unpad.ac.id/2016/11/tata-ruang-laut-jadi-salah-satu-strategi-pembangunan-perikanan-dan-kelautan-indonesia/>> accessed 18 November 2023.

¹⁰⁷ Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning.

¹¹² Qinhua Fang, Ran Zhang, et al., 'Marine Functional Zoning in China: Experience and Prospects' (2011) 39 *Taylor & Francis* 656.

Comparison	Indonesia	China
	2. Marine Area Zoning Plan ○ RZ KSN The boundary of the RZ KSN area is determined based on the coastline of the KSN planning administrative area to the waters area of the provincial management authority by considering objects or activities that have important values and strategies for the national interest.¹⁰⁸ ○ RZ KSNT The boundaries include the waters around the outermost small islands.¹⁰⁹ ○ RZ KAW RZ KAW regulates bays, straits, and seas beyond the 12 nautical miles limit of local government jurisdiction, all the way up to the central government's maximum claim boundary, which includes the	○ Provincial MFZ the zoning scope includes the sea and islands under the jurisdiction of the province government, which is from the shoreline to the territorial sea's boundaries.¹¹³ ○ MFZ Country-level The zoning scope consists of the sea and islands which are included in the administration of municipal and regional governments.¹¹⁴

¹⁰⁸ Article 17 Paragraph (1) of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan.

¹⁰⁹ Article 33 Paragraph (1) of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan.

¹¹³ Qinhua Fang, Ran Zhang, et al., 'Marine Functional Zoning in China: Experience and Prospects' (2011) 39 *Taylor & Francis* 656.

¹¹⁴ Qinhua Fang, Ran Zhang, et al., 'Marine Functional Zoning in China: Experience and Prospects' (2011) 39 *Taylor & Francis* 656.

Comparison	Indonesia	China
	Exclusive Economic Zone and/or Continental Shelf.¹¹⁰ 3. RZWP-3-K The scope is the transition area between land and marine ecosystems which are influenced by alterations occurring on sea and land; landward includes the administrative region of the sub-district and extends 12 nautical miles towards the sea from the coastline on the seaward side.¹¹¹	
Classification of the contents	🚧 National MSP¹¹⁵ ➤ The Waters Area 1. Policies and strategies for MSP in the waters area 2. Marine spatial structure plan in the water area ○ Structure of marine and fisheries growth centres ▪ Marine and fisheries growth centres ▪ Marine industry centre	1. Mariculture and fishery zone ○ Mariculture reclamation zone ○ Fishery infrastructure zone ○ Mariculture zone ○ Nursery zone ○ Capture zone ○ Conservation zone of key fishery species

¹¹⁰ Rekso Sukmono, et al, *Pedoman Muatan Sektor Pertahanan Untuk Perumusan Peraturan Rencana Tata Ruang* (Ministry of Defense, 2022).

¹¹¹ Article 18 Paragraph (1) of Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 23 of 2016 on Planning for the Management of Coastal Areas and Small Islands.

¹¹⁵ Government Regulation of the Republic of Indonesia Number 32 of 2019 on Marine Spatial Planning.

Comparison	Indonesia	China
	○ The network system of marine infrastructures and facilities ▪ National port arrangements ▪ Fisheries port arrangements 3. Marine spatial pattern plan in the waters area ○ Public utilisation area ▪ Fishing zone ▪ Tourism zone ▪ Marine industry zone ▪ Mining zone ▪ Energy management zone ▪ Defence and security zone ▪ Transport zone ○ Conservation area ▪ Coastal and small island conservation area ▪ Maritime conservation area ▪ Waters conservation area ▪ Other conservation areas which are designated according to the	2. Port and navigation zone ○ Port zone ○ Waterway zone ○ Anchorage zone 3. Industry and urban use zone ○ Industrial construction zone ○ Urban construction zone 4. Minerals and energy zone ○ Oil and gas zone ○ Solid mineral zone ○ Salt pan ○ Renewable energy zone 5. Tourism and entertainment zone ○ Tourism zone ○ Recreation zone 6. Marine protection zone ○ Marine protected area ○ Special marine protected area 7. Special purpose zone ○ Military zone

Comparison	Indonesia	China
	provisions of laws and regulations ○ Sea lanes ▪ Shipping lanes ▪ Pipelines - route/submarine cable ▪ Migration of marine biotas route ○ KSNT 4. Determination of public utilisation areas that have national strategic value ○ National fisheries industry development area ○ Integrated Marine and Fisheries Centre ○ Sustainable fish production area ○ Strategic industry area ○ Location for strategic infrastructure and/or activity that has national strategic value ➤ The Jurisdiction Area 1. Policies and strategies for MSP in the jurisdiction area 2. The marine spatial structure plan in the jurisdiction area	○ Other special purpose zones 8. Reservation zone.¹¹⁸

¹¹⁸ Xin Teng, Qiwei Zhao, Panpan Zhang, et al., 'Implementing Marine Functional Zoning in China' (2021) 132 *Marine Policy* 1.

Comparison	Indonesia	China
	○ The network system of marine infrastructures and facilities 3. The marine spatial pattern plan in the jurisdiction area ○ Public utilisation area ▪ Fishing zone ▪ Mining zone ▪ Energy management zone ○ Conservation area ✚ Marine Area Zoning Plan¹¹⁶ 1. The marine spatial structure plan ○ The composition of the marine growth centre ▪ Marine and fisheries growth centre – The centre of business activity of salting – Capture fisheries activity centres – Aquaculture fisheries activity centres – Tourism destinations – Development of new and renewable energy ▪ The marine industry centre	

¹¹⁶ Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan.

Comparison	Indonesia	China
	– Marine biotechnology industry centre – Maritime industry centre – Manufacturing industry – Fish processing industry – Development of science and high technology – Tourism industry ○ The network system of marine infrastructure and facilities ▪ National port arrangements ▪ Fisheries port arrangements 2. The marine spatial pattern plan ○ Public utilisation areas ▪ Tourism ▪ National port ▪ Fisheries port ▪ Oil and gas mining ▪ Mineral and coal mining ▪ Capture fisheries ▪ Aquaculture ▪ Industry ▪ Airport ▪ Energy management ▪ Defence and security ▪ Settlement ▪ Salting	

Comparison	Indonesia	China
	▪ Trade in goods and/or services ▪ Public facilities ▪ Coastal ecosystem management ▪ Utilisation of seawater other than energy ▪ Other utilisation in accordance with the biogeophysical characteristics of the environment. ○ Conservation areas ○ Sea lanes ▪ Shipping lanes ▪ Submarine pipeline route ▪ Submarine cable route ▪ Migration of marine biotas route ▪ Traffic Separation Scheme (TSS)  RZWP-3-K¹¹⁷ 1. Allocation of spatial areas for public utilisation areas, conservation areas, KSNT, and sea lanes	

¹¹⁷ Article 10 of Law of the Republic of Indonesia Number 1 of 2014 on Amendment to Law of the Republic of Indonesia Number 27 of 2007 on Management of Coastal Zone and Small Islands.

Comparison	Indonesia	China
	2. Connections between terrestrial and marine ecosystems within a bioecoregion 3. Determination of marine spatial utilisation, and 4. Determination of priority marine areas for conservation, socio-cultural, economic, marine transportation, strategic industry, defence and security purposes	
Current status of MSP	In the process of integration	In the process of integration

Table 1. Comparison table of Indonesia and China's MSP concepts

The table shows that Indonesia's MSP is more detailed than China's MFZ, but in terms of implementation, China's MFZ is more successful. Evidently, based on the results of research in 2008, the consistency between MFZ and development is 90.75%.¹¹⁹ Meanwhile, Indonesia's MSP still has some conflicts that occur, such as overlapping, conflict of interest, etc. For instance, there is a case of overlapping marine spatial utilisation areas in Sampang Regency with the incompatibility of each utilisation zone. In detail, the MSP of Sampang Regency is regulated in the RZWP-3-K of East Java province, which is regulated in the Regulation of the Province of East Java Number 1 of 2018. In total, only 57% of the utilisation zones are in accordance with the RZWP-3-K.¹²⁰ The following is a map which describes the appropriate and inappropriate coastal and sea utilisation zones based on the existing and RZWP-3-K:

¹¹⁹ Subandono Diposaptono, *Membangun Poros Maritim Dunia Dalam Perspektif Tata Ruang Laut* (3rd edn, Minister of Marine and Fisheries of the Republic of Indonesia 2017).

¹²⁰ Annisa' Kunny Latifa, Yanto Budisusanto, et.al, 'Kajian Kesesuaian Pemanfaatan Ruang Laut dan Pesisir Berdasarkan RZWP-3-K dan RTRW di Pesisir Selatan Kabupaten Sampang' (2019) 8 *Jurnal Teknik ITS* 144.

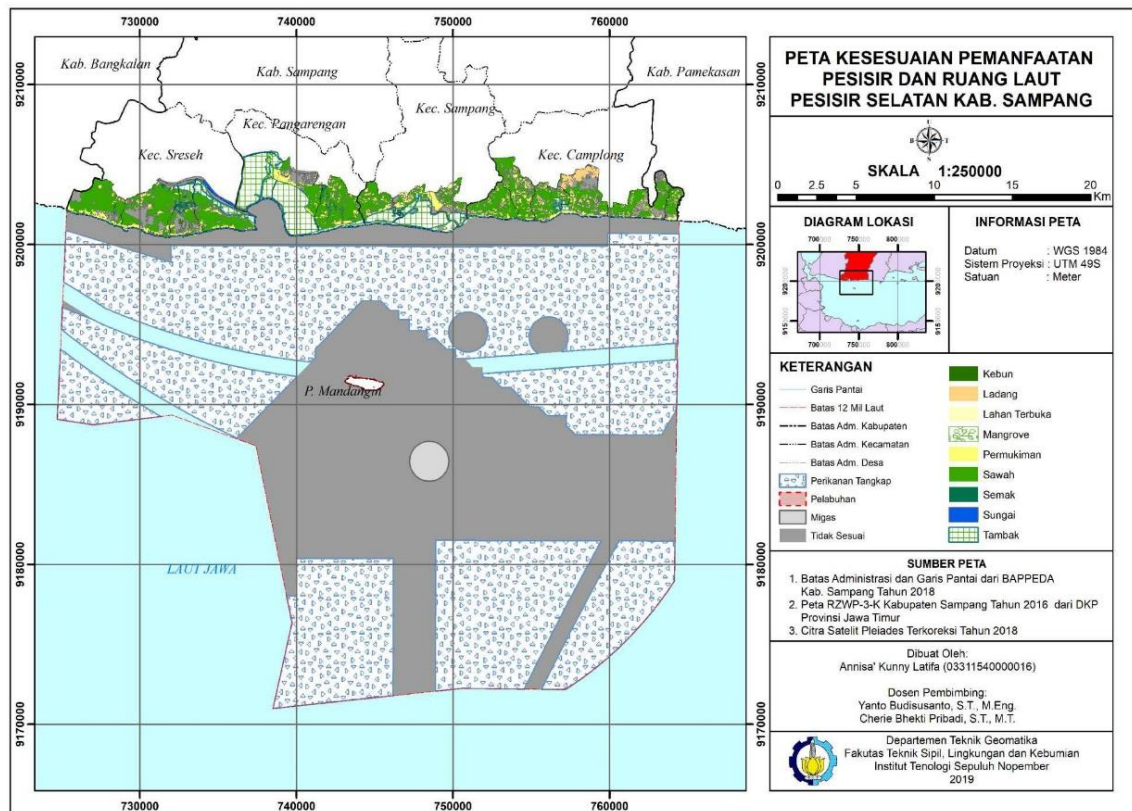


Figure 28. The map of appropriate and inappropriate coastal and sea utilisation zones based on the existing and RZWP-3-K.¹²¹

Based on the map above, the zone of inappropriate utilisation of coastal and sea areas is coloured in dark grey. Further, the capture fisheries zone is coloured white with a triangle outlined in blue. The existing condition of the capture fisheries zone overlaps with some other utilisation zones. According to the map above, the capture fisheries zone that is in accordance with the RZWP-3-K is 86.87% of the entire existing capture fisheries zone. Not only does the capture fisheries zone overlap, but the oil and gas zone also has overlapping problems, and only 1.64% of that zone is in line with the RZWP-3-K. Moreover, the utilisation of the port zone also has overlapping areas. This zone is mostly included in the aquaculture zone, and only 1.28% of the port zone is in line with the RZWP-3-K.¹²²

¹²¹ Ibid.

¹²² Annisa' Kunny Latifa, Yanto Budisusanto, et.al, 'Kajian Kesesuaian Pemanfaatan Ruang Laut dan Pesisir Berdasarkan RZWP-3-K dan RTRW di Pesisir Selatan Kabupaten Sampang' (2019) 8 *Jurnal Teknik ITS* 144.

Moreover, there is another problem in Indonesia's MSP, which is the disharmony between MSP and laws and regulations. An example is the RZWP-3-K of East Kalimantan province. The RZWP-3-K of East Kalimantan Province is regulated in the Regulation of the Province of East Kalimantan Number 2 of 2021. According to the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 23 of 2016 on Planning for the Management of Coastal Areas and Small Islands, there are several spatial allocations regulated in the RZWP-3-K, one of which is the settlement zone and the zone is described in two sub-zones, namely fishermen's settlements and non-fishermen's settlements.

With reference to the Regulation of the Province of East Kalimantan Number 2 of 2021 on RZWP-3-K of East Kalimantan Province for 2021-2041, the fishermen's settlement zone is only located in one city, namely Bontang City, whereas there are other existing fishermen settlements that have long settled in the settlement area long before Indonesia's independence, such as fishermen settlements in Kutai Kartanegara regency, specifically in Samboja district.¹²³ Therefore, there is disharmony between the Regulation of the Province of East Kalimantan Number 2 of 2021 and the higher laws and regulations, namely the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 23 of 2016.

Other than the previous problems, there is another problem in Indonesia's MSP, especially in the RZWP-3-K, namely the differentiation of space allocation.¹²⁴ According to Law of the Republic of Indonesia Number 26 of 2007 on Spatial Planning, regional spatial planning at the national, provincial, and regency/city levels includes land area, sea area, and air space, including space within the earth.¹²⁵ Nevertheless, the law also delegates the regulation of the management of sea areas and airspace to be regulated by a separate law.¹²⁶ Based on Law of the Republic of Indonesia Number 1 of 2014 on

¹²³ Syifa Nur Aini, 'Access to Justice for Fishermen Occupying Coastal Areas in the Perspective of Spatial Planning in East Kalimantan' (Bachelor of Law Thesis, Mulawarman University 2021).

¹²⁴ Ananda Prima Yurista, Dian Agung Wicaksono, 'Compatibility of Zoning Plan for Coastal Areas and Small Islands as Integrated Spatial Planning' (2017) 6 *Jurnal Rechts Vinding Media Pembinaan Hukum Nasional* 183.

¹²⁵ Article 15 of Law of the Republic of Indonesia Number 26 of 2007 on Spatial Planning.

¹²⁶ Article 6 Paragraph (5) of Law of the Republic of Indonesia Number 26 of 2007 on Spatial Planning.

Amendment to Law of the Republic of Indonesia Number 27 of 2007 on Management of Coastal Zone and Small Islands, the drafting of the RZWP-3-K needs to be aligned, harmonised and balanced with the Regional Spatial Planning - commonly called *Rencana Tata Ruang Wilayah* (RTRW) of the province and/or city,¹²⁷ but in allocating the spatial between the RTRW and the RZWP-3-K has differences. The spatial allocation that is regulated in the RTRW consists of protected areas and cultivated areas.

In contrast, the space allocation regulated in the RZWP-3-K consists of Public Utilisation Areas, Conservation Areas, Specific National Strategic Areas, and Sea Lines.¹²⁸ It indicates that the structure of MSP in the RZWP-3-K and the RTRW is very different, although both are regulating MSP. The differentiation in spatial allocation can trigger overlapping problems in the future. Furthermore, in its preparation, the RTRW is the domain of authority of the Land Affairs and Spatial Planning Office, while the preparation of the RZWP-3-K is the domain of authority of the Marine Affairs and Fisheries Office. It becomes a weak point to synchronise the substance between the RTRW and RZWP-3-K.

In addition, sectoral ego between regional apparatus can also cause potential problems in the implementation of the two planning documents. It emphasises that the RZWP-3-K and RTRW should be developed in an integrative manner and do not need to be made into two different local regulations.¹²⁹ Apart from avoiding potential problems, it can also reduce the regional budget.¹³⁰ It is also in line with the efforts undertaken by the Indonesian government at this time, namely integrating its MSP with RTRW, with the following details: the National MSP is integrated into the National Spatial Planning; the RZWP-3-K is integrated into the Provincial Spatial Planning; and the RZ KSN is

¹²⁷ Article 9 Paragraph (2) of Law of the Republic of Indonesia Number 1 of 2014 on Amendment to Law of the Republic of Indonesia Number 27 of 2007 on Management of Coastal Zone and Small Islands.

¹²⁸ Article 10 Point a Law of the Republic of Indonesia Number 1 of 2014 on Amendment to Law of the Republic of Indonesia Number 27 of 2007 on Management of Coastal Zone and Small Islands.

¹²⁹ Ministry of Law and Human Rights of the Republic of Indonesia, 'Laporan Analisis dan Evaluasi Hukum Tentang Pengelolaan Wilayah Pesisir dan Pulau-Pulau Kecil' (2015).

¹³⁰ Ministry of Law and Human Rights of the Republic of Indonesia, 'Laporan Analisis dan Evaluasi Hukum Tentang Pengelolaan Wilayah Pesisir dan Pulau-Pulau Kecil' (2015).

integrated into the National Strategic Area Spatial Plan.¹³¹ Currently, the integration process is ongoing.

One of the similarities between Indonesia's MSP and China's MFZ is that both are currently in the integration process, but China's MFZ will be integrated into Territorial Spatial Planning. This is because China's MFZ currently has several problems, such as no consideration on climate change, over-expanding the sea reclamation area, etc.¹³² However, the new MFZ will be developing an ecological civilisation,¹³³ and will prioritise ecosystem-based management in several aspects, such as human activity regulation, zoning goals, supporting measures, zoning division, environmental protection requirements, and compatibility coordination.¹³⁴ China's MFZ will add more content, including protecting marine biodiversity, combating climate change, preserving natural coastlines, marine conservation area networks, preserving important coral reefs, islands, and other important habitats.¹³⁵

3.2. THE IDEAL CONCEPT OF MARINE SPATIAL PLANNING FOR INDONESIA

China has completed its MFZ since 2002 at the national, provincial, and country levels. Because of MFZ, China has reaped many benefits, whether in the economic, social and environmental fields. According to Ehler and Douvere, when the MSP is properly developed, it can produce a range of benefits in terms of the environmental, social, and

¹³¹ Rasman Manafi, Yogi Yanuar, et. al., *Integrasi Tata Ruang Darat dan Laut, Satu Rencana, Satu Tata Kelola* (Deputy for Maritime Resources of the Coordinating Ministry for Maritime and Investment Affairs of the Republic of Indonesia 2021).

¹³² Xin Teng, Qiwei Zhao, Panpan Zhang, et al., 'Implementing Marine Functional Zoning in China' (2021) 132 *Marine Policy* 1.

¹³³ 'Speeding up reform of the system for developing an ecological civilization and building a beautiful China' (*China Daily USA*, 19 October 2017) <http://usa.chinadaily.com.cn/epaper/2017-10/19/content_33454847.htm> accessed 29 December 2023.

¹³⁴ Xin Teng, Qiwei Zhao, Panpan Zhang, et al., 'Implementing Marine Functional Zoning in China' (2021) 132 *Marine Policy* 1.

¹³⁵ Xin Teng, Qiwei Zhao, Panpan Zhang, et al., 'Implementing Marine Functional Zoning in China' (2021) 132 *Marine Policy* 1.

economic.¹³⁶ Therefore, it is evident that MFZ in China is a well developed MSP and has become the most developed MSP in Asia.¹³⁷ Evidently, in the economic field in 2012, China obtained sea use fee revenue of 9.68 billion Yuan. The total revenue went to the central treasury of 2.97 billion yuan and 6.71 billion yuan to local treasuries.¹³⁸ The marine economy of China has experienced a higher rate of growth compared to the national economy during the same time frame while maintaining a more balanced industrial structure.

Based on the Statistics Bulletin of China's Marine Economy, in 2016, the Gross Ocean Product (GOP) in China grew by 6.8% from the previous year, amounting to 7 trillion yuan (approximately one trillion US dollars). This was almost 7.8 times higher than the figures recorded in 2002.¹³⁹ In 2016, the proportion of GOP to the GDP also increased to 9.5%. The marine industries produced an economic output of about 4.3 trillion yuan or roughly 0.6 trillion US dollars, while the marine-related industries generated approximately 2.7 trillion yuan or around 0.4 trillion US dollars more than the previous year.¹⁴⁰ The first, second, and tertiary marine industries saw an increase in number. The first marine industries reached 356.6 billion yuan, which is equivalent to around 50.9 billion US dollars. The second marine industry reached 2.8 trillion yuan, which is equivalent to around 0.4 trillion US dollars. The tertiary marine industry reached 3.8 trillion yuan, which is equivalent to around 0.54 trillion US dollars.

From the environmental field, marine pollution in China can be reduced after MFZ. This is because each area, such as industrial areas, tourism, ports and aquaculture is organised in such a way that the allocation of designated spatial areas does not have a negative impact on each other. Also, the MFZ of China enhances the natural functions of marine ecosystems, guarantees the ecological safety of the country's sea regions and

¹³⁶ Charles Ehler, Fanny Douvère, *Marine Spatial Planning: A Step-By-Step Approach Toward Ecosystem-Based Management* (UNESCO, 2009).

¹³⁷ Catarina Frazão Santos, Charles N. Ehler, et al., 'Marine Spatial Planning' in Charles Sheppard (ed), *World Seas: An Environmental Evaluation* (Academic Press, 2019).

¹³⁸ Subandono Diposaptono, *Membangun Poros Maritim Dunia Dalam Perspektif Tata Ruang Laut* (3rd edn, Minister of Marine and Fisheries of the Republic of Indonesia 2017).

¹³⁹ Xin Teng, Qiwei Zhao, Panpan Zhang, et al., 'Implementing Marine Functional Zoning in China' (2021) 132 *Marine Policy* 1.

¹⁴⁰ Ibid.

promotes harmony between people and the sea. Continuous monitoring has been carried out for the key MFZ during the implementation of the zoning, and environmental quality monitoring has been conducted for the spawning area, marine dumping zone, mariculture zone, entertainment and tourism zone, and oil and gas zone.

As a result of those measures, the inshore marine environment quality has improved significantly. The quantity of polluted water, class II water, class III water, and class IV water reduced in 2017 as compared to that in 2000. This reduction has achieved the targeted aims of managing the degradation of the inshore environment as outlined by national and provincial MFZ.¹⁴¹ The implementation of national and provincial MFZ has facilitated the rapid progress in establishing marine protected areas. As of 2016, there are 258 marine protection zones in China, covering an area of over 124,000 square kilometres. This area is an increase of 100,000 square kilometres compared to that in 2002.

Additionally, another advantage of China's MFZ is that it guarantees the production of its marine fisheries. This plays a very important role in promoting the fisheries economy's sustainable development and ensuring the seafood supply's stable growth. In addition, it is also very important for fishermen to stabilise their lives and production. China has an abundance of marine fishery resources. There are around 3000 fish species among the more than 20,000 marine species, 150 of which are very valuable economically. Moreover, MFZ always makes its total marine products the best in the world, which has always ranked first since 1990.¹⁴² The overall number of marine products produced in China's coastal waters in 2010 was close to 33 million tonnes, which is comparable to the amount of grain produced on 80,000 km² of cultivated land and contributes to seafood security.¹⁴³

¹⁴¹ Ibid.

¹⁴² B. Zhang, Y.j. Li, *Marine Development and Management Manual* (China Ocean Press, 2007).

¹⁴³ Z.F. Zhang, G.C. Lin, J.Y. Wang, *The Quality Evaluation and Contamination Mechanisms of China's Inshore Oceanic Environment* (China Ocean Press, 2013).

In 2016, the total amount of coastal marine products was about 69 million tonnes.¹⁴⁴ In addition, China has always been the world's largest marine fish producer, reaching 11.70 million tonnes in 2020.¹⁴⁵ Meanwhile, Indonesia is the second largest marine fish producer, with 6.43 million tonnes. The comparison of the number of marine fish catches in China and Indonesia is very different. Based on data from the number of marine fish catches, China is very superior compared to Indonesia. Meanwhile, Indonesia has a vast sea area compared to China.¹⁴⁶

The regulations related to fisheries in the MSP between China and Indonesia are different. In MFZ, China regulates its fishery zones in more detail than Indonesia, which consists of the fishery infrastructure zone, capture zone, nursery zone, mariculture zone, and conservation zone of key fishery species. Meanwhile, in the field of fisheries, Indonesia's MSP only has capture fisheries zones and aquaculture zones. From that concept of MSP, the ideal concept of MSP that Indonesia can adopt is to regulate fisheries zones in more detail, like China, so that Indonesia's fisheries are sustainable.

From several fisheries subzones China regulates, three fisheries subzones are not regulated in Indonesia, namely the fishery infrastructure zone, nursery zone, and conservation zone of key fishery species. For fishery infrastructure zones in MFZ of China mainly consist of the national central fishing port, first-class fishing port, and offshore fishing base. The construction of those zones is also regulated as it should be rationally laid out, and the coastline and sea area should be used economically and intensively.¹⁴⁷

Furthermore, the state establishes conservation zones of key fishery species to protect fishery species with genetic breeding value and important economic value, as well

¹⁴⁴ D.M. Guan, *The Study on China's Marine Functional Zoning* (China Ocean Press, 2013).

¹⁴⁵ 'Lima Negara Penghasil Ikan Laut Terbesar Dunia, Indonesia Peringkat Kedua' (*Jurnal Pangannews*, 2023) <<https://pangannews.id/berita/1682739259/lima-negara-penghasil-ikan-laut-terbesar-dunia-indonesia-peringkat-kedua>> accessed 14 December 2023.

¹⁴⁶ 'Laut Lebih Luas, Kok Perikanan RI Bisa Kalah dari China?' (*detikfinance*, 2013) <<https://finance.detik.com/berita-ekonomi-bisnis/d-2142840/laut-lebih-luas-kok-perikanan-ri-bisa-kalah-dari-china>> accessed 13 December 2023.

¹⁴⁷ 'The State Council approved the National Marine Functional Zoning (2011~2020)' <http://f.mnr.gov.cn/201806/t20180621_1830454.html> accessed 31 October 2023.

as their spawning areas, wintering areas, feeding areas, migratory routes and other habitats for breeding and reproduction. Without approval, no unit or individual may engage in fishing activities in the conservation zones; fishing for seeds and broodstock of important fishery species is prohibited; building gates and dams in fish migration channels and activities that impair fish migration are prohibited.¹⁴⁸

Additionally, the seawater quality standards in subzones of the fishery zone in China are also regulated, such as the fishery infrastructure zone, mariculture zone, and nursery zone, which should implement seawater quality standards that are no lower than category II seawater quality standards. Further, the capture zone should implement seawater quality standards that are no worse than category I seawater quality standards.¹⁴⁹ Within Indonesia's fisheries zones, there are no regulations regarding water quality standards. Therefore, this is one of the challenges faced in managing fish resources in Indonesia.¹⁵⁰ If there is a decrease in seawater quality, it can also cause a decrease in the quality and quantity of fishery production. In this case, Indonesia should also adopt China's policy regarding regulating seawater quality in its fisheries zone so that Indonesian fisheries can be superior and sustainable like China.

CONCLUSION

Indonesia is the largest archipelagic country with the richest biodiversity of seas in the world at the genetic, species, and ecosystem levels. Indonesia has adopted MSP to protect and utilise its rich biodiversity. The elaboration of Indonesia's MSP is regulated in the Law of the Republic of Indonesia Number 32 of 2014 on Marine Affairs. Indonesia's MSP includes the national MSP, marine area zoning plan, and RZWP-3-K. The territorial scope of the National MSP consists of the territorial sea, inland sea,

¹⁴⁸ 'National marine functional zoning' (*National Development and Reform Commission of the People's Republic of China*, 07 July 2019) <https://www.gd.gov.cn/zwgk/wjk/zcfgk/content/post_2532745.html> accessed 30 December 2023.

¹⁴⁹ 'The State Council approved the National Marine Functional Zoning (2011~2020)' <http://f.mnr.gov.cn/201806/t20180621_1830454.html> accessed 31 October 2023.

¹⁵⁰ Ade Nur Anugrah, Arindra Alfarizi, 'Literature Review Potensi dan Pengelolaan Sumber Daya Perikanan Laut di Indonesia' (2021) 3 *Jurnal Sains Edukatika Indonesia* 31.

archipelagic waters, contiguous zone, continental shelf, and exclusive economic zone. The national marine spatial plan is further elaborated in the marine area zoning plan and RZWP-3-K.

The marine area zoning plan consists of RZ KSN, RZ KSNT, and RZ KAW. The legal regulation which is used as a guideline for the government in preparing marine area zoning plan is the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 32 of 2020 on Procedures for Preparation of Marine Area Zoning Plan. Furthermore, RZWP-3-K is a plan that identifies the direction of resource utilisation along with the allocation of the area within a designated planning area that contains permitted and prohibited activities and permitted activities that may only be carried out with permission. The scope of this RZWP-3-K is the transition area between land and marine ecosystems which are influenced by alterations occurring on sea and land; landward includes the administrative region of the sub-district and extends 12 nautical miles towards the sea from the coastline on the seaward side. In 2020, Indonesia determined to create 20 RZ KAW in 20 inter-regional areas, but only 10 RZ KAW were established; 28 RZ KSN, but only 16 RZ KSN were established; 111 RZ KSNT, but only 57 RZ KSNT were established; 34 RZWP-3-K in 34 provinces, but only 27 were established. Indonesia has not fully completed all its MSP.

On the other hand, China has been implementing MSP since 1989 and has completed all its MSP since 2002 at national, provincial, and country levels. The MSP in China is referred to as the MFZ. MFZ is mandated by the Law of the People's Republic of China on the Administration of the Use of Sea Areas. The zoning scope of MFZ at the national level includes territorial sea, inland waters, islands, continental shelf, and exclusive economic zone. Further, the zoning scope of the Provincial MFZ includes the sea and islands under the jurisdiction of the province government, which is from the shoreline to the boundaries of the territorial sea. Moreover, the zoning scope for country-level MFZ consists of the sea and islands which are included in the administration of municipal and regional governments.

Furthermore, China's MFZ classifies zones into eight, including mariculture and fishery zone, port and navigation zone, industry and urban use zone, minerals and energy

zone, tourism and entertainment zone, marine protection zone, special purpose zone, and reservation zone. Currently, the MSP status of both countries is in the integration process. China's MFZ will be integrated into territorial spatial planning, and Indonesia's MSP will be integrated into national spatial planning.

China's MFZ has been implemented more successfully than Indonesia's MSP. Research in 2008 found that MFZ has a consistency rate of 90.75% with development. However, MSP in Indonesia still faces conflicts such as overlapping and conflict of interest. For example, there is an issue of overlapping marine spatial utilisation areas in Sampang Regency due to the incompatibility of each utilisation zone. In total, only 57% of the utilisation zones comply with RZWP-3-K.

China has experienced significant economic, environmental, and social benefits due to the MFZ. In 2016, China reached 7 trillion yuan, equivalent to one trillion US dollars for their Gross Ocean Product (GOP). Also, since 1990, China's total marine product production has been the highest in the world. Meanwhile, Indonesia is the second largest producer of marine fish, even though Indonesia's sea is larger than China's. China regulates its fishery zones in more detail than Indonesia, including fishery infrastructure zone, nursery zone, mariculture zone, capture zone, and conservation zone of key fishery species. Indonesia's MSP only has capture fisheries zones and aquaculture zones.

Additionally, China regulates seawater quality standards in subzones of the fishery zone, such as fishery infrastructure, mariculture zone, and nursery zone, to maintain standards no lower than Category II seawater quality standards. Further, the capture zone should implement seawater quality standards that are no worse than category I seawater quality standards. Indonesia does not regulate that. This lack of regulations in Indonesia's fisheries zones poses challenges in managing fish resources and can reduce the quality and quantity of fishery production. The ideal MSP concept for Indonesia to adopt is to regulate fisheries zones in more detail, like China, to ensure superior and sustainable fisheries.

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ÖZET

Deniz saha planlaması (DSP), sürdürülebilir kalkınma için deniz kaynaklarının korunması, muhafaza edilmesi ve sürdürülebilir bir şekilde kullanılması için hedeflerden biridir. Endonezya, sürdürülebilir kalkınmayı sürdürmek için DSP'lerini geliştiren ülkelerden biridir. Buna dayanarak, bu çalışma Endonezya'nın DSP'sinin yasal bir analizini sağlamayı ve Endonezya'nın DSP'yi etkili bir şekilde uygulaması için bu konuda mevcut uygulamayı araştırmayı amaçlamaktadır. Ayrıca, Endonezya'nın DSP'yi uygulamak için gerçekleştirebileceği tavsiyeleri ve ideal konsepti yönlendirmeyi amaçlamaktadır. Araştırmanın ana hedeflerine ulaşmak için yasal olarak karşılaştırmalı yaklaşım ve doktrinel yaklaşım uygulanmıştır. Makale, birincil ve ikincil kaynaklara dayalı olarak mevcut uluslararası ve ulusal yasal araçların ve ilgili literatürün çerçevesini analiz etmektedir. Makale, bu çalışmadaki sorunun formülasyonu ile ilgili temel hukuk ilkeleri ve ilgili yasal teoriyi bir araya getirmektedir.

Analiz sonuçlarına göre, bu çalışma Çin'in DFB'sinin Endonezya'nın DSP'sinden daha başarılı bir şekilde uygulandığı sonucuna varmıştır. Ancak, Endonezya'daki DSP hala çakışma ve çıkar çatışması gibi çatışmalarla karşı karşıyadır. Dahası, Çin balıkçılık bölgesinin alt kısımlarında deniz suyu kalite standartlarını düzenlerken, Endonezya düzenlememektedir. Endonezya'nın balıkçılık bölgelerindeki bu düzenleme eksikliği, balık kaynaklarının yönetiminde zorluklara yol açmakta ve balıkçılık üretiminin kalitesini ve miktarını azaltabilmektedir. Endonezya'nın benimsemesi gereken ideal DSP konsepti, üstün ve sürdürülebilir balıkçılığı sağlamak için Çin gibi balıkçılık bölgelerini daha ayrıntılı bir şekilde düzenlemektir.

Anahtar Kelimeler: Deniz Saha Planlaması, Deniz Fonksiyonel Bölgelendirme, Endonezya, Çin.

ABSTRACT

Marine spatial planning (MSP) is one of the goals in maintaining, preserving, and sustainably utilising marine resources for sustainable development. Indonesia is one of the countries that developed their MSP for maintaining sustainable development. Based on that, this study aims to provide a legal analysis of Indonesia's MSP and investigate the practice available in this matter for Indonesia to implement MSP effectively. Also, to lead the advice and the ideal concept that Indonesia may apply to implement MSP. To reach the main goals of the research, a legally comparative approach and doctrinal approach have been applied. The paper analyses the framework of the available international and national legal instruments and related literature based on those primary and secondary resources. The paper combines black letter law and relevant legal theory related to the formulation of the problem in this study.

As the analysis results, this study concluded that China's MFZ has been implemented more successfully than Indonesia's MSP. However, MSP in Indonesia still faces conflicts such as overlapping and conflict of interest. Furthermore, China regulates seawater quality standards in subzones of the fishery zone, but Indonesia does not. This lack of regulation in Indonesia's fisheries zones poses challenges in managing fish resources and can reduce the quality and quantity of fishery production. The ideal MSP concept for Indonesia to adopt is to regulate fisheries zones in more detail like China to ensure superior and sustainable fisheries.

Keywords: Marine Spatial Planning, Marine Functional Zoning, Indonesia, China.