Major Challenges in Developing Marine Spatial Planning in Bangka Belitung Island Province

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Abstract. Bangka Belitung is one of the provinces that is characterized by the largest archipelago in Indonesia, having a very wide coastal area with a variety of natural resources contained in it. This raises serious problems, especially conflicts in accessing that have an impact on ecological conditions. While the Law mandates the use of marine and coastal resources must be sustainable. There is no other choice that must be made in the aspects of development planning policies other than sea spatial planning. This study aims to analyze the major challenges in marine spatial planning, as well as evaluate the sea spatial planning process undertaken. The result of this study is expected to be a recommendation for stakeholders in evaluating and at the same time improving the quality of the sea spatial planning process so that it can be carried out properly and sustainably. The approach in this study is qualitative. The results of this study indicate that sea spatial planning in Bangka Belitung has become an arena for conflict, power struggles, and the right of access to use. The reason is that in the same area, there are fishery resources and contain mineral reserves that are technically and economically potential to be mined. Therefore, the author recommends that there is a need for government commitment through a clear framework and optimal stakeholder involvement.

1. Introduction

Bangka Belitung Islands is one of the provinces in Indonesia characterized by an archipelago that consists of two large islands (Bangka and Belitung) and more than 250 other small islands, with a total area of 81,582 KM2. Only 21% is a land (equivalent to 16,281 KM2), while the remaining 79% (65,301 KM2) is the ocean. This geographical condition, on one hand, becomes its comparative advantage because there are potential marine resources that must be optimized and become the leading development sector. However, on the other hand, ecological and socio-economic problems caused by the wrest for access to the use of existing marine resources pose a particular threat as a result of the weak management of the sea space being undertaken.

Marine spatial planning, ranging from coastal areas to open seas, in the last few decades is being developed around the world [1, 2, 3], including in the Bangka Belitung Islands Province, Indonesia. The aim is to encourage sustainable marine management and governance. This is done as a form of response to the demand and use of marine resources which is expected to continue to increase so that there is very high pressure on the marine ecosystem. As a result, competition and conflict arise among sea users [4]. Therefore it is necessary to do a Marine Spatial Planning (MSP) to minimize conflicts [5, 6, 7]. Many reference sources discuss MSP [8, 1, 9, 4, 10]. In general, MSP can be defined as a public process for analyzing and allocating human space and activities at sea to achieve ecological, economic, and social goals that are usually determined through political processes [11, 12].

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In the case of Bangka Belitung, this sea spatial planning was realized through a Regional Regulation (Perda) on the Zoning Plan for Coastal Areas and Small Islands (RZWP3K). This RZWP3K regional regulation is prepared based on a spatial planning hierarchy that has been mandated by the Law, which consists of 4 (four) zoning, namely general use zones, conservation zones, sea channel zones, and certain national strategic zones. Setting this zone is certainly not an easy thing to do because there are various interests in access to power and the use of existing sea space.

| No | Area                      | Zone                        | Zone Area (in Ha) | Percentage |
|----|---------------------------|-----------------------------|-------------------|------------|
| 1  | Public Use Zone           | (1) Tourism Zone            | 138,327.1 Ha      | 3.25 %     |
|    |                           | (2) Port Zone               | 49.832, 62 Ha     | 1.17 %     |
|    |                           | (3) Mining Zone             | 477.030,288 Ha    | 11.20 %    |
|    |                           | (4) Aquaculture Zone        | 185.697,588, 8 Ha | 4.36 %     |
|    |                           | (5) Capture Fisheries Zone  | 2,591,247,999,6 Ha| 60.83 %    |
|    |                           | (6) Industrial Zone         | 2,981,3 Ha        | 0.07 %     |
| 2  | Zone of Conservation      | (1) Water Conservation Area | 627,794.140 Ha   | 14.74 %    |
| 3  | Sea Lane Zone             | (1) Shipping Lane           | -                 | -          |
|    |                           | (2) Submarine Pipe / Cable  | 189,104 Ha        | 4.44 %     |
|    |                           | (3) Marine Biota Migration  | -                 | -          |
| 4  | Specific National Strategic Zone |                     | -                 | -          |
|    |                           |                             |                   |            |
|    | **Total**                 |                             | **4,259,119,3 Ha**| **100 %**  |

Source: Regional Regulation RZWP3K Bangka Belitung Islands Province

Based on Table 1, the largest allocation of space in sea spatial planning in the Bangka Belitung Islands Province is the public use zone, while the shipping lanes and marine biota migration in sea lane zones, as well as specific national strategic zone, are regulated in local regulations but the zones are not determined like other zones.

2. Methodology

This research is descriptive qualitative with the primary data sources are in-depth interviews with stakeholders, representatives of fishing groups, and communities who work as fishermen. Those primary data sources are supported by secondary data as a reinforcement of studies derived from documents relevant to research. Data is processed using a descriptive analysis model. This analysis model consists of collecting, reducing, presenting data, and finally drawing conclusions. The scope of this study is limited by the framework of Marine Spatial Planning (MSP) in the Bangka Belitung Islands Province, Indonesia.
3. Results and Discussion

3.1. Marine Spatial Planning and Vision Management of Coastal Areas and Small Islands of Bangka Belitung Islands Province

Figure 1. The map of Marine Space Allocation in RZWP3K Bangka Belitung Islands Province

Figure 1 shows that there are 4,259,119.30 hectares of sea and coastal areas that need to be managed. Managing marine space in the Bangka Belitung Islands Province begins with the establishment of a vision of the management of coastal areas and small islands. The vision is "Realization of Management of Marine, Coastal and Small Islands Provinces in the Bangka Belitung Islands Province which is Advanced, Safe, Prosperous, Sustainable and Equitable with Local Wisdom and Appropriate Technology". This vision implies that well-managed coastal areas and small islands will have an impact on the growth and economic development of coastal communities more independent, stronger, and resilient.

The vision of managing this coastal region is in line with Law No. 27 of 2007 jo. Law No. 1 of 2014 concerning Management of Coastal Areas and Small Islands (WP3K) along with their derivative regulations mandating provincial areas to conduct marine spatial planning (MSP) through Coastal and Small Islands Zoning Plans (RZWP3K). RZWP3K is a plan that determines the direction of the use of resources of each planning unit accompanied by the determination of the structure and spatial pattern in the planning area that contains activities that may or may not be carried out and activities that can only be carried out after obtaining a permit in the coastal areas and islands small. The aim is that marine space can be used and managed in a healthy and productive ecosystem [7, 8], so that it remains sustainable. Therefore, sea spatial planning in the Bangka Belitung Islands Province was realized in RZWP3K through Regional Regulation (Perda) No. 3 of 2020. The preparation process can be seen in Table 2:
### Table 2. Marine Spatial Plan Making Process Practice in Bangka Belitung Island Province

| No | Activity                              | Stages                  | Process/Output                                                                 |
|----|---------------------------------------|-------------------------|--------------------------------------------------------------------------------|
| 1  | The Preparation                       | (1) Preparation         | - Preparation of work plan and Preparation of ToR / RAB                       |
|    |                                       | (2) Data collection      | - Secondary data collection                                                     |
|    |                                       | (3) Field Survey         | - Primary data collection (if the secondary data that has been collected meet the needs) |
|    |                                       | (4) Data Processing and  | - The processing and analysis of data to be arranged in thematic maps           |
|    |                                       | Analysis                |                                                                                  |
| 2  | Preparation of Final RZWP3K Documents  | (1) Description of      | - Descriptions of the thematic map that have been compiled, Thematic maps, and |
|    |                                       | Potential and The Utilization Activities | Result of the thematic maps description                                         |
|    |                                       | (2) The Preparation of   | - The delivery of RZWP3K initial draft document and request feedback            |
|    |                                       | the Initial Document     |                                                                                  |
|    |                                       | (3) Public Consultation  | - Overlying thematic maps in the initial document that has been corrected from the result of the public |
|    |                                       | (4) The Determination of | - Analysis of conformity to the criteria of the regional zones, sub-zones, and utilization |
|    |                                       | The Space Allocation    |                                                                                  |
|    |                                       | Proposal                |                                                                                  |
|    |                                       | (5) Preparation of The   | - Determination of proposed regions, zones, sub-zones, and utilization         |
|    |                                       | Intermediate Document    |                                                                                  |
|    |                                       | (6) Public Consultation  | - The result of the revised initial document, non-spatial analysis, analysis of spatial utilization conflict, determination of space allocation, generalization of the spatial document (RTRW), drafting statements of space utilization regulations, composing indication program, draft of RZWP3K. |
|    |                                       | (7) Preparation of The   |                                                                                  |
|    |                                       | final Document           |                                                                                  |
|    |                                       | (8) Request for          |                                                                                  |
|    |                                       | feedback or suggestions  |                                                                                  |
| 3  | Determination of Ranperda RZWP3K      | (1) Discussion of        | - Discussion of Ranperda draft by DPRD, and evaluation                         |
|    |                                       | Ranperda                 |                                                                                  |
|    |                                       | (2) Determination        | - The determination of Ranperda into RZWP3K regulation                         |
|    |                                       |                         |                                                                                  |

Source: Fisheries and Marine Government Agency of Bangka Belitung Island Province, 2020
Table 2 illustrates the MSP preparation process carried out in the Bangka Belitung Islands Province. At first glance, it looks simple and easy to be implemented. But empirical reality shows that the practice of marine spatial planning is very complicated and must go through a long process. This condition is due to considerable challenges in the practice of its preparation. There are various aspects of the challenge. Starting from various aspects of interests, the wrest for access, and for the right to use space. Moreover, from the aspect of time needed to prepare RZWP3K, which began to be initiated in 2017 and was only completed and endorsed at the end of February 2020. This shows that there is a need to allocate sufficient time in the drafting process. A summary of RZWP3K regulations can be seen in Table 3.

**Table 3. A summary of RZWP3K regulations Bangka Belitung Islands Province**

| Chapter                                      | Short Description                                                                 |
|----------------------------------------------|-----------------------------------------------------------------------------------|
| Chapter I – General Terms                    | This chapter contains descriptions of terms and definitions used in RZWP3K and RZWP3K material |
| Chapter II – Scope                           | This chapter contains the scope of RZWP3K                                         |
| Chapter III – Planning Area, Duration, and Function | This Chapter contains the durations and functions in maritime area development and management |
| Chapter IV – Policy and Strategy             | This chapter contains policies and strategies in RZWP3K3.                         |
| Chapter V – Spatial Allocation Plan          | This chapter contains a spatial allocation plan, consisting of four zonings, including public use area, conservation area, sea lanes area, and national strategic area. |
| Chapter VI – Indications Programs            | This chapter contains the main indications program and indications funding         |
| Chapter VII – Directions for Regulation on Spatial Use | This chapter contains the designation and function of RZWP3K, Regulation on Spatial Use in Regions / Zones / Sub Zones. |
| Chapter VIII – Institutional                 | This chapter contains procedures for coordination and cooperation between sectors/regions in an integrated spatial planning area of WP-3-K |
| Chapter IX – Disaster mitigation             | This chapter contains provisions containing disaster mitigation in the Coastal Areas and Small Islands according to the type, level, and region. |
| Chapter X – Representative's Lawsuit         | This chapter contains procedures for carrying out a claim for representation to a court by a community/community organization. |
| Chapter XI - Supervision and Control of Spatial Use | This chapter contains provisions requiring supervision and/or control of the implementation of the provisions of the Management of Coastal Areas and Small Islands by parties appointed by the government. |
| Chapter XII - Rights, Obligations and Community Participation | This chapter contains rights, obligations, and community participation in the use and control of zoning. |
| Chapter XIII – Provisions for Investigation  | This chapter contains provisions and mechanisms for conducting investigations of violations of the provisions that occur in this Regional Regulation. |

Source: Perda RZWP3K No. 3 Year 2020
3.2. The Main Challenges in the Arrangement of Marine Space in Bangka Belitung

That indisputable empirical reality of the arrangement of marine space in Bangka Belitung has become an arena of contestation for various actors under the pretext of struggling for interests, rights, and power. The actors involved in the RZWP3K preparation process consist of the government, non-government or private, and community elements (fishermen and miners’ groups). All three are interconnected. Therefore, this arrangement of marine space also has its dimensions of very complex challenges.

**Figure 2. The Challenges in drafting RZWP3K**

The interests, powers, and rights to use space as shown in figure 2 are the main findings in this study. Interest is an object of need that is a source of conflict which means that a group of fishermen and miners has the same needs and desires on the object. The power is the object of the actors who have the interest to obtain the same status and role as their partners in the dominance of authority in utilizing access to resources. While the rights concern the same needs and desires of their demands because each group feels that each other’s demands are related to power, authority, and responsibility.

Because the sea and coastal areas of Bangka Belitung have fisheries resources and also contain mineral reserves that are technically and economically potential to be mined [13, 14], securing access to control is an absolute interest that must be achieved by users (mining corporations and fishing community). Access to utilization is claimed as the right of each community as a citizen. Therefore, the government (state) as the holder of control of power is also required to be fair in dividing the allocation of sea space. During the process of drafting the RZWP3K (2017-2020), conflicts over the struggle for access to space utilization continued. On the one hand, many fishing communities (especially Batu Perahu fishermen, South Bangka) protested against the spatial plan determined because it accommodated the mining zones at sea. The rejection was made more on ecological considerations because the environmental damage caused by the sea mines was judged to be unable to replace the economic potential that would be lost to the fishermen group. This is quite rational considering that mining activities in the sea have previously decreased revenue from fisheries and maritime businesses, while the coefficient of capital and operational costs to go to sea increased. On the other hand, the Mining Business Permit (IUP) has also been given to the mining company long before spatial planning is done. This condition is then sought for a solution through RZWP3K [13]. The enactment of the RZWP3K Regional Regulation is expected to be able to provide legal certainty in the protection of coastal ecosystems, coastal communities’ livelihoods, and investments while sustainably maintaining the environment.
4. Conclusion
RZWP3K is an effort of the Bangka Belitung Islands Province government in managing sea space. The dynamics that occur during the drafting process are an inseparable part of the challenges of sea spatial regulation. The contestation of interests, power, and access rights for the use of sea space is a challenge during the drafting process. This dynamic ultimately leads to a common vision that absolute sea space regulation is needed to sustain the use of natural resources at sea while making it a leading sector of development and bargaining positions for Bangka Belitung.

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