Legal regulation on protecting marine environment from sea sand mining impact: a case study of spermonde archipelago

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Abstract. The dilemma between development interest, economical gain and preserving the marine environment from the implication of sea sand mining activity has been primarily discussed in the last decade. In essence, the sea sand mining which jeopardizes the marine environment occurs due to sand dredging activity which contributes to abrasion, removal of corals and marine habitat that plays an important role to the continuity of the majority of fishermen activity in coastal society through observing from several previous sea sand mining cases, including the current situation in Spermonde archipelago. This article is purposed to analyze legal regulation in protecting marine environment from sea sand mining in relation to the current situation in Spermonde archipelago. It applies normative legal research and uses a study case approach. The result shows that the existence of the loopholes in legal regulation on protecting marine environment from sea sand mining is still prominent. Thus, the coastal society in Spermonde archipelago has been negatively impacted by the sea sand mining activity. Pertaining plausible legal effort on such sea sand mining activity, local community are able to file a strict liability lawsuit to the concession permit owner.

1. Introduction

Indonesia is an archipelagic state containing abundant natural wealth in the sea, such as the sea sand. However, such wealth will be exterminated over time if it is not managed and utilized properly. The Spermonde archipelago is the most noticeable characteristic of the Indonesian archipelagic state, an area with 121 clusters of islands spread across Barru Regency, Pangkajene Islands Regency, Makassar City, and Takalar Regency within a total area of 2,500 km² located in the strait of Makassar, is qualified as the world’s coral triangle area with a total of 262 species. The marine resources from this island become the prominent source of the livelihood for coastal communities, as the largest fish supplier in Makassar city [1]. Nevertheless, the sea sand mining activity in Spermonde archipelago has brought a jeopardy of destruction to the sustainability of marine environment and the economic process of the residents in Spermonde archipelago.

Normatively, sea sand is defined as sand extracted material located in the Indonesian territorial waters, which does not contain any group A and/or B mineral elements in certain measures, based on the economic mining perspective [2]. Sea sand exploitation is an economic activity which contains into mining, dredging, transportation and the export of sea sand [3]. While mining has been juridically defined as a part or a whole stages of activity in the context of mineral or coal which suffused on the general investigation, exploration, feasibility study, construction, mining, processing and/or refining or development and/or utilization, transportation and sale, and post-mining activity [3].

As a matter of fact, the sea sand mining activity has actually resulted in various negative impacts. Starting from the destruction of the natural form of beach and the sea, the extinction of living ecosystem
and habitats in the sea sand mining area and the coastal marine environment, increasing risk of erosion, and economic losses due to the diminishing coastal aesthetics which contribute to the decreasing tourism attraction and especially to the marine sources which become the main economic resources of local residents that are decreasing due to the sea sand mining activity performed in the coastal and marine area [4].

Starting from the initiation of Makassar New Port (MNP) as a part of National Strategic Program (PSN) which is visioned to be one of the largest harbors in eastern Indonesia, causing the need of sea sand as the primary reclamation material for this program. Consequently, the Spermonde archipelago identified as the Public Utilization Area for Sea Sand Mining Sub-Zone (KPU-TB-P) were utilized by the South Sulawesi Province Government as the main source of sea sand material which then granted permission to the Queen of the Netherlands ship owned by Boskalis to initiate the sea sand mining activity in Spermonde area. Nonetheless, due to the condition that the sea sand mining is located right into the traditional fishing area of Kodingareng Island as a part of Spermonde archipelago, it perpetrates numerous negative impacts to the sustainability of the marine environment ecosystem in that mining location. Such as the turbid seawater, disappearance of fishes in the traditional fishing area, which then contributes to the marine environment degradation and the stagnation of economic circulation of coastal residents in Kodingareng Island due to lack of income of the fishermens in the past few months [5].

The unpropitious story of sea sand mining cases which ends in bringing negative impact to the local community have perpetrated a prolonged conflict between the concession permit owner and the local community. Although it is not massively reported or analyzed in articles and news, several cases are able to be identified such as the Serang regency which performed sea sand mining in its area as the response to the sand material demand for land opening to the coastal area in various regions, especially in Jakarta. The sea sand mining in Lontar village is suspected to cause damage to the environment, thus detrimental to the local society due to the intensive process of abrasion in the coastal area which shows the hazardous effect of sea sand mining. Similar cases have occured in the Riau Islands which consists of sea sand dredging, transportation, and trade for the Singapore coastal reclamation have caused damage to the coastal and marine ecosystem, to the capture fisheries and aquaculture area, the deterioration of of fishermen and fish cultivators, and the falling price of the sea sand [6].

Based on the established arguments, this article will identify the marine environment and the society condition affected by the sea sand mining activity in Spermonde archipelago. Therefore, this article will analyze and formulate argumentations to answer several quintessential questions; is it legally permissible for the sea sand mining activity in Kodingareng island to be performed? what impact will arise by the permission of this sea sand mining activity? Is there any regulation prohibiting the sea sand mining activity? could the concession permit owner be subjected into a strict liability lawsuit?

2. Research method
The method utilized in this research is normative legal research which uses some approaches such as statute and case study approaches. The primary legal materials are obtained from relevant national regulations, the secondary legal materials are obtained from various related literatures. All sources will be analyzed qualitatively by describing facts and its linkage to the regulations to construct argumentations as the result of the legal analysis.

3. Results and discussion

3.1. Legal review of sea sand mining activity in spermonde archipelago

3.1.1. Legal regulation on sea sand mining permit in spermonde archipelago. The regulation of mining zone utilization permit in South Sulawesi recognized as Public Utilization Area on Mining Zone (KPU-TB) is a space mutually agreed upon by various stakeholders and its legal status has been established for the sea sand and/or oil/gas mining activity [7]. The Spermonde archipelago is identified as traditional fishing area which then categorized as sea sand mining location recognized as Public Utilization Area for Sea Sand Mining Sub Zone-01 (KPU-TB-P-01) or Spermonde Bloc covering an area of 9,355.49 hectares [8]. Based on article 7 of Minister of Marine Affairs and Fisheries Decree No. 33 of 2002 concerning Coastal and Marine Zoning for Sea Sand Exploitation Activities, the Spermonde bloc is identified as a conditional utilization zone which can only be utilized for sea sand mining activity with
specific prerequisites including the limitation on the type and amount of ship; mining and dredging system; specific volume of mineable sea-sand; and the schedule of the mining and dredging activity.

Considering the sea sand mining activity in Spermonde archipelago is purposed for the reclamation development for PSN which is the MNP, article 34 of Law No.27 Year 2007 concerning Management of Coastal Areas and Small Islands has stipulated that reclamation of coastal areas is carried out in order to increase the benefits and/or added value of coastal areas and small islands in terms of technical, environmental and socio-economic aspects. The reclamation implementation is obliged to preserve and consider the sustainability of life and livelihood of society, balancing between the utilization interest and the conservation of coastal and small islands environmental function, as well as the technical requirements for material extraction, dredging and the accumulation of the material [8]. According to Greenpeace, 90,000 m³ of sea sand dredged and brought into the coast of Makassar each day with five times in a day of dredging frequency for the reclamation of MNP. In particular, the profit of concession permit owners reaches Rp. 1,305,000,000 per day with 1 m³ sea sand equals 1 US$ [9].

Regarding the environmental aspects in the process of sea sand mining, it is regulated in the Article 15 of Presidential Decree No. 33 Year 2002 concerning Control and Supervision of Exploitation of Sea Sand, which clearly states that every person and/or legal entity conducting sea sand exploitation business is obliged to formulate a plan for the maintenance and restoration of the coastal and marine environment, and is obliged to conserve the marine ecosystem that it causes. In terms of sea sand exploitation, the holder of the mining authority also shall report it to the government [2].

In article 46 paragraph (4) Regional Regulation No.2 Year 2019 concerning the Zoning Plan for Coastal Areas and Small Islands (RZWP3K) of South Sulawesi (Perda RZWP3K) stipulate that activities that can be carried out after obtaining permit at KPU-TB-P are only includes for research and education, monitoring and evaluation, as well as other activities in accordance with statutory regulations. It is clear that the Perda RZWP3K does not explicitly allow mining activities for sea sand for the construction of the National Strategic Project, which leads into an uncertainty as to whether sea sand mining activities in the Spermonde Islands can be carried out according to this regulation. However, this regional regulation explicitly states that sea sand mining activities are not allowed to carry out mining within the traditional fishing area [3].

3.1.2. Legal regulation on the prohibition of sea sand mining. The rules pertaining sea sand mining activities have actually been affirmed in the law that in the use of coastal areas and small islands, everyone is directly or indirectly prohibited from: mining sand in areas which, if technically, ecologically, socially and/or culture causes environmental damage and/or environmental pollution and/or harms the local community [10].

There is an existence of legal loophole visible in the regulations on the prohibition of sea sand mining, which is the absence of a vivid criteria in classifying whether a sea sand mining activity has technically, ecologically, socially and/or culturally caused environmental damage and/or is detrimental to the local community. This then causes the local community to find it difficult to claim their right to take an active role in monitoring and reporting on these activities, where supervision function by the local community is carried out by submitting reports and/or complaints to the authorities. In Article 66 of Law No. 32 Year 2009 concerning Mineral and Coal Mining, it is explained that anyone who fights for the right to a good and healthy environment cannot be prosecuted criminally or criminally. Article 70 of the a quo law also provides equal rights and opportunities as widely as possible to play an active role in environmental protection and management.

Supposedly, the sea sand mining activities in this area shall be stopped or at least moved to a place that is not included in the traditional fishing area. Thus, licensing documents have to be completely accessible to all parties involved in this sand mining project in order to establish a check and balance mechanism between the permit holder and the local community, especially in the function of monitoring and protecting the real impacts caused by this activity.

Degradation of the marine environment as well as the socio-economic changes of the affected communities in the Spermonde Islands should be a stressing point for companies holding mining concession permits as well as all stakeholders issuing sea sand mining permits. Sea sand mining activities will have an impact on changes in the condition of the surrounding ecosystem. Changes in the coastal ecosystem further affect the condition and health of the underwater environment such as the survival of coral reefs and marine life. In addition, marine sand mining activities will also trigger
changes in ocean currents and abrasion. Therefore, all aspects of sea sand mining activities starting from zoning, planning business activities, licensing, and monitoring mining activities must involve affected communities and consider the impact of mining on the sustainability of community economic activities and the ecosystems that live in the sand mining area.

3.2. Negative impact of the sea sand mining permits issuance in spermonde archipelago

Residents in the spermonde archipelago have very diverse professions, ranging from entrepreneurs, tradesmen and mostly fishermen which amount to 90% of the 45,000 residents [8]. The sea sand mining in the Spermonde archipelago has had a myriad of impacts on fishermen which is certainly very tortuous for fishermen, especially on the economic impact. Not only fishermen, the environment also becomes the victim. The environment of the Spermonde Islands, which originally had an ecosystem filled with beautiful marine habitats, has now turned into an archipelago with turbid sea water.

After the presence of sand mining activities in the Spermonde archipelago, fishermen have lost their fishing grounds, thus urging them to search for fish in distant places. This has resulted in swelling operational costs and delinquency in debt because the results obtained cannot cover operational costs [11]. The environment was also damaged, the destruction of coral reefs made marine habitats disappear and made the height of the waves change dramatically resulting in abrasion as well as an increase in the number of accidents of fishermen [11].

Before obtaining sea sand mining concession permit, the initiator of the Spermonde Bloc sea sand mining activity is obliged to prepare an Environmental Impact Assessment (AMDAL) document by obliging the local communities, environmentalists, and all parties affected by all decisions in the AMDAL process through the announcement of a business plan and/or activities and public consultations where the community within a period determined by government regulations has the right to submit suggestions, opinions and responses to the business plan and/or sea sand mining activities of the Spermonde Bloc. By observing the dynamics of the aspirations of the Kodingareng community towards the Spermonde block marine sand mining activities, there are indications that the local community was not involved in the AMDAL formulation or in granting mining concession permits [10].

Through observing the general principles of good governance, it is clear that the principle of public interest. Which prioritizes public welfare and benefit in an aspirational, accommodating, selective and non-discriminatory manner [2]. The exclusion of local communities in the formulation of AMDAL and the issuance of sand mining permits confirms that the government is not aspirational in this case and certainly does not uphold the general principles of good governance.

As a form of reaction to the disharmonization between the local communities and companies that hold concession permits and stakeholders who grant permits, the fishing communities of Kodingareng Island have to demonstrate in front of the governor's office of South Sulawesi Province where their voices may still unsure to be heard [12]. Instead of their voices being heard, the police resorted to violence to the point of arresting and detaining the community/fishermen [10]. In fact, the local community elements would not have taken a similar action if their voices were accommodated by the initiator of the mining concession permit during the preparation of the AMDAL.

3.3. Legal Effort in Protecting Marine Environment from Sea Sand Mining Activity

By recalling the negative impact on the environment caused by marine sand mining activities, it raises a question on what legal effort can be taken in order to protect the marine environment from marine damage. Supposedly, the principle of strict liability shall be the main argument of the community in demanding responsibility for the owner of the Kodingareng bloc sea sand mining concession. Juridically, the principle of strict liability or absolute responsibility is that every person whose actions, business, and / or activities use hazardous waste, produce and / or manage hazardous waste, and/or who causing serious threat to the environment are absolutely responsible for the loss. that happens without the need to prove the element of error [13]. However, one example which proves that hazardous and toxic waste is not an absolute element of strict liability can be seen through the Mandalawangi case [14]. Which leads into a conclusion that the only element that needs to be proven is “causing serious threat to the environment”.

After understanding the definition of strict liability, it is necessary to acknowledge that the criteria for actions that cause losses in strict liability are in the form of serious threats to the environment, which has a wide impact on the environment and cause public unrest. The Supreme Court decision letter
No.36/KMA/SK/II/2013, details that pollution and/or environmental damage whose impact has the potential to be irreversible and/or environmental components that are very broadly affected, such as human health, surface water, ground water, soil, air, plants and animals, where the element of proof is only based on the causality between the losses incurred and the actions of the defendant. Elements of government and local government agencies are responsible for the environmental sector [13], the local community as well as environmental organizations have the right to file a lawsuit for the sake of preserving environmental functions [13].

Based on argument that the degradation of the marine environment and the socio-economic changes of fishermen occurred as a result of the Spermonde bloc marine sand mining activities, have actually fulfilled the causality element between the losses incurred and the actions of the defendant as well as proving the element of “causing serious threats to the environment” whose impacts cannot be recovered and environmental components such as the ecosystem in the sea sand mining area, as well as the local community has caused a very wide impact. Therefore, all parties, both government agencies and local governments, communities, and environmental organizations must cooperate together to take legal measures to prevent environmental damage and the economic sustainability of fishermen that are more severe in the future.

4. Conclusion

The presence of sea sand mining in the Spermonde Islands has generated various detrimental impacts. Economically, the local community, specifically those who work as fishermen, is tormented due to reducing catch and the polluted sea environment. Marine habitats are also damaged due to activity polluting the environment. Positive law that regulates sea sand mining ranging from regional to national regulation already exists, although the existence of legal loopholes still occur. Pertaining to the various actions undertaken by the local community, it is resulted by the fact that the community was not involved in the preparation of documents and in the decision-making process related to sea sand mining although the community is one of the elements that are affected. However, instead of providing a solution, violent acts of detention by the police emerged for perpetrators of the action.

The government as the actor in issuing the sea sand mining permit for the Spermonde archipelago shall be held responsible for sea sand mining or at least by moving it to a non traditional fishing area. In terms of legal effort on protecting the marine environment, local communities have the right to file a strict liability lawsuit to the mining concession permit owner. Furthermore, this sea sand mining must be implemented with the strict supervision of the concession holder. Therefore, the participation of the government, non-governmental organizations and the local community is quintessential in terms of preserving the marine environment from destruction.

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