JURNAL MEDIA HUKUM
Vol. 29, No. 1, June 2022
P-ISSN: 0854-8919, E-ISSN: 2503-1023
Nationally Accredited Journal, Decree MoHE No. 148/M/KPT/2020.

Disaster Mitigation in Coastal Areas: Perspective of the Indonesian Spatial Planning Law

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ARTICLE INFO

Keywords:
coastal areas; disaster mitigation; spatial planning

How to cite:
Widowati, D.A. (2022). Disaster Mitigation of Coastal Areas in The Spatial Planning Law of Indonesia. *Jurnal Media Hukum, 29(1)*, 79-93.

Article History:
Received: 15-03-2022
Reviewed: 04-04-2022
Revised: 03-06-2022
Accepted: 01-07-2022

ABSTRACT

This article is a critical analysis on spatial planning with regard to disaster mitigation in coastal areas. The author explores the concepts and regulations of disaster mitigation and spatial planning in Indonesian coastal areas to identify how spatial planning works in terms of disaster mitigation in coastal areas and the roles of stakeholders in disaster mitigation in coastal areas in the context of the spatial planning law. This normative legal research was conducted by examining secondary data from relevant books, journals, and published documents. This study finds out that, first, according to the Spatial Planning Law, Management of Coastal Zone and Small Islands Law, Disaster Management Law, Job Creation Law, and their derivative regulations, there have been regulations mandating spatial planning as a non-structural mitigative measure with regard to disaster management in coastal areas. Second, in terms of spatial planning and disaster mitigation, the government is the dominant stakeholder, while the role of non-government stakeholders is not expressly provided for which may eventually result in "tokenism" participation in disaster mitigation in coastal areas.

DOI: https://doi.org/10.18196/jmh.v29i1.14685

1. Introduction

The past two decades saw 7,348 disasters occurred worldwide (United Nations, 2020) claiming the lives of 1.23 million people - an average of 60,000 fatalities every year – and affecting more than four billion people around the globe. In terms of economic losses, the disasters cost approximately USD 2.97 billion globally (CRED and UNDRR, 2020). Disaster risks manifest when hazards intersect with physical, social, economic, and environmental vulnerabilities. Facts show that people and properties worldwide are increasingly and more rapidly affected while vulnerability remains stagnant (ISDR, 2009).

Disaster risk management can be a powerful mechanism for minimizing the risks and negative impacts of disasters (Morgan, 2013). Disaster risk management is a relatively

complex social mechanism to alleviate the risk level and predict the potential risks in society. Other studies show that disaster risk management is dynamic as it is driven by dynamic social contexts. As a result, disaster risk management is determined by the way organizational actors understand the objectives and how they run their operational programs (Christoplos et al, 2001). Disaster risk management aims at reducing social, economic, and climate exposure and threats while promoting protection, life quality, resilience, and sustainable development (IPCC, 2012).

Disaster risk management comprises two elements: disaster risk reduction (DRR) and disaster management (Begum et al, 2014). Literatures suggest that disaster risk management deals with short-term disaster management activities, including preparedness, emergency response, and recovery. Nevertheless, long-term DRR activities involving mitigation factually subsist as well. Disaster risk management consists of designing, implementation, and evaluation of strategies and policies to raise awareness of disaster risk and various DRR activities (IPCC, 2012). As it is directly related to socio-economic conditions, the preparation of disaster risk-based mitigation may moderate the social and environmental impacts of the crisis due to natural disasters when practiced properly (Horney et al, 2016).

As it is an archipelagic country (Gunawan and Arumbinang, 2021), Indonesia is prone to natural disasters as most of its areas are coastal areas (Kron, 2008). This situation requires an understanding of disaster risk mitigation to prepare and promote the resilience of individuals, the people, and the state to manage coastal areas more productively and effectively (Endyka et al., 2020). In this regard, DRR activities aim at minimizing hazards and potential disasters. On the other hand, accommodation of disaster mitigation in coastal areas management requires partnerships between public authorities, with the people, relevant companies, and the financial sector (Kron, 2008).

Spatial planning is now considered a vital instrument for disaster risk reduction, including in coastal areas, as it regulates the long-term use of space. With proper land use, natural hazards in the present and in the future can be minimized or even prevented (Sutanta et al., 2010). Disaster risk reduction is a systematic development and application of policies, strategies, and practices to avoid (prevention) or limit (mitigation and preparedness) the adverse effects of hazards (ISDR, 2010). Disaster mitigation in the context of Disaster Risk Reduction is crucial (Mubarak, 2019) as it seeks to see the empirical conditions of disaster-prone areas to minimize the impacts in the event of a disaster (Pancasilawan et al, 2020). Disaster is a fragment of development that must be constantly dealt with, and disaster management is inseparable from development (Putuhua and Christianty, 2020). For this reason, disaster mitigation measures need to be set at the policymaking phase, particularly when formulating policies (Pancasilawan et al., 2020), especially spatial planning policies as disaster mitigation may be the guidelines for development purposes.

Spatial planning as the measure to mitigate disaster in coastal areas are regulated in four legislations, namely Law Number 26 of 2007 concerning Spatial Planning (the Spatial Planning Law), Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands, and Law Number 1 of 2014 concerning Amendment to Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands (the Management of Coastal Areas and Small Islands Law), Law Number 24 of 2007 concerning Disaster Management (the Disaster Management Law), and Law Number 11 of 2020 concerning Job Creation (the Job Creation Law). However, these legislations may overlap if they are

not harmonized and synchronized as they involve numerous stakeholders with different interests, which can influence decision-making in disaster mitigation. As noted by Kahneman and Tversky (1979), human being tends to maximize the value of selected options to fulfill their desires.

There have been countless studies on legislation governing spatial planning and disaster mitigation, even though only a few discuss spatial planning and disaster mitigation and the role of stakeholders in coastal areas, given the inharmonious Indonesian legislation. This issue makes the study on the roles of spatial planning laws and regulations in disaster mitigation - in coastal areas by empowering the stakeholders necessary. Freeman et al (2010) define stakeholders as groups or individuals who can affect or be affected by the achievement of certain objectives. Stakeholders' approaches towards disasters refer to activities like mitigation, preparedness, response, and recovery, which are planned and conducted before, during, and after disasters (Mojtahedi & Lan Oo, 2014; Altay & Green, 2006; Moe & Pathranarakul, 2006). This paper aims to examine the spatial planning legal framework with regard to disaster mitigation in the coastal area and identify the role of stakeholders in coastal disaster mitigation. This paper will firstly examine the functions of Indonesian spatial planning laws and regulations with regard to disaster mitigation in coastal areas. Subsequently, this paper will describe the roles of stakeholders based on the disaster mitigation laws and regulations and the interactions between stakeholders in achieving the goals set by the laws and regulations.

2. Method

This is normative legal research was conducted by examining secondary data obtained from relevant books, journals, and published documents. This study uses 2 (two) approaches, namely the statutory approach as suggested by Marzuki (2010), to examine all laws and regulations related to spatial planning and disaster mitigation in coastal areas and to inspect the consistency and conformity among them and the conceptual approach as suggested by Ibrahim (2007) as this study identifies existing principles or doctrinal views before offering novel ideas in regard to spatial planning and disaster mitigation in coastal areas and roles of stakeholders.

3. Discussion and Analysis

3.1. Indonesian Spatial Planning Laws and Regulations in Indonesia with Regard to Disaster Mitigation in Coastal Areas

The Black Law Dictionary defines mitigation as the process or outcome of making something less severe, dangerous, painful, harsh, or damaging (Webster, 1828), while the Disaster Management Law defines it as a series of efforts to reduce disaster risks through physical development and building awareness and capacity in dealing with disaster threats (Arumbinang, 2022). Disaster mitigation is a term used to describe actions taken to reduce the impact of a disaster before its occurrence (pre-disaster), including preparedness and long-term risk reduction measures (Coburn et al., 1994).

Article 33 of the Disaster Management Law provides that the implementation of disaster management consists of 3 (three) stages, namely pre-disaster stage, during the emergency response stage, and post-disaster stage. Furthermore, Article 34 of the Law

dictates that the implementation of disaster management at the pre-disaster stage includes the following situations:

a. non-disaster situation; and

b. potential disaster situation.

Mitigation is explicitly provided for in Article 44, ruling that disaster management is implemented in situations in which a disaster may potentially occur as referred to in Article 34 letter b which shall include:

a. preparedness;

b. early warning; and

c. disaster mitigation.

Disaster mitigation has four important indicators as follows:

a. Availability of information and maps of disaster-prone areas for each type of disaster;

b. Campaign to increase public understanding and awareness in dealing with disasters for living in disaster-prone areas;

c. Knowledge of do's and don'ts and how to escape during a disaster;

d. Management of disaster-prone areas to reduce the threats of disaster.

From the above explanation, there are two main elements in the implementation of mitigation, namely physical development and human development. Physical development can be manifested in the form of infrastructure as a preventive tool in reducing disaster risk, while human development can be carried out by promoting human awareness to reduce disaster risk and increase capacity, especially for those living in disaster-prone areas to cope with disasters.

Furthermore, disaster risk reduction by mitigation can also be classified in structural and non-structural mitigation. Structural mitigation refers to technology-based mitigation by, among others, construction of flood embankments, designing new buildings, or reinforcing existing buildings to make them more resistant to hazards, while non-structural mitigation refers to policy-based actions such as regulations related to spatial planning prohibiting the construction of houses in flood-prone areas or requiring insurance for structures prone to storm (Office of Inspector General, 2009) which can also be in the form of capacity building as part of human development (Nugroho et al., 2020).

Spatial planning laws and regulations for mitigating disaster in coastal areas, like laws and regulations in general, must be formulated comprehensively (Walker et al, 2011). In relation to spatial planning, Article 1 point 5 of the Spatial Planning law defines it as a system of spatial planning processes, space utilization, and space utilization control. Consequently, in order to formulate comprehensive spatial planning laws and regulations, a comprehensive plan is instrumental. It is a type of long-term planning comprising five elements as follows:

a. Research: a comprehensive plan usually begins with the data collection and analysis phase;

b. Designation of goals and target: there must be an agreement on what to achieve in the plan;

c. Plan formulation: outlining the achievable options and doing analysis;

d. Plan implementation: implementing the plan using instruments in the form of investment capital and land use control;

e. Review and revision: carried out to ensure the plan runs effectively and prolongedly by accommodating public interests to accommodate public involvement/participation in the process. (Levy, 2016)

The explanation above shows that disaster management in the context of spatial planning requires disaster mitigation not only at the stage of planning but also at the stage of space utilization and spatial control, as the Spatial Planning Law mandates that the national, provincial, and local spatial plan is subject to reconsideration every five years even though it is valid for 20 years.

The Spatial Planning Law normatively points out that the Republic of Indonesia is geographically located in a disaster-prone area, so spatial planning based on disaster mitigation is instrumental to improve safety and life, and livelihood. Nevertheless, it must be noted that even though the Law explicitly mentions disaster mitigation, its articles do not explicitly mention disaster mitigation, and disaster-prone areas are only discussed in the regulation governing protected areas. The Spatial Planning Law defines a protected area as an area designated with the main function of protecting environmental sustainability, including natural resources and artificial resources. In fact, from several derivative regulations of the Spatial Planning Law, only Government Regulation Number 21 of 2021 concerning Implementation of Spatial Planning expressly provides provision for disaster mitigation by ruling that sustainable use of space can be achieved by prioritizing safeguarding concept in space utilization by taking into account disaster risk reduction, in addition to disaster mitigation.

With regard to disaster mitigation and spatial planning, the Disaster Management Law in Article 47 rules as follows:

(1) The mitigation, as referred to in Article 44 letter c, shall be conducted to reduce disaster risk with regard to the people living in disaster-prone areas.

(2) The mitigation activities, as referred to in paragraph (1), shall be carried out through:

   a. spatial planning implementation;

   b. development management, infrastructure development, building; and

   c. implementation of conventional and unconventional education, counseling, and training.

The measures are further elaborated by Government Regulation Number 21 of 2008 on Disaster Management in Article 20 paragraph (2), which provisioned that mitigation activities shall be carried out through planning and implementation of spatial planning based upon disaster risk analysis. The provisions of the Disaster Management Law and the Government Regulation on Disaster Management show that spatial planning can be utilized as an instrument in disaster mitigation implementation.

Disaster mitigation in the Management of Coastal Zone and Small Islands Law is provided for in Article 56, ruling that in preparing an integrated plan for the management and utilization of Coastal Areas and Small Islands, the Government and/or Regional Governments are required to include and implement the sections containing disaster mitigation in the Coastal Zone and Small Islands based on the type, level, and territory. The article shows that in conducting disaster mitigation in coastal areas, spatial planning instruments can be useful. The elements of spatial planning in coastal management are Managerial Planning of Coastal Zone and Small Islands which consists of the following planning classifications:

a. Strategic Plan for Coastal Zone and Small Islands (RSWP-3-K);
b. Zoning Plan for Coastal Zone and Small Islands (RZWP-3-K);
c. Management Plan for Coastal Zone and Small Islands (RPWP-3-K); and
d. Action Plan for the Management of Coastal Zone and Small Islands (RAPWP-3-K).

These various plans are the basis for the utilization of coastal areas, which are further elaborated in Government Regulation Number 64 of 2010 concerning Disaster Mitigation in Coastal Areas and Small Islands concerning RSWP-3-K, RZWP-3 -K, RPWP-3-K, and RAPWP-3-K which have been amended by the Job Creation Law dictating coastal areas and small islands planning to include the following: Coastal Zone and Small Islands Zoning Plan (RZWP-3-K), National Strategic Area Zoning Plan (RZ KSN) and Certain National Strategic Area Zoning Plans (RZ KSNT). However, notwithstanding the Job Creation Law, the Management of Coastal Zone and Small Islands Law, along with its derivative regulations, is still applicable, so long as they do not conflict with the Job Creation Law.

With regard to planning, the Government Regulation concerning Disaster Mitigation in Coastal Areas and Small Islands rules that in formulating the managerial plans for coastal and small islands, central and local governments must include disaster mitigation as it is part of the disaster management plan. The government regulation mandates disaster mitigation to be carried out by structural activities by building infrastructure based on the hazard threats in the area such as tsunamis or earthquakes and non-structural activities, which include formulation of legislations, preparation of disaster-prone area maps, preparation of disaster risk maps, preparation of environmental impact analysis, formulation of spatial planning, zoning and education, counseling and raising public awareness.

The laws and regulations related to the use of spatial planning for disaster mitigation in coastal areas should not only focus on implementing mitigation at the planning stage in the forms of, among others, the preparation of disaster-prone maps. The element of space utilization and control must also be taken into account in disaster mitigation as disasters may occur in areas that are not originally disaster-prone areas if the use of natural resources is uncontrolled, as shown by several studies suggesting that disasters are not only caused by natural forces but also human behavior (Lyster & Verchick, 2018) to make ends meet (Pinkowski, 2008).

The use of sanction is a vital instrument to control space utilization as it may prevent excessive utilization of space beyond the carrying capacity of the environment, which may result in disasters. It is safe to say that sanction is an elaboration of disaster mitigation at the stage of spatial planning control. However, in the context of coastal

areas, after the introduction of the Job Creation Law, the element of disaster mitigation is no longer attached to the sanction since the sanction in terms of use of coastal areas does not contain the elements of prevention as stated in the Management of Coastal Zone and Small Islands Law. The Job Creation Law makes the imposition of sanctions more difficult as it must be preceded by a change of space function.

Article 75 of the Management of Coastal Zone and Small Islands Law stipulates that "*any person who utilizes space from part of the Coastal Waters and some parts of small islands without Location Permit shall be subject to imprisonment for a maximum period of 3 (three) years and maximum fine of Rp. 500,000,000.00 (five hundred million rupiahs)*". This provision is rendered moot by the Job Creation Law into "*any person who utilizes space from waters and without Business License related to marine utilization resulting in spatial function change shall be subject to imprisonment for a maximum period of 3 (three) years and maximum fine of Rp. 500,000,000.00 (five hundred million rupiahs)* in line with the amendments to the Spatial Planning Law by the Job Creation Law dictating that any person using space not in accordance with the space utilization permit from the authorized official causing changes to the space function can be subject to criminal sanction and fines – in contrast with the provision of the Spatial Planning Law before being amended by the Job Creation Law dictating that any use of space not in accordance with the permit may be subject to sanctions – whether or not there is a change in the function. This change has made sanctions merely a repressive but not preventive measure to prevent disasters in coastal areas.

From the explanation above, in terms of disaster mitigation and spatial planning in coastal areas, the Spatial Planning Law, Management of Coastal Zone and Small Islands Law, Disaster Management Law, and Job Creation Law and their derivative regulations indicate there have been sufficient regulations to make spatial planning a non-structural mitigation for managing disaster in coastal areas. However, the regulations related to spatial planning as a disaster mitigation instrument still need to be made more comprehensive as the articles of the Spatial Planning Law as the regulation governing do not explicitly mention disaster mitigation. As a result, in the spatial planning implementation, the disaster perspective is still not optimally regulated despite the fact Indonesia is prone to various natural disasters, especially in coastal areas. In addition, upon the introduction of the Job Creation Law, the sanction can no longer be an instrument of disaster mitigation as a sanction under the Job Creation Law can only be imposed if there has been a change in the space function.

3.2. Designation of Roles of Stakeholders' Roles in Disaster Mitigation in Coastal Areas: Spatial Planning Context

In disaster management, spatial management (especially spatial planning) and disaster mitigation are integral and inseparable. Spatial planning is the reference in terms of the use of space, while mitigation is the process of seeking various preventive actions to anticipate any disasters that might occur in the future to minimize the negative impacts caused by the disasters (Diposaptono, 2003). As a result, as they are prone to disasters, coastal areas need an integrated planning to balance and optimize environmental protection, public use, and economic development (Sorensen & Mc Creary, 1990). The need for integrated coastal management arises as the use of the sea and the coast can affect the marine and coastal environment and its users, while various interests in coastal areas' use may lead to conflicts between users of the coastal area or between the users and the government making harmony between various interests and linkages between

these interests for coastal management imperative. In other words, a development concept involving all stakeholders and taking into account the perspective of disaster is required.

According to the Disaster Management Law, the stakeholders involved in disaster management are as follows: *Firs*t, the Government. The Disaster Management Law designates the government as the main party responsible for reducing disaster risk and integrating it into the development plan, protecting the people from any impact of disasters, securing the fulfillment of rights of the affected communities and refugees, recovery of conditions, and budget allocation. Special agencies have been formed to carry out disaster management, namely the National Disaster Management Agency (BNPB) at the national level and the Regional Disaster Management Agency (BPBD) in regions.

Second, the people. In terms of disaster management, the people are entitled to protection and fulfillment of basic needs in the event of a disaster, to be given disaster information and education, to participate in decision-making on disaster planning, and to do supervision. On the other hand, people are obliged to protect the environment, to carry out disaster management activities, and spread accurate information about disasters.

Third, Business Institutions. Business institutions have the opportunity to organize disaster management, either separately or jointly with other parties. In the context of obligations, business institutions have several obligations, namely:

a. To adjust their activities to disaster management policies;
b. to submit reports to the government and/or agencies assigned to do disaster management and to convey the report to the public transparently; and
c. to observe the humanity principle in carrying out its economic function in disaster management.

Fourth, international institutions and foreign non-governmental organizations. These institutions can participate in disaster management activities, and their personnel are entitled to protection from the Government during a disaster.

The elucidation to the Disaster Management Law suggests the responsibility and authority on disaster management implementation fall in the hand of the Government and regional governments to be carried out in a planned, integrated, coordinated, and comprehensive manner by giving broad opportunities for business institutions and international institutions in disaster management. However, based on the explanation above in terms of the roles and obligations of non-state actors, the Disaster Management Law does not explicitly regulate non-state actors' roles in spatial planning for disaster mitigation. The Disaster Management Law and its implementing regulations only regulate the government's role in spatial planning for disaster mitigation which is regulated in Article 42 of the Disaster Management Law dictating the implementation and enforcement of spatial disaster plan is carried out to reduce disaster risk covering the implementation of regulations on spatial planning, safety standards and imposition of sanctions against violators with periodic monitoring and evaluation by the government in terms of implementation of spatial planning and compliance with safety standards.

The involvement of the people in disaster management implementation, including disaster mitigation, is initiated by the government. One of the strategies of the government to involve the people in disaster mitigation is through the development of disaster-resilient villages with community-based disaster risk reduction (PRBBK) measures, commonly referred to as disaster-resilient villages (destana), carried out under the Regulation of the Head of the National Disaster Management Agency Number 1 of 2012 concerning Guidelines for Disaster Resilient Villages (hereinafter referred to as Perka Destana). A Disaster Resilient Village is a village with the capacity to adapt, face hazards, and recover in a short time from disasters (the National Disaster Management Agency, 2020).

Through this Perka Destana, the Government gives maximum opportunities for universities, NGOs, community organizations, private sectors, and other parties to actively participate in disaster risk reduction, including in the development of Disaster Resilient Villages and other similar initiatives. Perka Destana can be a breakthrough to accommodate the role of stakeholders to overcome the impact of disasters – both positive and negative. The most significant negative impact is an economic decline (Skidmore & Toya, 2002). However, several studies suggest disaster may result in positive impacts. Cuaresma et al. (2008) claim that disasters may increase productivity and capital investment. Moreover, areas prone to disasters may invest more to reduce hazards (Kousky, 2014). Callaghan (2016) suggests disasters reduce factors of production, which will stimulate innovations as successful technological innovation may boost up resilience and prevent economic decline. Hui Hu et al (2018) suggest the government has an obligation to encourage innovation and concern for disaster risk reduction by stakeholders.

The government is undoubtedly the main actor in disaster mitigation as ruled in the Disaster Management Law and the Spatial Planning Law as the regulation governing spatial planning. The Spatial Planning Law only dictates that spatial planning is carried out by the government by involving the people. However, the role of the people in spatial planning is carried out through participation in the preparation of spatial plans, space utilization, and controlling space utilization. There is no further explanation related to the involvement of stakeholders in the implementation of spatial planning for disaster mitigation as the Spatial Planning Law dictates that the government plays the dominant role in spatial planning, and disaster mitigation is not regulated in detail. Explicit regulations related to the involvement of non-government stakeholders in laws and regulations are crucial to encourage non-government stakeholders to be actively involved in disaster mitigation. Bosher et al. (2009) suggest that there is still insufficient evidence indicating that key stakeholders are playing a proactive role in mitigating disasters. Collaboration between stakeholders is expected to overcome the negative impacts of disasters in coastal areas while creating positivity through disaster mitigation.

The Management of Coastal Zone and Small Islands Law is one of the laws that accommodates disaster perspectives, particularly disaster mitigation, as indicated by its specific chapter regulating disaster mitigation, namely Chapter X, which is then further elaborated in the Government Regulation on Disaster Mitigation in Coastal Areas and Small Islands. Based on the Government Regulation, disaster mitigation shall refer to a plan for the management of coastal areas and small islands, which is closely related to spatial planning (especially planning elements) since spatial planning can also be defined as regional planning activities, including strategies, policies and sectoral

programs and integrated documentation specifically for balanced spatial development and a range of sustainable methods used by the public sector (Nichersu & Iacoboae, 2011).

Roles of stakeholders in coastal area planning related to spatial planning are regulated in the Management of Coastal Zone and Small Islands Law mandating the coastal area planning mechanism as follows, as provided for in Article 14:

a. Proposals for the preparation of the RSWP-3-K, RZWP-3-K, RPWP-3-K, and RAPWP-3-K are prepared by the Local Government, Community, and business institutions.
b. The mechanism for the preparation of the RSWP-3-K, RZWP-3-K, RPWP-3-K, and RAPWP-3-K of the provincial and district/city governments is carried out by involving the people.
c. Local governments are obliged to distribute the draft RSWP-3-K, RZWP-3-K, RPWP-3-K, and RAPWP-3-K to get input, feedback, and suggestions for improvement.
d. The regent/mayor submits the final document for the management plan of the regency/municipal Coastal Zone and Small Islands to the governor and the Minister for information.
e. The Governor submits the document of the final plan for the Management of the Coastal Zone and Small Islands of the province to the Minister and the Regent/mayor in the province concerned.
f. The Governor or the Minister shall provide responses and/or suggestions on the proposed final document for the Management of Coastal Zone and Small Islands within a period of 30 (thirty) working days.
g. If the responses and/or suggestions as referred to in Paragraph (6) are not fulfilled, the document of the final plan for the Management of Coastal Zone and Small Islands shall take effect.

The coastal area planning mechanism in Article 14 of the Law *a quo* has given an opportunity to the parties/stakeholders related to the coastal area to participate in preparing coastal area plans. However, the opportunity is removed by the Job Creation Law. Even though Article 7 paragraph (6) rules that the Management of Coastal Zone and Small Islands planning is carried out by involving the people, the form of involvement is not provided for, in contrast to the Management of Coastal Zone and Small Islands Law that clearly regulates the form of involvement. There is a concern that the involvement will only be in the form of "token" participation by merely fulfilling the requirements for the formation of regulations but does not directly involve the people in policy formation (Arnstein, 1969). However, community involvement as mandated by the Management of Coastal Zone and Small Islands Law may be reinstated upon the passing of the Constitutional Court Decision Number 91/PUU-XVIII/2020 concerning judicial review on the Job Creation Law as in the decision. The Constitutional Court rules that if within a period of two years, the Job Creation Law is not revised according to the Constitutional Court's order, the relevant laws mandated by which will be reinstated – despite numerous ambiguous wordings in the decision.

Furthermore, in relation to the management of coastal areas and small islands planning, Article 42 of the Law stipulates that to improve the quality of planning and implementation of the Management of Coastal Areas and Small Islands, the Government shall conduct science and technological research and development as well as human resource development in sustainable management of Coastal Zone and Small Islands. Furthermore, the Government shall regulate, encourage and/or conduct research and development on the Management of Coastal Zone and Small Islands to produce knowledge and technology needed in the management of Coastal Zone and Small Islands to be more effective, efficient, economical, highly competitive and environmentally friendly while respecting local traditions or culture. The research and development can be carried out by the Government, Regional Government, universities, non-governmental organizations, private research, development institutions, and/or individuals in accordance with the laws and regulations.

Although the Law has dictated the roles of these various parties in the management plan of coastal areas and small islands, the law is silent about disaster mitigation. On the other hand, the Job Creation Law amending the Law does not give a detailed explanation of stakeholders' role in disaster mitigation in coastal areas. The study on the above four laws, namely the Spatial Planning Law, Management of Coastal Zone and Small Islands Law, Disaster Management Law, and Job Creation Law along with their derivative regulations, the government has a dominant role in spatial planning for disaster mitigation, while the role of non-government stakeholders is not regulated in detail and there have been no uniform provisions to the stakeholders involved in spatial planning for disaster mitigation among the regulations. It is safe to say that regulations related to the use of spatial planning as a disaster mitigation instrument are still underdeveloped and less integrated with regard to the roles of stakeholders in spatial planning implementation for disaster mitigation.

Detailed descriptions of programs in disaster-prone areas in a preventive framework can be described in more detail in the Regional Spatial Planning Regulations. For coastal areas, the Regional Spatial Plan can be integrated with the Zoning Plan for Coastal Areas and Small Islands to integrate regulations regarding disaster-prone areas in the two planning documents. However, as previously explained, disaster mitigation certainly is not only limited to the existence of a disaster-prone map as disasters are not only caused by nature which can be anticipated through disaster-prone maps, but also by humans as the result of the uncontrolled utilization of coastal areas. In this regard, control in the utilization of coastal areas must also utilize the elements of disaster mitigation, making the roles of non-government stakeholders imperative in controlling the coast used by doing monitoring to prevent any utilization of coastal areas that may potentially cause disasters. As a result, uniform and integrated regulation related to the roles of stakeholders in spatial planning to mitigate disasters in coastal areas superior to regional regulations are imperative, with also taking into account that if the roles of stakeholders are regulated by regional regulation, its implementation will depend upon the goodwill of the respective regional government while disaster mitigation must be carried out in an integrated rather than partial manner.

4. Conclusion

From the explanation above related to the Spatial Planning Law, Management of Coastal Zone and Small Islands Law, Disaster Management Law, and Job Creation Law and their derivative regulations, there have been regulations that make spatial planning as the non-structural mitigation used for disaster management in coastal areas. However, the regulations related to the use of spatial planning as the instrument of disaster mitigation still need to be more comprehensive in that, as the articles of the Spatial Planning Law as the law governing spatial planning do not explicitly regulate disaster mitigation making spatial planning implementation in the perspective of disaster is still not explicitly regulated, even though Indonesia is a country that is very prone to various natural disasters, especially in coastal areas. The implementation of disaster mitigation is needed not only at the planning level but also at the level of controlling the use of coastal areas by, among others, imposing sanctions.

Meanwhile, the study on the aforementioned four laws and their derivative regulations indicates that government plays a dominant role in spatial planning in terms of disaster mitigation while the roles of non-government stakeholders are not regulated in detail. In addition, there have been no uniform regulations regarding the stakeholders involved in spatial planning for disaster mitigation. Laws and regulations related to the use of spatial planning as a disaster mitigation instrument are still underdeveloped and unintegrated in relation to the roles of stakeholders in the spatial planning implementation for disaster mitigation. The newly passed Job Creation Law even makes the roles of non-government stakeholders increasingly unclear, which may eventually trigger tokenism participation by involving the people merely for fulfilling the requirements of making the law without any real involvement of the people in the process.

This paper is expected to give broader comprehension on the laws and regulations of Indonesia related to disaster mitigation within the framework of spatial planning in coastal areas. However, the author believes that in-depth and larger studies, both qualitatively and quantitatively by involving all stakeholders related to disaster mitigation in coastal areas may give new insight for improving Indonesian laws and regulations with regard to disaster mitigation in the coastal area by using a spatial planning approach.

References

Altay, N., & Green, W. G. (2006). OR/MS Research in Disaster Operations Management. *European Journal of Operational Research*, 175(1), 475-493

Arnstein, S. R. (1969). A Ladder of Citizen Participation. *JAIP*, 35(4), 216-224

Arumbinang, M. H. (2021). Problems and Dilemmas: ASEAN Commitments in Disaster Management. *Indonesian Comparative Law Review*, 4(1), 17-25. https://doi.org/10.18196/iclr.v4i1.13219

Begum, R. A., Sarkar, Md., Kabir, S., Jaafar, A. H., & Pereira, J. J. (2014). Toward Conceptual Frameworks for Linking Disaster Risk Reduction and Climate Change Adaptation. *International Journal of Disaster Risk Reduction*, 10, 362–373. http://dx.doi.org/10.1016/j.ijdrr.2014.10.011

Bosher, L. (2008). *Hazards and the Built Environment: Attaining Built-In Resilience*. Routledge

Callaghan C. W. (2016). Disaster Management, Crowdsourced R&D and Probabilistic Innovation Theory: Toward Real Time Disaster Response Capability. *International Journal of Disaster Risk Reduction*, 17, 238-250.

Christoplos, I., Mitchell, J., & Liljelund, A. (2001). Re-Framing Risk: The Changing Context of Disaster Mitigation and Preparedness. *Disasters*, 25(3), 185–198. https://doi.org/10.1111/1467-7717.00171

Coburn, A. W., Spence, R. J. S., & Pomonis. A. (1994). *Disaster Mitigation*. UNDP

CRED and UNDRR. (2020). *The Human Cost of Disasters - An overview of the last 20 years 2000-2019.* https://www.undrr.org/publication/human-cost-disasters-overview-last-20-years-2000-2019#:~:text=In%20the%20period%202000%20to,over%20the%20previous%20twenty%20years.

Cuaresma, C. J., Hlouskova, J., & Obersteiner, M. (2008). Natural Disasters as Creative Destruction? Evidence from Developing Countries. *Economic Inquiry*, 46(2), 214-226.

Diposaptono, S. (2003). Mitigasi Bencana Alam di Wilayah Pesisir dalam Kerangka Pengelolaan Wilayah Pesisir Terpadu di Indonesia. *Alami*, 8(2), 1-8

Doody, J. Pat. (2001). *Coastal Conservation and Management An Ecological Prespective*. Kluwer Academics Publisher

Endyka, Y., Muhdar, M., & Sabaruddin, A. (2020). Environmental Justice in Intra Generations: An Overview of Aristotle's Distributive Justice to Coal Mining. *Indonesian Comparative Law Review*, 3(1), 25-34. https://doi.org/10.18196/iclr.v3i1.11234

Freeman, R. E., Harrison, J. S., Wicks, A. C., Parmar, B. L., & De Colle, S. (2010). *Stakeholder Theory: The State of The Art*. Cambridge University Press.

Government Regulation Number 21 of 2008 concerning Disaster Management

Government Regulation Number 64 of 2010 concerning Disaster Mitigation in Coastal Areas and Small Islands

Gunawan, Y., & Arumbinang, M. H. (2021). Indonesian Forced-Labour Crew in Chinese Vessel: A Human Rights Perspective. *Sociology and Technoscience*, 11(2), 115-133.

Horney, J., Nguyen, M., Salvesen, D., Tomasco, O., & Berke, P. (2016). Engaging The Public in Planning for Disaster Recovery. *International Journal of Disaster Risk Reduction*, 17, 33–37

Hui, H., Lei, T., Lei, J., Zhang, S., & Kavan, P. (2018). Disaster-Mitigating and General Innovative Responses to Climate Disasters: Evidence from Modern and Historical China. *International Journal of Disaster Risk Reduction*, 28, 664-673

Ibrahim, J. (2007). *Teori dan Metodologi Penelitian Hukum Normatif: Cetakan Ketiga.* Bayumedia Publishing

International Strategy for Disaster Reduction (ISDR). (2009). *Terminology on Disaster Risk Reduction*. https://www.undrr.org/publication/2009-unisdr-terminology-disaster-risk-reduction

International Strategy for Disaster Reduction (ISDR). (2010). *Local Governments and Disaster Risk Reduction: Good Practices and Lessons Learned*. https://reliefweb.int/report/world/local-governments-and-disaster-risk-reduction-good-practices-and-lessons-learned

IPCC. (2012). *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change. Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.K. Plattner, S.K. Allen, M. Tignor and P.M. Midgley. Cambridge University Press

Kahneman, D., & Tversky, A. (1979). Prospect Theory – Analysis of Decision Under Risk. *Econometrica*, 47(2), 263-291. https://doi.org/10.2307/1914185

Kousky, C. (2014). Informing Climate Adaptation: A Review of The Economic Costs of Natural Disasters. *Energy Economics*, 46, 576-592

Kron, W. *(2008). Coast- The Riskiest Places on Earth. https://www.asianscientist.com/wp-content/uploads/2012/07-new/9789814277426_0001.pdf*

Law Number 1 Year 2014 concerning Amending Law Number 27 Year 2007 on the Management of Coastal Zone and Small Islands

Law Number 11 Year 2020 concerning Job Creation

Law Number 24 Year 2007 concerning Disaster Management

Law Number 26 Year 2007 concerning Spatial Planning

Law Number 27 Year 2007 concerning the Management of Coastal Zone and Small Islands

Levy, J. M. (2016). *Contemporary Urban Planning: Eleventh Edition*. Routledge

Lyster, R., & Verchick, R. R. M. (2018). *Research Handbook on Climate Disaster Law (Barriers and Opportunities)*. Edward Elgar Publishing

Marzuki, P. M. (2010). *Penelitian Hukum*: *Cetakan Keenam.* Kencana Prenada Media Group

Moe, T. L., & Pathranarakul, P. (2006). An Integrated Approach to Natural Disaster Management Success Factors. *Disaster Prevention and Management,* 15(3), 396-413.

Mojtahedi, S. M. H., & Lan Oo, B. (2014). Stakeholders' approaches to disaster risk reduction in built environment. *Disaster Prevention and Management* 23(4), 356-369. https://doi.org/10.1108/DPM-11-2013-0209

Morgan, M. G. (2013). *Readings in risk*, in Glickman, T., & Gough, M. (eds) *Readings in Risk*. Resources for the Future

Mubarak, A. F., Amiruddin, R., & Gaus, S. (2019). The Effectiveness of Disaster Prevention and Mitigation Training for The Students in Disaster Prone Areas. *OP Conf. Ser.: Earth Environ. Sci.* 235 012055. https://doi.org/10.1088/1755-1315/235/1/012055

National Disaster Management Agency. (2020). *Annual Report 2019*. https://bnpb.go.id/documents/laporan-kinerja-2019-51-1587446756.pdf

Nichersu, I., & Iacoboae, C. (2011). Systematic Spatial Planning. *Theoretical and Empirical Researches in Urban Management*, 6 (2), 67-77

Nugroho, S. S., Haq, H. S., & Erwin, Y. (2020). *Hukum Mitigasi Bencana di Indonesia*. Lakeisha

Office of Inspector General (US Department of Homeland Security). (2009). *FEMA's Progress in All-Hazards Mitigation*. https://www.oig.dhs.gov/assets/Mgmt/OIG_10-03_Oct09.pdf

Pancasilawan, R., Utami, S. B., Sumaryana, A., Ismanto, S. U., & Rosmalasari, D. (2020). Mitigation of Disaster Risk Reduction in Pangandaran Regency. *Sosiohumaniora* 22(2), 214 - 222. https://doi.org/ 10.24198/sosiohumaniora.v22i2.25792

Pinkowski, J. (2008). *Disaster Management Handbook*. Taylor & Francis Group

Puturuhua, F., & Christianty, R. (2020). Disaster Risk on Review Scale and Spatial Planning Archipelago Region: The Risk Based Island Cluster In Moluccas Province. *Jambura Geoscience Review*, 2(2), 94-105. http://ejurnal.ung.ac.id/index.php/jgeosrev

Regulation of the Head of the National Disaster Management Agency Number 1 of 2012 concerning Guidelines for Disaster-Resilient Villages

Skidmore, M., & Toya, H. (2002). Do Natural Disasters Promote Long-Run Growth? *Economic Inquiry*, 40(4), 664-687.

Sorensen J. C., & Mc Creary. (1990). *Coast: Institutional Arrangement for Managing Coastal Resources*. University of California

Sutanta, H., Rajabifard, A., & Bishop, I. D. (2010). *Integrating Spatial Planning and Disaster Risk Reduction at the Local Level in the Context of Spatially Enabled Government*. https://www.semanticscholar.org/paper/Integrating-Spatial-Planning-and-Disaster-Risk-at-Sutanta-Bishop/8dcd5a80f45e3be877b2b5ccaa1ac525248e61eb

United Nation. (2020). *Staggering Rise in Climate Emergencies in Last 20 Years, New Disaster Research Shows*. https://news.un.org/en/story/2020/10/1075142

Walker, G., Deeming, H., Margottini, C., & Menoni, S. (2011). Introduction to Sustainable Risk Mitigation for a More Resilient Europe. In: Menoni, S., & Margottini, C. (eds) Inside Risk: A Strategy for Sustainable Risk Mitigation. *Springer, Milano*. https://doi.org/10.1007/978-88-470-1842-6_1

Webster, M. (1828). *Black Law Dictionary*. West Publishing