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## Jakarta Bay Reclamation: The Challenge Between Policy, Environmental and Social Impacts

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# Jakarta Bay Reclamation: The Challenge Between Policy, Environmental and Social Impacts

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**Abstract.** Coastal areas have strategic value for the development of national economy and the improvement of people's welfare and are at the same time very vulnerable to damage and destruction. Therefore, it is necessary to manage them wisely by placing economic interests in proportion with the environmental and social interests, both in the short and long term. A good policy should be in accordance with the needs of the community and its benefits to the community. Such as the policy regarding the Jakarta Bay reclamation, whether it benefits the interests of the public or those of the owners of capital. The Environmental Review of the Jakarta reclamation is considered unclear and transparent, including the Permits issued without regard to the Environmental Impact Assessment (EIA). Since 1995, the Jakarta Bay Reclamation, as part of coastal area management, has had advantage and disadvantages at the same time. The advantage is in order to create a new center of economic growth based on services and creative economy and suppress housing development in South Jakarta which should be used as a water catchment area. The disadvantages are that it causes environmental and ecosystem damage and damages the livelihoods of fishermen and communities on the North Coast of Jakarta. This paper describes the lack of conformity among environmental, social, and policy aspects in coastal area management to the Jakarta Bay reclamation. This research will present theories on environmental law compliance especially regarding licensing and spatial planning and discover the ideal rule of law model so that sustainable development can be achieved.

**Keywords:** Environment, Jakarta Bay Reclamation, Social, Policy, Sustainable Development

## 1. Introduction

Reclamation is one example of coastal area management. Law of Indonesia Number 27 of 2007 j.o Law Number 1 year 2014 on Management of Coastal Areas and Small Islands states that the definition of reclamation is an activity carried out by people in order to increase the benefits of land natural resources in terms of environment and socio-economics by means of landfill and drainage. Reclamation must be planned in the reclamation area which already has had Zoning Areas for Coastal and Small Islands. Whereas in the context of the legal basis for reclamation, reclamation activities in coastal areas must be regulated at the provincial level in the form of Coastal Zoning and Licensing Regional Regulations. Reclamation activities must obtain permission from the Indonesian Ministry of Maritime Affairs and Fisheries as stipulated in the Regulation of the Minister of Maritime Affairs and Fisheries No. 40/PRT/M /2007 concerning Guidelines for Spatial Planning for Coastal Reclamation Areas.



The Jakarta Provincial Government had previously planned to build 17 reclamation islands on the North Coast of Jakarta; all the islands had obtained permission from the Governor. But on September 26, 2018, the new Governor of Jakarta revoked 13 island development permits on the basis that developers who obtained the permit did not fulfill their obligations. The islands whose permits were revoked are islands A, B, E, F, H, I, J, K, L, M, O, P and Q, while islands C, D, G and N were not revoked because the construction had been held. According to the Governor of Jakarta, spatial planning for the finished islands would be arranged and used as well as possible for the benefits of the community.[1]

### Land reclamation in North Jakarta

Masterplan involves creating 17 artificial islets



Source: PERGUB DKI JAKARTA STRAITS TIMES GRAPHICS

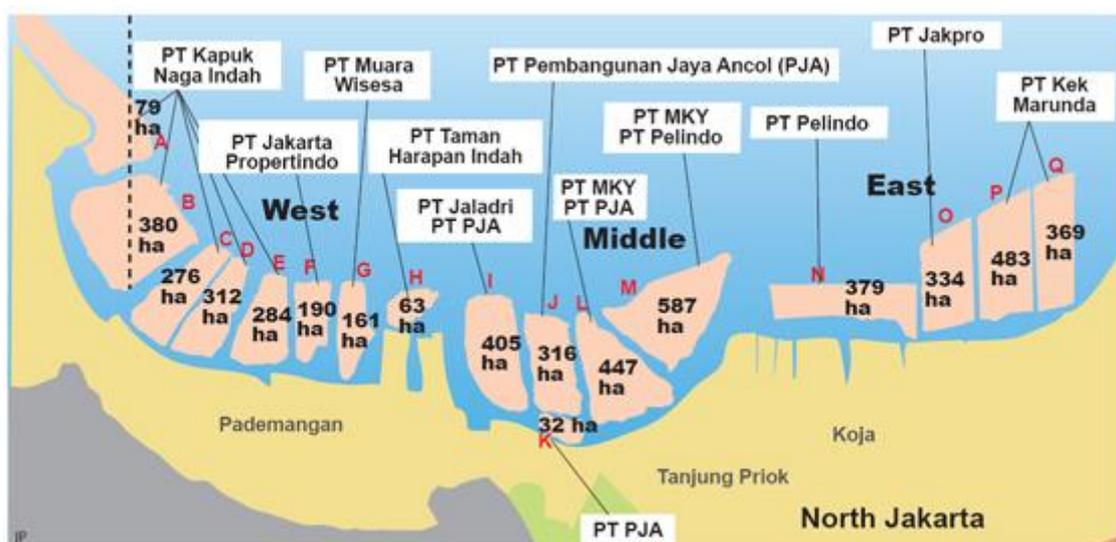


Figure 1. Jakarta Bay Reclamation Plan Map. Source: The Jakarta Post.

The G Island Reclamation in Jakarta Bay was carried out after the Jakarta Governor Decree Number 2238 of 2014 concerning Granting of Island G Reclamation Permits. The decision was signed by the Governor of Jakarta, in which the decision was stated that the developer must have started reclamation activities at the latest one year after the decision determined, and the permit to implement reclamation was valid for a period of three years.[2]

Compensation from the construction of the Jakarta Bay reclamation is that fishermen around the coastal island of Jakarta will be transferred to the reclamation apartment. However, based on the results of the study, no fisherman has been moved to the apartment. Based on the results of interviews with fishermen, residents do not need to live in apartments, but they are happy enough to live on the coast. Residents refuse to live in an apartment because they cannot afford to live in an apartment because the fishermen's livelihood is lost with the reclamation island. Islands A to Q is an area where various fish and marine habitats live, which is the catchment areas for fishermen so that they are very reliable to fulfil their daily lives.[3]

Since the implementation of G island reclamation activities, fishermen in the area around Muara Angke, especially traditional fishermen who complained about their fish catches have declined significantly. As a result, fishermen have to sail further even to Merak to get more catches. However, not a few of them prefer to stop working as fishermen and go back to their respective hometowns because they feel that they have to lose if they have to survive as fishermen in the current condition. In other regions, the area around Kapuk Muara, where there has not been any reclamation of the surrounding islands, there are still many fishermen who go to the sea.[3]

The main issue in this article is lack of conformity among environmental, social, and policy aspects in coastal area management with respect to the Jakarta Bay reclamation. Coastal area management through Jakarta Bay reclamation should comply with the principles of the environment as required in a number of laws and regulations related to the environment and spatial planning. Reclamation has not only a legal impact, but also social and environmental impacts. Reclamation that does not pay attention to the social environment can have an impact on the violation of the basic rights of citizens or people living around the coast.

Based on previous background, there are two major legal issues in this paper. The first is how the policy on Jakarta Bay reclamation can impact the social and environmental aspects? The second one is what is the ideal policy or law to manage coastal area especially in Jakarta Bay?

## **2. Method**

The method used in this research is normative juridical approach which focuses on research on library data as the secondary data supported by primary data. Secondary data have a wide scope, including legislation, reference books, legal journals, newspapers, magazines, articles from the internet until the official documents issued by the government. Interviews are also part of this research to make the data more concrete.

## **3. Result and Discussion**

### *3.1. The Impact of Reclamation Policy to the Social and Environmental Aspects*

One issue that is often discussed at national and international levels is coastal reclamation. Learning from many countries in the world, the growth of the most dominant region is the coastal region. As population and exploitation of marine resources grow, coastal areas experience an increase in burden.

This is what should be considered by Indonesia when it wants to develop coastal areas. Do not let socio-cultural and ecosystem problems be overlooked and forgotten because they are too focused on the economic growth and forget the community or vice versa. The Jakarta coastal reclamation project

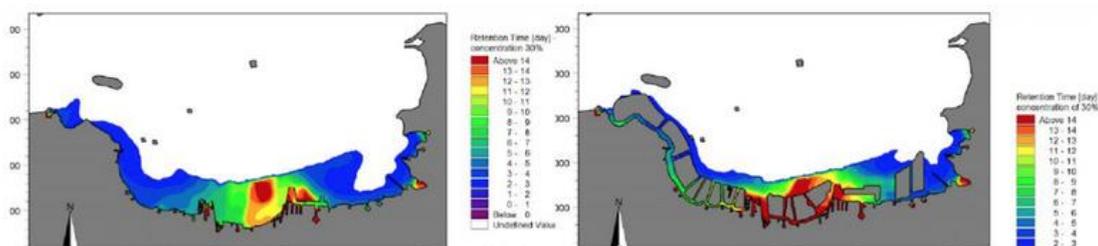
is intended to increase Jakarta's development space. Although the density of Jakarta is still below the cities in Europe, finding lands for large new developments is difficult and expensive.

The permit for 17 reclamation islands in Jakarta Bay was established in areas that did not yet have zoning. This case is against the Article 17 paragraph (1) of Law No. 1 of 2014 about Management of Coastal and Islands of Small Islands which states that the location permit given based on zoning plans for coastal areas and small islands.

In addition, the reason for this reclamation in 1995 was claimed to be aimed at preventing the erosion of Jakarta's land by sea water and building several other city facilities. Not only that, reclamation of North Jakarta beach also aims to reorganize the North Java Beach area by building a coastal area and making Jakarta a coastal city (waterfront city) because the space is impossible to expand. In reality, the problem of Jakarta Bay reclamation development is very complex, both in terms of licensing and economic, social and environmental problems.[4] This research will focus on social and environmental issues.

Reclamation has been counted as one of the development of urban areas in the DKI Jakarta Spatial Planning General Plan 1985-2005. Small-scale reclamation has begun in Penjaringan, Pademangan, Ancol, and Pluit areas in the 1980-1990s. In 1995, the Presidential Decree number 52 of 1995 was issued concerning the Pantura Reclamation then the DKI Jakarta Regional Regulation Number 8 of 1995 concerning the Management of the Jakarta Pantura Space and the Implementation of the Pantura Reclamation and the Regulation of the Governor of DKI Jakarta Number 973 of 1995 (jo. Regulation of the Governor of DKI Jakarta 220/1998) concerning Establishment of the Implementing Agency for the Jakarta Pantura Reclamation were too. Prior to the issuance of Presidential Decree number 52 of 1995, there were four developers who had signed a MoU with the Provincial Government of DKI Jakarta for the implementation of Reclamation on the North Coast of Jakarta. After the Presidential Decree was issued until 2000, the number of MoUs increased by 10, between the DKI Jakarta Provincial Government and seven companies.[5]

The existence of reclaimed islands will affect the bay's longer duration of "washing time" to dilute materials (sediment, heavy metals, and organic matters) that enter the bay from the land. The increase in the duration of "washing time" was due to the presence of 17 new islands slowing down the current speed. This current velocity is caused by an increase in sedimentation on the bay lip. The DHI [6] study (2012) stated that there was an increase in sedimentation of 50-60 cm per year around the reclamation islands. Another impact of sedimentation is siltation in the sea between reclaimed islands, or sea areas between reclaimed islands and the mainland, which is about 2 meters.[6]



**Figure 2.** Numerical Simulation Results of Changes in "Washing Time" Before and After The Construction of 17 Reclaimed Islands (DHI, 2011).

If the reclamation islands in Jakarta Bay have been built, the mangrove forests as spawning grounds and the habitat of small fish (nurseries) and mangrove forests to prevent abrasion will be replaced by piles of sand and cement. In 1992, Jakarta had 1,140.13 hectares converted into 831.63 hectares into elite settlements, golf courses, condominiums, and business centers in Pantai Indah Kapuk (PIK) residential area. At present, the remaining mangrove forests in Jakarta Bay have an area of 25.02 ha and will be slowly damaged due to changing current circulation. The sea wall will increase the pressure and cause damage to the animal sanctuary. Jakarta Green Monster records a total of 91

species of birds, namely 28 species of water birds and 63 species of forest birds living in this region. Around 17 species of which are protected bird species.

In the development of Jakarta Bay, spatial planning related to protected areas and cultivation areas does not become a reference. Law No. 32 of 2009 about Management and Protection of the Environment also does not become a reference in the implementation of reclamation, especially related to the compliance principle and the precautionary principle. With the existence of various studies and literature that show the existence of environmental damage (one of them is the bay washing time that has been explained previously), the precautionary principle must be adhered to. Furthermore, the reclamation policy has never been through an adequate process of Strategic Environmental Assessment as a mandate from Law Number 32 of 2009.

Meanwhile, environmental problems are the most highlighted because reclamation is indeed known to disrupt ecosystems in the north coast of Jakarta which are rich in coral reefs, fish, shells, and other marine biotas. Then there are problems with the missing catching areas that traditional fishermen must sail further outside the catchment areas. Whereas traditional fishermen do not have adequate equipment, and the costs needed to go to sea are more expensive.[3]

Furthermore, this project is increasingly polluting the Jakarta Bay. Fishermen in Jakarta Bay reported finding various coloured muds around the G Island development project, which caused the absence of fish for some time. This condition caused many fish deaths and the shift of fish to other places when coloured muds appeared which was thought to be the result of the construction of a reclamation project.

Besides the environmental issues described above, in the government reclamation policy it is not permissible to override the rights of fishermen as the marginalized groups who still have to fulfil their economic rights, the right to life, and the right to a comfortable environment. The main issue of the implementation of the fulfillment of the economic, social, and cultural rights of marginal communities is because these groups do not have access to the center of power that composes and decides policies.[7] Access to justice does not stop at making decisions or ratifying the rules, but also evaluates the progress of the case to the level of implementation.

Nono Sampono in his dissertation states that fisheries activities that are directly affected by reclamation activities are *payang*, *dogol*, *bubu*, and gillnet fisheries and green shellfish cultivation. The area of fishing and cultivation of green mussels will be directly affected from the reclamation activities reaching to 1,527.34 ha. The most important impacts that will be felt from reclamation are changes in fishing areas, loss of location of green mussel cultivation, disruption of fishing boat lines, and deterioration in the quality of fish resources.

Getting livelihoods is human rights. Fishermen on the north coast of Jakarta do not demand the government to provide them jobs even if it is the citizens' rights as stipulated in the 1945 Constitution. Indonesian development must aim to prosper the people, so it is absolutely necessary. However, the existing development sometimes does not side with the prosperity and welfare of the people.

As a result of the construction of the reclamation project, fishermen's residences that have been occupied for years have been forced to be abandoned because they will be used as project land. Some of them, although are not local residences, have lived in this area for more than 20 years that they can be referred to as local residents. These fishermen develop modalities, such as institutional social capital, social networks, economic capital, social interaction, and cultural capital by developing local wisdom related to maritime culture. Coastal communities are getting worse with the commencement of reclamation projects without prior socialization because their livelihoods are increasingly difficult to access due to the construction process. Initiation should be done in an inclusive manner since the beginning the community has been invited to consult and involved in determining the direction of regional development, and the community plays a role.

In this case, not all fishermen and local residents were invited to discuss the Jakarta reclamation development. According to information from fishermen, only certain communities were invited to discuss, those who agreed with the reclamation development. Project alignments towards the community can be said to be low. Whereas since a long time ago, Sunda Kelapa Port was the entrance

and exit point for fishermen. If this port is closed, it will kill the livelihoods of fishermen, and this will be considered violating the economic, social, and cultural rights as guaranteed in the 1945 Constitution.

### 3.2. *Ideal Policy or Law to Manage Coastal Area*

Vietnam manages their coastal area through reclamation, with the Mekong River flow as the focus of development without marginalizing the people who live along the river flow and without damaging the coastal ecosystem. Attention is more focused on coastal areas than inland areas. In Japan, the reclamation of Kansai Airport is very well guarded, between the balance of the conservation and the interests of local communities and economy. How is the development of a region carried out without damaging the ecosystem and marginalizing local communities? And how does that balance become the main point in development and an integrated point?

In the development of a reclamation project, the authorized officials must consider various principles contained in Article 2 of the Law No. 32 of 2009 about Management and Protection of the Environment, namely among them[8]:

1. State Responsibility Principle: the state guarantees that the utilization of natural resources will provide maximum benefits for the welfare and quality of life of the people, both for present and future generations; the state guarantees the right of citizens to a good and healthy environment; the state prevents the utilization of natural resources that cause environmental pollution and/or damage;
2. Preservation and Sustainability Principle: everyone bears the obligations and responsibilities for future generations and towards each other in one generation by making efforts to preserve the carrying capacity of the ecosystem and improve the quality of the environment;
3. Precautionary principle: uncertainty regarding the impact of a business and/or activity due to limited mastery of science and technology is not an excuse to postpone steps to minimize or avoid threats to environmental pollution and/or damage; this principle is related to the principle of sustainability; in every decision or policy, the government must prioritize this principle to avoid threats to environmental pollution and/or damage.
4. Participatory principle; every member of the community is encouraged to play an active role in the decision-making process and the implementation of environmental protection and management, both directly and indirectly; this participatory principle is important especially in the case of the Jakarta Bay reclamation as one real example where decision making does not involve affected communities or potentially affected communities.
5. Good Governance Principle; the protection and management of the environment is imbued with the principles of participation, transparency, accountability, efficiency, and justice; in this case, policy must not negate aspects of social, economic and community life. Policy must be born from a proposal and socio-economic and environmental interests.

In connection with the case, the Preservation and Sustainability Principle explains that in issuing policies, the government must pay attention to sustainability of the surrounding environment. The management of coastal areas through Jakarta Bay reclamation, on the other hand, intends to create new settlements but does not pay attention to the sustainability of the surrounding environment. This can be seen from the results of the research of the authors in reclamation projects that do not pay attention to the social environment that can have an impact on the violation of the basic rights of citizens or people living around the north coast of Jakarta. Their livelihood is reduced because reclamation activities close access to the sea which is a source of livelihood for fishermen and their families. Shellfish search communities are decreasing in number due to reclamation activities that close their access. Many of them change jobs as unskilled labours. Environmental impacts due to damage to the surrounding marine and coastal ecosystems, coral reefs, mangrove habitat, and coastal pollution will occur.[9]

In reclamation project, everyone directly or indirectly prohibits mining coral reefs that causes damage to the coral reef ecosystem, take coral reefs in conservation areas; use explosives, toxic materials, other materials that damage coral ecosystems; use equipment, methods, and other methods that damage coral ecosystems; use methods that damage mangrove ecosystems that are not in accordance with the Coastal Zone and Small Islands; carry out conversion of mangrove ecosystems in the zone or zone that cannot reflect the sustainability of the functions of the Coastal and Small Islands; cut mangroves in conservation areas for industrial activities, settlements, or other activities; use methods that damage seagrass beds; carry out sand mining in areas that require technical, ecological, social, or environmental culture, environmental pollution, loss of the surrounding community; carry out mining of oil and gas in areas that are technically, ecologically, socially, culturally environmentally, environmental pollution, losses of the surrounding community; carry out mineral mining in areas that allow ecologically, socially, culture the environment, environmental pollution, loss of the surrounding community; and carry out physical development that causes environmental damage or harms the surrounding community.[10]

Heavy metal pollution in the waters of Jakarta Bay is still in the national safe standard but has exceeded the Netherlands Standards for Water Sediment. What should be done is to do environmental restoration and not reclamation which will actually add to the damage and pollution of the sea, during the development process and also the process of the reclamation islands running.[11]

Basically, the implementation of reclamation projects was allowed, but must still refer to the applicable rules. It also should be built in areas that have zoning, as mentioned in Article 17 Paragraph (1) of Law No. 1 of 2014 about Management of Coastal Areas and Small Islands which states that the Location Permit is given based on zoning plans for coastal areas and small islands. Even though until now there are no rules that specifically regulate reclamation, it does not mean that the government overrules the existing rules. This can cause various problems from different aspects, not only economic aspects, but also social, environmental, and legal aspects.

On September 23, 2018, the new Governor of Jakarta revoked 13 island development permits on the basis that developers who obtained the permit did not fulfill their obligations. The islands whose permits were revoked were islands A, B, E, F, H, I, J, K, L, M, O, P and Q, while islands C, D, G and N were not revoked because the construction had been held. According to the Governor, spatial planning for the finished islands would be arranged and used as well as possible for the benefits of the community. The policy issued by the Governor of Jakarta did not only revoke the permit but also should erase reclamation of 17 islands from the General Plan of Spatial Planning and the Provincial Zoning Plan of the DKI Jakarta Province so that the reclamation permit cannot be issued again by the next governor.

In line with that, in the north coast Jakarta reclamation are, there must be replanning by the Integrated Coastal Management (ICM). ICM is not just a concept, but an adaptive technical order. By looking at reclamation as a unity of ecological, social, economic and policy issues, the ICM principle for harmony must be the basis of management in Jakarta Bay.

#### **4. Conclusion**

Policy must be born from socio-economic and environmental interests. The policy of the government by giving permission to the reclamation development greatly affects the social and environmental aspects of the affected area. Reclamation that does not pay attention to social aspects can have an impact on the violation of the basic rights of citizens or people living around the coast. Jakarta Bay is like a master bay, the space that supports millions of people and various activities. There are biological resources, such as mangrove ecosystems, fishing areas, and green mussel cultivation areas. There are also ports for goods and passenger flows, transportation services, gas and electricity transmission lines, and other strategic activities. Reclamation in Jakarta Bay resulted in disruption of fishing lines, as well as the disappearance of fish resources and their habitat and cultivation of green shellfish. According to the study, the fish catchment area directly affected is 1,527.34 hectares with a direct benefit value of Rp198.5 billion.

Changes in policies related to coastal management through reclamation in the Jakarta Bay require re-planning or re-planning of the North Coast Reclamation area of Jakarta so that the management plan for the Jakarta Bay reclamation area must be integrated. Integration from the scientific point of view requires that the management must be based on an interdisciplinary approach involving relevant fields of science. Integrated Coastal Management (ICM) is the right instrument to be carried out in the coastal management of the Jakarta Bay, after the DKI Jakarta regional regulation on zoning of coastal and marine management of Jakarta Bay, and the reclamation permit were revoked.

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