



UDC 332

MODEL FOR INCREASING OF NATIONAL RESILIENCE FROM THE IMPACT OF COASTAL RECLAMATION IN MAKASSAR CITY

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ABSTRACT

Coastal reclamation is an attempt to create new land in coastal areas. The main purpose of reclamation is to transform unused coastal areas into new areas more suitable for the lives of different people, such as residential areas, industrial areas, airports, waste and environmental management areas, tourist destinations and other strategic purposes. This study aims to thoroughly analyze all issues using a systematic approach to increase national resilience to the impacts of land reclamation in Makassar City. The research method uses exploratory research, a mixed method approach, first qualitative and then quantitative analysis. Qualitative analysis to analyze experts' opinions regarding the impact of land reclamation on national resilience, and a quantitative analysis to quantitatively measure the value of national resilience using system dynamics techniques. The evaluation of all ideological, political, economic, socio-cultural, and defense and security variables as interacting systems becomes clearer. Each variable is defined and evaluated in terms of its role within the system of interaction or causation. The concepts of system unity and variable totality are emphasized. The research results are expected to serve as a model for enhancing regional national resilience as a result of systematic interaction processes influenced by ideological, political, economic, socio-cultural, and defense/security dimensions.

KEY WORDS

Coastal reclamation, national resilience, system dynamics.

Coastal reclamation is one of Indonesia's potential resources which needs to be managed optimally and sustainably in order to realize Indonesia's ideals in an effort to provide maximum benefits for the prosperity of the people (Huda, 2013). Therefore, on February 20, 2017, President Joko Widodo signed Presidential Decree Number 16 of 2017 about Indonesian Maritime Policy, but must still consider the condition of National Resilience of the local community. This is in accordance to the seventh mission of national development 2005-2025, which was realizing Indonesia as an archipelagic country that is independent, advanced, strong and based on national interests (Law of The Republic of Indonesia Number 17 (2007) about National Development Vision and Mission 2005 – 2025).

Coastal reclamation is expected to increase the overall carrying capacity and environmental carrying capacity of the area. Every reclamation project carried out must refer to the policy provisions of the Government which are based on Presidential Regulation of the Republic of Indonesia Number 122 of 2012 about Reclamation in Coastal Areas and Small Islands. The provisions that have become official Government policy are binding and become the center for the provisions that following technically and operationally (Ramdhani & Ramdhani, 2017).

Coastal reclamation projects do not always succeed as expected. Several cases of coastal reclamation such as the reclamation of the North Coast of Jakarta and reclamation of



Bali's Benoa Bay has raised pros and cons had a significant impact on aspects of people's lives (Hidayat, 2019; Rosidin, 2020). Based on existing data, the Center Point of Indonesia (CPI) reclamation project in the Losari Coastal area of Makassar, South Sulawesi is still receiving criticism from various parties. This is because this project has caused serious damage to the coast and has worsened the living conditions of coastal communities. The Indonesian Forum for the Environment (Walhi) of South Sulawesi Province is one of the many parties that often criticizes the construction of this mega project. Walhi assessed that a lot of damage had been caused. According to the Director of Walhi South Sulawesi, one of the impacts resulting from the CPI reclamation project is the occurrence of severe abrasion at Galesong Coastal, Takalar Regency due to sea sand mining activities. Sand from the area is used in reclamation projects. The Losari reclamation location is stated in the Makassar City Regional Spatial Planning Document (RTRW) 2005-2015. The reclamation plan area is divided into several zones, which contain the types of designation, namely parking areas, tricycle-rickshaw roads, tricycle bases, fast lanes, slow lanes, children's play areas, places to eat, parks/boulevards, plazas, docks, motorized vehicle lanes, garden and pedestrian floors (IDN Times Sulse, 2020).

Based on initial observations in the field and based on a review of previous research, we found a phenomenon and the fact that some people are for and against the coastal reclamation project, indicating that the development of coastal reclamation areas has had both good and bad impacts on aspects of a region's national resilience. These aspects include: ideological, political, economic, socio-cultural and defense and security aspects which have a very significant influence on Coastal Reclamation activities which ultimately have an impact on the level of National Resilience. National Resilience or National Resilience Indonesia is the dynamic condition of the Indonesian nation which covers all aspects of integrated national life, contains tenacity and toughness which contains the ability to develop national strength, in facing and overcoming all challenges, threats, obstacles and disturbances both coming from outside and within. in, to guarantee the identity, integrity, survival of the nation and state as well as the struggle to achieve its national goals (Indonesian Ministry of Defense, 2015).

The Indonesian nation, in organizing and carrying out its life, cannot be separated from the influence of interactions with its environment, both in the national, regional and global scope in maintaining and increasing the value of its National Resilience (Santoso et al., 2023). Predictions in the form of perceptions that are developing among the public regarding the impact of reclamation on National Resilience in aspects of ideology, politics, economics, socio-culture and defense and security are reflections of hypotheses that must be proven true, so more in-depth research is needed to examine whether they are true. There is an impact of coastal reclamation development on national resilience in these aspects.

In this research, a model of increasing national resilience was developed from the systemic impact of Coastal Reclamation in Makassar City, with aspects including: ideology, politics, economics, socio-culture and defense and security. The development of a model for increasing national resilience from the impact of coastal reclamation in the city of Makassar appears as a holistic and dynamic system which is considered important and urgent for solving complex problems. One of the outcomes obtained is an optimal government policy scenario to increase the achievement of the ideal and expected National Resilience value.

METHODS OF RESEARCH

This research uses a Mixed Methods approach, which is a combination of qualitative and quantitative approaches. Mixed methods research is a research design that is based on philosophical assumptions in showing direction or giving instructions on how to collect data and analyze data as well as a combination of quantitative and qualitative approaches through several research phases (Justan et al., 2024). The types of research designs in mixed methods research are divided into three, such as: Sequential explanatory, Sequential exploratory, and Concurrent triangulation design (Zohrabi, 2013).

As for data on variables and policies on Coastal Reclamation, which are qualitative and



quantitative, which have preference values, they were taken from research sources consisting of 2 types; first, qualitative research informants and quantitative research respondents who are manifestations of people who directly feel the impact of reclamation. . Second, the Expert Resource Persons, who were chosen because they really understand the problems of coastal reclamation and are competent in their field to determine the value of national resilience. Validation of interview and questionnaire results also needs to be carried out in this dissertation research with the aim of obtaining valid and objective data regarding the opinions of expert sources.

The second research stage uses modeling analysis using System Dynamic Methods to prepare an analysis model for the impact of reclamation on increasing the value of National Resilience (John & Song, 2014).

Data collection took the form of questionnaires and in-depth interviews conducted during that time period. In carrying out the process of formulating Coastal Reclamation policies that affect National Resilience, the research subjects were selected purposively according to the needs and objectives of this research, which included: Expert Staff for the Provincial Investment Service and PTSP. South Sulawesi, Makassar City, Expert Staff from the Makassar City Tourism Office, Expert Staff from the Indonesian Navy Lantamal VI, Expert Staff from the Makassar City Environmental Service as well as Traditional Leaders, Journalists and the Community involved in the Coastal reclamation process, namely Coastal Reclamation in Makassar.

RESULTS AND DISCUSSION

The following is a diagram of the interaction between the main aspects of national resilience as a result of coastal reclamation:

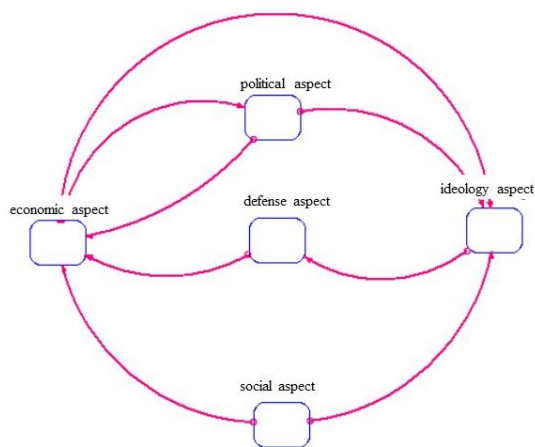


Figure 1 – Interaction Relationship between Main Aspects of Coastal Reclamation and National Resilience (Researcher Analysis Model, 2023)

The main model has several sub models, which is Sub Models for Ideological Aspects, Political Aspects, Economic Aspects, Socio-Cultural Aspects, Defense and Security Aspects. The following is an explanation of each sub model:

The ideology of a country is defined as the guiding principles or principles that form the basis of a nation (Subekti, 2010). The crime case variable is influenced by the variables of crime on land and crime at sea. The crime case variable will influence the crime index. Data related to crimes on land were obtained through the Central Statistics Agency from 2013 to 2020. Meanwhile, data on crimes at sea were obtained from the Indonesian Navy, Lantamal VI. Meanwhile, the crime index was obtained from the results of the Lantamal VI Navy expert staff questionnaire.

Politics is defined as principles, directions, or policies used to achieve goals and power (Marsetio, 2014). In the output of this model, a business investment index is obtained. The



results of the business investment index are influenced by the ease of business index and the business climate. The ease of business index is obtained through political stability in the region as well as the business regulation index. The business regulation index is influenced by the local government's carrying capacity index and the coastal environment index.

Economic activities are all government and community activities in managing production factors and distribution of goods and services for the welfare of the people. Efforts to increase economic resilience are efforts to increase the smooth production capacity of goods and services evenly throughout the region (Marlinah, 2017).

The output of the Economic Aspects sub model is the economic index variable. The economic index variable is influenced by changes in GDP per capita. The GDP per capita variable is influenced by the GRDP value of Makassar City. The GRDP results for Makassar City are the total of the GRDP of other sectors plus the GRDP of the trade, hotel and restaurant sectors. The economic index variable will influence the business climate index, where the business climate index is influenced by the demographic index, socio-cultural index, and national defense index.

Socio-cultural can be interpreted as a dynamic condition of national culture that contains tenacity to develop national strength in facing and overcoming threats, challenges, obstacles and disturbances (ATHG) (Pranadji, 2004).

The depiction in this sub model produces population variables and socio-cultural indices. The socio-cultural index is influenced by the variables of customs, community relations, religious culture, and cultural integration. Meanwhile, population variables are influenced by birth and death variables.

Defense and security defined as a dynamic condition in the defense and security life of the Indonesian nation which contains tenacity and toughness which contains the ability to develop national strength in facing and overcoming ATHG which endangers the identity, integrity and survival of the nation based on Pancasila and the 1945 Constitution (Ministry of Defense, 2018).

The sub model output in this sub chapter is the national defense index. This index is influenced by 4 variables, such as the Defense equipment readiness index, the ideological aspect of the crime index, the Defense equipment availability index and the operations index.

The following are several analyzes of managerial implications that can be prepared as concrete actions that must be carried out by government stakeholders in order to increase the value of national resilience:

- Managerial implications for improving community relations can be carried out by the government by carrying out several important things, including (1) socialization and publication, (2) an intense and sustainable deep humanist approach by paying attention to community aspirations by the central and regional governments, (3) involvement of traditional leaders and community leaders in resolving various reclamation problems;
- The socialization and publication aspect is a very significant influence on the public's understanding of aspects of Coastal Reclamation. The aspect of socialization and publication can provide a sense of social solidarity which has a very important influence on development because in solidarity there is a relationship of mutual need with a sense of mutual cooperation so that there is a sense of mutual help between one another. Reclamation that occurs in both villages and cities cannot run well without a sense of social solidarity among the affected communities, both positive and negative impacts;
- Aspects of a deep humanist approach that is intense and sustainable by paying attention to community aspirations by the central and regional governments can be carried out with the aim of reducing various conflicts that occur due to the impact of Coastal Reclamation. Reclamation project activities must be carried out carefully and based on existing legal and regulatory guidelines by involving all relevant stakeholders. This aims to minimize negative impacts physically, ecologically, socio-economically and culturally as well as optimizing the positive impacts of Coastal Reclamation activities. Apart from that, this reclamation project must also apply



sustainable development principles that pay attention to social, economic and environmental aspects with a long-term orientation;

- The aspect of involving traditional leaders and community leaders in resolving various reclamation problems can also be carried out with the hope that there will be a conducive and safe atmosphere in the implementation of the Coastal Reclamation project in Makassar. Traditional leaders and community leaders in Makassar culture are still considered elders whose policies and decisions must be obeyed and respected. Traditional leaders and community leaders in ideological and socio-cultural aspects in Makassar society have a significant influence on good social life and prosperity as local wisdom that must be maintained (Badewi, 2019).

Reclamation is an effort to create and develop new land by backfilling, land drying or drainage in order to increase the benefits of existing resources. This reclamation policy must go through a series of review processes both in terms of environmental impacts and socio-economic impacts. In the process, parties wishing to carry out reclamation projects must submit proposals, master plans and feasibility studies, as well as detailed reclamation designs that can be seen in the provisions of statutory regulations so that they are in accordance with the best desired objectives and can influence aspects of regional and central political stability.

Managerial implications on the Political Stability aspect of areas affected by reclamation can be carried out by (1) An in-depth re-analysis study of the granting of Reclamation permits submitted by developers or reclamation developers by considering socio-cultural, economic and environmental factors, (2) An in-depth re-analysis study of government regulations governing the Coastal Reclamation process, (3) Increasing the readiness of main equipment and personnel in defense and security systems in areas affected by coastal reclamation to anticipate widespread conflict and crime.

Depth Review Aspect of the granting of Reclamation permits submitted by developers or reclamation developers must be carried out involving all elements including the Government, academic institutions/universities and affected communities. The first process in the reclamation stage is of course to obtain permission from the local government and receive an academic review from the local university. Then, if permitted, the permit giver is obliged to carry out monitoring and evaluation during the reclamation implementation so that the realization is in accordance with the reclamation plan that has been prepared, so that the negative impact can be minimized. During the reclamation project implementation process, strict monitoring must be carried out, including the coordinate points for reclamation implementation as stated in the permit, the presence of land monitoring equipment, and the quality of the environment in accordance with the environmental monitoring documents. Involvement in academic studies by universities and the community must be carried out on an ongoing basis.

The aspect of depth review study of government regulations which arrange the Coastal Reclamation process must also be carried out carefully and thoroughly by considering the positive and negative impacts of the Coastal Reclamation project. An in-depth re-analysis study of the regulations governing Coastal Reclamation must involve all elements, including regional government, central government, academics/universities, NGOs, traditional leaders and the community. It is aimed that the results of the review of the regulations governing Coastal Reclamation can produce decisions that are fair and acceptable to all parties involved in the reclamation project and the affected parties.

The aspect of increasing the readiness of the main equipment and Defense and Security personnel in the defense and security system in areas affected by coastal reclamation must also be carried out seriously and continuously. Increasing the readiness of defense and security systems in areas affected by reclamation can be done by adding and modernizing the main defense and security equipment, increasing TNI/Police human resources and increasing the number of security operations in areas affected by Coastal Reclamation. This aims to provide a sense of security, comfort and peace in the lives of people in areas affected by coastal reclamation, improves the community's business climate



and increase business investment both domestically and abroad because the community's conditions are safe and peaceful and controlled.

Increasing and empowering the standard of living of coastal communities must be managed optimally. Through coastal reclamation which is carried out in accordance with applicable standards and regulations, the hope is to realize the welfare of coastal communities in a sustainable manner. Of course, this reclamation policy requires integrated planning and takes into account environmental impact analysis and socio-economic impacts on society, for this reason it is necessary to increase aspects of the Government's Carrying Capacity.

Managerial implications on aspects of government carrying capacity can be in the form of (1) making it easier for local communities to obtain business permits in reclamation areas, (2) improving social and economic facilities in communities affected by reclamation in the form of educational, health facilities and other supporting infrastructure in the form of roads, transportation, vehicles and so on, (3) adequate replacement of business locations for local communities affected by reclamation.

The Simplicity Aspect in obtaining business permits for local communities in reclamation areas can improve a good, competitive and sustainable business climate based on local wisdom existing in areas affected by reclamation. By making business easier for the surrounding community, it can increase the GRDP of the area so that it can improve the welfare of the surrounding community affected by the Coastal Reclamation project.

Aspects of improving social and economic facilities in communities affected by reclamation can be carried out with the aim of avoiding gaps in the social and economic status of affected areas.

Improving social and economic facilities in communities affected by reclamation can take the form of improving educational facilities, health facilities, public service facilities and facilities and infrastructure such as transportation roads, public transportation and other transportation facilities that support the community's economy.

The aspect of relocating or replacing adequate business and residential locations for local communities affected by reclamation needs to be carried out to reduce various conflicts that occur in coastal reclamation cases. This requires more serious handling by regional and central governments. Relocation must be carried out well based on the principles of justice, welfare and sustainable socio-economic and cultural norms in the Makassar area.

CONCLUSION

The preparation of the Policy Scenarios carried out in the Model was carried out based on sensitive variables, which have a significant effect on the National Resilience System as a result of the Coastal Reclamation case. The results of the research analysis showed that there were 3 (three) Policy Scenarios that had a significant effect on increasing the National Resilience Value of the city of Makassar, including: Scenario 1 Increasing the Public Relations variable, Scenario 2 Increasing the Political Stability variable, and Scenario 3 Increasing the Government Carrying Capacity variable.

Some of the managerial implications that can be prepared are as follows: 1) Managerial implications for improving community relations can be carried out by the government by carrying out several important things, such as (a) Socialization and publication of the positive impacts of coastal reclamation, (b) A deep humanist approach. intensive and sustainable activities carried out by central and regional government stakeholders with the obligation to pay attention to the aspirations of affected communities, (c) Involvement of traditional leaders and community leaders in resolving various coastal reclamation problems. 2) Managerial implications on aspects of Political Stability in areas affected by Reclamation can be carried out by (a) An in-depth re-analysis study of the granting of Coastal Reclamation permits submitted by developers or reclamation developers by considering socio-cultural, economic and environmental factors, (b) An in-depth re-analysis study of government regulations governing the Coastal Reclamation process involving central and regional governments, academics/universities, NGOs, traditional



leaders and the community, (c) Increasing the readiness of the main equipment and personnel in the defense system and security for the TNI/Polri in areas affected by coastal reclamation to prevent community conflicts so as to ensure a safe business climate and increase investment both domestically and abroad. 3) Managerial implications on the government's carrying capacity aspect can be done in several ways, including: (a) Ease for local communities to obtain business permits in reclamation areas in accordance with regulations, (b) Increase socio-cultural and economic facilities in communities affected by Coastal Reclamation in the form of educational facilities, health, as well as other supporting infrastructure in the form of adequate and sustainable transportation roads, and (c) Relocation or replacement of business and residential locations that are adequate and support a better life and guaranteed prosperity for local communities that impacted by reclamation.

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