Significant factors impact of reclamation on environmental, economic, and social cultural aspects in Makassar city

Dewi Yustiana *, Moh Fadli, Adi Kusumaningrum and Solimun

University of Brawijaya Malang Indonesia.

Global Journal of Engineering and Technology Advances, 2021, 07(03), 213–223

Publication history: Received on 22 May 2021; revised on 26 June 2021; accepted on 28 June 2021

Article DOI: https://doi.org/10.30574/gjeta.2021.7.3.0094

Abstract
Reclamation at the Center Point of Indonesia (CPI) in Makassar City was initiated by the South Sulawesi Provincial Government. The sustainability of the CPI reclamation project is still reaping the pros and cons until now. Reclamation policies can have both good and bad impacts on environmental, economic, and socio-cultural aspects. Contrary to the essence of the policy that should bring goodness to the lives of the people of Makassar, the CPI reclamation has attracted the attention of several NGOs that allied to demand that the reclamation be stopped because it has damaged the surrounding environment and has adversely affected coastal communities economically and materially. This study aims to obtain significant factors that can have an impact on coastal reclamation on environmental, economic, and socio-cultural aspects in the city of Makassar. This research was conducted qualitatively in a Review Study of CPI reclamation case. The method used is a literature study, in-depth interviews, and field observations as well as digging the necessary data from related sources, to analyze the impacts that arise from the CPI reclamation, in terms of environmental, economic, and socio-cultural perspectives. The results of this study are the acquisition of significant factors that influence and have a systemic impact on the coastal reclamation activities in the city of Makassar which are very useful for formulating the best policies in reclamation activities towards a prosperous and prosperous society.

Keywords: Significant Factors; Impact of Reclamation; Makassar City; Review Study

1. Introduction
Based on research conducted by the Indonesian Environmental LSM-Walhi, South Sulawesi, marine reclamation or stockpiling has occurred on the Makassar coast from 2013 to 2021. The case of Mariso coastal stockpiling, hotel construction behind Polair and Mariso coast, Buloa coastal stockpiling, and finally reclamation of the beach by many parties. The Makassar City Government also made a master plan for the reclamation plan for the strategic integrated global business area of Makassar which included the Center Point of Indonesia or CPI development plan in it. The CPI project is a project fronted by the South Sulawesi Provincial Government (South Sulawesi Provincial Government) until now it is reaping many problems. Although there is no Coastal Zone Zoning Regulation yet, the CPI reclamation project continues. The area of the spatial structure plan in the CPI proposed by the South Sulawesi Provincial Government has an area of 625.35 hectares in the core zone and 840.75 hectares in the buffer zone. Most of them are planned in reclamation areas that do not yet have legal aspects, such as the absence of a Regional Regulation on Zoning of Coastal Areas and Small Islands (Bastari, 2020).

Makassar City is a flat coastal area with a slope of 0-5 degrees to the west, flanked by two river mouths, namely the Tallo River which empties into the northern part of the city, and the Jeneberang River which empties into the south of the city. The total area of Makassar City is approximately 175.77 Km² of land and includes 11 islands in the Makassar Strait plus a water area of approximately 100 Km. The number of sub-districts in Makassar City is 14 sub-districts and has

*Corresponding author: Dewi Yustiana
University of Brawijaya Malang Indonesia.

Copyright © 2021 Author(s) retain the copyright of this article. This article is published under the terms of the Creative Commons Attribution License 4.0.
143 sub-districts. Among these sub-districts, seven sub-districts are bordering the coast, namely Tamalate, Mariso, Wajo, Ujung Tanah, Tallo, Tamalanrea, and Biringkanaya sub-districts (Aspan, 2017).

Makassar City as a world-class city has carried out the construction of supporting facilities and infrastructure, one of which is the development of the Center Point of Indonesia (CPI) area. However, less attention has been paid to the attention of residents, such as the conversion of coastal areas that have the potential for fishermen’s fishing points to be converted into built-up areas, namely the location of the Center Point Of Indonesia development area. The map of the CPI reclamation project can be seen in Figure 1:

[Map image]

Source: Makassar City Spatial Plan, 2015

Figure 1 Map of Reclamation Space Allocation in Makassar City

Judging from the physical environment of the coast, there has been abrasion due to the reclamation of the CPI project, especially in Takalar Regency. Takalar Regency is a coastal sand mining location that is used as raw material for reclamation on the coast of Makassar City. Released by Makassar Antara News (2017), post-sea sand mining using suction vessels by companies in the sea waters of Galeson Raya for CPI reclamation has caused a fairly large abrasion impact. On the other hand, there are community economic activities that are disrupted due to sand mining. One of them is destroying the fishing space of fishermen. To pass the CPI project, the South Sulawesi Provincial Government cooperates with PT Yasmin Bumi Asri to work on several projects with the APBD budget. However, the contract was transferred to PT Ciputra Surya Tbk to work on an area of 157 ha. In the contract, it is stated that a 57 ha land (Wisma Negara) will be handed over to the South Sulawesi Provincial Government. Furthermore, Ciputra will control an area of 100 ha which is designated for business areas, hotels, and luxury residential areas (Aspan, 2017).

In early 2015, the illegal reclamation of landfill activities carried out by developers was stopped by the Special Committee (Pansus) for regional spatial planning and the Makassar City Government. This suspension is only temporary in nature, waiting for the certainty of the allocation of reclamation space which will be discussed by the Special Committee for the 2015-2035 Makassar spatial planning Raperda. Civil society and academics have provided their views regarding Makassar’s coastal reclamation in a hearing meeting of the Makassar City DPRD Special Committee. The Makassar Save the Coastal Alliance expressly rejects the allocation of reclamation space, Makassar coastal commercialization for the benefit of city development which is more directed at the interests of privatizing public space for commercial, business, and economic purposes only. Initially, the Makassar Regional Spatial Planning Committee showed an attitude of rejecting reclamation without a permit by issuing several recommendations to those who carried out reclamation on the Makassar coast. This threat was issued because the entrepreneur who carried out the reclamation did not have a permit as stipulated in the legislation. However, as a political institution that is vulnerable...
to conflicts of interest, despite initially showing an attitude of rejecting reclamation, the Makassar DPRD still ratified the 2015-2020 Makassar Regional Regulation on Spatial Planning and Regional Regulation even though the reclamation activity has not yet obtained a complete permit (Yustiana, 2021).

Based on Tempo Magazine news (2017), although the reclamation location is in Makassar City, the South Sulawesi Provincial Government also has an interest in the construction of the CPI/COI mega project. After cooperating with PT. Yasmin Bumi Putra and PT Ciputra Surya Tbk, the South Sulawesi Provincial Government proposed the CPI Ranperda. The purpose of this CPI Ranperda is to complement the 2015-2035 Makassar Regional Spatial Regulation and to smooth out the CPI project which is opposed by several parties. The Makassar Coastal Rescue Alliance (ASP) from a coalition of several Civil Society Organizations (CSOs) which initially rejected the reclamation project then filed 2 (two) lawsuits. First, sued the South Sulawesi Governor’s Permit Number 644/6273/Tarkim dated November 1, 2013, regarding the Reclamation Implementation Permit in the Central Integrated Business Area of Indonesia in South Sulawesi Province as a Provincial Strategic Area. Second, LBH Makassar (as a CSO who is a member of ASP) submitted a request for a public information dispute to the Public Information Commission (KIP) of South Sulawesi regarding the request for a reclamation permit document issued by the Makassar City Government.

In the context above, this paper aims to find out the significant factors that affect the aspects of Coastal Reclamation in terms of Environmental, Economic, and Socio-Cultural aspects that affect the National Resilience value of a coastal reclamation area, using a literature review method approach, interviews with resource persons, community leaders and expert judgment.

2. Material and methods

2.1. The conception of National Development and Reclamation

2.1.1. National development

Based on the literature review, the Meaning of Development according to Rochajat, et al. (2011) is a useful change towards a social and economic system that is decided as the will of a nation. Furthermore, according to W.W Rostow (2004) development is a process that moves in a straight line, namely from an underdeveloped society to an advanced society. Development is essentially a process of transforming society from one situation to another which is closer to the desired social order; In the transformation process, two things need to be considered, namely continuity and change. The attraction between the two creates dynamics in the development of society.

2.1.2. Reclamation

Based on the literature review, in Article 1 paragraph 23 of Law no. 27 of 2007 concerning the Management of Coastal Areas and Small Islands, reclamation is an activity carried out by people to increase the benefits of land resources from an environmental and socio-economic point of view by way of backfilling, drying of land or drainage. The substance of reclamation is to turn useless areas into potential and useful for the public. The new area is usually used for residential, industrial, business, agricultural, and tourist areas. In urban planning, coastal reclamation is one of the steps for city expansion (Barr, 2013).

2.2. Environmental Principles and State Responsibilities

Environmental management currently does not reflect justice. The concept of justice in the Indonesian state is guided by Pancasila as the state philosophy that prioritizes justice for all Indonesian people. Justice in the environmental aspect must be interpreted as justice in environmental protection and management for the welfare of society and the environment which has given its function in supporting human life and other living creatures (Erlandson, 2008). Environmental justice is currently reflected injustice based on sectoral laws that prioritize sector interests. Thus, the state has a major role in providing justice for the environment and society in the concept of a unitary state with an archipelago perspective.

The concept of sustainable development agreed at the 1992 Rio de Janeiro Conference puts forward development that meets the needs of the present without compromising the ability of future generations to meet their own needs, to ensure environmental justice for future generations. The environment is a heritage for all mankind (common heritage of mankind), so its protection is the main thing for every human being for the benefit of future generations (D. Munadjat, 1984).
Based on the literature review, internationally based on Principle 21 of the Declaration of the United Nations Conference on the Human Environment, Stockholm 1972, the principle of state responsibility has been formulated. This principle was further confirmed and reaffirmed in the Second Principle of the Conference in Rio de Janeiro 1992 (Declaration of the United Nations Conference on the Human Environment and Development Rio de Janeiro 1992). Based on this principle, the state has sovereignty over the management of natural resources in its territory, but the state is obliged to protect and preserve environmental functions within its jurisdiction and sovereign rights from the danger of damage and destruction. Sovereignty and sovereign rights are the highest power for the country (Harahap, 2005).

2.3. Environmental Principles in Sustainable Development

Based on the literature review on the General Elucidation of Article 1 of Law Number 32 of 2009 concerning Environmental Protection and Management (UU PPLH) states:

"Environmental protection and management is a systematic and integrated effort carried out to preserve environmental functions and prevent pollution/or environmental damage which includes planning, utilization, control, maintenance, supervision, and law enforcement".

Based on the literature review on Law Number 32 of 2009 concerning Environmental Protection and Management, it has contained principles/principles in environmental protection and management. So it is clear and clear that the central and regional governments must pay attention to these principles in managing the environment, including the paradigm of sustainable development. Sustainable development is a standard that is not only intended for environmental protection but also development policies, meaning:

"In providing, using, increasing the capacity of natural resources and increasing economic levels, it is necessary to realize the importance of preserving environmental functions, equal degrees between generations, awareness of community rights and obligations, prevention of destructive development that is not responsible for the environment, and is obliged to participate in implementing sustainable development at every level of society".

One of the failures of countries in the world, including Indonesia in actualizing sustainable development according to Achmad Santosa (2007) is:

"The inability of policymakers to integrate the three pillars of sustainable development (ecology, economy, socio-culture) and these three pillars with good governance into the state policy decision-making process".

Law is an instrument of social control, and a means of social change or a means of development, so legal arrangements are needed to prevent and overcome the negative impacts of development. The need for comprehensive legal regulation is the reason for the term legal regulation. The legal arrangements according to Alvi Syahrin (2010) are:

"Reflecting how a nation seeks to use the law as an instrument to prevent and overcome the negative impacts of the development".

One form of legal regulation is the presence of Law no. 32 of 2009 concerning Environmental Protection and Management which contains the principles and principles of environmental management that must be adhered to by all stakeholders.

2.4. Environmental Advocacy Principles

In environmental advocacy, the courts are the last and main spearhead. Settlement of environmental disputes through the courts (litigation) is one of the efforts to resolve environmental disputes, other than those carried out outside the court (non-litigation). Generally, litigation efforts are taken when persuasive means do not find results, aka dead ends. The court was chosen as a means of testing environmental crimes committed by the state or companies, or testing the validity of state administrative decisions regarding the granting of environmental permits as reviewed in this study. In this context then, the judge becomes the spearhead in assessing whether there is an environmental crime or administrative violation from the decree/permit issued by the authorized official. For cases of environmental crimes, District Court judges are required to be able to prove whether or not environmental crimes have occurred. Likewise, judges at the state administrative court are required to be able to prove whether there is an administrative violation in the issuance of environmental permits (Ma et al, 2012).

Based on the literature review of Law Number 48 of 2009 concerning Judicial Power, it adheres to the principle of judicial independence in examining and deciding a case. However, this freedom must mean that judges are obliged to
explore, follow, and understand the legal values and sense of justice that live in society. The judge in choosing freedom is not choosing something against justice. On the other hand, freedom is chosen because there are people who suffer and struggle for justice. To separate freedom from justice is a social sin. Freedom must be filled by prioritizing obligations over rights and then used to serve justice.

According to Harahap (2005), the freedom of judges should not be interpreted as unlimited freedom by highlighting the attitude of the arrogance of power by using the freedom to justify any means, but that freedom is relative with references:

- Applying laws that originate from appropriate and correct laws and regulations in resolving cases that are being examined, under the principles and statute law must prevail (the provisions of the law must prevail);
- Interpreting the right law through justified interpretive approaches (systematic, sociological, linguistic, analogical, and interpretation) or prioritizing justice over statutory regulations, if the provisions of the law do not have the potential to protect the public interest. Such application is following the doctrine of equity must prevail (justice must prevail);
- Freedom to seek and find law (Recht’s finding), legal principles and principles through the doctrine of legal science, unwritten legal norms (customary law), jurisprudence as well as through the "realism" approach, namely seeking and finding the law contained in the law, economic, moral, religious, propriety and customary values.

Within the above limits, the range of judges’ freedom in carrying out the functions of judicial power in resolving disputes over cases being examined. Freedom to apply laws that are sourced from "applicable" laws and regulations, as long as the relevant laws and regulations are appropriate and correct to be treated in cases being examined. Likewise, freedom in interpreting the law is not justified in interpreting the law outside the provisions of the applicable laws and regulations. The freedom of interpretation that is justified must go through a disciplinary approach which is recognized as valid by theory and practice such as a systemic or sociological approach (Mochtar, 2003).

2.5. Research Methods

This research was carried out in South Sulawesi, precisely in Makassar City which is the focus area of research, especially the Center Point of Indonesia (CPI) beach reclamation area in Makassar City, South Sulawesi. This research was conducted through a qualitative approach with a Review Study, which included literature studies, in-depth interviews, and field observations (Zohrabi, 2013), meaning that the data collected came from interview scripts, field notes, personal documents, memo notes, and other official documents. The form of this research is a case study in the form of a literature review, interviews with community leaders, and expert judgment. This study is intended to examine clearly and in-depth the impact of coastal reclamation on environmental conditions around the Makassar City CPI reclamation project which is then processed and analyzed to draw conclusions based on literature reviews, interviews with community leaders, and experts judgments (Zohrabi, 2013).

3. Results and discussion

3.1. The Trend of Public Reaction to the Reclamation Project in Makassar City

Based on literature studies on several news and magazines in Makassar, after the reclamation project has been carried out until now, the impact of environmental damage can be felt. The rainy season that hit Makassar City made some areas much more quickly inundated, in this case, related to urban drainage, for which there were two direct reasons; the first is that more and more semi-permanent buildings are being built, which disrupts groundwater absorption, secondly, with reclamation, the flow of water that should reach the sea becomes blocked and causes the water to smell bad. The government’s efforts to build infrastructure but do not pay attention to environmental aspects are cause for concern. In addition, the people who are members of the mass movement rejecting the CPI reclamation demand a social transformation that is just. Reclamation of course does not rely on one particular aspect but refers to other aspects. Moreover, the CPI reclamation project later disrupted the access and livelihoods of the community, especially those who make a living in the waters. Therefore, in this section, the author describes the characteristics of the coastal communities of Makassar City, especially in the CPI reclamation area, and their reactions to the Provincial Government project (Suharyo, 2021).

Around the Losari beach, Makassar City, there is soil growing due to the sedimentation process for decades. This growing land area is approximately 10 hectares and has mangrove vegetation. This growing land is also inhabited by fishermen and shellfish seekers as many as 43 families. They have inhabited this growing ground location since the 1970s. This growing land is also a favorite location for fishermen from outside Makassar as a place to moor their boats.
One of the residents evicted from the growing land that he has lived in since 1979 is the community leader Daeng Bollo on CNN News. According to Daeng Bollo, the evictions carried out by the state apparatus seemed sudden (Usman, 2018). Information about the evictions was not shared with residents living in the growing land area. From the eviction, many furniture and household appliances were damaged. In addition, the loss of property residents due to evictions. The following is an interview study with Community Leader Daeng Bollo quoted from CNN News, in Usman’s research (2018):

"The government seems to throw us away like trash. They demolished and burned our house and did not compensate us. I have lived in the Celebes Convention Center for six years (triple-C), there has been no attention from the government for the eviction victims until now." Daeng Bollo said when he was met in one of the corners of the triple-C that he was currently inhabiting.

Furthermore, forty-three families who had been evicted finally moved to the courtyard of the Celebes Convention Center (triple-C) building which was not far from where the land grew. Until now seven heads of families still survive living in the courtyard of the triple-C building. Not only have a few people been forced to evicted from their homes, since the construction of the CPI project started, but people’s access to the Makassar sea area has also begun to be limited. Fishing boats are increasingly difficult to penetrate and enter the sea area. Shell and fish seekers are also increasingly limited in access to shallow waters in Makassar City. Some shellfish seekers have stopped looking for shellfish and are looking for other jobs. The following is an interview study with resource person Daeng Silla quoted from Antara News, in Nugroho’s research (2019):

"In the end, it is the upper-middle class who will benefit from the added value of the properties there. So, the reclamaiton reflects the interests of the elite, the interests of the middle class in political terms.

This damage to coastal ecosystems reduces the catch of traditional fishermen. As a result, their economic income decreased, especially shellfish-seeking fishermen who lost their livelihoods. Based on an interview with Daeng Tayang quoted from Celebes News, in Bastari’s research (2020):

"Many fishermen here have had their economic life disturbed because the catch is decreasing and the fishing area is getting farther away. Many fishermen change professions to become masons, laborers, vendors, selling drinks on the roadside to meet the needs of their families."

Many fishermen around Losari are no longer fishing. The reduced catch of fishermen has caused them to switch professions from scavengers to builders, pedicab drivers, some even become scavengers. Because of this condition, the coastal community rejects the CPI reclamation project in Makassar City.

3.2. Significant Factors and Impacts on Environmental Aspects

The allocation of such a large reclamation space in the regional spatial planning regulation should also consider the carrying capacity of the coastal environment. Environmental carrying capacity is the ability of the environment to support human life and other living things. The allocation of reclamation space in the 2015-2035 Regional Regulation on Spatial Planning can be said to be a neglect of the capacity of the natural environment and resources to support community activities that use space for their survival. The results of determining the carrying capacity of the environment should be used as a reference in the preparation of the Makassar City spatial plan. The carrying capacity of the environment cannot be limited based on administrative boundaries, the implementation of the spatial plan must pay attention to aspects of ecological linkages, and effectiveness and efficiency of space utilization, and in its management consider inter-regional linkages.

Based on Expert Judgment resource persons from the Makassar Environmental Service (2020), the allocation of reclamation areas on the coast of Makassar will not only cause damage to coral reefs, coastal water ecosystems such as mangroves are still widely found in the Mariso, Tallo, Biringkanaya and Tamalanrea Districts predicted to be lost. The reclamation of the energy center on the coast of Tallo damages the coastal environment and the watershed of Tallo. On the other hand, seagrass plants as part of the coastal ecosystem are also lost. Extensive reclamation eliminates natural marine biota. Reclamation projects in several places such as the reclamation of Manado Boulevard Beach, Serangan Island, Sanur Bali, and Jakarta’s coastal reclamation can be a reference for the negative impact of reclamation on the environment and society. Coral reefs are a good absorber of carbon emissions.

Based on Expert Judgment resource persons from the Makassar Maritime and Fisheries Service Expert Staff (2020), the allocation of reclamation space in the Makassar regional spatial planning regulation of approximately 4000 hectares in
its implementation changes the landscape of the Makassar coastal area. This triggers changes in ocean current patterns (oceanography) so that it affects reclamation or stockpiling areas. Changes in the pattern of ocean currents trigger abrasion of the islands in the waters of Makassar City. The coastal vulnerability of Gowa, Takalar, and Maros Regencies due to the reclamation of 4000 ha on the Makassar coast is increasing. The loss of biodiversity in Makassar waters contributes to increasing the effects of global warming (Yustiana, 2021).

In line with this, the aspects that are formed in the implementation of the reclamation project, the threats to the environment will be increasingly widespread. The implementation of reclamation requires material sources that come from the land. Reclaiming an area of 4000 hectares of course requires tons of stockpile material, be it landfill or elephant stone. Taking material in an area certainly has an ecological and social impact on the area.

Reclamation for Green Open Space does not restore the function of marine ecosystems. The reclamation project covering an area of 4000 hectares eliminates the natural habitat of mangrove plants that are still widely found in the coastal areas of Tallo, Biringkanaya, and Tamalanrea Districts. Mangroves are important for traditional fishermen and communities living in coastal areas and small islands. Not only saving their lives from the threat of coastal abrasion, but the mangrove area also contributes to their economy. Fish, shrimp, crabs, and other organisms place the mangrove area as a nursery ground, a spawning ground, and a feeding ground. Reclamation has an impact on the physical destruction of coastal waters, coastal ecosystems, and the socio-economic livelihoods of the community. Reclamation provides the potential for massive environmental impacts on small islands within its territory (Nugroho, 2020).

Based on the phenomena and conditions described above, and in the opinion of several Expert Judgment Resource Persons from the Environment Service and the Makassar City Maritime Affairs and Fisheries Service (2020), it can be concluded that several Environmental/Environmental Aspects have a significant effect as shown in Table 1 below:

### Table 1 Significant Factors on Environmental aspects that have an impact on Reclamation

| Main Aspect                      | Significant Factors                              |
|----------------------------------|--------------------------------------------------|
| Environmental                    | Regional Spatial                                 |
|                                  | Mainland Environmental Sustainability            |
|                                  | Water Environment Sustainability                 |
|                                  | Coastal Environmental Sustainability              |
|                                  | Environmental Impact Analysis on National Resilience |

In Table 1, Significant factors in environmental aspects that have an impact on coastal reclamation, this is proven in the context of disaster risk reduction, the allocation of reclamation area space in the regional spatial planning regulation increases disaster risk for Makassar City. Currently, the vulnerability of coastal areas can be demonstrated by the decreasing area of mangrove cover in coastal areas, damage to coral reefs, and levels of seawater exposed to waste. Filling the sea with soil material adds a new series of vulnerabilities to the coast. The higher the level of vulnerability of an area, the higher the area is exposed to threatening threats. In this case, the threats to coastal areas are tidal floods, inundation floods, and hurricanes. This vulnerability threatens life assets, communities, property and built infrastructure, social, cultural, and political activities, and the environment.

Makassar’s vulnerability to floods can be seen from the number of disaster events each year. There are two types of floods that threaten, namely tidal flooding and inundation floods. Some areas that have the potential and are frequently hit by tidal flooding are Tamalate, Mariso, and Tamalanrea, while areas that are often exposed to inundation are Mariso, Ujung Tanah, Wajo, Tallo, Biringkanaya, and Tamalanrea sub-districts. Disaster risk for coastal areas that are vulnerable to tidal flooding and inundation increases with sea stockpiling (reclamation). These areas are the Districts of Tamalate, Mariso, Wajo, Ujung Tanah, and Tamalanrea. Reclamation eliminates or covers water catchment areas in the Tamalate area to the Jeneberang watershed, as well as causing sea level rise. As a result of hoarding, there is a rise in sea level. The area that used to be a “pool” is gone and replaced with the land. This directly results in an increased risk of coastal areas affected by tidal flooding. On the other hand, due to sea-level rise due to reclamation, other coastal areas are prone to sinking, or at least salty seawater rises to the mainland so that many plants die. Rice fields located on the coast are easily eroded so that they cannot be used for farming.
3.3. Significant Factors and Impacts on the Economic Aspect

This alliance, which consists of various civil society organizations, expressly rejects the allocation of reclamation space, the commercialization of the Makassar coast for the sake of developing a World City, which is more directed at the interests of privatizing public space for commercial purposes, and imaging. Reclamation also has a destructive impact on coastal ecosystems and small islands around Makassar City. The resistance efforts carried out by the two NGO groups have been carried out using various methods such as demonstrations, creative campaigns, collecting signatures on petitions against reclamation, garnering support from student organizations on campuses by conducting discussions and organizing for coastal communities. In addition, the resistance carried out was reporting the Provincial Government to the State Administrative Court and reporting reclamation cases to law enforcement, including the Corruption Eradication Commission. Once again, the Center Point of Indonesia reclamation policy taken by the Provincial Government in collaboration with the private sector is still inviting polemics in various circles. Calculation of profit and loss, damage the environment or even beautify the coast so that the issue of the fate of coastal communities continues to be talked about (Yustiana, 2021).

Based on the phenomena and conditions described above, and according to the opinion of several Expert Judgment Resource Persons from the Economic Service, Environmental Service, and Makassar City Maritime Affairs and Fisheries Service (2020), it can be concluded that several significant economic aspects affect as in Table 2, as follows:

Table 2 Significant Factors on Economic aspects that have an impact on Reclamation

| Main Aspect  | Significant Factors          |
|--------------|------------------------------|
| Economic     | Community Income             |
|              | Livelihood Guarantee         |
|              | Residential Sustainability   |
|              | Community Survival           |

In Table 2, Significant Factors in the Economic aspect that have an impact on Beach Reclamation, can be proven by sea sand mining carried out by PT. Boskalis for the CPI project has resulted in 250 fishermen changing professions to become informal workers such as masons and pamulung (Walhi South Sulawesi, 2019). In addition, the income of 6,474 fishermen decreased by 80%. Then, another impact is beach abrasion. In almost all villages there was an abrasion of 10 to 20 meters long. As a result, 20 houses were heavily destroyed and 2 public cemeteries were also badly damaged (Makassar Antara News, 2018).

The reclamation project that conducts sand mining, has had a direct impact on the economy of fishermen in the Makassar Coast. The first mining location has damaged five fishing areas, namely Taka Lantang, Taka Talua, Taka Bau, Taka Taka, and Panangbu'ngia (Walhi, 2019). Where the fishing point is the place for the economic activity of fishermen, there has been an overlap with the location of the sand mine on the coast of Makassar. Currently, these five locations are no longer able to provide catches as before. Whereas previously, these five points were fishing areas that were most often visited by fishermen because of their location close to the coast and the catch was also large. The mining site is also close to the conservation area, Tanakeke Island.

3.4. Significant Factors and Impacts of Socio-Cultural Aspects

Reclamation has a social impact on the lives of the people around the beach. Until now, the number of shellfish seekers in the Mariso area and its surroundings is hard to find anymore. Apart from the damage to coastal areas, CPI's reclamation activities have also eliminated the livelihoods of shellfish seekers. The study by Walhi in South Sulawesi found around 3000 fishing boats and boats that were threatened by reclamation activities. Fishermen in the Mariso Sub-district have experienced difficulties in finding fish around Makassar waters, and boat transportation routes are also getting narrower as the implementation of the CPI reclamation project continues (Yustiana, 2021).

Based on the phenomena and conditions described above, and in the opinion of several Expert Judgment Resource Persons from the Social Service, Environmental Service, and Makassar City Maritime Affairs and Fisheries Service (2020), it can be concluded that several Social and Cultural Aspects have a significant effect as shown in Table 3 the following:
Table 3 Significant Factors on Socio-Cultural aspects that have an impact on Reclamation

| Main Aspect                | Significant Factors                        |
|----------------------------|--------------------------------------------|
| Social and Cultural        | Customs / Law                             |
|                            | Community Life                            |
|                            | Local Wisdom                              |
|                            | Local Culture                             |
|                            | Public, Government, and Private Relations  |

In Table 3, Significant Factors in the Socio-Cultural aspects that have an impact on Coastal Reclamation, this can be proven by the condition of the Makassar fishermen families who inhabit and manage the emerging land on the Losari Coast, which has now been evicted because of the reclamation project approved by the South Sulawesi Provincial Government to the developer Ciputra Group. Now, the fisherman’s family who previously lived for 40 years on the coast of Losari Beach are abandoned on the overhang of the multipurpose building belonging to the South Sulawesi Provincial Government, the Celebes Convention Center (CCC) on Jalan Metro Tanjung Bunga. They will also be evicted for the second time because the Celebes Convention Center building is about to be demolished due to the construction of a hotel owned by the Governor of South Sulawesi.

4. Conclusion

Based on the phenomena and conditions described above, and in the opinion of several Expert Judgment Resource Persons from the Environment Service, Social Service, and Makassar City Maritime Affairs and Fisheries Service (2020), it can be concluded:

a. Environmental Aspects that have a significant influence include:
   - Spatial Planning
   - Mainland Environmental Sustainability
   - Water Environment Sustainability
   - Air Environment Sustainability
   - Coastal Environmental Sustainability
   - Environmental Impact Analysis on National Resilience

b. Economic aspects that have a significant influence include:
   - Community Income
   - Livelihood Guarantee
   - Residential Sustainability
   - Community Survival

c. Social and Cultural Aspects that have a significant influence include:
   - Customs / Law
   - Community Life
   - Local Wisdom
   - Local Culture
   - Public-Government and Private Relations

Reclamation is not illegal to do, but it must comply with environmental principles/principles as required in several laws and regulations related to the environment and spatial planning. Reclamation does not only have a legal impact but also socially, economically, and environmentally. Reclamation that does not pay attention to the social and economic environment can have an impact on violating the basic rights of citizens/communities living around the coast. Their livelihoods are reduced because reclamation activities close access to the sea which is the source of livelihood for
fishermen and their families. Environmental impact due to damage to the surrounding marine and coastal ecosystems; coral reefs, mangrove habitat, and coastal pollution.

5. Future Work
This research can be continued with the making of a Dynamic System Model for the analysis of Coastal Reclamation Policy based on the significant factors that influence coastal reclamation, which is the output or result of this research. The coastal reclamation policy analysis model is very necessary for implementing the best policy to achieve a prosperous and prosperous society as a good impact of Coastal Reclamation.

Compliance with ethical standards

Acknowledgments

The authors greatly acknowledge the support from the University of Brawijaya Malang Indonesia for providing the necessary resources to carry out this research work. The authors are also grateful to the anonymous reviewers and journal editorial board for their many insightful comments, which have significantly improved this article.

Disclosure of conflict of interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

[1] Alvi S. Pembangunan Berkelanjutan (Perkembangannya, Prinsip-Prinsip dan Status Hukumnya). Medan: Fakultas Hukum USU. 1999.
[2] Aspan Z. Advokasi Litigasi Kasus Reklamasi Pantai Makassar (Perspektif Undang-Undang Lingkungan Hidup). Amanna Gappa. 2017; 25(2): 19-24.
[3] Barr BW. Understanding and managing marine protected areas through integrating ecosystem-based management within maritime cultural landscapes: Moving from theory to practice. Ocean & coastal management. 2013; 84: 184-192.
[4] Bastari A, Sukandari B, Widjayanto J, Hutabarat D. Dynamic Probability Of The Indonesian Archipelago Underwater Defence With Submarine Sonar. JOURNAL ASRO-STTL-INTERNATIONAL JOURNAL. 2020; 11(1): 21-31.
[5] Bastari A, Marjono M, Fanani Z. The Relationship Model of Maritime Culture and State Policy Towards National Resilience.
[6] Erlandson JM, Moss ML, Des Lauriers M. Life on the edge: early maritime cultures of the Pacific Coast of North America. Quaternary Science Reviews. 2008; 27(23-24): 2232-2245.
[7] D Munadjat. Hukum Lingkungan Nusantara Buku V: Sektoral Jilid 2, Cetak 2. Jakarta. 1984.
[8] Harahap MY. Kedudukan kewenangan dan acara peradilan agama. Jakarta: Sinar Grafika. 2005; 222.
[9] Kusumaatmadja M. Hukum, masyarakat dan pembinaan hukum nasional; suatu uraian tentang landasan pikiran, pola dan mekanisme pembaharuan hukum di Indonesia. Binacipta. 1976.
[10] Ma C, Zhang GY, Zhang XC, Zhou B, Mao TY. Simulation modeling for wetland utilization and protection based on system dynamic model in a coastal city, China. Procedia Environmental Sciences. 2012; 13: 202-213.
[11] Mochtar K, Agoes ER. Pengantar Hukum Internasional. Bandung: Alumni. 2003.
[12] Nugroho SH, Suharyo OS, Bandono A. The Assessment of Management Effectiveness Program on Organizational Performance Satisfaction. Assessment. 2020; 29(4): 4730-4741.
[13] Nugroho SH, Reza HK. The Role Of Leader In Employee Performance Achievement (Studies In Regional Employment Agency Surabaya). Journal Asro-Sttl-International Journal. 2020; 11(03): 135-139.
[14] Santosa MA. Peraturan Perundang-undangan dalam Lingkungan. Jakarta: Makalah Training Pengelolaan Lingkungan Hidup Bagi Eksekutif Kementerian Lingkungan Hidup. 2004
[15] Smith GM, Duke D, Jenkins DL, Goebel T, Davis LG, O’Grady P, Smith HL. The Western stemmed tradition: problems and prospects in Paleoindian archaeology in the Intermountain West. *PaleoAmerica*. 2020; 6(1): 23-42.

[16] Suharyo OS, Bastari A. Preliminary Study on River Water Change To Determine Map Datum of Musi River Palembang. *International Journal of Progressive Sciences and Technologies*. 2021; 24(1): 194-201.

[17] Suharyo OS, Bastari A. Preliminary Study on River Water Change To Determine Map Datum of Musi River Palembang. *International Journal of Progressive Sciences and Technologies*. 2021; 24(1): 194-201.

[18] Syahrin A. *Pengaturan Hukum dan Kebijakan Pembangunan Perumahan dan Permukiman Berkelanjutan*. Pustaka Bangsa Press. 2003.

[19] Usman AS. Lingkungan Hidup sebagai Subjek Hukum: Redefinisi Relasi Hak Asasi Manusia dan Hak Asasi Lingkungan Hidup dalam Perspektif Negara Hukum. *Legality: Jurnal Ilmiah Hukum*. 2018; 26(1): 1-16.

[20] Zohrabi M. Mixed-Method Research: Instruments, Validity, Reliability and Reporting Findings. *Theory & practice in language studies*. 2013; 3(2).

[21] Yustiana D, Fadli M, Kusumaningrum A, Solimun. (2021), The Conceptual Model of National Resilience Assessment Due to The Impact of Coastal Reclamation with System Dynamic Methods; *Russian Journal Agriculture and Socio-Economic Sciences RJOAS*. March 2021; 3(111): 36-47.

[22] Yustiana D, Fadli M, Kusumaningrum A, Solimun S. (2021). Analysis Study of Coastal Reclamation Impact to The National Resilience (A Literary, Philosophical, Juridical And Sociological Approach). *Sttal Postgraduate International Conference*. 2021; 5(1).