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Utilization and Management of Marine Resources in the Coastal Area Based On Regional Autonomy

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Abstract

Introduction: *In the current development planning efforts, the management of small islands faces various threats, both from the ecological aspect as well as from the social aspect.*

Purposes of the Research: *This study aims to examine and analyze strategies and policies for the utilization and management of marine resources in the Coastal Area of the Aru Islands Regency, as well as the obstacles to the utilization and management of marine resources in the Coastal Area of the Aru Islands Regency.*

Methods of the Research: *This study uses the sociolegal method with primary data and secondary data analyzed descriptively. This research is directed to be able to study and analyze the utilization and management of marine resources in the Coastal Area of the Aru Islands Regency.*

Results of the Research: *There are several strategies carried out by the local government through the Fisheries and Marine Service of the Aru Islands Regency, namely providing assistance to the community, collaboration with the Ministry of Maritime Affairs and Fisheries, as well as the Aru Islands Regency Regional Government in improving facilities and infrastructure, especially in the fisheries and marine sector, quality improvement human resources through training in the field of fisheries, as well as collaboration with the Ministry of Maritime Affairs and Fisheries to provide scholarships for fishermen's children to study and study at educational institutions under the auspices of the ministry of fisheries. Obstacles in implementing the utilization and management of the abundant marine resource potential in the Aru Islands are limited facilities and infrastructure to manage and utilize the potential of marine resources owned, weak market share, still controlled by strong investors (market monopoly) by strong investors, so that the community is not able to compete, the quality of human resources both local governments and the community in terms of managing and utilizing marine resources owned is also very low, there is still a lack of assistance from the government and the Department of Marine Affairs and Fisheries so that the management and utilization of marine resources is still not optimal, The difficulty of Vulnerability of control on the outermost small islands of the Aru Islands.*

1. INTRODUCTION

Indonesia is an archipelagic country with a total of 17,508 islands and a coastline of approximately 81,000 km. This situation causes coastal areas to become a mainstay of income for the Indonesian people. In general, coastal areas can be defined as a meeting area between land ecosystems, marine ecosystems and air ecosystems that meet each other in a

fragile balance.[1] From an ecological point of view, coastal and marine areas namely estuaries, mangrove forests, seagrass beds, coral reefs, beaches (rocky, sandy and muddy) and small islands are the locations of several unique and interrelated, dynamic and productive ecosystems.[2] In terms of management and utilization of coastal areas, it is necessary to have clear legal arrangements so that in the future it does not cause various problems and problems in the community.

The protection and preservation of marine resources is very important considering that many human needs are supported by the marine environment both in terms of economy, primary needs, and secondary needs[3]. Law is the result of several factors in society, such as customs, the physical environment, and past developments so that the law can only be understood within the framework of the life of the community where the law develops,[4] considering the issue of justice as one of the goals of the existence of the law will never be finished discussing it will even stick out in line with the development of society itself because of different demands and interests, sometimes even contradictory.[5]

Based on Article 1 Point 2 of Law Number 1 of 2014 concerning Amendments to Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands, it is stated that coastal areas are transitional areas between land and sea ecosystems that are affected by changes in land and sea. sea. Coastal resources and small islands consist of:

1) biological resources, non-biological resources;
2) artificial resources, and environmental services;

Biological resources include fish, coral reefs, seagrass beds, mangroves and other marine biota. While non-biological resources include sand, sea water, seabed minerals. Artificial resources include marine infrastructure related to marine and fisheries, environmental services in the form of natural beauty, the surface of the seabed where underwater installations are related to marine and fisheries as well as ocean wave energy found in coastal areas. Despite the abundance of fishery resources (sea products) in the Aru Islands Regency, the people in this area are still categorized as coastal communities which are relatively left behind socially and economically compared to communities in other areas.[6]

The coastal area has a strategic meaning because it is a transitional area between land and sea ecosystems, and has a very rich potential for natural resources and environmental services. Bearing in mind that Indonesia is a constitutional state, normatively these resource assets are controlled by the state to be managed in such a way in the context of realizing

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[1] Timothy Beatley, David Brower, and Anna K Schwab, *An Introduction to Coastal Zone Management* (Island Press, 2002).

[2] Aditya Irawan and Nilam Sari, "Kajian Implikasi Terbitnya UU RI. No. 27 Tahun 2007 Tentang Pengelolaan Wilayah Pesisir Dan Pulau-Pulau Kecil Terhadap Pengelolaan Hutan Mangrove," *Jurnal Analisis Kebijakan Kehutanan* 5, no. 3 (2008): 131–41.

[3] Muchtar Anshary Hamid Labetubun, La Ode Angga, and Sabri Fataruba, "Hawear As Customary Law In Protecting And Conserving Marine Resources In Southeast Maluku Regency," *Technium Social Sciences Journal* 25 (2021): 146–55, https://techniumscience.com/index.php/socialsciences/article/view/4874.

[4] Eddy Sismarwoto, "Celah-Celah Pemberdayaan Hukum Dalam Masyarakat (Analisis Teoritis Hukum Dan Masyarakat)," *Jurnal Hukum* 14, no. 3 (2004).

[5] Ibnu Artadi, "Hukum: Antara Nilai-Nilai Kepastian, Kemanfaatan Dan Keadilan," *Jurnal Ilmiah Hukum Dan Dinamika Masyarakat* 4, no. 1 (2016).

[6] Erwin Ubwarin, Nelson Gaspesz, and Sostones Y Sisinaru, "Pemberdayaan Masyarakat Melalui Produksi Ikan Asin Balobo Yang Higienis Dan Berdaya Saing," *MITRA: Jurnal Pemberdayaan Masyarakat* 3, no. 2 (2019): 141–50.

public welfare (Article 33 paragraph 3 of the 1945 Constitution of the Republic of Indonesia), as well as providing benefits to society today without compromising the interests of future generations, especially in an effort to utilize coastal resources as well as environmental conservation and management.[7]

Utilization and management of coastal areas and small islands is very important in order to maintain and protect marine ecosystem units in these areas in order to achieve balance, stability and productivity of marine resources in coastal areas and small islands. Utilization and management of coastal areas and small islands is a form of coordinating, planning, supervising and controlling coastal and small island resources carried out by the government, both central government and provincial and district/city governments, related sectors in order to improve welfare, communities in coastal areas and small islands.

However, this is in contrast to what is expected, due to the fact that local coastal communities have a low level of welfare. One of the reasons for this is that there is a misinterpretation of the law which always ignores the rights of the territory and the interests of the local population which have been taken over by the authorities at the Center. Policy products of legislation as institutional instruments include formal and non-formal, working methods, relationship mechanisms, economic laws and regulations as well as other rules and norms that are chosen or accepted or determined by the community where the life order in question takes place as part of the legal system. of the community's economic system.[8]

In the current development planning efforts, the management of small islands faces various threats, both from the ecological aspect, namely the decline in environmental quality, such as pollution, destruction of ecosystems and overfishing as well as from the social aspect, namely low accessibility and lack of public acceptance. local.[9] On the other hand, the exploitation of natural resources by destructive means such as sand excavation has resulted in the loss of several small islands or erosion. Threats to coastal ecosystems and small islands can also occur in various coastal areas in Indonesia, including in the Aru Islands Regency, Maluku Province.

In general, the geographical conditions of the Aru Islands are small islands. It is identified that there are around 832 islands in the Aru Archipelago. Only one island is included in the large island category when referring to Law Number 1 of 2014 concerning Coastal Management and Small Islands. The existence of marine ecosystems and resources in the Aru Islands has an important role to maintain the stability of the coastal areas of the Aru Islands Regency. For example, a Mangrove Forest with an area of mangrove in the Aru Islands reaching 156,524 hectares of course can withstand the rate of abrasion and prevent sea water intrusion. Moreover, the condition of the Aru archipelago in the form of small islands is very vulnerable to the threat of global climate change.

Moreover, the mainland of the Aru Islands does not have a high enough altitude, only about 30-250 meters above sea level. The availability of fresh water sources is a determinant for the sustainability of people's lives. Aru Islands Regency is one of the regions in Maluku Province which is rich in various marine resources so that it is very helpful for the

[7] Endang Sutrisno, "Implementasi Pengelolaan Sumber Daya Pesisir Berbasis Pengelolaan Wilayah Pesisir Secara Terpadu Untuk Kesejahteraan Nelayan (Studi Di Perdesaan Nelayan Cangkol Kelurahan Lemahwungkuk Kecamatan Lemahwungkuk Kota Cirebon)," *Jurnal Dinamika Hukum* 14, no. 1 (2014): 1–12.

[8] Djakaria Machmud, "Pergulatan Pemikiran Paradigma Ekonomi Kerakyatan Dalam Arus Globalisasi," *Hukum Responsif* 1, no. 1 (2016).

[9] Denny Benjamin Albrecht Karwur, "Rancangbangun Hukum Dalam Pengelolaan Pulau-Pulau Kecil Terluar Di Provinsi Sulawesi Utara," n.d.

community in meeting the needs of life and of course improving the welfare of the Aru Islands Regency community.

Through regional autonomy, it gives an authority to the regions to regulate and manage themselves related to government and the interests of the local community in accordance with regulations and laws. Therefore, in determining future development plans, local governments should consider things like this. especially the condition of the Aru Islands which are very vulnerable to being affected by climate change. Development orientation that converts land is no longer an option. But utilizing the existing natural potential and considering the rights of the people will bring more benefits to everyone, including the surrounding environment.

Based on the description above, we are interested in conducting legal research with the title "Utilization and Management of Marine Resources in the Coastal Area of Aru Islands Regency Based on Regional Autonomy".

2. METHOD

In accordance with the problems and objectives of this research, the type of research used is sociolegal research[10] with the research location in the Aru Islands Regency with the consideration that the Aru Islands Regency is one of the regions in Maluku that is rich in marine resources, and is also included in the regency area which is included in the category of coastal areas and small border islands. The data used in this study are primary data and secondary data through library research and field studies conducted by interviewing relevant sources and then analyzing descriptively analytically by identifying and grouping, then analyzed and described according to the hierarchy

3. RESULTS AND DISCUSSION

3.1 Strategy and Policy for Utilization and Management of Marine Resources in the Coastal Area of the Aru Islands Regency

Until now there is no standard definition of coastal areas. However, there is general agreement in the world that the coastal area is a meeting area between land and sea, towards the land covering both dry and submerged land which is still influenced by sea characteristics such as tides, sea breezes and salt water infiltration. Towards the sea includes parts of the sea that are still influenced by natural processes occurring on land such as sedimentation and freshwater flow, as well as those caused by human activities such as agriculture and pollution.[11]

Dahuri defines a coastal area as a transitional area between land and sea, where the landward boundary is the arbitrary distance from the highest average tide and the seaward boundary is the jurisdiction of a province or state in a country.[12] The coastal area is a transitional area between land and sea waters. Physiologically, it is defined as the area between the coastline and the land that is still influenced by tides, with a width determined by the slope of the beach and seabed, and is formed by clay deposits to loose sand and sometimes the material is gravel.

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[10] Sulistyowati Irianto, "Praktik Penelitian Hukum: Perspektif Sosiolegal," *Metode Penelitian Hukum: Konstelasi Dan Refleksi. Jakarta: Yayasan Obor Indonesia*, 2011.

[11] Afrizal Mr, "Pengembangan Masyarakat Pesisir Dalam Mengelola Sumber Daya Pesisir Dan Laut Di Kecamatan Samatiga Kabupaten Aceh Barat" (Universitas Teuku Umar Meulaboh, 2013).

[12] R Dahuri, "Ekosistem Pesisir, Makalah/Materi Kuliah" (IPB, Bogor, 1996).

Coastal area space is the territorial space between land space and ocean space which borders each other. Land space is space located above and below the land surface, including inland waters and the land side of the lowest line. Ocean space is the space located above and below sea level starting from the sea side at the lowest sea line, including the sea floor and the earth below it.

In horizontal coverage, the coastal area is delimited by two hypothetical lines. First, towards the land, this area includes areas where oceanographic processes (sea breezes, tides, the influence of sea water, etc.) can still be felt. Second, towards the sea, it covers areas where the processes occurring on land are affected (sedimentation, river currents, fresh water influence and so on). This border area brings together land land and water masses originating from relatively high land (sloping, steep or moderate elevation) with seawater masses that are relatively low, flat, and much larger in volume. Such characteristics by Ghofar, said that naturally this area is often referred to as a nutrient trap area. However, if this area is causing massive environmental destruction due to pollution, then this area is also known as a pollutant trap area.[13]

Fishery resources around the coast are a source of livelihood for fishermen. In these areas, fishermen usually live who form fishing communities to catch fish around the area.[14] Thus, it can be understood that various biological and environmental resources in coastal areas are relatively more vulnerable to damage, compared to other areas or ecosystems. Of all the existing types of ecosystems, usually coastal ecosystems are the areas that receive the heaviest environmental pressure.[15]

The waters of the Aru Islands and the surrounding sea in Maluku Province have natural resources and high biodiversity in the form of coral reefs, mangroves, littorals, and seaweed. The Aru Islands have muddy beaches, and the small island is dominated by sandy beaches. The muddy area is overgrown by mangrove vegetation with species that are often found, including Rhizophora sp. and Bruguiera sp. Meanwhile, the sandy beach is covered with coastal vegetation, such as cypress (Casuarina equisetifolia) and the Barringtonia formation) and cultivated vegetation such as coconut. Some species of mangrove vegetation include Rhizophora mucronata, Bruguiera gymnorhiza, Ceriops tagal, Aegiceras comiculatum, Aegiceras floridum, Avicennia alba, Sonneratia alba, Xylocerpus granatum, Excoecaria agallocha and so on.

Some data on coral reefs around the Southeast Aru Islands include Enu Island, Jin Island, Barakan and Panambulai Island, Koba Island, Lola Island, Waraba Island, and Kararai Island (Karaweira Island):

a) Enu Island Observations of coral reefs on this island were carried out at a depth of ± 3 meters. The results of observations obtained that the percentage of coral cover in this location was 84% and included in the very good category. Several types of coral found in this area include Acropora sp., Montipora sp., Lobophyllia sp., and Goniastrea sp. The dominant corals are corals of the Acropora sp.
b) Jin Island is an island with a sand substrate. This island has a sloping beach type with the shore a bit far out to sea. No coral reefs were found at this location, possibly coral reefs at a depth of 5 meters and below. Based on data from the

[13] Ahmad Ghofar, "Pengelolaan Sumberdaya Perikanan Secara Terpadu Dan Berkelanjutan" (Cipayung-Bogor, 2004).

[14] Imamulhadi, "'Urgensi Pembentukan Peradilan Lingkung- an Hidup,'" *Jurnal Penegakan Hukum* 4, no. 2 (2007): 127.

[15] Imamulhadi.

Environmental Sensitivity Area Map study conducted by ConocoPhillips (Amborip VI) Ltd. and PKSPL-IPB in 2010, the condition of coral reefs in the waters of Jin Island is well developed because Jin Island is directly opposite the Arafura Sea. The coral reefs at this location are of the fringing reef type. The Jin Islands consist of Jeudin, Marjinjin, Wadidin, Kultubai, Mar, Jeh, Enu, and Karang islands. They have sandy beaches along the coastline with coral reef ecosystems along sub-tidal waters.

c) Barakan and Panambulai Islands Not much different from the conditions on Jin Island, Barakan and Panambulai islands at a depth of 3-5 meters are also dominated by sand substrate and seagrass ecosystems. No coral reefs were found at a depth of 3-5 meters. Possible coral reefs are at a depth of 10 meters and above. Based on data from the Ministry of Marine Affairs and Fisheries (2006), it shows the condition of coral reefs on Penambulai Island where the percentage of hard coral and biota cover reaches 73.76%, and the cover of abiotic components reaches 26.24%. Corals in the sub-tidal waters of Penambulai Island consist of 51 species, 22 genera and 0 families. The dominant families are Faviidae (18 species) and Poritidae (5 species). Coral reef families with the lowest number of species are Helioporidae and Oculinidae (1 species).
d) Koba Island The coral reefs at this location are classified as very poor with a live coral cover of only 5%. The coral reef observation site at this location is located in front of the river mouth so that the low coral cover is thought to be due to sedimentation. High sedimentation has a negative impact on coral life. Several types of coral found in this location include Porites sp., and Montipora sp.
e) Lola Island Coral reefs on Lola Island are categorized as very damaged with the percentage of live coral is only 8%. The observation location is a beach with a basic substrate dominated by sand with a gentle slope. Several types of coral found in this location are Montipora sp., Goniastrea sp., Acanthastrea sp., and Porites sp.
f) Waraba The depth of the waters at the sampling site is around 3 meters. The live coral cover from the observations was 29% and included in the damaged category. Waraba Island has a sandy beach with a gentle slope. Several types of coral found in this area include Montipora sp., Goniastrea sp., Porites sp., Symphyllia sp., and Pocillopora sp. The dominant coral species is Pocillopora sp.
g) Kararai Island (Karaweira Island) The percentage of live coral cover in this location is dominated by soft corals at 42.2%. This indicates that the waters in this area are quite current. The beach has a sand and sloping substrate. This area also has a seagrass ecosystem. In addition there are also clams as one of the protected animals. Seagrass ecosystems are evenly distributed in the waters of the Aru Islands, especially in small islands. The total area of seagrass ecosystems around the Aru Islands identified is 19,384.76 ha. Seagrass in the Aru Islands consists of the families Potamogetonaceae and Hydrocharitaceae, genus Cymodocea (C ymodocea rotundata, C. serrulata), Halodule, Syringodium isoeifolium, Thalasodendron ciliatum, Enhalus acoroides, Halophila ovalis, H. Ovata, H. Spinulosa and Thalasaia hemprichii.

The density of seagrass on Jeh Island was 410.05 ind/m2 and 71.25%, respectively. Meanwhile, the area of the mangrove ecosystem around the Aru Islands based on the results of satellite imagery analysis in 2011 by PKSPL IPB, shows a fairly large area, which is 111,177 ha spread over almost all sub-districts in the Aru Islands. The Arafura Sea is home to green turtles in Indonesia, particularly the Aru Islands Regency, and is a basic area for foraging

and migrating for hawksbill turtles, leatherback turtles and possibly flat turtles. Several studies confirm that four species of sea turtles (Chelonia mydas, Eretmochelys imbricata, Lepidochelys olivacea, Caretta caretta) have habitats in the Aru Islands. The image below shows the importance of the Aru Islands as a turtle area/habitat in Indonesia.

Based on data from the 2007 Aru Islands Regency Spatial Plan Analysis Data Book, utilization and sightings seen by coastal communities, it turns out that only two types of sea turtles inhabit the coastal and marine waters of the small islands of Aru Islands Regency, namely the green turtle (Chelonia mydas).) and the hawksbill turtle (Eretmochelys imbricata). Green turtles are more commonly found or inhabit coastal waters, seas and small islands in the Aru Islands Regency than hawksbill turtles.

Based on the geographical distribution approach and living habitats, it can be said that these types of green and hawksbill turtles are inhabitants of coastal waters, seas and small islands in the Aru Islands Regency. Field facts show that green turtle species spread and occupy coastal waters where seagrass beds and dry beaches are islands with sand and shrub habitat from several small islands such as Enu Island and Karang Island as nesting places. On the other hand, hawksbill turtles with low populations are found in the coastal waters of the Aru Islands Regency where there are coral reef ecosystems.

The district of the Aru Islands with the potential for abundant marine resources, but not followed by an increase in the welfare of people's lives. People in the Aru Islands Regency are still below the poverty line, for example in Maluku Province, the Aru Islands Regency is in the second lowest area with a high poverty rate. In the community of the Aru Islands Regency in the context of managing and utilizing the potential of abundant marine resources, there are several strategies carried out by the local government through the Fisheries and Marine Service of the Aru Islands Regency, namely:

a) Provide assistance to the community in order to increase understanding, knowledge of the community both regarding the potential of marine resources owned and how to use and manage them, also related to increasing human resources themselves.
b) Through collaboration with the Ministry of Maritime Affairs and Fisheries, as well as the Regional Government of the Aru Islands Regency in improving facilities and infrastructure, especially in the fisheries and marine sector. Because so far, people in fishing and so on are still using traditional fishing gear and motor boats, so they will be far behind with other parties who use modern fishing gear and motor boats.
c) Improving the quality of human resources through training in the field of fisheries Cooperation with the ministry of maritime affairs and fisheries to provide scholarships for fishermen's children to study and study at educational institutions under the auspices of the ministry of fisheries.

3.2 Barriers to the Utilization and Management of Marine Resources in the Coastal Area of Aru Islands Regency

Coastal and marine areas have various kinds of biodiversity that have their respective roles and functions in maintaining the balance of the ecosystem. Biodiversity is a potential resource that is able to support the lives of coastal communities in improving the quality of life. Coastal and marine resources are broadly divided into three parts, namely: biological, non-biological (mineral) natural resources, and energy. The three types of resources are natural resources that have the potential to be developed and managed as a mainstay

development sector in the future. To achieve effective and sustainable management, it is necessary to identify and direct the utilization of the potential of these resources.

A coastal area, in which there are one or more environmental systems (ecosystems) and coastal resources. Coastal ecosystems can be natural or man-made. Natural ecosystems found in coastal areas include coral reefs, mangrove forests, sea grass, sandy beaches, pes-caprea formations, baringtonia formations, estuaries, lagoons and deltas. Artificial ecosystems include; tidal rice ponds, tourism areas, industrial areas, agro-industrial areas and residential areas. Coastal resources are one of the natural resources that are widely used by the community, but the utilization of these resources has not paid attention to its sustainability until now, as a result there has been a decline in the function, quality and biodiversity that exists.

According to Dahuri, stated that the potential of coastal resources is generally divided into four groups, among others, as follows:[16]

a) *renewable resources*.
b) *non-renewable resources*.
c) marine energy.
d) *environmental services*.

Resources that can be recovered consist of various fishery resources (plankton, benthos, fish, molluscs, crustaceans, marine mammals), seaweed (seaweed), seagrass, mangrove forests and coral reefs, including coastal aquaculture and marine aquaculture. marine culture). Non-recoverable resources include minerals, mining/excavation materials, oil and gas, iron ore, sand, tin, and bauxite. Energy resources consist of OTEC (Ocean Thermal Energy Conservation), tides, waves and so on, while marine environmental services include tourism and sea transportation. Every coastal area management requires careful planning in allocating natural resources, and at the planning stage good coordination and cooperation is needed from related sectors, both government and local communities.[17] Because if not through careful planning, it will cause a shift that can trigger a conflict of interest between the government, the community and outside parties.[18] In addition to such good planning, it should also be based on clear legal arrangements, and be able to accommodate various interests in the management and utilization of the coastal area.[19]

According to Abelshausen, stated that sustainable coastal area management has shifted from a top-down approach to a bottom-up approach. In traditional societies a combination of both approaches is considered more desirable because it represents a participatory approach that allows for direct knowledge sharing.[20] Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia No. 14/MEN/2009 concerning Maritime Partners stipulates that the management of coastal areas and small islands is a process of planning, utilization, monitoring and control of coastal resources and

[16] Rokhimin Dahuri, "Pengelolaan Ruang Wilayah Pesisir Dan Lautan Seiring Dengan Pelaksanaan Otonomi Daerah," *Mimbar: Jurnal Sosial Dan Pembangunan* 17, no. 2 (2001): 139–71.

[17] Supriharyono, *Pengelolaan Ekosistem Terumbu Karang* (Djambatan, 2000).

[18] Lies Ariany, "Telaah Dalam Bidang Kehutanan Di Indonesia Ditinjau Dari Hukum Administrasi Negara," *Jurnal Ilmu Hukum Syiar Madani* 10, no. 1 (2008).

[19] Jason M Patlis, "The Role of Law and Legal Institutions in Determining the Sustainability of Integrated Coastal Management Projects in Indonesia," *Ocean & Coastal Management* 48, no. 3–6 (2005): 450–67.

[20] Yang Lei et al., "Information Technology and Service Diversification: A Cross-Level Study in Different Innovation Environments," *Information & Management* 58, no. 6 (2021): 103432.

small islands with several sectors. The sectors in question are the central government, regional governments, land ecosystems, marine ecosystems, as well as science and management with the aim of improving people's welfare.

Bengen said that coastal areas are the foundation of human hope in meeting their future needs, therefore development carried out in coastal and marine areas should be a process of change to improve people's living standards.[21] In planning the development of a coastal ecological system that has implications for the use of natural resources, it is necessary to pay attention to the applicable ecological rules to reduce negative consequences that are detrimental to the sustainability of development as a whole.

In the management of coastal resources, apart from the government, the community is also empowered to have a role in planning, implementing and evaluating.[22] The objectives of the empowerment include:

a) fulfillment of basic human needs;
b) availability of local production facilities and infrastructure;
c) increasing the role of community institutions to achieve goals;
d) the creation of productive economic activities;
e) the creation of transportation and communication relationships;
f) the realization of Indonesia's economic structure based on economic activities in coastal and marine areas as a form of utilization of marine resources.

In general, there are several problems faced in the management of archipelagic areas. First, most of the islands are underdeveloped areas and many are uninhabited. Second, the limitations of government administration services, economic and socio-cultural empowerment, communication and transportation facilities and infrastructure, including sea transportation that connects small islands and large islands. Third, the occurrence of illegal activities and smuggling, fishery activities that are not environmentally friendly and have the potential to threaten security stability.

On the other hand, the potential for small archipelago areas is very high both in terms of economic, social, political and Indonesian security and defense, especially small islands located in border areas. Natural resources such as coral reefs, seagrass beds, mangroves, fisheries, and marine tourism in the archipelago can be development assets for regional development. The problem so far is the lack of efforts to promote development potential in small islands. Fourth, limited equipment, frequency and security personnel at sea. Fifth, inadequate electricity supply. Sixth, arising from the large potential of existing resources in the sea, is the issue of the authority to manage marine areas which is a serious concern of various stakeholders. They assume that with the implementation of decentralization, the authority to manage marine resources within the scope of their territory is absolutely in the hands of the region without paying attention to the interests of the surrounding area and moreover the interests of the central government.

The problem of differences in interests that have been mentioned above often causes frictions between several regions and between regional governments and the central government. With the regulation of maritime boundaries as far as 12 miles for the sea area

[21] Dietriech Geoffrey Bengen, "Ekosistem Dan Sumberdaya Pesisir Dan Laut Serta Pengelolaan Secara Terpadu Dan Berkelanjutan," 2001.

[22] Victor P H Nikijuluw, "Aspek Sosial Ekonomi Masyarakat Pesisir Dan Strategi Pemberdayaan Mereka Dalam Konteks Pengelolaan Sumberdaya Pesisir Secara Terpadu," *IPB: Pusat Kajian Sumberdaya Pesisir Dan Lautan*, 2001, 14–27.

which is the authority of the province and 4 miles for the sea area which is the authority of the district/city government, some regions assume that the utilization of marine resources in their territory should not be carried out by other regions, even by the central government.

As a result of this problem there is a conflict of interest between the regions and between the regional government and the central government which gives the impression that there is a "plot" of the sea area and restrictions on the exploration and exploitation of resources in the sea area. In fact, it is not uncommon for conflicts to arise regarding the utilization of marine resources by several existing stakeholders. A concrete example is a clash in terms of the utilization of marine resources in terms of fishing. The intersection of resource management in the sea area does not only occur between autonomous regions, but also occurs between autonomous regions and the central government, especially with regard to strategic resource management.

Maritime governance in the era of President Joko Widodo has made several achievements. These include handling IUUF, increasing fish production, and establishing marine boundaries based on zoning.[23] However, there are several aspects that need to be criticized, especially regarding the implementation of Law 23 of 2014 concerning Regional Government which triggers maritime management conflicts in the regions. Some of them are the management of maritime resources and the vertical relationship between the central government and local governments and the horizontal relationship between local governments.

It should be understood that the nature of the management of an environmental area should embody the active participation and involvement of the community around the area so that several objectives can be achieved, the main objective of which is to increase the level of community welfare.[24] Several facts show that there is friction between levels of government in terms of marine resource management. For example, in terms of port management, local governments feel that ports in provincial areas should be managed by local governments, not by the central government.

Based on the results of research at the Department of Maritime Affairs and Fisheries of the Aru Islands Regency, there are various problems that arise as obstacles in the implementation of the utilization and management of the potential of marine resources that are so abundant in the Aru Islands, namely:

a) Limited facilities and infrastructure to manage and utilize the potential of marine resources owned.
b) Weak market share, still controlled by strong investors (market monopoly) by strong investors, so that people are unable to compete.
c) The quality of human resources, both local government and community in terms of managing and utilizing marine resources owned is also very low
d) There is still a lack of assistance from the government and the Department of Marine Affairs and Fisheries so that the management and utilization of marine resources is still not optimal.

[23] Abul Haris Suryo Negoro et al., "Maritime Policies in the Era of Regional Autonomy: Identifying the Challenges," in *IOP Conference Series: Earth and Environmental Science*, vol. 485 (IOP Publishing, 2020), 12030.

[24] Sunarno, "'Penetapan Kawasan Gunung Merapi Sebagai Taman Nasional Dan Hak-Hak Masyarakat Lokal,'" *Jurnal Media Hukum* 14, no. 3 (2007): 6.

e) Vulnerable control in the outermost small islands in the Aru Archipelago which is also a barrier factor for the government and the community in reaching certain areas to sell or conduct sales transactions for marine products obtained.

4. CONCLUSION

There are several strategies carried out by the local government through the Fisheries and Marine Service of the Aru Islands Regency, namely providing assistance to the community, collaboration with the Ministry of Maritime Affairs and Fisheries, as well as the Aru Islands Regency Regional Government in improving facilities and infrastructure, especially in the fisheries and marine sector, quality improvement human resources through training in the field of fisheries, as well as collaboration with the Ministry of Maritime Affairs and Fisheries to provide scholarships for fishermen's children to study and study at educational institutions under the auspices of the ministry of fisheries. Obstacles in implementing the utilization and management of the abundant marine resource potential in the Aru Islands are limited facilities and infrastructure to manage and utilize the potential of marine resources owned, weak market share, still controlled by strong investors (market monopoly) by strong investors, so that the community is not able to compete, the quality of human resources both local governments and the community in terms of managing and utilizing marine resources owned is also very low, there is still a lack of assistance from the government and the Department of Marine Affairs and Fisheries so that the management and utilization of marine resources is still not optimal, The difficulty of Vulnerability of control on the outermost small islands of the Aru Islands. Conclusion contains a description that should answer the objectives of research. Provide a clear and concise conclusion. Do not repeat the Abstract or simply describe the results of the research. Give a clear explanation regarding the possible application and/or suggestions related to the research findings.

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