

## Research Article

# Integration of Sustainable Governance in Improving the Economy of Coastal Communities Based on Blue Economy in Southwest Papua Province

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## Abstract.

To reduce the overexploitation of natural resources and the environment, it is necessary to pay attention to improving the economy of coastal communities based on the blue economy. This research aims to analyze the principle of integration in sustainable governance in improving the economy of coastal communities based on the blue economy in Southwest Papua Province.

This research used a qualitative approach. Data collection methods included observation, in-depth interviews, and documentation. Data sources consisted of primary and secondary data, while data analysis was conducted using interactive methods. The informants in this research are stakeholders who are directly involved in improving the economy of coastal communities in Southwest Papua Province.

The results show that integration in sustainable governance is realized through collaboration between local governments, traditional institutions, academics, and indigenous peoples in coastal area management. The transdisciplinary approach has begun to be applied by integrating knowledge, local cultural values, and blue economy-based policies. Blue economy-based programs such as sustainable fisheries, ecotourism, and mariculture have been implemented. However, integration still faces problems such as the lack of integrated data, weak coordination between sectors, and limited capacity of indigenous peoples. Nevertheless, the support of the special autonomy policy and the commitment of the local government is one of the key factors in improving the economy of coastal communities based on the blue economy.

**Keywords:** integration, economic improvement, coastal communities

## 1. Introduction

Indonesia is one of the countries whose territory is mostly water; Indonesia is then referred to as a maritime country. As an archipelagic country, Indonesia has thousands of islands with vast seas, so it is possible to have diverse natural tourism potential. This condition brings its advantages to Indonesia. Coastal and marine areas are almost always special attractions and are used as marine tourism areas. In addition, many natural resources are produced from the sea. With its vast sea, Indonesia is a major contributor to economic progress in Indonesia and has the potential to contribute even

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more to the economy in Indonesia. Indonesia is a very rich country, especially for people who live in coastal areas [1]. Coastal areas in general can be explained in Law No. 1 of 2014 concerning the Management of Coastal Areas and Small Islands, namely as an area that is a transition between land and sea ecosystems, where changes that occur in the area are directly influenced by land and sea [2]. Coastal areas are often considered areas that have a myriad of benefits in terms of natural resources due to the transition between land and sea, which ultimately creates areas with diverse ecosystems that can increase the economic value and productivity of the people who inhabit the area. If we look at the history, the coastal areas of Indonesia have played an active role in forming modern indigenous Indonesian civilization. The use of coastal areas as strategic areas can be traced as the main gateway for explorers to arrive by utilizing the sea as a natural infrastructure. Coastal areas and small islands have high potential for natural resources and environmental services and can be used as basic capital for implementing Indonesian development in the future. This area provides productive natural resources such as coral reefs, seagrass beds, mangrove forests, fisheries, and conservation areas [3]. Small islands also provide great environmental services because of their natural beauty, which can drive the marine tourism industry.

Both renewable and non-renewable natural resources are abundant in coastal areas. In addition, this area also has ports, industry, transportation, settlements, and tourism, as well as various other economic activities. However, the balance between environmental carrying capacity and development levels, as well as the balance of development between regions, must be considered when developing coastal areas. For the region to develop and advance by itself by utilizing local resources, regional development must be an effort to expand the local and regional economy. The large potential of the marine sector should be able to contribute to improving the welfare of the community, especially the fishing community, and can increase equitable development. Development and utilization in the marine and fisheries resource management sector have not been able to improve the welfare of coastal communities. Coastal communities generally have heads of families who work as fishermen at sea, while their wives work as housewives. Coastal communities have relatively low economic conditions. This situation places coastal communities currently still poor both culturally and structurally, this situation increasingly makes them vulnerable to poverty [4]. This certainly needs attention, considering that there is a close relationship between poverty and coastal area management.

Indonesia's abundant marine resource potential can be utilized as a driver of the community's economy and improve the welfare of coastal communities. One of the marine potentials that contributes a large role to Indonesia's marine economic activities is the potential of fishery resources, both aquaculture and capture fisheries. Fisheries as an economic activity have a very important role in the progress of the country and the welfare of the community. As an economic activity, fisheries should continue to be advanced and developed, and become a priority to be able to produce positive economic growth. This requires innovation and creativity as well as optimization of the role of stakeholders, in this case, the government, so that fisheries activities continue to exist and can contribute to the welfare of the country. In addition, fisheries that are currently heading towards the industrialization process must be able to maintain business sustainability while still paying attention to the balance and sustainability of the waters. Fisheries resources are not the only sector that utilizes marine potential as an economic driver. But many sectors can be a livelihood for coastal communities. These sectors include fisheries, coastal tourism, marine tourism, transportation, and so on, which can increase the income and welfare of coastal communities. However, extinction will occur due to improper management of marine resource utilization. In addition to causing resource scarcity and environmental damage, improper management will also have a major impact on marine economic activities. Therefore, a concept is needed that regulates the sustainable use of marine resources. Seeing these problems, the Indonesian government has made several efforts, one of which is implementing the concept of a blue economy to increase marine economic development. Proper management and utilization of natural resources can create development that is right on target and sustainable. This development must prioritize the sea as its main resource. The potential of Indonesia's marine resources is greater when compared to land.

Blue economy is a sustainable ocean economy that generates economic and social benefits by ensuring the long-term environmental sustainability of the source of these benefits [5]. The concept of blue economy refers to the sustainable use of marine resources for economic growth and improved livelihoods. This concept emphasizes the interconnection of cross-sectoral activities, considering their impacts on marine resources to manage cross-sectoral trade-offs, multi-stakeholder consultation, and data enhancement, natural capital accounting to determine and communicate the value of natural resources. The application of the blue economy concept in Indonesia is based on the fact that Indonesia has a geographical condition with an Archipelagic State and has the second-longest coastline in the world. Therefore, in order for marine resources

to continue to be used responsibly, it is important to consider ways to protect their potential value. Water and marine-based sectors such as tourism, transportation, and fisheries are all closely related to the blue economy. Conservation of marine biota that provides food and livelihoods for coastal communities. So that the management of these resources is the main focus of the economy. The development of the blue economy in Indonesia plays a role in supporting Indonesia in achieving the Sustainable Development Goals (SDGs). The inclusion of a special goal for oceans (SDG 14) emphasizes the importance of oceans in global policies. For island nations, oceans underpin their entire sustainable development agenda, with linkages between SDG 14 and other goals addressing poverty (SDG 1), food security (SDG 2), quality education (SDG 4), affordable and clean energy (SDG 7), decent work and sustainable economic growth (SDG 8), industry, innovation and infrastructure (SDG 9), reducing inequality (SDG 10), responsible consumption and production (SDG 12), and adaptation to the impacts of climate change (SDG 13). The Blue Economy Roadmap (2023) and Indonesia Blue Economy Index (2024) data released by Bappenas explain that the Blue Economy indicators focus on three pillars, namely the environmental, economic, and social pillars. The environmental pillar includes the quality of marine resources and conservation, and renewable energy. The economic pillar includes capture fisheries and aquaculture, marine-based industry, trade, transportation and logistics, and marine-based tourism. The social pillar includes welfare, health and R&D, and Education.

The province of Southwest Papua is one of the provinces in Indonesia that is famous for having the potential for marine natural resources and a very diverse coastal community culture that can be used as a potential to increase the economy of coastal communities. The topography of the province of Southwest Papua is diverse, from coastal areas to mountains. Mangroves are found in abundance on the southern coast of Sorong Regency and South Sorong. The coast of South Sorong is known as one of the largest mangrove and sago forest areas on the island of Papua, smaller mangrove areas can also be found in Sorong City and Raja Ampat. The western part of the province of Southwest Papua is the Raja Ampat Islands, which consist of various islands. Several islands in Raja Ampat are unique because they are karst landforms in the form of hills with steep walls. The ocean around Raja Ampat is one of the areas with the largest coral reef biodiversity in the world. The Ayau Islands, one part of Raja Ampat, also have islands originating from coral reefs that appear on the surface of the water and form a ring formation with the center called a lagoon. Not only in the Raja Ampat Islands, the Province of Southwest Papua, which also has a coastal area

designated as a conservation area, namely the Jeen Womon Coastal Park located in Tambrauw Regency, has famous fauna, namely large leatherback turtles. Seeing the potential of the waters and seas of the Province of Southwest Papua, efforts need to be made to optimize the utilization of marine resource potential and coastal land potential in improving the economy of coastal communities in the Province of Southwest Papua. The Government of the Province of Southwest Papua, to improve the economy of the community, has carried out a skills training program to empower the community's economy. The training provided includes product marketing training. Then the training for developing Human Resources for creative economy actors, namely training to obtain room scheme certification for homestay managers, and training for developing human resources for creative economy actors, Craft craftsmen. In efforts to improve the economy of coastal communities, obstacles are still found, namely the lack of public awareness and understanding, conflicts of interest between various groups, economic dependence on natural resources, and inconsistent legal and policy uncertainty. Therefore, the application of sustainable governance principles is very important to ensure that coastal resource management can be carried out effectively and sustainably by considering the blue economy aspect.

Sustainable governance refers to a management approach that considers economic, social, and environmental aspects in a balanced manner [6]. In the context of coastal areas, sustainable governance can help improve the welfare of local communities, protect ecosystems, and encourage inclusive economic growth, which is in line with the blue economy orientation. The application of these principles can create synergy between stakeholders, including government, communities, and the private sector, in managing coastal resources sustainably. Sustainability is a desired goal for coastal areas that is currently not embraced by all stakeholders. Davos (1998) stated that this may be a function of socially constructed coastal area management policies. Effective implementation of these policies depends on the cooperation of all stakeholders and must be achieved through a process of negotiation among stakeholders [7]. Considering Daly (1990), it seems that this strategy must be achieved on a sustainable scale, that is, the human scale must be limited, if not optimally, then within the carrying capacity of the ecosystem [8].

In the context of Sustainable governance in improving the economy of coastal communities in the Province of West Papua faces various challenges, namely environmental damage caused by excessive utilization without conservation efforts, and climate

change. Based on this explanation, this study aims to analyze how integration in sustainable governance can be applied in improving the economy of coastal communities based on the blue economy in the Province of West Papua.

## 2. Materials and Methods

This study uses a qualitative approach. The qualitative research method in this study aims to explain or describe problems systematically, factually, and accurately [9]. The location of the study is in the Province of West Papua. Primary data was obtained directly from sources and informants, Primary data can be in the form of individual or group opinions of subjects, observations, events, or activities. Secondary data was obtained in finished form or the form of published data. Primary data in this study are the results of direct interviews with informants and observations regarding integration in sustainable governance in improving the economy of coastal communities based on the blue economy in the Province of West Papua, while secondary data are data related to improving the economy of coastal communities from books, journals and previous research. In this study, the main data collection techniques were in-depth interviews and observations. In-depth interviews were conducted in a semi-structured manner with various informants consisting of officials and staff of the Department of Agriculture, Food, Fisheries and Marine Affairs, officials and staff of the Department of Youth, Sports, Tourism and Creative Economy, and related stakeholders. Documentation is studying documents or records of past events. The data analysis technique in this study uses interactive model data analysis techniques [10].

## 3. Results and Discussion

The purpose of this study was to analyze and describe the improvement of the coastal community economy in the Province of West Papua, using the theory of sustainable governance. This study focuses on integration in sustainable governance, which is realized through collaboration between local governments, traditional institutions, academics, and indigenous peoples in managing coastal areas. To improve the coastal community economy, the West Papua Provincial Government has implemented it through funding programs, pier construction, and transmigration. The funding referred to in this case is the provision of grants to business groups and biodiversity conservation initiatives in supporting local groups, including indigenous fishermen, village-owned enterprises,

youth groups, women, and environmental monitoring communities. The purpose of providing this grant is to assist the community in managing the marine products obtained and also to assist in coastal area conservation. Furthermore, the construction of a new pier aims to support the mobility of residents and the smooth distribution of logistics for the community in Wardik Village, Mayer District, South Sorong Regency. The next program is local transmigration, which aims to assist coastal communities that have houses above sea level. This local transmigration is expected to improve the quality of life of the community and reduce the risks that often occur in coastal areas. In addition to the three programs, the West Papua Provincial Government has also implemented advanced fishing village programs, integrated seaweed cultivation, assistance for fisheries production facilities, and entrepreneurship training. The focus of this program is on increasing the capacity of coastal communities in managing marine resources sustainably.

The livelihoods of coastal communities in West Papua Province are generally in the fisheries sub-sector. This fisheries sub-sector business includes two types of businesses, namely fish farming and fishing businesses. The following is data on the number of fishing business households by district/city and the type of fishing activities undertaken:

TABLE 1: Number of Fishing Business Households by Regency/City and Type of Fishing Activities Carried Out in Southwest Papua Province in 2023.

Region (District/City)	Fishing	Fishing in the Sea	Fishing in Inland Waters
Raja Ampat	3,897	3,897	0
Push	1,267	1,071	196
South Sorong	1,461	1,154	327
Maybrat	266	0	266
Tambrau	236	227	9
Sorong City	1,634	1,603	35
<b>Total</b>	<b>8,761</b>	<b>7,952</b>	<b>833</b>

Source: Central Statistics Agency of Southwest Papua Province, 2023

Based on the Table 1 above, it shows that Raja Ampat Regency has the largest number of individual agricultural businesses (UTP) in the fisheries sector in Southwest Papua Province. The number of UTPs that is greater than the number of RTUPs indicates that in 1 household, there can be more than 1 individual agricultural business unit in the fisheries sector. Meanwhile, the Maybrat area, which does not directly border the sea,

the 266 total fishing business households, all of them only work on fishing in inland waters.

The West Papua Provincial Government, in supporting the sustainability of the coastal economy, is realizing through community-based water area management through conservation as a form of wisdom. To improve the economy of coastal communities based on the blue economy, the West Papua Provincial Government applies the principle of sustainability through:

- a) An integrated management system that is interconnected by taking into account various ecosystem components, such as coastal areas, open seas, and land.
- b) Sustainable fisheries management uses fishing methods that do not damage habitat, such as the use of selective fishing gear, quota restrictions, and the closure of certain fishing seasons.
- c) Increasing public awareness by educating the public about the importance of sustainable marine management and encouraging active participation in conservation efforts.
- d) Ensuring that coastal and fisheries communities can obtain economic benefits from the sustainable use of marine resources.

Improving the economy of coastal communities is not only through the utilization of marine resources in the fisheries sector, but the tourism sector can also support improving the economy of coastal communities. Nature-based tourism, especially ecotourism and marine tourism, can play an important role in improving the economy of coastal communities in Southwest Papua through the provision of homestays, local guide services, and tourism products. This sector creates jobs for the community, encourages the growth of local businesses in coastal communities, and increases regional income through the receipt of domestic and foreign tourists. However, the development of ecotourism and marine tourism can face challenges such as disrupting the sustainability of environmental protection, low-quality infrastructure, and how local governments ensure equal distribution of benefits for local communities so that the development of nature-based tourism can truly have a positive impact.

The West Papua Provincial Government in improving the economy of coastal communities based on the blue economy refers to national policies such as the National Blue Economy Strategy and the Regulation of the Minister of Marine Affairs and Fisheries Number 12 of 2024 concerning Community Participation and Empowerment in the Management of Coastal Areas and Small Islands, encouraging a strong role for



communities in managing coastal areas and making this an integrated marine spatial planning instrument. The West Papua Provincial Government supports improving the economy of coastal communities based on the Blue Economy through the development of marine renewable energy, organic seaweed cultivation, and a marine waste bank program that involves the community to raise public awareness of the sustainability of the marine environment. The role of indigenous communities, fishermen, and MSMEs in implementing the blue economy program is very important in encouraging public awareness and concern through a local system, namely marine sasi.

Improving sustainable management of coastal resources based on the blue economy in West Papua Province is done through the integration of economic activities by implementing environmental conservation principles such as sustainable coastal spatial planning, to manage wider coastal zones in terms of community and environmental livelihoods and minimize environmental impacts. Furthermore, responsible management of fish resources is intended to prevent overfishing and overfishing and implement management measures to ensure that fishing efforts are balanced with the productive capacity of fishery resources and their sustainable use. Furthermore, the development of environmentally friendly tourism is intended to provide long-term impacts on the environment, social, cultural, and economic for the present and future for all local communities and visiting tourists.

Scientific research plays an important role in developing economic policies based on the blue economy that support the sustainability of coastal ecosystems in the Province of West Papua. This research helps identify the potential of marine resources, analyze the impact of economic activities on coastal ecosystems, and develop strategies for sustainable resource management policies. Implementation and improvement of close coordination between all parties involved in improving sustainable economic development for coastal communities based on the blue economy can be achieved through good collaboration from all stakeholders. Economic diversification based on the blue economy in the Province of West Papua can be focused on the fisheries sector, marine tourism, and the development of the maritime industry because it has great potential in the development of sustainable fisheries, attractive marine tourism, and the development of the maritime industry that supports marine economic activities.

The integration of fisheries and marine-based renewable energy policies has a significant positive impact on the economy of coastal communities in Southwest Papua.

This integration creates new opportunities, increases income, and encourages environmental sustainability through diversification of livelihoods and the use of more environmentally friendly resources. Integrated regulations, from the center to the regions, ensure the sustainability of economic development programs based on the blue economy. Clear government policy support in efforts to improve the economy of coastal communities based on the blue economy is a major factor in achieving successful economic development.

## 4. Conclusion

The improvement of the coastal community economy based on the blue economy in the Province of Southwest Papua has been implemented quite well. In terms of integration in sustainable governance, it shows the collaboration of local governments, traditional institutions, academics, and indigenous communities in managing coastal areas. However, there are still problems related to the integration of the limited capacity of indigenous communities and the need for increased coordination between sectors in the sustainable management of coastal resources based on the blue economy to encourage the improvement of the coastal community economy, as well as the lack of integrated data. So it is necessary to strengthen local institutions to achieve sustainable development, digitalization of coastal data and businesses, and acceleration of regional regulations to provide legal certainty in the implementation of coastal community economic activities based on the blue economy.

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