The Enhancement of Fishers' Economic Community: A Case of Gorontalo, Indonesia

Frahmawati Bumulo[a*], Sri Umi Mintarti Widjaja[b], Budi Eko Soetjipto[c], Hari Wahyono[d], [a]Doctoral Program in Economic Education, Universitas Negeri Malang/Faculty of Economics, Universitas Negeri Gorontalo, Indonesia, [b,c,d]Faculty of Economics, Universitas Negeri Malang, Indonesia, Email: [a*]frahmawatibumulo@ung.ac.id

This study aimed to develop an enhancement economic-based model for fishers in the coastal area in Gorontalo of Indonesia. The variables studied were a model of economic development based on fishing communities, social conditions of fishing communities, fishing community education, fisheries and processed products, and tourism objects. This paper applied a development study using a design-based research approach. The data were gathered through in-depth interviews with fishers and related agencies. There are several stages to develop a model, including identifying problems and analysing needs, developing product prototypes, testing, and the evaluating of economic-based fisheries community. From this study, it can be found that with the application of various stages of appropriate development and cooperation from various parties, related institutions, financial institutions, and private and coastal fishing communities, it is expected it will increase the income of the coastal fishing communities in Gorontalo of Indonesia.

Key words: *Community development, community welfare, fishers' community.*

Introduction

The development of the marine sector has a crucial role in increasing national income in Indonesia. With a sea area of 5.8 million km^2, Indonesia has a comparative advantage in the fisheries and marine sector (Wahono, 2015; Mira, 2017; Wahdaniyah et al., 2018). In addition to Fisheries Resources, Indonesia also has a potential coastline of 81,000 km^2. Such a long beach has not been used optimally for the benefit of the welfare of the population along the coastline (Trinanda, 2017; Waluyo, 2014; Lasabuda, 2013).

Demographically, the livelihoods of the fishing communities are mostly in the fisheries' sector and the utilisation of existing marine resources. Fishing communities have different characteristics, but in general, they work using various levels of existing fisheries' technology. Another distinctive feature of traditional fishers is that they have a low level of education where they are deemed not necessary to have a higher education to fish at sea and are more concerned with their energy and experience (Wantah, 2018; Ramli et al., 2019: Warouw et al., 2019).

Education is associated with the main problem of poverty that occurs in fishermen (Tahawila, 2014; Baharudin, 2014; Suparno et al., 2019). With a low level of education, most fishers find it challenging to switch professions outside their profession as fishermen. The level of education will significantly affect the quality of fishers' human resources (Zebua et al., 2017). Another characteristic of coastal fishers is that most of them marry at an early age (Ramli et al., 2019). Under these conditions, the economic life of fishers families is getting more onerous and demanding when they have children. These problematic economic problems will encourage social interaction between fishing communities to help each other in their economic activities (Asmawati et al., 2020).

Unemployment and economic vulnerability are the main problems of coastal fishing communities (Jacob et al., 2013). This is caused by many factors, including education, nature, fishing technology, competition with modern fishers, expensive fuel prices. Also, coastal fishers also have a dependency on moneylenders to provide for their economic lives. The problem of fishermen's economic income is uncertain and far from a decent life. Bene (2003) stated that fishermen's poverty is caused by internal factors, namely limited quality of fishermen's human resources, limited business capital, limited fishing technology, relationship between fishing boat owners and fishermen, and fishermen workers who are less harmonious, dependent on the sea season and lifestyle or the behaviour of fishers' consumption.

Several previous studies have examined the empowerment model of the community. For instance, Saleh (2017) conducted a study on community empowerment based on Islamic value in Pamekasan of East Java Indonesia. Chen et al. (2020) added that organising local people and promoting community empowerment are critical factors for ensuring fishing communities' development. Tegar and Gurning (2018) focused on the development of marine and coastal tourism based on the blue economy. In addition, Abdillah (2016) focused on local community involvement and quality of life in tourism destination development in West Java, Indonesia.

However, few studies focused on the development of the local community in Gorontalo. A prior scholar by Halid and Abdul (2018) provided the impact of the development of an

independent tourism village on community empowerment in Gorontalo. The Bone Bolango Regency, especially in the Sub-District of Bone in Gorontalo, holds a tremendous potential of marine resources. It is quite promising to be managed and utilised as a productive economy for fishing communities. Therefore, this study for the first time analysed the economic potential and examined the economic model that forecasted enhancement of community welfare.

Literature Review

The main problem in regional development lies in the emphasis on development policies based on the specific characteristics of the area concerned by using the potential of human resources, institutions, and physical resources locally (Li et al., 2014;). This orientation leads to taking initiatives from the regions concerned in the development process to create new job opportunities and stimulate increased economic activity. Regarding regional development, Jovovic et al. (2017) argued that different regional conditions carry different implications in the development pattern. Raw imitation policy poles that have been applied to one region may not necessarily provide the same benefits to other regions. When people are going to develop an area, the policy they take must be following the existing conditions, including problems, needs, and potential. Coastal and sea area development using an integrated area development approach, at least pays attention to six aspects, namely biogeophysical, economic, social, political, cultural, institutional, locational and environmental aspects (Basiago, 1998).

Biogeophysical aspects include the content of biological resources, non-biological resources, marine services as well as facilities and infrastructure that exist in coastal and marine areas. On the other hand, the economic aspects include economic activities that occur in coastal and oceanic regions (Dyck & Sumaila, 2010). Socio-cultural, political, and defense and security aspects include population, quality of human resources, the culture of coastal and marine communities, and defense and security. Aspects of location include the space relating to marine commodities produced and how to obtain production facilities, processed and marketed. The location aspect also shows the interrelationship between one region and other regions that relate to aspects of production, processing, and marketing facilities.

Environmental aspects include the study of how the production process takes input from ecosystems, whether damaging or not, for example, in catching fisheries, whether overfishing is carried out or not, which will result in the preservation of the fish being threatened. Institutional aspects include community institutions that exist in the management of coastal and marine areas, whether conducive or not, whether in the form of property rights, territorial use rights, entitlement, indigenous knowledge, and other local institutions. Institutions also

include laws and regulations that apply both from the central government and regional governments as well as social and economic institutions in the coastal region.

Regional development is a function of the potential of natural resources, labour, and human resources, capital investment, infrastructure, transportation and communication, industrial composition, technology, economic situation and trade between regions, the ability of funding and financing of regional development, entrepreneurship, regional institutions, and the massive development environment. All of the above factors are important, they are still considered separate or mutually exclusive and have not been integrated as a component that forms the basis for a comprehensive regional development theory (Khusaini, 2015; Wulandari et al., 2019).

Strategic Management Concepts

Strategic management can be interpreted as a managerial effort to develop the company's strength to enhance business opportunities (Gurel & Tat, 2015; Wulandari et al., 2017). Meanwhile, Best et al. (2007) mentioned that strategic management is a way to control the organisation effectively and efficiently. It also concerns providing the implementation of the front line, in such a way that its goals and objectives are achieved. The development of the organisation becomes very complex, where the management of organisational resources becomes increasingly complicated. This situation causes the importance of a management strategy so that the organisation develops healthily and can maintain its existence.

Strategy becomes a fundamental framework in which an organisation will be able to express its vital continuity. At the same time, it will have the power to adapt to an ever-changing environment. The task of strategic management is always to formulate strategic issues. Strategic issues are conflicts between various forces or conflicts between values that can affect an organisation's ability to achieve the desired future goals (Abiodun, 2014). Fischer and Miller (2017) remarked that in general strategic issues are given limits as fundamental policy questions or critical challenges that can affect the mandate, mission and values of the organisation or management, the level of results and services and a combination of both, client, user or budget financing, and organisation or management.

Strategic and Regional Development

According to Stoner et al. (1994), the concept of strategy can be defined based on two different perspectives, namely (1) from the perspective of what an organisation intends to do and (2) from the perspective of what the organisation eventually does. Based on the first perspective, the strategy is defined as a program to determine and achieve organisational goals and implement the mission. The meaning contained in this strategy is that managers

play an active, conscious and rational role in formulating organisational strategies. In a changing environment, this view is more widely applied. The fisheries development strategy adopted is:

1. Maritime and fisheries development is carried out with high accountability transparency in order to create a clean and authoritative government, which is reflected in various forms of public service and program implementation to achieve the medium-term strategic goals.
2. Community welfare is reflected in regulations that favour the nation itself and are directed to be able to alleviate poverty (pro-poor), absorb labour (pro-jobs), and increase economic growth (pro-growth).
3. Marine and fisheries development is carried out by taking into account the principles of justice and equity between regions, reducing the backwardness and inequality as well as the priority of developing small outer islands as an important part of the sovereignty of the Republic of Indonesia.

There are three main concepts of strategy, namely: comparative advantage, special capabilities and strategic suitability. The stages of developing a strategy, namely: knowing the general state of the organisation, developing missions and goals in writing, conducting a SWOT Analysis, conducting an analysis of the four main dimensions, determining important issues about humans, developing solutions and consequences for actions, implementing and evaluating plans of action.

Methodology

This paper applied a development study using a design-based research approach. The variables studied were a model of economic development based on fishing communities, social conditions of fishing communities, fishing community education, fisheries, processed products, and tourism objects. The data were obtained through interviews with fishermen and relevant agencies, while the variables studied were a model of economic development based on fishing communities, the social conditions of fishing communities, fishing community education, fisheries, processed products, and attractions in Bone Bolango Regency. The observation process and interviews that have been carried out using several stages, namely: identifying problems and need analysis, developing product prototype, testing and evaluating prototypes, continuing analysis of needs and perfecting product design; in addtion, as part of the observation process and interviews were advanced development based on local economy and culture, expert review, modification and refinement of the economy-based fishing community empowerment model, testing and evaluation of economic-based fisheries community empowerment models followed by the final improvement of product design before finally the final product.

Results and Discussion

Demographics of Bone Bolango

In the Bone Bolango Regency as one of the regions in Gorontalo Province. Bone Bolango Regency with a total area of about 1,984.31 km², consists of seven districts before and after division into 17 Districts, namely: Bone District, Bone Raya District, Bonepantai District, Botupingge District, South Bulango District, East Bulango District, Bulango Ulu Subdistrict, North Bulango Subdistrict, Bulawa Subdistrict, Kabila Subdistrict, Kabila Bone Subdistrict, Suwawa Subdistrict, Suwawa Subdistrict, Suwawa Central Subdistrict, Suwawa East Subdistrict, Tapa Subdistrict and Tilong Kabila Subdistrict.

The economy of Bone Bolango Regency in the last ten years has seen an increase compared to being united with the Gorontalo Regency. Based on the prevailing prices, the GRDP experienced a significant increase, from IDR 459,585,000,000 in 2013 to IDR 535,822,000,000 in 2014. While on the basis of the constant prices, the GRDP rose from IDR 208,386,000,000 in 2013 to IDR 219,396,000,000 in 2014. As one of the newly developing regions, the Bone Bolango government is actively building and stimulating all sectors to catch up with the economy. Various changes have always been made and have begun to appear, both in the fields of government, development and public services. The functions of government and departments have begun to optimally be able to serve the community. The availability of advice and infrastructure continues to be improved to keep pace with the dynamics of investment and trade developments.

Investment Potential and Opportunities

The Bone Bolango regency has potential and prospective opportunities for investment and trade activities. Bone Bolango is a centre for the development of integrated agropolitan industries, a buffer zone of basic needs for the city of Gorontalo, Gorontalo provincial education centre, as well as a nature tourism area, beaches, and underwater parks. In general, this district is an area that has potential in agriculture, plantations, fisheries, animal husbandry as well as small and medium industries. The fertility and suitability of the region's agrologic enable the flourishing of a variety of plantation crops. Its location in Tomini Bay is quite conducive for the development of the fisheries sector and the results of its processing, as well as a Travel Destination.

The Potential of Marine and Fisheries in Bone Bolango

The Maritime and Fisheries Sector is one of the sectors that have strategic and highly prospective value in Bone Bolango Regency, with a beach length of around 84 Km covering

4 Districts and 27 Villages; opportunities for catching fish and home industry for catching fish are processed. The Bone Bolango coastal area directly facing Tomini Bay has great fisheries potential, but development policies have so far been more oriented to the development of activities on land rather than on the coast and ocean, so that the exportation and exploitation of coastal and marine resources are neglected.

The potential of fisheries in the Tomini Bay Region is about 590,620 tons per year, but the level of utilisation of marine and fisheries resources is still low at 197,640 tons per year (33.46%). Based on the results of the study, it is explained that the catching fish activities in the Tomini Bay area so far have a fishing ground relatively close to the coastline with the fishing, which is still very simple. With a relatively simple level of catching technology, the great potential has not been managed optimally.

The potential of fish processed production in the coastal area of Bone Bolango is almost 50 percent that has not been utilised well; from the catch fisheries, many processed fisheries that are still managed by production households that are simple, consumed and only marketed locally, where the results of processed fisheries consist of: fish balls, fish crackers, fish jerky, corn fish sticks, and others.

Tourism Potential in Bone Bolango Regency

Potential of Natural Tourism

Enthusiast diving seems incomplete if you have not explored and delved into the Olele Sea Park. This tourism object is located in Olele village, Kabila Bone District, Gorontalo Province, which is about 20 km from the center of Gorontalo City. Going to Olele tourism sites can be reached by using available land transportation, and sea transportation is also available from the city of Pohe, in Olele; we can also enjoy Goa Jin, a variety of ornamental fish and other biota and coral reefs. The Bone Bolango regency government has set Olele as a regional marine observation area that aims to preserve endemic marine biota, coral reefs, and other underwater beauty.

1. **Taludaa Waterfall**

Permai Taludaa Waterfall is located in Taludaa Village, Bone Beach, Bone Bolango Regency, about 65 km. The waterfall has a height of 42 m and a stretch of 15 m is found in the area of agro-tourism forests such as durian trees, jack fruit, and shady trees with clean and clear water.

2. Maritime Tourism

Uabanga beach tourism which is located in Uabanga Village and Kaidudu Village 38 Bone beach, 38 km from Gorontalo city centre with clean sea conditions and white sand extending 3 km; as for other beach tourism objects that offer beautiful sea views and are crowded by the people on each weekend, are Molotabu beach tourism sites and Botutonuo Beach tourism sites.

3. Whale Shark Tourism

The whale shark is protected through the Minister of Maritime Affairs and Fisheries Decree No. 18/2013, and although protected, the non-extractive use of the whale shark's economic potential is still permitted, such as the use of whale sharks as a tourist destination target.

SWOT Analysis

The results of research carried out in the Bone Bolango Coastal area specifically related to the strategy of developing catch fisheries, and their processed products, are supported by interviews with all stakeholders related to the object of research among the relevant agencies (the Fisheries and Maritime Affairs Office and the Tourism Office of Bone Bolango Regency), Local village officials, coastal communities around tourist attractions, fishermen and processed fisheries production households. Then through the SWOT Analysis, the results will be described as an analysis of internal and external environmental conditions, which are factors that influence the development of catching fisheries, and the process results in improving tourism destinations in Bone Bolango District.

Table 1: SWOT Analysis

Strenghts	Weaknesess
a. Clarity of vision and mission b. Wide potential of coastal development and diversity of marine biota. c. Bone Bolango fleet and fishing gear. d. Marketing of Bone Bolango fishing fisheries e. The availability of human resources or labour f. The existence of catch fish production households which produce various types of processed products. g. The existence of fascinating tourist objects	a. The human resources sector is inadequare in the development of the catch fisheries sector. b. Information access c. Insufficient capital for the business of processing fisheries production. d. Limitations of fishing equipment facilities owned e. The unavailability of public facilities and infrastructure such as hotels, lodging, restaurants
Opportunities	**Threats**
a. Market demand b. Government policy c. Modernisation of the catch fisheries fleet d. Applying appropriate technology e. Strengthening the fishermen's catch through Education and Training f. Cooperation opportunities with overseas, national and local investors g. Promotion opportunities by utilising the big name of Gorontalo province as a fishery producing area other than agropolitan with corn entry point.	a. Exploitation of fisheries products by fishermen from outside the area b. Lack of government oversight. c. The absence of optimal spatial planning d. Sea pollution

The analysis of the internal conditions (weaknesses) of Fisheries and Marine Bone Bolango is intended to find out the internal weaknesses that become obstacles for the development of catching fisheries and their processed products in Bone Bolango district, so as to achieve the stated objectives. Besides that, the internal condition (strength) of Bone Bolango, which is an asset of the region, can reduce or eliminate existing weaknesses and, at the same time, be a driver to achieve the goals of Bone Bolango Regency in improving the Tourism Destinations.

Conclusion

From this study, it can be concluded that with the application of various stages of appropriate development and cooperation from various parties, icluding related institutions, financial institutions, and private and coastal fishing communities, it is expected to increase the income of the coastal fishing communities in Gorontalo of Indonesia. Things that need to be done in the development of catching fisheries and their processed products to improve tourism destinations in one of the Gorontalo coastal areas, especially in Bone Bolango District, are namely relating to advice and infrastructure, market information, appropriate models and technology, local community, regulation and human resources development.

REFERENCES

Abdillah, F. (2016). Local Community Involvement and Quality of Life in Tourism Destination Development: Case of Coastal Tourism in West Java, Indonesia. *E-Journal of Tourism*.

Abiodun, A. R. (2014). Organisational conflicts: Causes, effects and remedies. *International Journal of Academic Research in Economics and Management Sciences*, *3*(6), 118.

Asmawati, T., Yuliani, T., & Sumiyatmini. (2020). Development of Life Skills in the Fishermen Community of Indonesia. *International Journal of Innovation, Creativity and Change, 11*(5), 100-111.

Baharudin, B. (2014). Pendidikan dan Pengentasan Kemiskinan Masyarakat Nelayan Pesisir. *Society*, *5*(1), 57-67.

Basiago, A. D. (1998). Economic, social, and environmental sustainability in development theory and urban planning practice. *Environmentalist*, *19*(2), 145-161.

Bene, C. (2003). When fishery rhymes with poverty: a first step beyond the old paradigm on poverty in small-scale fisheries. *World development*, *31*(6), 949-975.

Best, R., de Valence, G., & Langston, C. (2007). Strategic management. In *Workplace Strategies and Facilities Management* (pp. 91-102). Routledge.

Chen, J. L., Hsu, K., & Chuang, C. T. (2020). How do fishery resources enhance the development of coastal fishing communities: Lessons learned from a community-based sea farming project in Taiwan. *Ocean & Coastal Management*, *184*, 105015.

Dyck, A. J., & Sumaila, U. R. (2010). Economic impact of ocean fish populations in the global fishery. *Journal of Bioeconomics*, *12*(3), 227-243.

Fischer, F., & Miller, G. J. (2017). *Handbook of public policy analysis: theory, politics, and methods*. Routledge.

Gurel, E., & Tat, M. (2017). SWOT analysis: a theoretical review. *Journal of International Social Research*, *10*(51).

Jacob, S., Weeks, P., Blount, B., & Jepson, M. (2013). Development and evaluation of social indicators of vulnerability and resiliency for fishing communities in the Gulf of Mexico. *Marine Policy*, *37*, 86-95.

Jovovic, R., Draskovic, M., Delibasic, M., & Jovovic, M. (2017). The concept of sustainable regional development–institutional aspects, policies and prospects. *Journal of International Studies*, *10*(1), 255-266.

Khusaini, M. (2015). A shift-share analysis on regional competitiveness-a case of Banyuwangi district, East Java, Indonesia. *Procedia-Social and Behavioral Sciences*, *211*, 738-744.

Lasabuda, R. (2013). Pembangunan wilayah pesisir dan lautan dalam perspektif Negara Kepulauan Republik Indonesia. *Jurnal Ilmiah Platax*, *1*(2), 92-101.

Li, Y., Wang, J., Liu, Y., & Long, H. (2014). Problem regions and regional problems of socioeconomic development in China: A perspective from the coordinated development of industrialization, informatization, urbanization and agricultural modernization. *Journal of Geographical Sciences*, *24*(6), 1115-1130.

Mira, M. (2017). Keunggulan sub sektor perikanan dan pariwisata bahari dalam struktur perekonomian wilayah pulau-pulau kecil. *Jurnal Sosial Ekonomi Kelautan dan Perikanan*, *8*(2), 145-156.

Ramli, R., Getteng, A. R., Amin, M., & Susdiyanto, S. (2019). Perilaku Nelayan Dalam Lingkungan Keluarga Terhadap Pendidikan Anak di Desa Tamalate Kecamatan Galesong Utara Kabupaten Takalar. *Jurnal Diskursus Islam*, *5*(3), 401-430.

Saleh, T. (2017). Community Development In Coastal Society Based on Islamic Values Perspective In Tanjung Village, Pademawu, Pamekasan. *KARSA: Journal of Social and Islamic Culture*, *25*(1), 90-117.

Stoner, J., Yetton, P., Craig, J., & Johnston, K. (1994). *Management, 2nd edn*. Prentice Hall, Sydney.

Suparno., Wibowo, A., Mukhtar, S., Narmaditya, B. S., & Sinta, H. D. (2019). The Determinant Factors of Development Batik Cluster Business: Lesson From Pekalongan, Indonesia. *The Journal of Asian Finance, Economics and Business (JAFEB),* 6(4), 227-233.

Tahawila, A. (2014). Studi Akar Kemiskinan Nelayan Di Kelurahan Baiya Kecamatan Tawaeli Kota Palu. *Katalogis*, *2*(7).

Tegar, D., & Gurning, R. O. S. (2018). Development of marine and coastal tourism based on blue economy. *International Journal of Marine Engineering Innovation and Research*, *2*(2), 128-132.

Trinanda, T. C. (2017). Pengelolaan Wilayah Pesisir Indonesia dalam Rangka Pembangunan Berbasis Pelestarian Lingkungan. *Matra Pembaruan: Jurnal Inovasi Kebijakan*, *1*(2), 75-84.

Wahdaniyah, N., Jufriadi, J., & Surur, F. (2018). Strategi Pembangunan Sektor Kelautan dan Perikanan Berbasis Wilayah pada Satuan Wilayah Pengembangan (SWP) Bagian Selatan Provinsi Sulawesi Selatan. *Journal of Regional and Rural Development Planning*, *2*(1), 64-73.

Wahono, U. (2015). Daya Saing Ekspor Tuna Kaleng Indonesia di Uni Eropa Tahun 2003-2013. *Economics Development Analysis Journal*, *4*(4), 427-434.

Waluyo, A. (2014). Permodelan Pengelolaan Wilayah Pesisir dan Pulau-Pulau Kecil Secara Terpadu yang Berbasis Masyarakat (Studi Kasus di Pulau Raas Kabupaten Sumenep Madura). *Jurnal Kelautan: Indonesian Journal of Marine Science and Technology*, *7*(2), 75-85.

Wantah, E. (2018). Pemberdayaan Nelayan Berbasis Pendidikan Ekonomi Dan Potensi Pesisir di Kabupaten Minahasa Utara. *Jurnal Teori dan Praksis Pembelajaran IPS*, *2*(2), 101-110.

Warouw, F. F., Lumeno, S., & Pusung, P. H. (2019). Analysis of Government Responsibility in the Sustainable Tourism Process Study at Manado Bay. *International Journal of Innovation, Creativity and Change, 10*(7), 170-179.

Wulandari, D., Soseco, T., Narmaditya, B. S., & Witjaksono, M. Strategic Efforts of East Java Province government to Develop Industrial Area in Increasing the Number of New Investors in the Region. *International Journal of Economic Research, 14*(13), 139-149.

Wulandari, D., Narmaditya, B. S., Prayitno, P. H., Ishak, S., & Asnan, L. (2019). Human Development Index, Poverty and Gross Regional Domestic Product: Evidence from Malang, Indonesia. *Jurnal Pendidikan Ekonomi Dan Bisnis (JPEB), 7*(2), 146-152.

Zebua, Y., Wildani, P. K., Lasefa, A., & Rahmad, R. (2017). Faktor penyebab rendahnya tingkat kesejahteraan nelayan pesisir pantai Sri Mersing Desa Kuala Lama Kabupaten Serdang Bedagai Sumatera Utara. *Jurnal Geografi*, *9*(1), 88-98.