

Optimizing local ocean economic towards small island development in North Sulawesi

L Nugroho¹, T Kusumastanto^{1,2} and Y Wahyudin^{2,3}

¹ Tropical Marine Resources Economics, Bogor Agricultural University, Bogor, Indonesia

² Center for Coastal and Marine Resources Studies, LPPM IPB (CCMRS LPPM IPB), Indonesia

³ Djuanda University, Bogor, Indonesia

Corresponding author: nugroho220192@gmail.com (L Nugroho)

Abstract. Small island in North Sulawesi facing a lot of influences from outside developed island, including from Philippines. This situation gives regional leakages for these islands and need to be mitigated in order to do not getting more loss and leakages. This study is trying a better solution to face this kind of problems. The study using an approach of ecosystem based business development. With this approach, we found that local ocean economics would be an answer toward small island development in North Sulawesi. By strengthen and developed local ocean economics, these small island could more better standing position to overcome the regional leakages. Their local ocean economics, such as fisheries, tourism based coastal and marine ecosystem, sea transportation, ocean based industry, ocean based infrastructure, and ocean based services, would be the best potential to improve their local economic development of the small islands in North Sulawesi. May, the result study by using this approach would be more benefit to be replicated in other small islands in Indonesia, especially which facing regional leakages from other countries.

1. Introduction

Economy is the human activity associated with the production, distribution, exchange, and consumption of goods and services. In economic activities recognize three main objectives to be achieved in the economic system, namely: (i) the economic growth, (ii) the creation of natural resource use, and (iii) the stability of prices [2]. If one of the three things that disturbed there will be interference, then there will be economic difficulties will lead to economic vulnerability. Vulnerability can be interpreted as the tendency of an entity that is damaged. In the last decade, become an important economic activity in the Republic of Indonesia to support the existence of Indonesia among countries in Asia and the world. On the other hand Indonesia is an archipelago in the world with the number of islands owned reached approximately 17,500 large and small islands, while the beaches along the 81,000 kilometers is the second longest after Canada.

Composition of the oceans that reaches 2/3 of the total number of the Unitary Republic of Indonesia to encourage Indonesia as the country with the highest biological kearagaman in the world, so it is known as a "mega-biodiversity". In other words, economic activity in Indonesia is strongly influenced and dependent on the Maritime field. This strategic position provides advantages for Indonesia to take the role as a country that has strong economic potential. As an archipelagic country there are many small islands are located in the Indonesian island countries which there are inhabited and uninhabited islands,



are 31 small uninhabited island. Economically based environment and natural resources, Indonesia has the potential not least. Like, North Sulawesi alone has more than 283, Sangihe Islands Regency alone there are a small uninhabited island that is directly adjacent to the philippine state Marore Island. Marore Island is located at the western end of the border between Indonesia and Sangihe Talaud Island, Philippines. The distance between the island Marore to Manado, the Capital 206 nautical miles. In 2011, the Marine Spatial Management Director, said Morore inhabited by 846 people, 471 men and 374 women from 165 households. Potential resources of the island Marore mostly coconut, orange, and pineapple and cassava into primary consumption. Plantation into alternative livelihoods of fishermen who live on the island Marore. In the economy based on natural resources and the environment, the island has the potential to be reviewed through the seven areas of the economy that can contribute the economic potential for the nation, namely: fishing, marine tourism, marine transportation, ESDM offshore, industrial marine, marine construction and marine services [2].

Marore island itself has some potential of the seven potential. In the economy based on natural resources and the environment, the island has the potential to be reviewed through the seven areas of the economy that can contribute the economic potential for the nation, namely: fishing, marine tourism, marine transportation, ESDM offshore, industrial marine, marine construction and marine services [2]. Marore island itself has some potential of the seven potential. In the economy based on natural resources and the environment, the island has the potential to be reviewed through the seven areas of the economy that can contribute the economic potential for the nation, namely: fishing, marine tourism, marine transportation, ESDM offshore, industrial marine, marine construction and marine services [2]. Marore island itself has some potential of the seven potential.

2. Material and Methods

2.1. Merthods

Methods used to analyze these journals is literature. Literature means doing Rethinking associated libraries (Review of related literature / literature review). Reader means works as a reference for understanding and investigating the research problem as reconsideration. (Review) library (research reports and so on). Review function libraries that are related are fundamental in the study, as stated by [3] that the more a researcher know, know and understand about the studies that have been done before (which is closely related to the research topic), the more it can dipertanggung responsibility for examining how the problems faced.

2.2. Meterial

Central Statistic Bereu, North Sulawesi Province through the publication describes that the number of Foreign transiting through Sam Ratulangi airport in August 2018 as many as 15 448 people or maningkat amounted to 30.09 percent compared to July 2018 reached 11 875 people. When compared with foreign tourists visiting the same month a year earlier in August 2017 as many as 8,886 people, an increase of 73.85 percent.

Table 1. The number of foreign tourist visitors in North Sulawesi Province in August 2018.

Commentary	Month-Year			Growth (%)	
	Agustus 2018	Juli 2018	Agustus 2018	MtoM Agustus 2018 terhadap Juli 2018	Yoy Agustus 2018 terhadap Agustus 2018
Number of Travelers	8.886	11.875	15.448	30.09	73.85

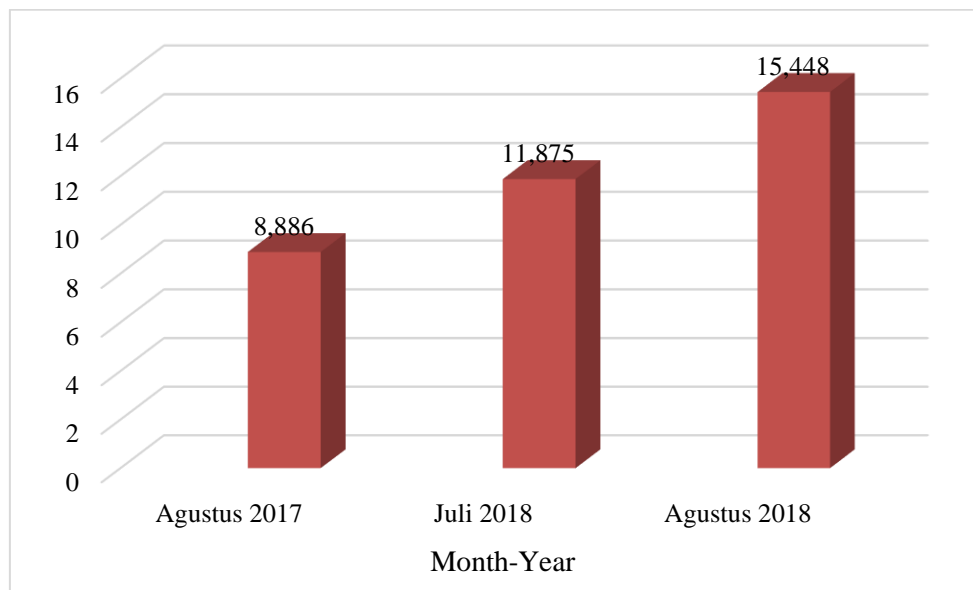


Figure 1. Comparison of foreign tourists in North Sulawesi month of August 2018 to July 2018 and August 2017.

Looking at the data and the above conditions can be seen that the potential for marine tourism is growing rapidly seen from the comparison in August 2017 with the month of June 2018 increased by almost 50% in August 2017, while in the month of August 2018 the number of tourists increased by almost doubling of the percentage in the month August 2017.

The natural conditions are still good making the fishery potential in this area is quite good, menurut the Central Bureau of Statistics of Sangihe, fishing catches by type of equipment from 2011 to 2016, can be seen and described by Table 2.

Table 2. The number of visitors of tourist Mancannegara In North Sulawesi province August 2018.

Type Fishing Gear	2011	2012	2013	2014
Payang	33	0	0	0
Dogol	0	0	0	0
Pukat pantai	170	170	170	170
Pukat cincin	100	105	108	108
Jaring insang hanyut	1400	1403	1403	1403
Jaring lingkar	220	213	215	215
Jaring insang tetap	654	660	664	664
Jaring klitik	0	0	0	0
Trammel net	0	0	0	0
Bagan perahu/rakit	50	40	38	5
Sero	3	0	0	0
Jaring angkat lain	0	0	0	0
Rawai tuna	150	143	143	143
Rawai tetap	0	0	0	0
Rawai hanyut lain	432	432	437	437
Huhate	0	0	0	0
Pancing tonda	4865	4870	4882	4930

Type Fishing Gear	2011	2012	2013	2014
Pancing yang lain	5800	6140	6205	6215
Seru	0	0	0	0
Bubu	471	463	465	468
Perangkat lain	1080	1065	1065	1065
Muroami	35	26	26	26
Lain lain	725	733	744	744
Total	16188	16463	16565	16593

Source: Marine and Fisheries Service of Sangihe Regency

3. Results and Discussion

3.1. Fisheries economics business and industry derivatives

The potential of marine fishery resources are quite large and spread across several regions in Indonesia in 2016 Kepmen KP RI No. 47 2016 describes fisheries management with sustainable use of the potential of reaching 9.93 million tons per year, equivalent to the value of 29.80 billion US dollars per year if measured from the average price of fish 3 US dollars per unit of kilo. This value can of course be increased when combined with the potential for fish production from aquaculture is estimated to reach 9 million tons. From the description and data presented economic potential of fisheries and aquaculture is expected to reach 18 billion US dollars per year. This sector may be the economic potential in the future, result of fishery industry which has an investment value that is no less magnitude.

Economic development policies should consider the sector Business Economics Fisheries and Industry proponents, this policy can be measured levels of partisanship, namely: First, put the interests of the economy on a macro level to improve the contribution of the fisheries sector to the national economy through increased production and exports, the modernization of the fishing fleet, industrialization and intensification of fishing effort. Surely this must be managed and supervised by the maximum, because this policy option if it is not monitored with maximum firmness will lead to over-exploitation of fishery resources and the environmental degradation of marine fisheries, creating poverty and unemployment continuing. The concept of sustainable arrests must remain the basis for the management and utilization of fishery resources. Second, the top priority is local economic development by building local economic potential and strengthen self-help, independence and well-being of coastal communities, especially fishermen, fishing cultivation, as well as the manager of a fish merchant.

It is to consider several things such as the increase in fish production during this time can still be maintained or perhaps could be improved, but the level of utilization of fish resources is still not evenly distributed. Most of the fishery management area of the Republic of Indonesia has experienced over fishing (*over fishing*) and some are still not utilized optimally.

3.2. Based nautical tourism business ecology region

The tropical climate and the island nation bestowed on the state of Indonesia made marine comrade provide underwater paradise beach as power and space travelers Pull present domestic to foreign countries. Biodiversity is typical in Indonesia such as endemic fish and some coral reefs and shorelines endemic presents the beauty of non-market, it has become a major factor or as a motivating factor for marine tourism potential as a consequence of the tropical island nation. Conditions island states have the distance between the island pretty much covers the provision of access to air transport, land and sea in order to encourage the potential for marine tourism, as a complement derivatives industry should also be considered as service providers in the form of accommodation, guesthouses, guesthouse or the like, Provision consumption such as local food and drink, including in the supply of fresh fish as fish consumption based on typical local culinary. Besides Provider cindramata Addressing the hallmark as a maritime state or island states.

When compared with foreign tourists visiting the same month a year earlier in August 2017 as many as 8,886 people, an increase of 73.85 percent. It is the economic impact on the society around either directly or indirectly, together with the impact of the derivative industry is not small. Judging from the data in August 2018 alone reaching 15 448 tourists, if assume an individual traveler and raise \$ 1000 US dollars only (not including transportation) in the period pelancongannya in North Sulawesi it is about 15 million US dollars more that circulates within the province Every month. Of course, the transportation costs are present provides for the separate impact of foreign exchange, in addition to land and sea transport services are also taking part in the economic activity in the province of North Sulawesi.

Maritime Tourism presented in the North Sulawesi in the form of water conservation, this conservation area would save so many ecosystem services, well services provision / production, such as food fish and other biota, regulating services such as climate and the prevention of coastal erosion, cultural services such as aesthetic natural and supporting services such as nutrient cycles. Ecological basis for an important basis in the utilization and management of marine tourism potential to create sustainable economic activity that berdampang against intergenerational.

3.3. *Marine transportation business, Industry Galang when and harbor*

Fisheries Resources is an economic sector where the maritime transport artery in the distribution of fishery products and menyuplay needs of life for society. As fishery products eg marine transport must be presented in order to provide a special space needed for quality products brought to be maintained until the destination market. In marine tourism is a sector of maritime economy in desperate need of transportation, limited access to special areas that provide marine tourism is very remote as Marore island that tends to be difficult to achieve. Therefore, the presence of a derivative industry that provides a means of transport must meet the safe transportation and shipping standardization course with environmentally friendly technology.

The potential need for the shipyard to provide marine transportation have indeed become absolutely necessary in a country that is archipelagic. Mentions that the potential fulfillment of the ship Indonesian shipping industry up to 1000 boats annually. This can be interpreted if the average price of when the alleged 10 million dollars alone, the potential for marine industry shipping sector is estimated at 10 billion US dollars per year. Business maritime industry itself seems in the Indonesian Chamber of Commerce estimated in 2015 is estimated to reach 171 billion per year is included in the shipping industry, fish management, the provision of facilities and provision of fishing gear and diving equipment and boat engines etc [1].

Island states require inter-island connectivity in particular on access to the small islands and outermost corridor is considered necessary to have the system and the main hub that will serve as the main port that will connect between the islands around the island in Indonesia. Referring to the 2015 CTF study, the economic impact of the presence of the fishing port in Jakarta PPS alone could reach 0.48 billion US dollars by the state of Fishing Over what region of northern suawesi which incidentally untapped optimally tangkapnya sustainable fisheries. While in Jakarta's public ports have three times the economic impact compared to the fishing port, the economic potential of marine construction can mencapai 95.30 billion US dollars per year [6]

3.4. *Offshore oil and gas business*

Economic sector of fisheries, marine tourism, marine transportation and marine insdustri of course, it needs support the presence of energy and mineral resources sector in order to provide energy demands mover and supporter. Therefore, ESDM considered vital to sustain economic activity in the island nation, especially in the supply of primary fuel for individual fisheries, sea transport as porters and marine services. [7], said that as many as 40 percent of fishing boats specialized in supplying fuel.

Indonesia alone in the ESDM sector buffer into key sectors for economic development of maritime Indonesia proviso, of course, review and emphasize the ecological, of course, the provision of environmentally friendly fuels and energy supply alternatif to make a complement or even substitute for fossil-based fuels needs. At present, the potential oil and gas resources in the sea were amazing also owned Indonesai. BPPT (1998) shows that until now Indonesia has the availability of oil and gas from Indonesia's marine area as much as 106.2 billion barrels of oil equivalent or equivalent to 5.30 trillion

US dollars if the assumed oil price remains 50 US dollars per barrel. When the estimated potential is exhausted in the next 50 years, the potential is estimated to reach at 106.2 billion per year.

3.5. Resource utilization and management of community-based Land Rights Sea, North Sulawesi

Fishermen in these islands recognize three types of areas [2]; [5], namely: (1) territorial waters nyare (saghe); (2) the territorial waters of inahe; and (3) the territorial waters of elites. Saghe is the sea area of the reef, inahe is the boundary waters between saghe waters with elites, while the elites are in the marine waters. The third type of fishing area this is not the limit of the territorial waters of which are owned by the fishermen, but it is a fishing area for fishermen Para.

During the implementation of the customary rights of the sea on the island of the conflict does not arise and running [4], because: (i) the existence of the traditional beliefs of the flying fish is considered as the fish are maintained by the ancestral spirits of fishermen island of Para, and may only be arrested by and trawl fishing gear must admit that circumference. This belief is supported by the myth that where fishing is considered as a sacred place. (ii) Seke which is a kite fishing gear is considered a symbol of unity of the island community. Therefore, it is an obligation to be a member must admit that so that people can come together. (iii) The village still dominant role in enforcing the implementation of the customary rights of the sea on the island of Para. The village chief will involve community leaders and village elites as well as the organization's management must admit that in scheduling the operation must admit that, cutting the majority of the catch in the public interest oversight of the offense in place of fishing and issuing permits to a group of fishermen who will operate must admit that. Scheduling arrest, cut, supervision and licensing agreed within the organization must admit that as an institution established under the agreement these fishermen spontaneous shows the attempt of resource management of sustainable marine fish.

3.6. Management of Small Island

Economic activities that harness the potential of the small islands of North Sulawesi Sangihe dikepulauan enough variety among them in the form of nautical tourism, fisheries, industry, trade, and transportation or shipping. The development of economic activities in small islands will be linked to the problem of investment in business development. As long as there is no government agency that is responsible for this, although it has been established directorate empowerment of small islands, but in practice the existing legal instruments do not support it either, so that business investment small islands can not be developed.

Development and construction of small islands at least have significance for the people of Indonesia, at least four important meanings, namely: First, In the economic potential of small islands have biological resources and non-living in the region of small islands that are so big. if the small islands have successfully developed an optimal and sustainable it will be a source of new economic growth. Second, In the social development of small islands in addition will enhance the dignity of people living area of small islands, also reducing the development gap between regions. Third, in geopolitical development and construction of small islands such as the island especially the border region Miangas Marore and will ensure the security and resilience of our country wilaya. For the development of our borders will be easier to detect all kinds of threats coming from other countries. Fourthly, ecological development of small islands will increase surveillance against the threat of damage to ecosystems caused by natural and human factors.

3.7. Small islands Border

Without realizing it, are currently in the region of small islands border there is a problem that is quite crucial, some of the problems that occurred in the small islands of the border, namely: First, small islands border vulnerable to intervention and dependence with other countries. Marore Island for example dependence on primary material disuply of the country of the Philippines because of the easy access affordable compared to nearby areas or the district capital plus more if there is insufficient climate extremes Marore Island into areas isolated, in terms of distance tempu this island takes hardly more than 12 hours to the district capital while requiring only 2 hours only reached the country of the Philippines. This makes the island Marore susceptible or already dependence and intervention by the

state in the Philippines. Second, potentially occur in trading activity and smuggling of weapons to the conflict zones. Third, being escape from the terrorist escape. Like the case of the terrorist movement ISIS who traveled to the country Syria North Sulawesi that through utilizing the smaller islands such as Miangan and Marore border towards Filipina. Fourth, occurred smuggling electronic goods, food, fertilizer, fuel, drugs and migrants. The level of smuggling in Indonesia are already on tarap harm. This smuggling activity utilizing marine traffic that passes through the small islands of the border. Fifth, the occurrence of circulation of foreign currency, like Island Marore and Miangas circulating counterfeit US dollars and the currency Philippine Peso which would threaten the existence of the currency. Sixth, the occurrence of Illegal Fishing and Transshipment. Seventh, the position of the remote and inaccessible by other central and local governments to make disaster vulnerability that may be present plus the condition of the poor and backwardness makes vulnerable to disruption and the threat of another country because access to the country is more accessible than the Indonesian state itself.

4. Conclusions

Utilization and management Marore Island as the outermost small islands are considered to have a very promising potential, in addition to the management and utilization of local community-based to provide authority, responsibility, and opportunity for local communities to manage resources (in his book Nikijuluw more emphasis on fisheries management) own first define your needs and desires, goals and aspirations by considering its development. Small islands border should be oriented to improve the activity and economic access communities in the region. Through the construction and development of investment in the area of small islands border, backward, isolated, will gradually be resolved for the people on the island who prefer to interact with other countries compared with the nation itself. With the increasing intensity of the development of border areas, the alienation of people in the island against their own people will never happen.

Alternative development model that can be developed in the area of small islands border regions are formed in regions that have the closeness of high connectivity and form as well as offering investment guarantees both inside and outside the country, through umbrella appropriate regulation consider the cultural and welfare of the local community. The development model is expected unlike Batam island which has become a boomerang against the sovereignty and the economic condition of the nation of Indonesia. These efforts should be based and impact of social, economic, and security at both regional and national. Grand design or Flatfrom mutual synergy and have a symbiotic mutualism for all people and all sectors of course consider the ecological and intergenerational usefulness.

The word "outer" in the concept of small islands outlying give the perception of distant and difficult to reach, this understanding makes the policy makers and the general public in the act of composing, recognize and interpret sensory information in order to provide an overview and understanding of the islands is negative, if change in mindset and a more positive perception outer words can be changed to the word "storefront" state. It is expected the outer islands will be transformed into a top priority to beautify the island country in order to promote the good name and existence of the state against another state that in fact Indonesia is the largest archipelago in the world.

Doctrinal against the concept of small islands as "window dressing" of the state is expected to change the orientation of sustainable development in Indonesia which was derived from the core point spread to the corner farthest corner bertansformasi of the conical outer corner towards the core point. This is in line with the current changes that are Centralized policy toward decentralization mengoptilmalkan potential resources contained in each area are scattered in the archipelago.

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