

# THE SOCIO-ECONOMIC CONDITION OF THE FISHER COMMUNITIES IN THE COASTAL AREAS OF GORONTALO

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## ABSTRACT

The research aims to analyze the socio-economic condition of the fisher communities in the coastal areas of Gorontalo. The data collection techniques are questionnaires and direct interviews with respondents to collect both primary and secondary data from relevant organizations. The data are analyzed with descriptive analysis and the Likert analysis approach. The research population is the communities in the coastal areas of Gorontalo. There are 2,025 heads of families in the communities. Research sampling is conducted with the slovin technique with a trust level of 15% and the respondents selected are 163. The research findings indicate that the socio-economic condition of the fisher communities in the coastal areas of Gorontalo is in the medium category with an index of 181.81.

**Keywords:** *Coastal Community, Fisher, Socio-Economic Condition*

## INTRODUCTION

A coastal area is the area where the sea waters and land meet. It has distinguished characteristics and natural resources. As time goes, coastal areas have been attacked by high pressure due to natural activities in the coastal areas; such as wind movement and waves. Besides, human activities i.e. settling, earning a living, and developing the water tourism sector in the areas affect the condition of the area which is blessed by vast natural and non-natural resources. The majority of the communities living in a coast areas work as fishers, cultivators, processors, and distributors of fishery products; while the rest, despite differences in jobs, maintain the same life pattern, live together, and establish a community with the same culture in terms of using the coastal resources. The good utility and management of coastal areas retained by the government and

communities are not supported by awareness of environmental preservation. It gives a negative impact on the environmental condition of coastal areas and hence causes the communities' socio-economic susceptibility. Furthermore, the coastal areas in Indonesia have more potential threats due to climate changes. The climate changes will cause an increase in the water surface, leading to a mass impact on the coastal areas and the communities living there. Another impact is in the form of natural disasters i.e floods which reportedly attack the areas, coastal erosion, and big waves (Dahuri, 2000).

Fordham (2007) argues that a coastal area is the transition area where land and sea meet. It has distinguished characteristics from that of land. In the area is the interaction between three natural elements i.e. land, sea, and atmosphere. The part of the area which

leads to the land still maintains the sea properties; whereas that which leads to the sea is also affected by natural processes that mainly occur on the land.

The majority of coastal communities work as fishers. In terms of socio-economy especially access to education and health services, they are relatively less established than other communities. They experience some common issues characterized by socio-economic underdevelopment and inadequate human resources. A coastal area also refers to a transition between sea and land, including an intertidal zone (Dahuri, 1996).

The major social category of the coastal communities in Indonesia works as traditional fishers and fishing workers. Fishers greatly contribute to the number of national capture fisheries. However, in terms of socio-economic conditions, they have a marginalized and exploited economic transaction process. As producers, they earn a little portion of total profits. Those that earn the largest portion of revenue are large-scale fish sellers or distributors. The last two groups are two economic rulers in a coastal area. The situation remains and haunts the fisher who cannot figure out the solution (Westplat, 2016).

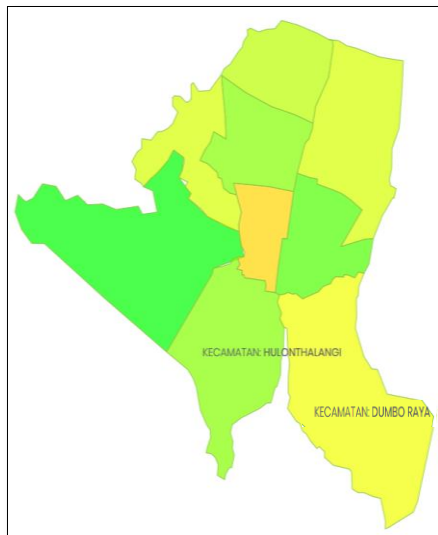
The communities that live in the coastal areas of Gorontalo commonly work as fishers that capture fish in the south beaches including in the waters of the Gulf of Tomini. The majority of the communities live in the coastal areas of Gorontalo, especially in Pohe, Tanjung Kramat, Leato Utara, and Leato Selatan work as fishers, processors, and

sistributors of fishery products and other services. In running their domestic businesses, the fishers jointly use the available coastal natural potentials in groups. Many of them have professions as fishers that specifically capture tuna and other pelagic fish, ring trawler fishers, and *nike* fishers or work in the field of fishery product process and distribution. Unfortunately, after one year operation, the businesses result reversely due to some factors i.e. the east season that causes big waves and strong winds and certain seasons that cause few captures. The situation affects the coastal communities' economy which greatly depends on the coastal resources. It thus leads to the susceptible socio-economic condition experienced by the communities. The research aims to examine the socio-economic condition of the communities living in the coastal areas of Gorontalo.

## **RESEARCH METHODOLOGY**

### **Time and Location**

The research was conducted in one year starting from January (preliminary observation) and finished in December 2019 in the coastal areas of Gorontalo. The field observation, regarded as the preliminary research aims to look for information on the socio-economic condition of the communities living in the coastal areas of Gorontalo that include Hulonthalangi (Pole and Tanjung Kramat) and Dumbo Raya (Leato Utara and Leato Selatan). The research locations are depicted in Figure 1.



**Figure 1. The Coastal Areas of Gorontalo**

### **Data Types and Sources**

Two data sources i.e. primary and secondary are used. Sugiyono (2014) clarify that primary data are data directly collected from respondents in the research location through questionnaires and interview distributed and conducted in the beginning until the end of the research. The questionnaires are distributed based on the number of respondents. Moreover, secondary data are data collected from studying literature and scientific publications.

### **Population and Sample**

#### **1. Population**

Sugiyono (2014) concludes that population is a generalized area comprising objects/subjects that maintain a certain quality and characteristics determined by a researcher to study and conclude. The population of this research includes 2,025 heads of families that live in the coastal areas of Gorontalo (BPS Gorontalo, 2019).

#### **2. Sample**

The sample of this research includes 2,025 heads of families that domicile in the coastal areas of Gorontalo. We determine the number of respondents using the Slovin Technique with an error level of 15%. We acquire 163 heads of families as our research sample that live in four of ten sub-villages in Dumbo Raya and Hulonthalagi. A random sampling technique is applied where questionnaires are randomly and proportionally distributed in each sub-village following the Slovin Technique with an error level of 15% that has been determined following the result of the sample calculation. Sampling is initiated by selecting respondents that live in one sub-village border and ended in the other border following the number of the sample that has been determined.

The number of samples is set using Slovin Formulae with an error level of 0.15. The number of selected samples is calculated using the following formulae.

$$n = \frac{N}{1 + Ne^2}$$

Where:

- n = the number of samples
- N = the number of the population
- e = the error tolerance limit

### Sampling and Data Collection Techniques

The data collection techniques used in this research are:

#### 1. Questionnaire

Data collection with questionnaires constitutes data collection with distributing questionnaires containing questions or statements to respondents in research. The scale used in questionnaire evaluation is a Likert scale with the following scoring.

- a. Score 3 is given to the “high” answer.
- b. Score 2 is given to the “medium” answer.
- c. Score 1 is given to the “low” answer.

#### 2. Documentation

Documentation is the research data and variable collection technique where the researcher is required to look up information from notes, books, newspapers, magazines, and news on electronic media. The documented data

is functioned to strengthen supporting data or as comparing references (Arikunto, 2006).

### Data Analysis

Data analysis is conducted using an inferential analysis method. The inferential analysis method used in this research is:

#### 1. Descriptive Analysis

This research uses a descriptive statistic analysis of a variant unit that describes the socio-economic condition of a community. The analysis aims to describe or illustrate the collected data as the way it is and is not supposed to draw a generalized conclusion. Among descriptive statistics are data presentations with a table, graph, round chart, pictogram, mode, median, and mean (central tendency measurement) calculation, decile, percentile calculation, data distribution calculation with a mean and standard deviation calculation, and percentage calculation (Sugiyono, 2014).

Three variables used in this research are dependent, independent, and intervening variables. The variables used in this research are listed in Table 1.

**Table 1. The Scoring of Socio-economic Indicators of the Fisher Communities in the Coastal Areas of Gorontalo**

No.	Socio-economic Indicator	Weight	Category of Socio-economic Condition of Each Variable		
			Low (1)	Medium (2)	High (3)
1	Age	10	20-40 years old	40-60 years old	60 years old
2	Distance between the domicile and the coast	5	>200 m	100-200 m	<100 m
3	Education	10	Tertiary level	Secondary level	Primary level
4	Occupation	15	Service provider	Laborer	Fisher

5	Revenue	15	>4 million	2-4 million	<2 million
6	Household expenditure	10	< 2 million	2-4 million	>4 million
7	Production asset worth	10	>15 million	5-15 million	<5 million
8	The number of family members financed	10	< 3 people	3-6 people	>6 people
9	Knowledge on coasts	10	High	Medium	Low
10	Dependence on coasts	5	Cultural	Social	Economic

The classification of the socio-economic condition of the fisher communities in the coastal areas of Gorontalo is shown in Table 2.

Another analysis is the descriptive analysis of respondents' responses using a comparison between actual

scores and ideal scores. The responses are scored with a maximum score of 3 and a minimum score of 1. The scale range is thus identified by multiplying the highest score to the number of respondents and multiplying the lowest score to the number of respondents.

**Table 2. The Category of the Socio-economic Susceptibility of the Communities in the Coastal Areas of Gorontalo**

No.	Category of the Socio-economic Condition Index	Score
1	High	>233
2	Medium	166-233
3	Low	>166

## FINDINGS AND DISCUSSION

### General Description

The coastal areas of Gorontalo are located in the Gulf of Gorontalo. The areas consist of two subdistricts i.e. Hulonthalangi and Dumbo Raya and four sub-villages. The majority of the communities that live in the areas work as fishers that capture fish in the coastal areas or the waters area of Gorontalo including the Gulf of Tomini and Seram Sea. Meanwhile, the rest work for other sectors. This research is performed in the coastal areas of Gorontalo and aims to investigate the socio-economic condition of the fishers communities in

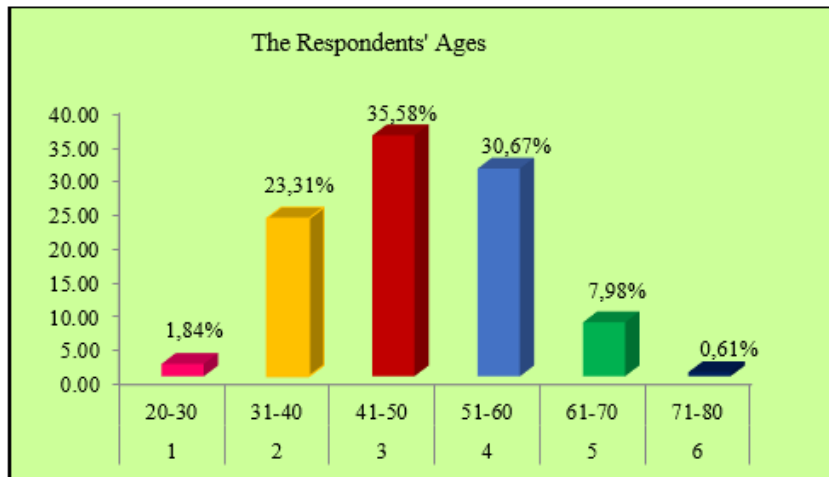
Pohe and Tanjung Kramat in Hulonthalangi and Leato Utara and Leato Selatan in Dumbo Raya.

### The Socio-economic Condition of the Communities in the Coastal Areas of Gorontalo

According to our research, the characteristics of the respondents that describe the socio-economic condition of the fisher communities are as follows.

#### 1. Age

The respondents have a range of ages that is 26-71 years old. The respondents' ages are described in the form of a chart in Figure 2.



**Figure 2. The Respondents' Average Ages**

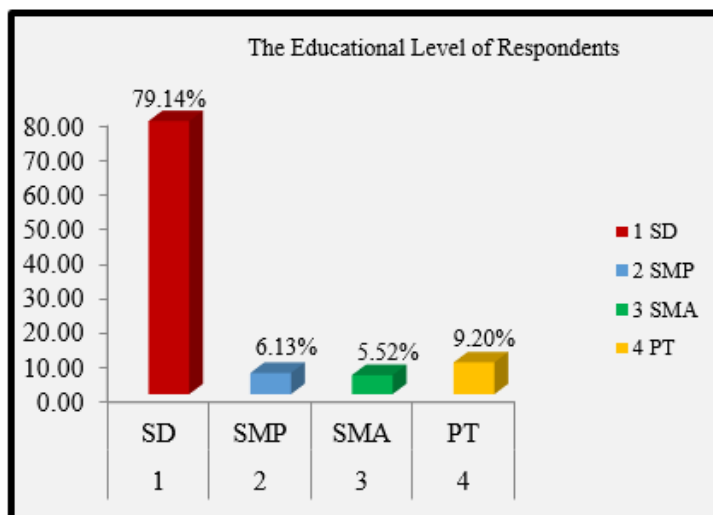
Source: Primary Data (Processed), 2019

Figure 2 confirms that the most predominant age category of respondents is in the interval 41-50 years old (35.58%), followed by the age category in the interval 51-60 years old (30.67%) and the interval 31-40 years old (23.31%). Moreover, the most subordinate age category is in the interval 60-70 years old (7.98%), followed by the age category in the interval 20-30 years old (1.84%) and the interval 70-80 years old (0.61%). According to Figure 2, the age category

of dominant and productive respondents is in the interval 20-60 years old (90.80%); whereas that of less productive respondents in terms of coastal activities is in the interval of 61-80 years old (9.20%).

## 2. Educational Level

The educational levels of respondents vary, from the primary, secondary, to tertiary levels. In general, the educational levels of the respondents are presented in Figure 3.



**Figure 3. The Respondents' Educational Levels**

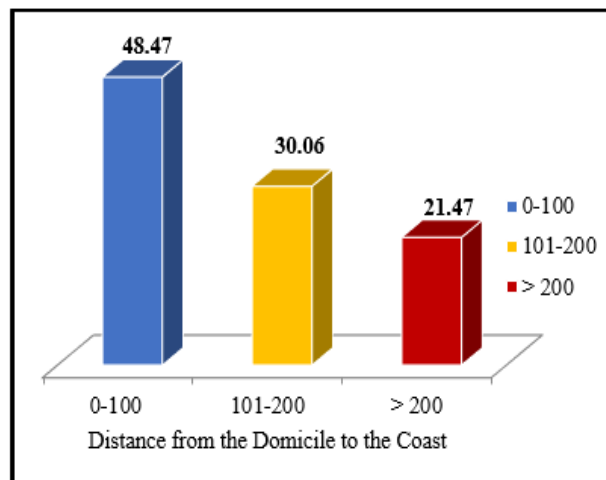
Source: Primary Data (Processed), 2019

Figure 3 indicates that most respondents have primary education (79.14%), while the rest have tertiary education (9.20%) and secondary education (junior high school education 6.13% and senior high school education 5.52%). The three educational levels inform us that the social capital of the communities in the coastal areas of Gorontalo in terms of eco-friendly technology adaptation to manage natural resources in the areas is relatively low. The situation also implies that socio-economic barriers in terms of educational level in the areas

have a significant impact. Now that the communities have a low educational level, they have a low adaptive ability that impedes the socio-economic condition in the area where they live.

### 3. Distance between the Domicile and the Coast

Based on the research of the distance from the domicile to the coast, the distance 0-100 meters reaches the highest percentage that is 48.47%, followed by 101-200 meters and >200 meters with the smallest percentage that is 21.47%. The detailed description is in Figure 4.



**Figure 4. Distance between the Domicile and the Coast**

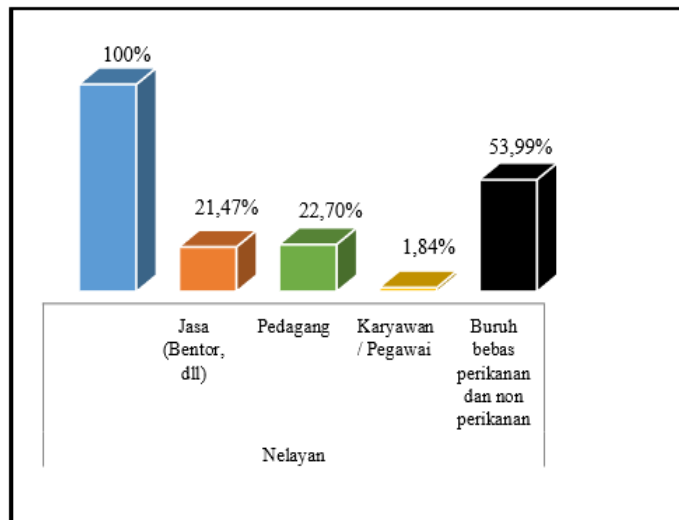
*Source: Primary Data (Processed), 2019*

The situation conveys that in terms of housings, most respondents' houses are located <200 meters from the beach (78.53%); while the rest build houses >200 meters from the beach (21.47%). It causes the first group's houses to experience coastal abrasion and other destructive impacts due to beach waves and sea winds. Contrastively, those who live more than 200 meters from the beach have a relatively good socio-economic condition as the distance prevents

coastal abrasion and destructive sea winds.

### 4. Occupation

Most respondents work as fishers and in other job fields i.e. laborers, service providers, merchants, and employees in either the government or private sector. According to the findings, most respondents are fishers. Besides, they have alternative jobs i.e. laborers, merchants, and service providers. The details are provided in Figure 5.

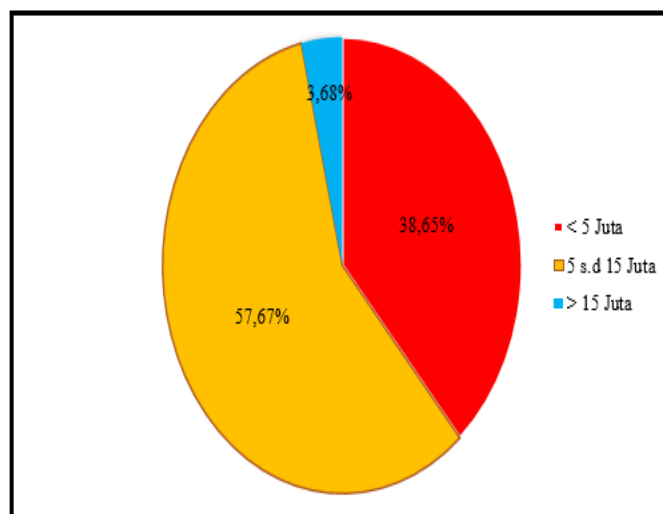


**Figure 5. The Respondents' Main and Alternative jobs**  
 Source: Primary Data (Processed), 2019

Indicated by Figure 5, most respondents work as fishers. However, fishery and non-fishery laborers (53.99%), merchants who sell in the coastal areas and fishery distributors (22.70%), auto-rickshaw driver (21.47%), and shopkeeper and shop employee (1.84%) are the alternative jobs they prefer when the seasons do not allow them to capture fish i.e. high waves and extreme weathers.

### 5. Production Asset Worth

The production assets owned by most respondents vary and consist of facilities and infrastructures to capture fish and other production facilities. The production asset worth is converted into Rupiah. Based on the data collected, the production asset worth is categorized into three groups i.e. <5 million, 5-15 million, and >15 million. The details are indicated in Figure 6.



**Figure 6. The Respondents' Production Asset Worth**  
 Source: Primary Data (Processed), 2019

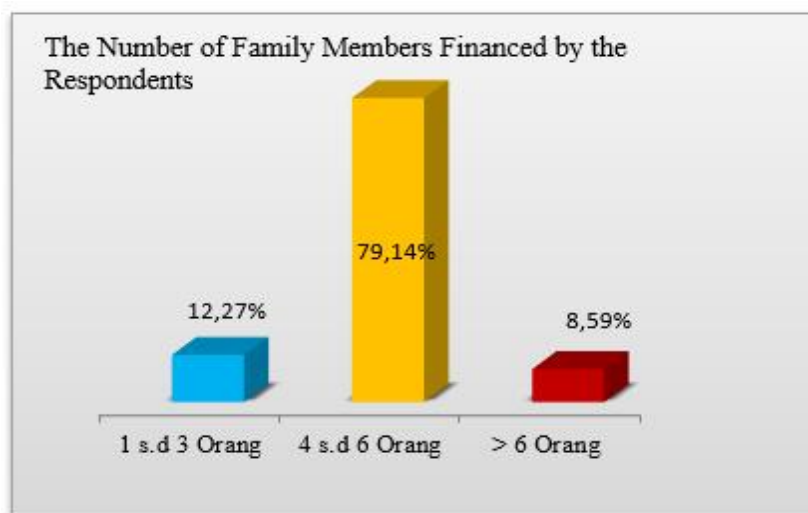


Referring to Figure 6, most respondents' assets are in the range of 5-15 million (57.67%), followed by the range of <5 million (38.65%) and >15 million (3.68%). Considering the value of the assets owned by our respondents, we conclude that the communities living in the coastal areas have a 'medium' situation because most of them had assets worth 5-14 million Rupiahs. The assets are mainly in the form of *ketinting* boats and simple equipment to capture fish. Meanwhile,

the communities whose assets are worth >15 million are the fishers who own fiber boats or wooden boats with a capacity of <5 GT and outboard motor of 15 PK.

#### 6. The Number of Family Members Financed

The number of family members financed by the respondents varies. The number of the family members financed is classified into three i.e. 1-3 people, 4-6 people, and >6 people. The details are indicated in Figure 7.



**Figure 7. The Number of Family Members Financed by the Respondents**

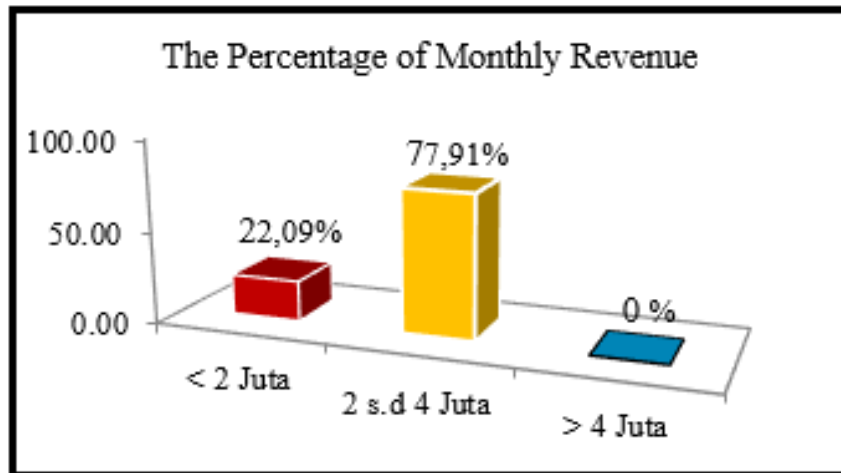
*Source: Primary Data (Processed), 2019*

Based on Figure 7, the highest number of family members financed by the respondents is 4-6 (79.14%), followed by 1-3 (12.27%), and >6 (8.59%). The number defines that respondents that finance 3-6 family members have a high expenditure. Meanwhile, the respondents that finance 1-3 family members come with a percentage of 12.27%. Furthermore, the respondents with a low expenditure have >6 family members (8.58%). It

signifies that the number of respondents with >6 family members is lower than the number of respondents with <6 family members.

#### 7. Monthly Revenue

The respondents' monthly revenue is categorized into three groups i.e. <IDR2,000,000; IDR2,000,000-4,000,000; and >IDR4,000,000. The details of the category are presented in Figure 8.



**Figure 8. The Respondents' Monthly Revenue**

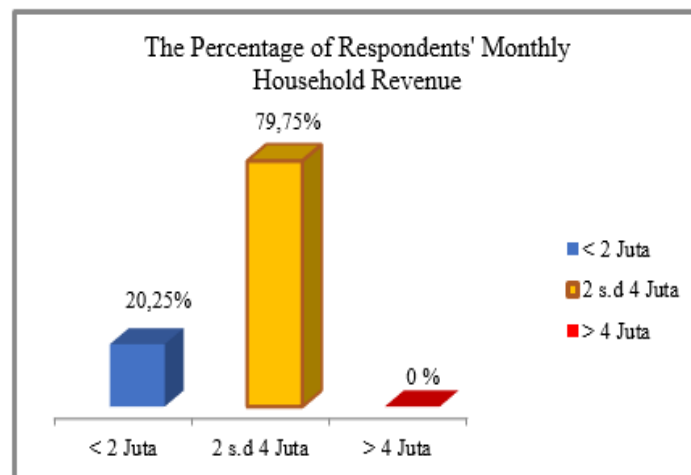
Source: Primary Data (Processed), 2019

As we can observed in Figure 8, most respondents's monthly revenue is IDR2,000,000-4,000,000 (77.91%), followed by <IDR2,000,000 (22.09%), and >IDR4,000,000 (0%). In terms of monthly income, the situation implies that the communities that live in the coastal areas of Gorontalo have a medium category with monthly revenue of IDR2,000,000-4,000,000. According to our interview with the respondents, the revenue is average monthly revenue from the total revenue accumulated in one year. The amount of revenue is

related to the production assets owned by the respondents. Most respondents own assets worth IDR15,000,000 with the asset type of boat fleet whose size is <3GT and *katining* machine and capturing equipment.

### 8. Monthly Household Expenditure

The respondents' monthl household expenditure is categorized into three i.e. <IDR2,000,000; IDR2,000,000-4,000,000; and >IDR4,000,000. The details of the category are presented in Figure 9.



**Figure 9. The Percentage of Respondents' Monthly Household Revenue**

Source: Primary Data (Processed), 2019

As presented in Figure 9, most respondents' monthly household revenue is IDR2,000,000-4,000,000 (79.75%), followed by <IDR2,000,000 (20.25%). The data imply that the economic condition of the communities that live in the coastal areas of Gorontalo, in terms of monthly household revenue, is in the medium and low categories and dominated by the communities that work as fishers.

## CONCLUSION

Based on the research, the socio-economic condition of the communities that live in the coastal areas of Gorontalo is in the medium category with an index of 181.81. We thus suggest the communities improve their socio-economic capacities through formal or non-formal education.

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