

## Analysis of the Welfare Level of Fishermen in Mulyorejo Sub-District, Surabaya City



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**ABSTRACT:** Fishing communities are generally residents in coastal areas with socioeconomic conditions that have low or below-average incomes so they are synonymous with poverty. This information is very useful and useful to determine the next steps in order to improve the welfare of fishing communities. Based on the research, the objectives achieved in the study are to analyze income, exchange rates, fishermen, and fishing businesses seen from food and non-food expenditures, and efforts to improve the welfare of fishing communities in Mulyorejo District, Surabaya City. The research location in Mulyorejo District, Surabaya City that Mulyorejo District, Surabaya City is one of the settlements for fishermen who have great potential in the field of fisheries in Surabaya, but every year it always decreases due to uncertain income. In this study, the number of samples determined will be examined as many as 41 samples in accordance with the number to be determined. Data analysis method using income analysis and exchange rate analysis of farmers. Results of the study average income for the upper layer classification is IDR 26,550,000 per year, the average income for the middle layer classification is IDR 17,275,000 per year and the average income for the lower layer classification is IDR 7,109,167 per year in the fishing business of fishing communities in Mulyorejo District, Surabaya City. The exchange rate of the sample fishermen in the study area was 65 or less than 100.

**KEYWORDS:** Fishermen's Welfare, Fishermen's Exchange Rate, Fishermen's Income

### INTRODUCTION

Fishing communities are generally residents in coastal areas with socioeconomic conditions that have low or below-average incomes so they are synonymous with poverty. This condition stems from the weak human potential of fishing communities and the lack of environmental carrying capacity in utilizing the natural potential and available natural resources (Wijayanti, 2019). With this reality, there are still many coastal communities that have poor conditions. This situation is a dilemma in the midst of the huge potential of the coast that should be able to encourage prosperity. However, it turns out that raising the social standard in a decent family economy does not work.

The purpose of welfare status is essential to fulfilling the right to life of the community, where community members have the desire to support their families. Community welfare is also part of the evaluation of quality of life, quality of life concerns people who are far from low socioeconomic conditions. Well-being is the set of satisfaction that a person receives from spending the income received. However, the level of well-being itself is relative, because it depends on the satisfaction obtained from consuming the income. Wawansyah et al., (2012) (Fesanrey, 2020) stated that the income level of the head of the family affects household welfare, but welfare in the household does not depend on the figure of the head of the family but is influenced by other household members as family members, fishermen's wives have a large share in increasing income and realizing family welfare.

According to Sari et al., (2013) in (Fesanrey, 2020) The income of fishing communities depends on their utilization. the potential of fishery resources in the ocean. The income of fishing communities will directly or indirectly affect the quality of their lives because income from fishing is the main or even the only source of income for them so the size of the income will greatly affect their lives, especially the ability to manage the environment in which they live. Capture fisheries are highly risky, given their shared resources, open management, and dependence on weather, seasons, migratory nature, and fish nature. This condition has an impact on fishermen's uncertain income, both in terms of time and amount (Firdaus and Cornelia, 2014).

Mulyorejo District is an area located on the coast in one of the cities of Surabaya, this condition causes people who live in the area to make a living as fishermen and chart laborers. According to (Kusnadi 2017) there are three social layers in the

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Indonesian fishing community, namely the upper layer (successful boat owners and fish traders), the middle layer (sea masters or boat crew leaders), and the lower layer (labor fishermen) where most of the people in Mulyorejo sub-district are at the bottom layer which causes people's lives to be in low welfare (poverty). Poverty can be seen from a person's inability to meet the needs of food, clothing, shelter, access to health, and education.

The production of capture fisheries in the Mulyorejo sub-district is higher than in the Kejawan Putih Tambak sub-district in 2022 with 3,1254 tons. Meanwhile, Mulyorejo capture fisheries production is low. From these data, it can be concluded the reason why researchers prefer the research area in Mulyorejo District, Surabaya City. Erratic fish catches coupled with erratic weather conditions cause fishermen to sometimes not bring catches. Based on initial observations through interviews with several fishermen, the author obtained information that the expenses of fishermen's families in Kejawan Putih Tambak Village were not balanced with the income earned by the fishermen's families.

In an effort to improve the welfare level of the fishing community in Mulyorejo District, Surabaya City needs to be studied so that efforts to improve welfare can be realized properly. Given the importance of this fishing sector in the national economic system, this problem needs to be expressed through research, to see and find out the extent of the welfare level of the fishing community in Kejawan Putih Tambak Village and Kalisari Village, Mulyorejo District, Surabaya City. This information is very useful and useful to determine the next steps in order to improve the welfare of fishing communities. Based on the research, the objectives achieved in the study are to analyze income, exchange rates, fishermen, and fishing businesses seen from food and non-food expenditures, and efforts to improve the welfare of fishing communities in Mulyorejo District, Surabaya City.

### RESEARCH METHODS

The research location in Mulyorejo District, Surabaya City, which was chosen purposively with a method of determining the location of the research was determined deliberately based on the consideration that Mulyorejo District, Surabaya City is one of the settlements for fishermen who have great potential in the field of fisheries in Surabaya, but every year it always decreases due to uncertain income.

Sampling techniques in this study include non-probability sampling, which means sampling techniques that do not provide equal opportunities or opportunities for each element (population member) to be selected as a sample (Sugiyono, 2016). The sample criteria are as upper-layer fishermen (successful boat owners and fish traders), middle-layer (sea masters or boat crew leaders), and lower-layer (labor fishermen) and use the same fishing tools. According to the criteria or conditions described above, the sampling technique used is quota sampling. Quota sampling means a technique to determine samples from populations that have certain characteristics to the desired number (quota) (Sugiyono, 2016). In this study, the number of samples determined will be examined as many as 41 samples in accordance with the number to be determined.

To answer analyzing revenue, after knowing the total costs and total receipts, the next step is to calculate revenue by subtracting total receipts by total costs. Kasim (2004) conveys to calculate income using the formula:

$$I = R - TC$$

Information:

I: Revenue (Rp)

R: Receipt (Rp)

TC: Total Cost (Rp)

To analyze the Neayan Exchange Rate analysis according to the Ministry of Marine Affairs and Fisheries (2001), the Fisherman Exchange Rate is the ratio of total income to total fishermen's household expenditure over a certain period of time. In this case, the income in question is gross income or can be referred to as fishermen's household income, the Fisherman's Exchange Rate can be formulated as follows.

$$NTN = \frac{Y_t}{E_t}$$

Where:

$Y_t$  : Total fishermen's revenue from fishing business (Rp)

$E_t$  : Total fishermen's expenditure for non-food and food (Rp)

If  $NTN < 1$ , it means that fishing families have the lower purchasing power to be able to meet their living needs and have the potential to experience a deficit in their household budget. If  $NTN > 1$ , it means that fishing families have a good level of welfare to meet their subsistence needs and have the potential to consume secondary or tertiary needs or save in the form of investment in goods.

To answer efforts in improving prosperity, the data analysis technique used is descriptive analysis, which is an analysis that aims to describe or describe an object of research through data that has been collected or by using information that has been

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obtained directly in the field. The data that has been obtained is described systematically and in detail, then compiled into a format that is easier to understand the supporting factors and inhibiting factors of the level of welfare of fishermen concretely. According to Usman and Akbar (2009), this form of qualitative analysis has three lines of activity, namely data reduction, data presentation, and conclusion drawing or verification.

### RESULTS AND DISCUSSION

#### Fishermen's Income Analysis Mulyorejo District, Surabaya City

The fishing business income of the fishing community is the difference between total revenue and total cost, there are profits that vary after deducting production costs and labor costs incurred by the respondent fishing community. For more details about the average revenue, production costs, labor costs, and net profits obtained by fishing communities in each respondent in the study area can be seen in Table 1. The following.

**Table 1. Average Income of Fishermen in Mulyorejo District 2022**

No	Information	Income (Rp/Kg/Year)		
		Upper	Intermediate	Lower
1	Acceptance	63.360.000	26.181.818	16.200.000
2	Total Cost	36.810.000	14.906.818	9.090.833
Jumlah		26.550.000	11.275.000	7.109.167

Source: Primer data, 2023

Based on table 1. It can be known that the fishing business income of the fishing community in Mulyorejo District is by adding up the costs of both fixed costs and variable costs. Income describes the profit obtained from the fishing business of the fishing community by each fisherman per year. The average income for the upper layer classification is IDR 26,550,000 per year, the average income for the middle layer classification is IDR 17,275,000 per year and the average income for the lower layer classification is IDR 7,109,167 per year in the fishing business of fishing communities in Mulyorejo District, Surabaya City.

The income obtained by each fishing community certainly varies depending on the production and area of land cultivated by fishermen. The amount of this income is sufficient and can be said to be successful because the costs incurred both fixed costs and variable costs can be paid, besides that farmers also get the difference in profit or profit. The profit obtained by farmers varies according to the number of respondents' fish catches. Most of the fishing communities in the Mulyorejo sub-district are still in the subsistence category where the fishermen do not think too much about how to get high profits, but the important thing is that they can produce enough to be eaten together with their families. This is because the Fishermen community in Mulyorejo District is a community that is very thick with its culture where there are still many fishing communities who believe in hereditary customs.

#### Analysis of Fishermen's Exchange Rate Mulyorejo District, Surabaya City

Household expenses are expenses incurred for the consumption of all members of the fishing household. Household consumption is classified into 2, namely food and non-food consumption without regard to the origin of goods, and is limited to expenditures for fishermen's household needs only, excluding expenses for the business.

**Table 2. Average Household Expenditure of Fishermen in Mulyorejo District 2022**

No	Information	Expenses (Rp/Year)					
		Upper		Intermediate		Lower	
		Rp.	%	Rp.	%	Rp.	%
1	Food	27.466.667	78	25.545.455	77	19.390.000	76
2	Non-Food	7.694.666	22	7.650.000	23	5.966.667	24
Jumlah		35.161.333	100	33.105.455	100	25.356.667	100

Source: Primer data, 2023

From Table 2. Shows that the total average expenditure of fishermen households in Mulyorejo District of Surabaya City for the upper layer classification is Rp 35,161,333 per year, the average for the middle layer classification is Rp 33,105,455 per year and the average for the lower layer classification is Rp 25,356,667 per year in the fishing community in Mulyorejo District of Surabaya City. The total average expenditure of fishing households in Mulyorejo District, Surabaya City, includes food expenditure for the

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upper layer classification of Rp 27,466,667 per year or 78 percent, the average for the middle layer classification of Rp 25,545,455 per year or 77 percent and the average for the lower layer classification of Rp 19,390,000 per year or 76 percent in the fishing community in Mulyorejo District, Surabaya City. Food expenditure has a greater expenditure than non-food expenditure, meaning that respondent households still spend most of their opinions to meet food needs rather than non-food needs.

The fishing community in Mulyorejo District, Surabaya City, is mostly even 80 percent still in the subsistence category where the farmer does not think too much about how to get high profits, but the important thing is that the land can produce enough to be eaten together with his family. Because the fishing community in Mulyorejo District, Surabaya City is a community that is very thick with its culture where there are still many people who believe in hereditary customs. From the results of the study, it can be known that the amount of farmer household expenditure from the total income of paddy rice farming is described in the following table.

**Table 3. Average Household Income and Expenditure of Fishermen in Mulyorejo District 2022**

No	Information	Cost (Rp/Year)		
		Upper	Intermediate	Lower
1	Fishermen's Business Income	26.550.000	11.275.000	7.109.167
2	Household Expenses	35.161.333	33.105.455	25.356.667

Source: Primer data, 2023

From Table 3. It can be seen that the average household expenditure of fishermen in the study area is Rp 25,356,667 to Rp 35,161,333 per year and fishing business income is Rp 7,109,167 to Rp 26,550,000 per year. This means that fishermen's household expenditure takes most of the income from the total income of rice farmers per month, which is the difference between household income and expenditure. So it can be concluded that fishermen's household expenditure is greater than the total fishing business income received. The fisherman exchange rate (NTN) is a measure of the exchangeability of fishery products produced by farmers to goods and services purchased by fishermen households, both in the context of fishery production business and fisherman household consumption. A measurement of fishermen's purchasing power that reflects the level of welfare is formulated in the form of the fishermen's exchange rate (NTN). NTN functions to measure the exchangeability of fishery products produced by fishermen with goods or services needed for fishermen's household consumption and the need to produce fishery goods.

The types of commodities studied are fisheries, production inputs paid by farmers include labor costs, and other production factors including equipment depreciation costs. Meanwhile, commodities purchased by fishermen to meet the needs of life include food and non-food consumption. The price used to calculate the exchange rate of fishermen is the price in 2022. Using the calculation concept (NTN), the following are the results of calculating the exchange rate of fishermen from sample fishermen in the research area.

**Table 4. Results of the calculation of the Fishermen's Exchange Rate in Mulyorejo District 2022**

No	NTN	Total (People)		
		Upper	Intermediate	Lower
1	< 100	14	11	15
2	>100	1	0	0
Rata - Rata	65	15	11	15

Source: Primer data, 2023

But on average, the exchange rate of sample fishermen in the study area was 65 or less than 100. Thus, it can be concluded that the welfare level of sample fishermen in Mulyorejo District, Surabaya City in 2022 is relatively low (less prosperous). This means that the income obtained from fishing is less able to finance the fishing business and meet the needs of fishermen's households (families) and fishermen also cannot save part of their income. The average East Java Fishermen Exchange Rate in 2022 increased by 2.59 percent compared to 2021, from 101.11 to 103.73. The increase was due to the increase in the price index received by fishermen (6.16 percent) greater than the increase in the price index paid by fishermen (3.48 percent) (Central Statistics Agency, 2022). This shows that the average exchange rate of captured fishery products against household consumer goods and the cost of producing and adding fishermen's capital goods in 2022, is generally higher than the conditions in 2021.

With regard to the condition of the fishing community in general and also labor fishermen in particular, the Surabaya City Government seeks to maximize the empowerment of fishing communities so that they can achieve a high and better degree of

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prosperity. Apart from that, in terms of improving the welfare of the fishing community in Mulyorejo District, Surabaya City, namely through improving the quality of human resources of labor fishermen through socialization on optimizing marine resource management accompanied by training on mastery of fishing technology and increasing entrepreneurial skills.

With the development in coastal communities, through modernization of fisheries in the use of capture fisheries and inland fisheries. Such as the use of motorized boats that can accommodate more catches with better production quality. The potential in marine resources that are usually only on a local scale is now changing to be oriented towards market needs. With an increase in fishery production, it will indirectly provide bargaining power for investors who enter. When the results of fish production will further strengthen the cooperative relationship between fellow fishermen. So in this aspect, modernization is not only in the economic dimension but also moral and ethical.

The increase in fishermen's opinion is also inseparable from the increasing amount of fishery production. But when compared with the law of demand and the law of supply which states that when the goods available are getting bigger, the nutrient will decrease. If this is true, fishermen will still lose money. However, if this is handled properly and maintained electability, what happens is the increasing income of fishermen so that there will be no more poverty in fishermen.

### CONCLUSION

Based on the research on the Analysis of the Level of Fishermen's Welfare in Mulyorejo District, Surabaya City that has been carried out, it can be concluded that the average income for the upper layer classification is IDR 26,550,000 per year, the average income for the middle layer classification is IDR 17,275,000 per year and the average income for the lower layer classification is IDR 7,109,167 per year in the fishing business of fishing communities in Mulyorejo District, Surabaya City. The exchange rate of the sample fishermen in the study area was 65 or less than 100. Thus, it can be concluded that the welfare level of sample fishermen in Mulyorejo District, Surabaya City in 2022 is relatively low (less prosperous). This means that the income obtained from fishing is less able to finance the fishing business and meet the needs of fishermen's households (families) and fishermen also cannot save part of their income. Based on the three indicators used, basically shows that most fishermen in Mulyorejo District belong to families whose standard of living is less prosperous. Efforts to increase the welfare of fishermen by improving fishing technology so that they can increase fish production can increase income and the welfare of fishermen's families are fulfilled.

### REFERENCES

- 1) Badan Pusat Statistik (BPS). 2022. Indikator Kesejahteraan Rakyat (2021). Jakarta: BPS.
- 2) Departemen Kelautan Dan Perikanan Direktorat Jenderal Perikanan Tangkap. 2001. Pedoman Kerjasama Operasional Pelabuhan Perikanan. Jakarta: Direktorat Prasarana Perikanan Tangkap Proyek Pengembangan Dan Pemanfaatan Sumberdaya Perikanan Tangkap Pusat
- 3) Fesanrey, W., & Tuhulola, E. 2022. Analisis Tingkat Kesejahteraan Masyarakat Nelayan Di Desa Bara: (Analysis of Welfare Level of Fishermen Community). Uniqbu Journal of Exact Sciences, 3(2), 8–16. <https://doi.org/10.47323/ujes.v3i2.226>
- 4) Firdaus, Maulana dan Cornelia Mirwantini Witomo. 2014. Analisis Tingkat Kesejahteraan Dan Ketimpangan Pendapatan Rumah Tangga Nelayan Pelagis Besar Di Sendang Biru, Kabupaten Malang, Jawa Timur. J. Sosek KP Vol. 9 No. 2 Tahun 2014
- 5) Kasim, Syarifuddin. 2004. Petunjuk Praktis Menghitung Pendapatan Usahatani Edisi II. Jurusan Sosial Ekonomi Pertanian. Fakultas Pertanian. Universitas Lambung Mangkurat. Banjarbaru
- 6) Kusnadi. 2017. Konflik Sosial Nelayan: Kemiskinan Dan Perebutan Sumber Daya Perikanan. Yogyakarta: PT LKiS Pelangi Aksara.
- 7) Sugiyono. 2016. Metode Penelitian Kuantitatif, Kualitatif dan R&D. Bandung: PT Alfabet.
- 8) Usman, H., & Akbar, P. S. 2009. Metodologi Penelitian Sosial. Jakarta: PT Bumi Aksara. Wijayanti, L dan Ihsanuddin. 2019. Strategi Peningkatan Kesejahteraan Masyarakat Nelayan Kecamatan Pademawu Kabupaten Pamekasan. Jurnal Agriekonomika, Volume 2 (2): 10



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