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Analysis of the Welfare Level of Fishing households in Klampis Village, Klampis Subdistrict, Bangkalan Regency

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ABSTRACT

Fishermen are one of the coastal community groups that are vulnerable to economic uncertainty due to their dependence on fishing yields and natural factors. Weather fluctuations, price changes, and limited access to production facilities often affect their income levels and overall welfare. In Klampis Village, the increase in the number of fishermen has not been accompanied by an increase in fish catches, resulting in various economic problems within fishermen's households. This study aims to analyze the household income and welfare level of fishermen based on the Fishermen's Exchange Rate (Nilai Tukar Nelayan/NTN) in Klampis Village, Klampis District, Bangkalan Regency. The research method used is descriptive quantitative, with 60 fishermen selected through purposive sampling from a total population of 150 fishermen. Data analysis was conducted through the calculation of household income and the Fishermen's Exchange Rate (NTN) to describe the economic welfare condition of fishermen. The results showed that the average household income of fishermen was Rp1,331,352 per month, while the average household expenditure reached Rp5,199,788 per month. The NTN value of 0.256 (<1) indicates that fishermen's household expenditures are greater than their income. This condition suggests that fishermen's households in Klampis Village are experiencing an economic deficit, which implies a limited ability to meet basic needs and an increasing level of economic and social vulnerability among fishermen.

INTRODUCTION

Fisheries are one of the natural resources that play an important role and become the backbone of the economy for people living in coastal areas. Fishermen's income is highly dependent on fish catches. If the catch is abundant, income increases so that it can meet daily needs (Andriani & Nuraini, 2021). However, in practice, most fishermen have not yet achieved welfare because they have not been able to optimize the utilization of catches. Factors such as low education, unstable

income, the number of family dependents, and the lack of government policy support also affect their welfare (Wafi et al., 2019)

Madura Island is a strategic region with significant development in the marine and fisheries sector. Consisting of four districts, namely Sumenep, Bangkalan, Sampang, Pamekasan and Sumenep, this region has 274 coastal villages. One of the potential areas is Bangkalan Regency which consists of 10 coastal sub-districts. Klampis sub-district is one of the centers of fishing activities in this district, where the majority of the population work as fishermen. the number of fishermen engaged in capture fisheries reflects the level of dependence of coastal communities on the marine sector. Data regarding the number of fishermen in Bangkalan Regency based on sub-districts during 2021 - 2022, is presented in Table 1 below.

Table 1. Number of Capture Fishermen & Fisheries Production by sub-district in Bangkalan Regency 2021-2022

District	Marine Fisheries		Marine Fisheries (ton)	
	2021	2022	2021	2022
Kamal	363	262	184,10	82,60
Labang	466	373	1.183,70	1.340,30
Kwanyar	1.345	911	3.656,30	3.994,50
Modung	329	185	26,30	26,00
Socah	799	793	2.973,40	2.654,20
Bangkalan	1.078	879	3.471,20	3.625,90
Arosbaya	722	462	3.130,20	3.442,60
Tanjungbumi	1.321	735	5.576,50	5.282,30
Sepulu	466	406	1.999,10	1.892,10
Klampis	939	1.033	4.103,40	3.939,20
Bangkalan Regency	7.858	6.039	26.304,20	26.279,70

Source: Bangkalan Regency Fisheries Service, 2024.

Based on the data presented in Table 1, it shows that the number of capture fishermen in Klampis Sub-district has increased, from 939 people in 2021 to 1,033 people in 2022. This increase indicates that the capture fisheries sector remains the main source of livelihood for people in the local area. However, an increase in the number of fishermen does not always reflect an increase in welfare, especially if it is not accompanied by an increase in catch production. Klampis Sub-district is one of the sub-districts with the highest fish catch production in Bangkalan Regency after Tanjung bumi Sub-district. Although the number of fishermen has increased by 94 people, fish production has actually decreased from 4,103.40 tons in 2021 to 3,938.40 tons in 2022 or a decrease of 4.03%. This decline indicates that there is pressure on fisheries resources, which can be caused by overexploitation, as well as an imbalance between labor growth and the availability of fisheries resources.

Klampis Timur Village is one of the coastal areas in Klampis Subdistrict, where most of the residents work as fishermen. The economic conditions of the community in this village are greatly influenced by the fluctuating and seasonal nature of marine catches. The unstable income makes it difficult for fishermen to achieve a decent standard of living. One important indicator in measuring the welfare of fishermen is the Fishermen's Exchange Rate (FER), as it reflects the balance between income earned and operational costs incurred in fishing activities. Based on the background description above, the objectives of this study are (1) to analyze the income of fishing households in Klampis Village, Klampis Subdistrict, Bangkalan Regency (2) to analyze the welfare level of fishermen based on the fishermen's exchange rate.

LITERATURE REVIEW

Fishermen are a community group that earns a living from marine resources through fishing or fish farming (Mulyadi, 2017). They generally live in coastal areas, close to where they work. As a community that lives in coastal areas close to where they do business, they have different social characteristics compared to people who live inland.(Fargomeli, 2014)

Revenue is the total amount of income earned within a certain period of time from the sale of goods or services in a business activity. Revenue is not the same as income. Revenue reflects the total amount before deducting expenses, while income is the net value after deducting expenses or operating costs (Susanti, 2016). A person's income can be influenced by the type of work they do, such as entrepreneur, worker, employee, or fisherman, and can be used to meet daily needs, saved as savings, or invested in business activities.(Ramadhan et al., 2023)

Fishermen's household income comes from three types of activities: on-farm, off-farm, and non-farm. The main source of fishermen's income comes from on-farm activities, particularly fishing, which is the main occupation for most fishermen. Meanwhile, income from activities outside this sector is generally relatively lower. (Wulandari, 2022). The amount of fishermen's income is greatly influenced by the volume of their catch, the selling price of fish, and the profit-sharing system. If household income is low, fishing families tend to struggle to meet basic needs such as food, clothing, shelter, healthcare, and education. Household expenditures of fishermen are generally classified into two main categories: food and non-food needs. When income is limited, the majority of expenditure allocation tends to be focused on food needs, as they are considered the top priority in household consumption (Gazali et al., 2023).

Well-being, according to KBBI (Ministry of Education and Culture), comes from the word sejahtera, which describes a state of safety and peace, both physically and mentally. Well-being is subjective because it differs between individuals and families, depending on each person's perspective and lifestyle (Rosmalina, 2022).

Based on Law No. 11 of 2009, welfare is defined as the fulfillment of material, spiritual, and social needs that enable a person to live a decent life and be able to carry out their social roles (Anandhyta & Kinseng, 2020). The level of welfare can be measured through economic indicators, such as income, access to education, and equitable improvement in the quality of health services, so that individuals can feel secure, comfortable, and prosperous (Febrianti, 2021).

The Fishermen's Exchange Rate (NTN) is one of the economic indicators used to measure the welfare of fishing households. In general, NTN describes the ratio between the total income earned by fishing households and their total expenditure in a given period. The income referred to includes income from fishing and non-fishing activities (Sarapil et al., 2020). The Fishermen's Exchange Rate reflects the two roles of fishermen, namely as producers (income from catches minus production costs and investments) and as consumers (ability to meet household needs) (Mandak et al., 2020). The higher the NTN value, the greater the purchasing power and the better the welfare.

METHOD

Research Location and Time

The research location was deliberately chosen (purposive), namely in Klampis Timur Village, Klampis Subdistrict, Bangkalan Regency. This location was selected based on its strategic geographical conditions, with abundant fishery and marine resources. This area has a large sea coverage and is a center for fishing and inland fisheries activities spread along its coastline. In addition, most of the population in the area depends on the fisheries sector for their livelihood, making Klampis Village a relevant location for research. The research was conducted from April to May 2025.

Population and Sample

The population in this study included all individuals who were the subjects of the study, namely 150 fishermen who were members of six fishing groups in Klampis Village. From this number, 60 respondents were selected as the research sample using non-probability sampling with purposive sampling techniques. According to Sugiyono (2018), purposive sampling is a technique for determining samples based on certain considerations or criteria tailored to the research objectives, so that the samples obtained can represent the characteristics of the population relevant to the issues being studied.

Types and Sources of Data

This study uses a quantitative descriptive approach. The data used comes from two types of sources, namely primary data and secondary data. Primary data was obtained through direct observation at the research location, namely Klampis Village, as well as through questionnaires and structured interviews with

respondents. Meanwhile, secondary data was obtained from various relevant sources, such as literature, scientific publications (journals and books), and data from relevant agencies, including the Central Statistics Agency (BPS) and the Bangkalan Regency Fisheries and Marine Service.

Data Analysis

The data analysis approach in this study uses income calculation methods and Fishermen's Exchange Rate (NTN), which includes several components consisting of:

1. Cost Analysis

Total costs are the accumulation of all expenses in the production process, consisting of fixed costs and variable costs. According to Soekarwati (1995) in Wahda (2021), total production costs (total cost) can be calculated by adding the two types of costs using the formula:

$$TC = FC + VC$$

Where:

TC = Total Cost
FC = fixed cost
VC = Variabel cost

2. Analysis of Fishermen's Revenue

Based on Soekartawi's (1995) explanation in Wahda (2021), income is defined as the product of the number of production or catch multiplied by the selling price per unit. To determine the amount of fishermen's income, the following formula is used:

$$TR = P \times Q$$

Where:

TR = Total Revenue (Rp)
P = Price Level (Rp)
Q = Number of Production Units (Quantity)

3. Revenue/Profit Analysis

Based on Soekartawi's (1995) explanation in Wahda (2021), the profit from a business is obtained from the difference between total revenue and total expenses. Profit is calculated using the following formula:

$$\Pi = TR - TC$$

Where:

Π = income (Rp)
TR = Total revenue (Rp)
TC = Total Production Costs (Rp)

4. Analysis of Non- Fishery Income

Non-fishing income is intended to provide information on other types of work outside of fishing activities, as well as the amount of income generated from such work. This analysis includes the contribution of income earned by wives and children in fishing households, which also supports the overall economic condition of the family.

5. Analysis of Total Household Income of Fishermen

Household income is calculated to determine the total income earned from various sources, with a primary focus on fishing activities. The aim is to determine the total income received by fishing households. Total income is calculated using the following formula:

$$PK = PN + PNN$$

Where:

PK = Household Income
PN = Income from fishing activities
PNN = Income from non-fishing activities

6. Fishermen's Exchange Rate

The Fishermen's Exchange Rate (NTN) is the ratio between the price index obtained by fishermen from their sales and the price index that must be paid for production and consumption needs. According to Basuki et al, (2001), the FTR is the ratio of total income to total expenditure of a fisherman's household over a certain period of time. The income referred to is gross income, or what can be called the income of a fisherman's household. The Fishermen's Trade Ratio can be formulated as follows:

$$NTN = Yt/Et$$
$$Yt = YFt + YNFt$$
$$Et = Eft + EKt$$

Where:

Yft = Total Income of Fishermen from fishing activities (Rp)
YNFt = Total Income of fishermen from non-fishing activities (Rp)
Eft = Total expenditure by fishermen on fishing activities (Rp)
EKt = Total expenditure by fishermen for consumption by fishermen's families (IDR)
t = Time period (month, year)

The criteria for the Fishermen's Exchange Rate (NTN) can be classified into three categories, namely:

- NTN < 1, Indicating that the purchasing power of fishing families is low, marking it difficuit to meet basic needs and putting them at risk of household financial deficits.

- NTN = 1, Inciditing that fishermen's Income is sufficient to meet basic needs or subsistence;

NTN > 1, Inciditing that fishing families have a relatively good level of welfare, enabling them to meet secondary or tertiary needs, as well as set aside part of their income for savings or investment in goods.

RESULT AND DISCUSSION

Fishermen Household Income

Fixed Costs

Fixed costs are expenses that remain unchanged regardless of changes in production volume. Examples include depreciation of fishing gear, machinery, and boats. These costs are used to support the production process over a relatively long period of time and are not affected by the volume of production. Fixed costs incurred by fishermen include the procurement of equipment such as nets, buoys, weights, flashlights, engines, boats, and storage boxes. Details of these costs are shown in Table 2.

Table 2. Details of Average Fixed Costs of Fishing Activities per Month

No	Fixed Cost Components (Equipment)	Amount (units)	Price (IDR)	Economic life (Months)	Depreciation expense (IDR)	Maintenance cost (IDR)
1.	Net	2	250.850	12	20.904	13.516
2.	Float	20	154.840	12	12.903	-
3.	Weight	20	257.500	12	21.458	-
4.	Flashlight	1	155.334	12	12.944	10.500
5.	Machine	2	9.700.000	36	269.444	19.783
6.	Boat	1	22.000.000	60	366.667	15.241
7.	Storage box	2	1.260.000	24	52.500	-
8.	Net maintenance costs	-	-	-	-	13.516
9.	Flashlight maintenance costs	-	-	-	-	10.500
10.	Machine maintenance costs	-	-	-	-	19.783
11.	Boat maintenance costs	-	-	-	-	15.241
	Amount		33.778.524		756.820	59.040
	Total fixed costs					815.860

Source: Primary data processed, 2025.

Based on Table 2, the average total fixed costs incurred by fishing households in Klampis Village amounted to IDR 815,860 per month, consisting of depreciation costs for fishing gear amounting to IDR 756,820 and maintenance costs amounting

to IDR 59,040 per month. These fixed costs include depreciation of fishing equipment such as nets, floats, weights, flashlights, engines, boats, and storage boxes. The amount of fixed costs is influenced by the initial investment value of fishing equipment and the frequency of its use in fishing activities. The greater the investment in fixed assets such as boats and engines, the higher the depreciation value allocated each month. This is in line with (Gustami, 2017) opinion, which states that investment is capital expenditure in the form of fixed assets used in the production process and has a long-term useful life. In addition, (Erlansyah & Mohamad, 2023), emphasize that the success of a fishing business is greatly influenced by the amount of production input, including the cost of facilities, labor, and depreciation of fishing equipment.

Variable Costs (VC)

Variable costs are costs incurred by fishing businesses each time they engage in fishing activities. These costs fluctuate depending on the intensity of fishing activities. They include direct expenses such as fuel (diesel), crew consumption, ice blocks for preserving catches, engine oil, and labor wages. The average details of variable costs in fishing activities per month can be seen in Table 3.

Table 3. Details of Average Monthly Variable Costs for Fishermen's Activities

No	Variable Cost Components (Equipment)	Amount (units)	Price (IDR)	Cost (IDR/Month)
1.	Fuel (Diesel)	62 liters	10.208	632.896
2.	Consumption	16 packages	11.300	259.900
3.	Ice blocks/Cooling	75 sticks	2.275	120.575
4.	Engine oil	24 liters	32.450	1.135.750
5.	Labor wages (profit sharing)	1 person	1.966.667	1.966.667
	Amount			4.115.788

Source: Primary data processed, 2025

Based on Table 3, the average total variable costs incurred by fishermen in Klampis Village, Klampis Subdistrict, Bangkalan Regency amounted to IDR 4,115,788 per month. These variable costs include fuel (diesel) amounting to Rp632,896, consumption costs of Rp259,900, ice blocks of Rp120,575, engine oil of Rp1,135,750, and labor wages of Rp1,966,667 per month. These variable costs reflect routine operational needs that are directly used in fishing activities, and their amounts fluctuate according to the intensity of fishing. The higher the frequency of fishing trips, the greater the variable costs incurred. This is in line with the opinion of (Fitriani et al., 2025) who state that an increase in variable costs such as fuel, logistics, and fishing equipment reflects a larger scale of fishing operations and higher intensity of work for fishermen.

Total Cost (TC)

Total cost (TC) is the accumulation of all costs incurred by fishermen during one month of production activities. These costs include fixed and variable costs incurred during a certain period. Fishing activities include fuel (diesel), ice blocks, consumption, engine oil, and labor wages. Total cost is obtained by adding variable costs and fixed costs, reflecting the total production costs of fishermen per month. The details of the total cost calculation are presented in Table 4 as follows.

Table 4. Details of total monthly production costs for fishing activities

No	Description	Cost (IDR/Month)
1.	Fixed Costs	815.860
2.	Variable Costs	4.115.788
	Amount	4.931.648

Source: Primary data processed, 2025

Based on Table 4, the total production costs for fishermen in Klampis Village, Klampis Subdistrict, Bangkalan Regency reached IDR 4,931,648 per month. This figure is a combination of fixed costs of IDR 815,860 and variable costs of IDR 4,115,788. Fixed costs include expenses that are not affected by production volume, such as depreciation of fishing gear, machinery, boats, and maintenance costs. Meanwhile, variable costs reflect expenses that fluctuate according to the intensity of fishing activities, including fuel, ice blocks, consumption, and labor wages. The cost structure shows that the largest portion comes from variable costs, which reflects the fishermen's dependence on daily operational activities. These findings are in line with (Arif et al., 2024), who state that in traditional fishing businesses, the proportion of variable costs tends to be greater due to the use of relatively simple equipment and low fixed investment values. Therefore, efficient management of variable costs is an important factor in improving the profitability and sustainability of fishing businesses.

Fishermen's Revenue (TR)

Revenue is the total income earned by fishermen, calculated based on the multiplication of catch volume and selling price per unit. The amount of revenue is greatly influenced by two main factors, namely catch volume and the selling price of fishery commodities prevailing in the market. Fishermen's income comes from eight main types of catch commodities, namely mackerel, largehead hairtail, Spanish mackerel, mackerel tuna, shrimp, anchovies, snapper, and crab. The details of this data can be seen in Table 6.

Table 5. Details of Average Monthly Income of Fishermen

No	Types of Fish	Production (kg)/month	Price (IDR)	Income (IDR/Month)
1.	Mackerel (Rastrelliger spp)	20,0	20.500	410.000

No	Types of Fish	Production (kg)/month	Price (IDR)	Income (IDR/Month)
2.	Largehead hairtail (Trichiurus lepturus)	20,8	35.000	728.000
3.	Spanish mackerel (Scomberomorini)	18,5	45.000	832.500
4.	Mackerel tuna (Euthynnus affinis)	15,0	25.000	375.000
5.	Shrimp (Caridea)	22,9	45.000	1.030.500
6.	Anchovy (Stolephorus spp)	20,0	32.000	640.000
7.	Snapper (Lutjanidae)	16,0	45.000	720.000
8.	Crab (Portunidae)	19,8	50.000	990.000
	Total			5.726.000

Source: Primary data processed, 2025.

Table 5, shows that the total income of fishermen in one month reached IDR 5,726,000, which is the accumulated result of eight types of main catch commodities. This value is obtained from the multiplication of production volume (kg/month) by the selling price per kilogram for each type of fish. Mackerel at IDR410,000, largehead hairtail at IDR728,000, Spanish mackerel at IDR832,500, mackerel tuna at IDR375,000, shrimp at IDR1,030,500, anchovy at IDR640,000, snapper at IDR720,000, and crab at IDR990,000. Fishermen's income is calculated by multiplying the production volume (kg/month) by the selling price per kilogram for each type of fish. This statement is supported by (Yapanto et al., 2021), who state that fishermen's income can be calculated using the formula TR = sales x catch, which means that income is greatly influenced by changes in price and quantity of catch. A similar point was also made by (Ramadhan et al., 2014), who stated that fishermen's income is largely determined by two main factors, namely the selling price of fish and the amount of catch obtained. The quantity of catch can vary from month to month, so fluctuations in price and volume can affect fishermen's total income.

Fishermen's Income (PN)

Fishermen's income is the difference between total revenue and total production costs. This concept is used to measure the extent to which fishing operations generate profits after all operating costs are deducted from total revenue. Details of the calculation of net income for fishermen in Klampis Village, Klampis District, Bangkalan Regency are presented in Table 7.

Table 6. Details of Monthly Net Income Calculations for Fishermen.

No	Description	Amount (IDR/Month)
1.	Acceptance (TR)	5.726.000
2.	Total Cost (TC)	4.931.648

No	Description	Amount (IDR/Month)
3.	Revenue (π)	794.352

Source: Primary data processed, 2025.

Based on Table 6, the total income of fishermen in Klampis Village reached IDR 5,726,000 per month, with total operational costs of IDR 4,931,648 per month. The difference between these two components results in a net income (π) of Rp794,352 per month, which reflects the real profit after deducting all production costs. The amount of net income is influenced by two main factors, namely the frequency of fishing trips and the value of the catch. The higher the intensity of fishing activities and the better the selling price of fish in the market, the greater the potential profit. This finding is in line with (Nanlohy et al., 2025), who stated that the frequency of fishing has a significant relationship with the volume of catch, which in turn affects the increase in fishermen's income. However, the level of fishermen's income is still influenced by fluctuations in the selling price of the catch in the market, which is one of the external factors determining the economic welfare of fishermen's households.

Non-fishing income (PNN)

Non-fishing income is an additional source of household income obtained from activities outside of the main fishing activities, such as trading, working as laborers, in the informal sector, or running other side businesses. This income serves as a strategy for diversifying the economy of fishing households to reduce dependence on catches, which are subject to fluctuations due to weather and seasonal factors. Non-fishing economic activities play an important role in maintaining income stability and improving the economic resilience of coastal households. Thus, the contribution of non-fishing income is an important indicator in assessing the overall welfare of fishing households. Details of non-fishing occupations are presented in Table 7.

Table 7. Details of Average Monthly Income of Non-Fishermen

No	Type of Work	Amount (People)	Average Income (IDR/Month)
1.	Merchant	10	784.000
2.	Farm workers	12	300.000
3.	Driver	6	420.000
4.	Construction Worker	8	640.000
5.	Child working part-time	4	600.000
6.	Without additional work	20	-
	Average		537.000

Source: Primary data processed, 2025.

Table 7 shows that the total non-fishing income (PNN) obtained from economic activities outside the fisheries sector has an average total of Rp537,000 per month. This income is derived from various types of additional work undertaken by fishing family members, including traders (IDR784,000, 10 people), agricultural workers (IDR300,000, 12 people), drivers (IDR420,000, 6 people), construction workers (IDR640,000, 8 people), and part-time working children (IDR600,000, 8 people). Meanwhile, 20 respondents did not have additional jobs, which also lowered the average total income. Wijaya (2024) states that income from non-fishing sectors such as trade and informal services contributes significantly to the total income of fishing households. Generally, this income comes from wives or children who are not directly involved in fishing activities, but their roles are crucial in maintaining family economic stability. This finding is also in line with (Maulana Firdaus, 2015), who states that the economic activities of family members outside the fisheries sector, such as becoming traders or laborers, have a real impact on supporting the economy of fishing households.

Fishermen's Family Income (PKN)

Fishermen's family income is the total of the main income earned by fishermen through fishing activities, plus side income or non-fishing income from other family members, such as wives, children, or other family members. Fishermen's family income does not only come from the fisheries sector, but is also supplemented by additional income earned from family members' activities outside that sector. This information can be seen in Table 8.

Table 8. Details of Average Income of Fishermen's Families.

No	Indicator	Value (IDR/Month)
1.	PN (fisherman's income)	794.352
2.	PNN (non-fisherman income)	537.000
	PKN (Fisherman's Family Income)	1.331.352

Source: Primary data processed, 2025.

Based on Table 8, the average total income of fishing families in Klampis Village is IDR 1,331,352 per month. This income comes from two main sources, namely fishing income (PN) from fishing activities amounting to IDR 794,352 and non-fishing income (PNN) from jobs outside the fisheries sector amounting to IDR 537,000 per month. This shows that fishing households do not only depend on marine catches, but also earn additional income from non-fishing economic activities as a diversification strategy to maintain income stability. Non-fishing income serves as a buffer when primary income declines due to seasonal factors, extreme weather, or a decline in catches. This finding is in line with (Arianti et al., 2025), who stated that most fishing families implement a dual income strategy to increase household economic resilience to fishing business risks. This additional

income becomes an important support when marine catches are insufficient, especially due to unpredictable seasons or extreme climatic conditions.

Fisherman's Welfare Level Based on Fisherman's Exchange Rate (NTN)

The Fishermen's Exchange Rate (NTN) is an indicator used to measure the welfare of fishing households by comparing the total income and total expenditure of fishing households in a given period (per month). Income includes all gross income of fishing families, both from fishing and non-fishing activities. Expenditures include all operational costs of fishing activities and household consumption expenditures. Information regarding the expenditure of fishermen in Klampis Village is shown in Table 9.

Table 9. Details of Average Fishermen's Expenditure

Description	Average (IDR/Bulan)
Food Expenditure	615.500
Clothing Expenditure	186.500
Board Expenditure	130.500
Non-Food Expenditure	151.500
Description	Rata rata (Rp/Bulan)
Total household consumption expenditure of fishermen (EKt)	1.084.000
Total fishery business expenditure (Eft)	4.115.788
Total EKt + EFt	5.199.788

Source: Primary data processed, 2025.

Based on Table 9, the total average monthly expenditure of fishing households in Klampis Village, Klampis Subdistrict, Bangkalan Regency reached IDR 5,199,788. This expenditure is divided into two main categories, namely household consumption expenditure (EKt) and expenditure for fishing businesses (Eft). Household consumption expenditure is recorded at IDR 1,084,000 per month, with the largest portion being food at IDR 615,500. Other components include clothing at IDR 186,500, housing at IDR 130,500, and other non-food expenditures at IDR 151,500, including transportation, education, health, zakat, and household equipment. Meanwhile, expenditures for fishing businesses reached IDR 4,115,788 per month. These expenditures are used for fishing operations, such as fuel costs, equipment maintenance, purchase of fishing equipment, and other needs that support fishing activities. These results show that income from the fisheries sector alone is not always sufficient to meet all operational and consumption needs of the family. Therefore, income from the non-fisheries sector is important to maintain household economic stability. These results are in line with the study by (Falatehan & Pariyasi, 2021), which states that consumption expenditures, both food and non-food, are the main components in the expenditure structure of fishing families. The

Fishermen's Exchange Rate (NTN) for household needs in Klampis Village, Klampis Subdistrict, Bangkalan Regency can be seen in Table 10 below.

Table 10. Fishermen's Exchange Rate (NTN) for household needs in Klampis Village.

No	Category	Amount (IDR/month)
Average income of fishermen		
1.	Fisheries business	794.352
2.	Non fisheries businesses	537.000
Total		1.331.352
Average expenditure of fishermen		
Fisheries business		4.115.788
Household needs		1.084.000
Total		5.199.788
Fishermen's exchange rate		0,256

Source: Primary data processed, 2025.

Table 10 shows that the income and expenditure structure of fishing households in Klampis Village, Klampis Subdistrict, has an average income of IDR 1,331,352 per month, consisting of IDR 794,352 from fishing businesses and IDR 537,000 from non-fishing businesses. Meanwhile, the average monthly expenditure of fishermen reaches IDR 5,199,788, consisting of fishing business expenditure of IDR 4,115,788 and household expenditure of IDR 1,084,000. Based on a comparison between income and expenditure, the Fishermen's Exchange Rate (NTN) was 0.256, which indicates that NTN < 1, meaning that fishermen's expenditure is greater than their income. This condition indicates that fishermen's households are in a situation of economic deficit, which has an impact on their inability to meet basic needs and increases the risk of economic and social vulnerability. These field findings are consistent with the results of research by Hidayat and Ma'ruf (2021), which states that fishermen with an NTN value below 1 are generally in an unstable economic condition, because most of their income is used for routine consumption without any financial reserves. This condition causes fishermen to remain vulnerable to economic shocks, even though their income may increase nominally during the fishing season.

CONCLUSION

The results show that the average total income of fishing families in Klampis Village is IDR 1,331,352 per month, consisting of IDR 794,352 from fishing businesses and IDR 537,000 from non-fishing businesses. This income structure shows that fishing is still the main source of income, but it is not yet able to meet all household needs. The Fishermen's Exchange Rate (NTN) of 0.256 indicates that NTN < 1, meaning that fishermen's expenses are greater than their income. This condition indicates that fishing households are in a situation of economic deficit, which has an

impact on their inability to meet basic needs and increases the risk of economic and social vulnerability.

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