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## Traditional Fishermen's Behavior in Building Family Economy on the Coastal Area of Papua

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### Abstract

This qualitative research uses a phenomenological approach. The results show that traditional fishermen on the coast of Papua have several advantages in their family economic activities, such as independence, utilization of local wisdom, high social solidarity, and flexibility in seeking additional income, all of which support community-based economic resilience. However, they also face various structural weaknesses, such as low productivity due to limited tools, difficult access to markets and infrastructure, minimal education and financial literacy, dependence on weather, and vulnerability to exploitation and social inequality, social inequality. The combination of these strengths and weaknesses reflects the complexity of the economic conditions of traditional fishermen which require policy intervention and more sustainable empowerment. Traditional fishermen on the coast of Papua apply various economic strategies that reflect adaptive capabilities to changing natural and social conditions, ranging from seasonal subsistence-based strategies and local wisdom, diversification of livelihoods such as farming or processing marine products, to forming joint business groups (KUB) or cooperatives to strengthen their bargaining position in the market.

**Keywords:** Behavior, Economy, Fishermen, Policy, sea

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### 1. Introduction

The coastal region of Papua is one of the areas rich in marine resources, which has naturally become the livelihood for traditional fishing communities. The people in this area, especially those living along the coastline, have relied on marine resources for centuries, making fishing activities their main source of income that not only supports individual lives but also sustains entire families. In this context, the behavior of traditional fishermen in managing and utilizing marine resources becomes important to study, especially in relation to how they build and maintain family economic resilience amidst increasingly complex social, economic, and ecological challenges.

Traditional fishermen on the coast of Papua have different characteristics compared to modern fishermen. They generally use simple fishing gear, have limited technology, and their work system is still heavily reliant on natural conditions such as seasons, tides, and weather. Additionally, their work system is often hereditary, community-based, and rich in local wisdom values. In conducting economic activities, traditional fishermen rely more on social networks

and customary structures, including in the distribution of catch and family economic decision-making.

However, in recent decades, traditional fishermen on the coast of Papua have faced a number of challenges that threaten the sustainability of their families' economies. Climate change causing weather uncertainty, declining catch yields due to overexploitation, and limited access to markets and infrastructure are serious issues. Moreover, social transformations due to the influx of outside culture, government policies that are less adaptive to local characteristics, and limited education and access to information further exacerbate the economic vulnerability of traditional fishermen. In such conditions, fishermen's behavior in responding to changes, making economic decisions, managing family expenditures, and adapting to the environment becomes very important to analyze.

Despite facing many limitations, traditional fishermen continue to show resilience and various interesting forms of survival strategies that are worth studying. Some fishermen have begun to combine fishing activities with additional efforts such as farming, gardening, or small trading, as a form of family economic diversification. There are also those who develop a fishermen's cooperative system independently, or engage in community cooperation to ensure the sustainability of access to fishing equipment and distribution of results. Such behavior reflects flexibility and adaptation to the socio-economic dynamics in coastal areas.

From a cultural perspective, traditional fishermen in Papua also have an economic behavior pattern that is closely related to the values of solidarity, cooperation, and trust in customary systems. These values give a distinct color to economic decision-making, such as in the distribution of catch, determining fishing times, and the use of income for household needs or customary activities. Such behavior shows that the economic life of fishing families is not solely viewed from a material aspect, but also involves complex social and cultural dimensions.

The study of traditional fishermen's behavior in building family economies in the coastal areas of Papua is also important in the context of inclusive and sustainable development. So far, development approaches have often been top-down and have paid little attention to local potential and dynamics. However, a deep understanding of the economic behavior of local communities can serve as a basis for formulating more contextual, participatory, and equitable policies. Thus, research on traditional fishermen's behavior not only contributes scientifically but can also provide important inputs for regional development planning and the empowerment of coastal communities.

## **B. Problem Formulation**

1. What is the condition of traditional fishermen in building family economies on the coastal shores of Papua?
2. What are the strengths and weaknesses of traditional fishermen in family economic activities on the coastal shores of Papua?
3. What strategies or methods do traditional fishermen use in economic activities on the coastline?
4. What forms of policies or support are provided by the government for the activities of traditional fishermen on the coastal shores of Papua?

## **2. Literature Review**

### **A. Fishermen**

Fishermen are residents who live on the coast and whose economic livelihood directly depends on activities related to processing marine resources. The fishermen community is a group of people whose livelihoods come from the sea and who live in coastal villages.

According to Fargomeli (2014), fishermen can be categorized into: owner fishermen (juragan), tenant fishermen (laborers/workers), small fishermen, traditional fishermen, and carrying fishermen (transport fishermen).

Owner fishermen (juragan) are individuals who engage in fish-catching businesses, with rights or authority over the boats and/or fishing gear used to catch fish. In the Panggung sub-district, there is only one owner fisherman (juragan), namely Haji Maskuri. Haji Maskuri is an educated ship owner; he graduated from the Fisheries Business Academy in Pasar Minggu, Jakarta, which allows him to manage his business in a more modern way.

A hiring fisherman (laborer or worker) is someone who provides their labor or works to catch fish, which generally forms a unit with others, earning wages based on a share of the fish sale proceeds. Hiring fishermen may also work for a shipowner who does not reside in the area, because generally, these laborers tend to seek shipowners who are generous (willing to provide money/goods) in fulfilling their needs while they are employed and fair in sharing the catch. These hiring fishermen may work on boats that spend a long-time fishing at sea, so they may sometimes be difficult to trace, which in Tegal language is called 'miyang,' or going out to fish at sea.

Traditional fishermen are individuals whose work involves catching fish using boats and simple (traditional) fishing equipment. Due to the limitations of their boats and fishing gear, their fishing range becomes limited, usually only about 6 nautical miles from the shore. These traditional fishermen are usually those who have been fishing for generations to meet their livelihood needs.

Small fishermen basically come from traditional fishermen, but with the modernization/motorization program for boats and fishing gear, they no longer solely rely on traditional boats or conventional fishing gear, but also use diesel or motors, allowing their fishing area to expand or become farther. The number of small fishermen in Panggung Village is only 23 people, and most of them, about 20, are traditional fishermen who receive guidance and empowerment from the City Government of Tegal through training and assistance with outboard motors and fishing gear.

The fishermen are, in fact, not fishing because the boat is not equipped with fishing gear, but instead set out with money (capital from the merchant) that will be used for transactions (buying or sourcing) fish in the open sea, which will then be resold. The characteristics of the fishing community can be seen from various aspects, as follows:

- In terms of livelihood, fishermen are those whose activities are related to the marine and coastal environment, or those who make fishing their source of income.
- In terms of lifestyle, fishing communities are communal communities. The need for cooperation and mutual assistance is felt to be very important when

dealing with situations that require large expenses and significant manpower, such as when sailing, building houses or seawalls around the village.

- In terms of appearance, although fishing is a heavy job, they generally only have simple skills. Most of them work as fishermen in a profession that is passed down by their parents, rather than being learned professionally.

Traditional fishermen are fishermen who catch fish in waters that are the rights of traditional fisheries that have been utilized for generations in accordance with local culture and wisdom.

## **B. Family Economy**

The meaning of the phrase 'family economic status' is as follows: Status means condition or position (of a person or body) in relation to the surrounding society. Economy refers to household financial affairs (organizations, states). In society, the term economy is usually related to issues of wealth and poverty. Family means parents and their children, a fundamental kinship unit in society. Social status in family economics is formed intentionally or unintentionally in every community environment. In this context, Soekanto quotes Aristotle's statement: 'In every country, there are three elements: those who are very rich, those who are poor, and those who are in between.'

Such statements demonstrate to some extent that in that era, there was a hierarchical status from the bottom to the top. A prominent sociologist, Pitirim A. Sorokin, stated: 'that the system of stratification is a constant and common characteristic of orderly societies. Those who possess valuable goods in large amounts are considered part of the upper class in society. Those who possess only a small amount of valuable items in the eyes of society hold a lower status. Between the upper layers and the lower layers, there are intermediary layers whose numbers can be determined by those who wish to study the stratification system of that society.'

The existence of a social stratification system can occur naturally in the process of societal growth. However, there are also those that are intentionally structured to achieve common goals. Theoretically, all humans are considered equal. However, in reality, the existence of social groups is not the same. Differences in stratification are a universal phenomenon that is a part of the social system of every society. To study the processes of social stratification, the following key points are used as guidelines:

- a. The stratification system rooted in the conflict system within society. This system has a specific meaning for certain communities that become the subject of investigation.
- b. The stratification system that can be analyzed within the scope of the following elements:
  - 1) Distribution of privileges such as wealth, safety, income, authority, and so on.
  - 2) The conflict system created by society.
  - 3) The criteria for the conflict system, which are derived from personal quality, group membership, and certain kinship.
  - 4) Symbols of status such as lifestyle behaviors, dressing styles, housing, and membership in an organization.
  - 5) The ease or difficulty of changing positions.
  - 6) Solidarity among groups of individuals occupying the same position within the social system of society.

There are also those who use the term class only for layers based on the economic system and layers based on honor within society. Max Weber makes a distinction between economic basis and social status but still uses the term class across all layers. The existence of classes that are economic in nature for him further exists in subclasses that operate in the economic field using their skills. In addition, Max Weber also mentions a specific social honor group called 'Stand.' Joseph Schumpeter states that the formation of classes in society is necessary to adapt society to real needs. Thus, classes and other social phenomena can only be correctly understood if their historical origins are known.

Thus, whether we like it or not, there is a system of social stratification, but its manifestation in society is also different. It depends on the form and needs of each society. It is clear that the position considered the highest is not held by many individuals, possibly only a small group within society. Therefore, in general, the upper-class citizens are not as numerous compared to the middle class and the lower class.

### **1. Aspects of Family Economics**

The economic conditions of families vary within society, with several different economic strata, namely affluent economy, middle economy, and underprivileged family economy.

#### **a) Economic Capabilities of Families**

It is an undeniable fact that economy is a determining factor in an individual's behavior within society and their environment. Within society, there are economic classes, which can categorize families with economic capabilities compared to other families. In daily life, families with economic capabilities experience a different standard of living compared to families beneath them economically. These differences contribute to the disparities between families with economic capabilities and those with weaker economies. Ultimately, this results in distinctions between capable families and less capable families based on their economic status. Marx stated: As long as society remains divided into classes, all power and wealth will be concentrated within the ruling class. Law, philosophy, religion, and art are reflections of that economic status. Nevertheless, the laws of change play a significant role in history, allowing for the possibility of change through revolutions. However, as long as there are ruling classes, exploitation of the weaker classes will continue to occur.

One of the functions of the family is the economic function, which is the state of being a self-sufficient social unit where family members consume the goods they produce. In this context, families need adequate financial or funding support to meet their production needs. This is because families also serve as educational institutions for all their members, providing education for children and teenagers.

The society that is more developed provides more ease for families with a capable economic status compared to those with lower economic status. Furthermore, they have many conveniences due to the support of a stable economy in fulfilling their needs and also in educating their children. The criteria that can be used to categorize members of society into different strata include wealth, power, honor, and knowledge.

#### **b) Middle-Class Economy**

Status that is prevalent in the community is the middle-class status. People in this status can live among a diverse society; they do not excessively spend their wealth nor are they lacking

in meeting their family's needs. Their status allows them to communicate well with those above them and also with those below them. In this level, issues in communication with other statuses are rarely encountered. As stated by W.A. Gerungan, the behavior that is not normal is least experienced by children from middle socioeconomic backgrounds. This indicates that the middle economic class can communicate well with other economic statuses, which leads to a lack of underlying psychological issues in children when socializing.

The family status size is not too prominent compared to the statuses above it because this status is too common within the community. This status can be determined by the relevant environment. Essentially, this family status can meet its needs like many other families, but what distinguishes it is the level of facilities used, which is different from the economic facilities above it. However, when viewed from the standpoint of their adequacy, they are still eligible to live among people in general. In his work, Durkheim states that: The basic element in society is the factor of solidarity; he differentiates between societies characterized by mechanical solidarity and those with organic solidarity. In societies with mechanical solidarity, community members have not yet differentiated their division of labor. Whereas organic societies already have a division of labor marked by a degree of specialization certain.

### **c) Economically Disadvantaged Families**

The third family status is that of economically weak families, this status can be said to be the status of economically disadvantaged families (poor). This status mostly originates from rural areas and also from communities that are lagging behind. The effects of poverty greatly impact human life, especially on education and the ability to meet basic needs. Poverty causes many children to work to help their families meet their needs, even though they are still required to seek education. As a result of poverty, many children drop out of school. As quoted from Tajuddin Noer Efendi: Many young girls have already learned to shop for their family's needs, and when their mothers shop at the market, they can substitute for their mothers for short periods. Meanwhile, boys work as laborers making cigarettes in shops, as bus ticket sellers as a tailor and carpenter.

It is very detrimental to the development of society; the backwardness resulting from the inability of the community to obtain education is an effect of poverty. From this study, it can be confirmed that families with weak economic conditions are very unfavorable for family life. Therefore, poverty must be addressed seriously so that the future of family life becomes better.

The roots of poverty in Indonesia cannot only be found in the culture of laziness to work. Meanwhile, limited knowledge, lack of skills, poor health, and a bad work ethic are all internal factors. External factors include poor health and low nutrition in society, which result in low income and limited natural resources.

## **3. Research Methods**

Type of qualitative research through a phenomenological approach.

## **4. Discussion**

**A. What is the condition of traditional fishermen in building family economies on the coast of Papua?**

Papua is an area that is very rich in marine resource potential. With a coastline of over 2,000 km and extensive water areas, coastal communities in Papua—especially traditional fishermen—have a high dependence on the sea as their main source of livelihood. However, the condition of traditional fishermen on the coast of Papua in building family economies still faces various complex and multidimensional challenges.

According to data from the Papua Province BPS (2023), the number of fishing households in the coastal areas of Papua is estimated to reach around 35,000 households, spread across the coastal regions of Mimika, Nabire, Biak Numfor, Yapen, Waropen, and Merauke. However, of this number, around 72% of fishermen are still classified as traditional fishermen who use small boats (non-motorised or outboard motors) and simple fishing gear, such as gill nets, hand lines, and traditional traps. Traditional fishermen's incomes tend to fluctuate and are far from prosperous. The average monthly income of traditional fishermen on the coast of Papua is only between Rp1,000,000 and Rp2,500,000, depending on the season, catch results, and market access. In bad weather conditions or during lean seasons, this income can even drop drastically to below Rp500,000 per month, which certainly has a direct impact on the economic resilience of their families.

Most traditional fishermen in Papua do not have access to the banking system or formal financing. Only about 11% of fishermen in Papua have access to people's business credit (KUR) or financing from fishing cooperatives, according to data from the Papua Provincial Marine and Fisheries Office (2022). This makes it difficult for them to scale up their businesses, improve their fishing gear, or add fleets to reach more productive fishing locations. Some fishermen are even forced to borrow capital from middlemen or collectors under unprofitable profit-sharing systems.

From the perspective of household consumption, many fishing families still rely on subsistence staple needs and social assistance. Research by LIPI in 2021 in the coastal areas of Biak Numfor Regency shows that approximately 68% of fishing families depend on daily catches not only for sale but also for direct consumption, with the remainder only sold to markets or collectors. This indicates a minimal production surplus that can be transformed into additional income.

The educational and skill conditions of traditional fishermen also pose a challenge in their own right. Over 60% of traditional fishermen in Papua only completed education up to elementary school, and only about 7% have ever undergone training in fisheries business management or additional skills training. This lack of skills makes it difficult for fishermen to adapt to new technologies or digital marketing systems, resulting in their catch not being maximised in terms of market value.

In an effort to build family economies, many fishermen are beginning to implement business diversification strategies. For example, some fishermen's families in the coastal areas of Merauke and Nabire use their non-fishing time to garden, raise chickens, or open small shops at home. Data from the Sustainable Nusantara Ecosystem Foundation (EcoNusa Foundation, 2023) shows that around 28% of fishermen's families now have sideline businesses outside of fisheries as a means to increase household income.

The role of women is also very significant in supporting the economy of fishing families. Many women fishers in Papua are involved in post-harvest processes, such as processing seafood

(salted fish, fish floss, fish crackers), as well as selling catches in local markets. However, this role is often not formally documented and has not received much recognition or support from government empowerment programmes.

On the other hand, there are several local initiatives that support traditional fishermen in building economic resilience, such as the establishment of fishermen's cooperatives and joint business groups (KUB). In Biak Numfor Regency, for example, there is the 'Manibabo' fishermen's cooperative which has successfully increased the selling price of fishermen's catches by over 20% compared to selling directly to middlemen, due to its collective management and connection to external markets.

Nevertheless, the main challenge remains in the aspects of infrastructure, logistics access, and dependence on weather. Many fishing villages along the coast of Papua lack fish storage facilities (cold storage), adequate docks, or connecting roads to major markets. As a result, catches often spoil before they can be sold, and selling prices decrease due to reduced quality.

Overall, traditional fishermen on the coast of Papua are still in a vulnerable economic condition. However, the spirit of resilience, community involvement, and emerging adaptive strategies indicate that with the right policy support, skills education, and adequate infrastructure, they have great potential to build a more stable and sustainable family economy.

## **B. What are the advantages and disadvantages of traditional fishermen in the economic activities of families on the coast of Papua**

Traditional fishermen are a group of coastal communities that play an important role in maintaining the sustainability of household economies as well as the preservation of marine resources in Papua. They generally rely on fishing activities with simple tools, based on local knowledge, and passed down through generations. However, in the context of family economics, there are various advantages and disadvantages that colour the dynamics of traditional fishermen's lives, especially on the coast of Papua.

### **Advantages of Traditional Fishermen**

#### **1. Independence and Local Economic Resilience**

Traditional fishermen in Papua generally live independently without heavily relying on large industrial systems. Their activities do not require significant capital and can still survive with simple fishing gear. When the catch is abundant, they can meet their family needs and even save for lean seasons. This independent nature creates a form of local economic resilience based on the surrounding ecosystem.

#### **2. Utilisation of Local Wisdom and Traditional Knowledge**

Traditional fishermen possess good knowledge of fish migration patterns, ocean currents, fishing seasons, and the surrounding ecosystem conditions. This knowledge is not acquired through formal education but is passed down through generations. In the context of Papua, which has marine diversity and extreme weather, this local expertise is a strength in ensuring their productivity. Moreover, local wisdom such as customary prohibitions against excessive exploitation can help conserve marine resources.

#### **3. High Social Solidarity and Mutual Aid**

In carrying out fishing activities and managing catch results, traditional fishermen are usually involved in close-knit working groups or fishing communities. This form of mutual aid creates a strong social support system, such as sharing catches, assisting with boat repairs, or cooperating during the fishing season. On the family economic side, this solidarity is also reflected in household financial management involving all family members, including women and children.

#### **4. Flexibility in Additional Economic Activities**

Many traditional fishermen in Papua also engage in additional economic activities apart from fishing, such as farming, livestock rearing, or small trading. This flexibility becomes an important strength in maintaining the economic stability of families, especially during lean seasons or bad weather. According to a report by the EcoNusa Foundation (2023), around 28% of fishermen in the coastal regions of Papua have side economic activities that contribute to family income.

### **Weaknesses of Traditional Fishermen**

#### **1. Low Productivity and Business Scale Simple**

fishing gear and non-motorized or small motor boats limit the range and volume of catches for traditional fishermen. This results in their productivity being low compared to modern fishermen. Consequently, the income of traditional fishermen often does not meet the basic needs of their families, especially when facing a poor fishing season.

#### **2. Limited Access to Markets and Infrastructure**

One of the main weaknesses is the limited access to profitable markets and supporting infrastructure. Many traditional fishermen in Papua still sell their catches to middlemen at prices far below market standards. Additionally, the lack of facilities such as cold storage, docks, and adequate transportation leads to the rapid spoilage of catches and reduces their selling value.

#### **3. Limited Access to Education and Financial Literacy**

Most traditional fishermen have only received an education up to primary level. Data from BPS Papua (2023) indicates that more than 60% of traditional fishermen have only completed elementary school or have not completed school at all. This has an impact on their ability to manage household finances, understand market prices, or access government assistance and training programmes. Low financial literacy makes it difficult for them to develop businesses or save sustainably.

#### **4. Dependence on Weather and Seasons**

Due to the lack of modern navigation and fish tracking technology, traditional fishermen are highly dependent on weather and natural conditions. When extreme weather occurs, such as strong winds and high waves, they are unable to go to sea, which directly disrupts family income and economic resilience.

#### **5. Vulnerable to Exploitation and Social Inequality**

In many cases, the bargaining position of traditional fishermen is very weak against other parties, especially middlemen or companies purchasing marine products. This often places them in a position of economic exploitation, without legal protection or supportive policies. This inequality makes it difficult to break the cycle of poverty in the long term.

### **C. What are the strategies or methods of traditional fishermen in economic activities along the coastal areas?**

Traditional fishermen play a vital role in the social and economic ecosystem of coastal communities, including in the resource-rich region of Papua. Although they operate with limited technology and capital, traditional fishermen are able to sustain the livelihoods of their families and communities through various distinctive economic strategies. The strategies or methods they employ in economic activities not only reflect efforts for survival but also adaptation to changing environmental and social dynamics.

#### **1. Subsistence and Seasonal Adjustment Strategies**

The main strategy of traditional fishermen is a subsistence model, which means catching fish to first meet the family's consumption needs before selling the rest. This has become the most common strategy, especially in the coastal areas of Papua that are still far from access to major markets. In this context, their economic activities are closely tied to the seasons and natural conditions.

Traditional fishermen usually understand the patterns of fish seasons, the tides of the sea, wind directions, and natural signs that indicate the arrival of fish. They adjust their fishing times based on local knowledge or traditional wisdom, for example by avoiding the high wave season or storms. This not only reduces risks but also optimises catches when the fishing season arrives.

#### **2. Diversification of Livelihoods**

Due to the unstable nature of catches, many traditional fishermen have developed economic diversification strategies to support their family income. When fish catches decrease or bad weather strikes, they turn to other activities such as:

- Farming or gardening on land near their homes,
- Raising poultry or pigs,
- Selling processed marine products such as smoked fish, fish crackers, or salted fish,
- Opening small shops or providing boat repair services.

This diversification is an important form of adaptive strategy in creating economic resilience for families. A report by the EcoNusa Foundation (2023) mentions that about 28% of fishermen in Papua have additional sources of income, and this significantly contributes to maintaining household economic stability.

#### **3. Collective Strategy: Joint Business Groups (KUB) and Fishermen Cooperatives Traditional**

Fishermen also implement collective strategies in their economic activities. They form Joint Business Groups (KUB), fishermen cooperatives, or community-based fishing

groups. This strategy is employed to strengthen their bargaining power against middlemen or markets, as well as to share capital and fishing equipment. For example, in Biak Numfor Regency, there is a fishermen cooperative that collectively sells their catch to external markets at higher prices. Collective activities often also include joint purchases of fuel, communal boat building, or collaboration in repairing nets and engines. This collaboration enhances efficiency and reduces individual cost burdens.

#### **4. Traditional Environmentally Friendly Fishing Methods**

From the method's perspective, traditional fishermen tend to use more environmentally friendly and selective catching techniques. They use tools such as: • Fish traps made of bamboo, • Traditional rods, both from land and small boats, • Simple gill nets, • Fish fences or enclosures (in shallow water areas). Although these methods are simple, they tend to preserve fish populations as they do not damage coral reefs and do not catch fish in large quantities at once. This strategy indirectly supports the principle of long-term sustainability of marine resources.

#### **5. The Utilisation of Women in Household Economy**

Women in traditional fishing families also play an important role. In many cases, they engage in economic activities such as: • Processing and selling catch at the market, • Creating derivative products such as fish floss, crackers, and fish sauce, • Establishing social relationships with buyers or traders in the market. In other words, the economic strategies of traditional fishermen are not solely focused on the sea, but also utilise family labour for post-harvest and marketing activities, especially by women.

#### **6. Social and Customary Network Strategies**

The economic strategies of traditional fishermen cannot be separated from customary systems and social networks. In many coastal villages in Papua, the customary system determines who may fish in certain areas, the timing of catches, and the method of distributing the results. The existence of "sasi laut" or customary prohibitions on taking marine resources at certain times also forms part of the collective management of economic and ecological strategies. In emergency situations, such as when a boat is damaged or a family member is ill, the customary social network serves as an economic safety net through social loans, mutual assistance, or profit-sharing systems.

### **D. What form of policies or support is provided by the government for traditional fishermen in the coastal areas of Papua?**

Traditional fishermen are an important group in the national food security system, especially in coastal areas like Papua. They serve as the main providers of seafood protein for the community while also acting as guardians of marine ecosystems through generally environmentally friendly fishing practices. However, their vulnerable position to climate change, marine exploitation, and limited infrastructure makes government involvement crucial. Both central and local governments have designed various forms of policies and support for traditional fishermen, although implementation in the field is not always optimal.

#### **1. Assistance for Fishing Facilities and Infrastructures**

One form of tangible support from the government to traditional fishermen in Papua is the provision of fishing gear and sea-going facilities. Through programs of the Ministry of Marine Affairs and Fisheries (KKP) such as Government Assistance (Banper) for Fishing Gear, the government distributes aid in the form of fibre boats, outboard motors, nets, and navigation aids. For instance, in 2022, 150 boats and 300 sets of fishing gear were distributed to fishermen groups in Mimika and Biak Numfor regencies. This assistance aims to enhance the efficiency and reach of traditional fishermen in capturing fish and to improve their safety at sea. However, limited distribution and selectivity of recipients often pose challenges. Many traditional fishermen in remote areas have yet to gain fair access to this assistance.

## **2. Training and Empowerment of Human Resource**

Capacity Through the Marine and Fisheries Office of Papua Province and national programmes such as Fishermen's Entrepreneurship Training, the government provides training on processing catch, marketing, financial management for fishing families, and marine cultivation. The aim is for fishermen not to rely solely on fish catching, but also to develop other productive enterprises that support family economies. According to the Papua DKP report (2023), in 2022 there were more than 500 fishermen trained in marine product processing and business diversification. This training is generally held in cooperation with local training institutions or NGOs focused on empowering coastal communities.

## **3. Access to Financing and People's Business Credit (KUR)**

The government also provides support in the form of access to financing, especially through the People's Business Credit (KUR) programme in the fisheries sector which is subsidised by the government at low interest rates. Traditional fishermen can access working capital to purchase equipment, repair boats, or fund marine processing businesses.

However, according to BPS data, only about 11% of traditional fishermen in Papua access the KUR programme, due to administrative requirements, limited financial literacy, and the inaccessibility of banking services in remote coastal areas. To address this issue, the government has begun to encourage the role of Fisherman's Banks and fishermen's cooperatives to become more flexible and easily accessible financial intermediaries.

## **4. Social Protection Programme for Fishermen**

The government is also striving to provide social protection for traditional fishermen, particularly in the form of Fishermen's Insurance and direct cash assistance during periods of drought or economic crisis. The Fishermen's Insurance Programme (Work Accident and Death Guarantee) was launched by the KKP in collaboration with PT Jasindo, with part of the premium covered by the state. In Papua, KKP data from 2022 recorded that over 2,000 fishermen have registered for this insurance, although coverage remains limited compared to the number of traditional fishermen available. This programme is important as minimal protection against the often-unpredictable risks of work accidents at sea.

### **5. Strengthening Institutions: Joint Business Groups and Fishermen Cooperatives**

The government also encourages the formation and strengthening of Joint Business Groups (KUB) and fishermen's cooperatives as a basis for economic organisation. These groups receive special access to assistance for fishing gear, training, and financing. In Biak Numfor and Yapen regencies, several fishermen's cooperatives have even established direct partnerships with buyers from outside the region, allowing them to sell fish at higher prices without the involvement of middlemen. Through the Minister of Marine Affairs and Fisheries Regulation No. 15 of 2021, the government also regulates community empowerment in coastal areas through a participatory institutional approach. This aims to enable traditional fishermen to take a more active role in the planning and management of coastal resources.

### **6. Zoning Regulations and Protection of Traditional Fishing Areas**

From a spatial policy perspective, the government through Regional Regulation (Perda) on Zoning of Coastal and Small Islands Areas (RZWP3K) establishes traditional fishing areas that must be protected from large-scale industrial exploitation. In Papua, the RZWP3K approved by the provincial government aims to protect the access rights and activities of traditional fishermen from disruption by large-scale investment such as deep-sea mining, massive aquaculture, and port projects. However, the monitoring and implementation of this regulation remain weak, leading to ongoing spatial conflicts between traditional fishermen and companies, particularly in the western coastal regions of Papua.

## **5. Conclusion**

Traditional fishermen on the coast of Papua, who make up around 72% of the total 35,000 fishing households, play an important role in the local economy but still face various serious challenges such as low and fluctuating incomes, limited access to capital and infrastructure, and low levels of education and skills. With an average monthly income of only IDR 1,000,000–IDR 2,500,000 and reliance on simple fishing equipment, they find it difficult to improve their family welfare. However, various adaptive strategies have begun to be implemented, such as diversifying businesses, the active role of women in processing marine products, and the establishment of fishermen's cooperatives that have proven capable of increasing income.

Nevertheless, the limitations of facilities such as cold storage and access to markets are still major obstacles. If supported by appropriate policies, skills training, and strengthening of infrastructure and institutions, traditional fishermen in Papua have great potential to build a more stable and sustainable family economy. Traditional fishermen on the coast of Papua possess several advantages in their family economic activities, such as independence, utilisation of local wisdom, high social solidarity, and flexibility in seeking additional income, all of which support community-based economic resilience. However, they also face various structural weaknesses, including low productivity due to limited tools, difficult access to markets and infrastructure, minimal education and financial literacy, dependence on weather, and vulnerability to exploitation and social inequality. This combination of strengths and weaknesses reflects the complexity of the economic conditions of traditional fishermen that require policy intervention and more sustainable empowerment.

The government has provided various forms of policies and support for traditional fishermen activities on the coasts of Papua, such as providing fishing equipment, skills training, access to financing through the People's Business Credit (KUR), as well as protection through fishermen insurance programs and strengthening economic institutions such as cooperatives and joint business groups (KUB). However, the implementation of these policies still faces challenges, such as uneven distribution of aid, limited access to training and capital, and weak oversight of the protection of traditional fishing areas. Therefore, there is a need to strengthen governance, improve data accuracy, and ensure sustainable empowerment so that existing policies can truly support the economic welfare of traditional fishermen's families on the coast of Papua.

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