



IDENTIFICATION OF FISHERMEN'S LIFE ASSET OWNERSHIP IN JANGKA DISTRICT, BIREUEN REGENCY

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Abstract

Access to asset ownership is very urgent because it relates to the ease of a person in living his life. The availability of living assets is directly related to the ability of each individual to achieve a more decent life outcome. These living assets are generally categorized into five types, namely human, cultural, financial, social and physical assets. This research was conducted in Jangka District, Bireuen Regency. The number of samples in this study were 100 fishermen. The sampling method used the Accidental Sampling technique, which is the technique of determining the sample by chance. This study uses primary data obtained through a survey using a questionnaire and secondary data. This data was then analyzed qualitatively descriptively. The results of the study found that most of the fishermen were of productive age, had secondary education, quite experienced, used my own financial sources, access to credit was still difficult, had great motivation to improve their standard of living, and the influence of the traditional panglima laot institution was still strong. The main source of capital for the fishermen is borrowing from the owner, cooperatives and only a few have their own capital. But most fishermen have savings, and they save money in the banks, social gatherings, cooperatives and at home, and this is done to save for their lives in the future. Based on physical assets, most fishermen have nets as fishing tools, many use 5-10 GT and 10-20 GT motorboats as fishing boats. Ownership status of fishing boats most fishermen use jointly by riding and renting. From social assets, most fishermen join fishermen's organizations or groups, and a small number of fishermen have positions in the community. The family relationship between them is also close.

Keywords: ownership, assets, fishermen.

1. INTRODUCTION

Asset ownership is one of the supporters of a person's life that can cause them to design a better life. Asset ownership can also show differences in a person's social level in society. Assets in this study are classified into five types, namely human assets, cultural assets, financial, social, and physical assets, while natural assets have been included in physical assets.

Assets are resources that support or benefit the achievement of community life goals. Generally, people will take advantage of various types of assets. According to (DFID, 2014) divides five types of assets or resources that influence people's lives, namely; human assets are associated with abilities and skills, knowledge, workforce capabilities, and health; natural assets are assets that exist in nature naturally and can be used as a life strategy such as land for agriculture, air, water, forests; Social assets are defined as the ability of people to work together and, achieving common goals, in various groups and organizations; Physical assets include basic infrastructure and producers of goods needed to support life, such as houses, roads, health clinics, access to information, and so on; Financial assets are the availability of capital which includes: (routine or pension payments, savings, and provision of credit.

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Resources or assets of life are important factors that need to be understood properly, because each resource has different characteristics and carrying capacity for the life of each individual and society. Each resource has a relationship with other resources (Salvestrin, 2006). The power of resources can carry out a strategy such as fostering the poor, transforming the relationship between the community and government, increasing knowledge, collective skills, and infrastructure in rural areas (Mitlin 2012 and Salvestrin 2006).

Communities or individuals have various living assets with which they can maintain a better and harmonious life. Even the poorest people also have various assets of life on which they depend their lives. Efforts to make a better and more sustainable life must be built on an understanding of the assets they already have and the extent to which they use and develop these assets. The assets are human assets, natural assets, financial assets, physical assets, and social assets (Mukherjee et al. 2001).

However limited access to and living resources is one of the problems faced by the poor, most of whom live in coastal areas. In this study, natural assets are included in physical assets and cultural assets are added because the Acet people have different characters from other communities. Therefore, it is necessary to analyze the identification of fisherman's life assets in Jangka District using descriptive statistical models. The purpose of this study was to analyze the identification of fishermen's livelihood assets in the Jangka District, Bireuen Regency.

2.LITERATURE REVIEW

There are three dimensions of a sustainable living framework that includes living assets, vulnerability contexts and livelihood strategies (Salvestrin, 2006). With the availability of life assets, individuals and households can develop their capacity to overcome various challenges. There are five categories of living assets that are expanded in scope, namely human assets, financial assets, social, physical, and personal, for example: emotional, motivational, self-confidence, and religious beliefs (Farrington, 2013).

Each family also has various assets to maintain their lives, and family assets also include the stock of resources used to obtain prosperity (Moser, 1998), and (Rakodi, 1999). Household assets are obtained from each individual, family, community, national and global and include natural, human, physical, financial, social/political and location assets (Jansen et al. 2006). Physical capital includes equipment and infrastructure; human capital assets consist of age, education, training, and family structure; financial assets include access to credit and savings; Natural capital includes weather, land, water, and social capital consists of family involvement in outside organizations at various levels.

However, the classification of this type of asset depends on the researchers and the research situation. In addition to human, physical, financial, social and natural capital as suggested by DFID (2014). Jansen et al. (2006) include location assets such as access to infrastructure and public services. But in other studies such as that conducted by DFID (2014) access to infrastructure and public services is included in physical capital. When Ferguson and Murray (2011) classify assets into five types, namely human, financial, physical, personal and social assets. Natural assets are included in physical assets.

3. IMPLEMENTATION METHOD

The total population of fishing fishermen in Term District, Bireuen Regency is 9,432 people, and the population in this study is all fishermen in Jangka District. According to (Kuncoro, 2011) If the population size is large, which is obtained from the estimation of the population ratio, then by using the Taro Yamane formula, a sample size of 100 fishermen is obtained and a sample size of 100 respondents has met the provisions of the statistical test used (Wirartha, 2006). The sampling method used the Accidental Sampling technique, which is the technique of determining the sample by chance. This means that anyone who meets the researcher by chance or incidentally can be used as a sample as long as the person meets the sample criteria (Sugiyono, 2016). This study uses primary data obtained directly through interviews and questionnaires from fishermen. Secondary data were obtained from the Marine Service, the Central Statistics Agency, the Agricultural Extension Center and other related agencies. The study was carried out from July to August 2022

Data analysis

The analytical tool used in this research is a descriptive statistical model using the excel program. The data were then tabulated and explained qualitatively descriptively. In this research, five types of assets are used by fishermen in Term District, Bireuen Regency.

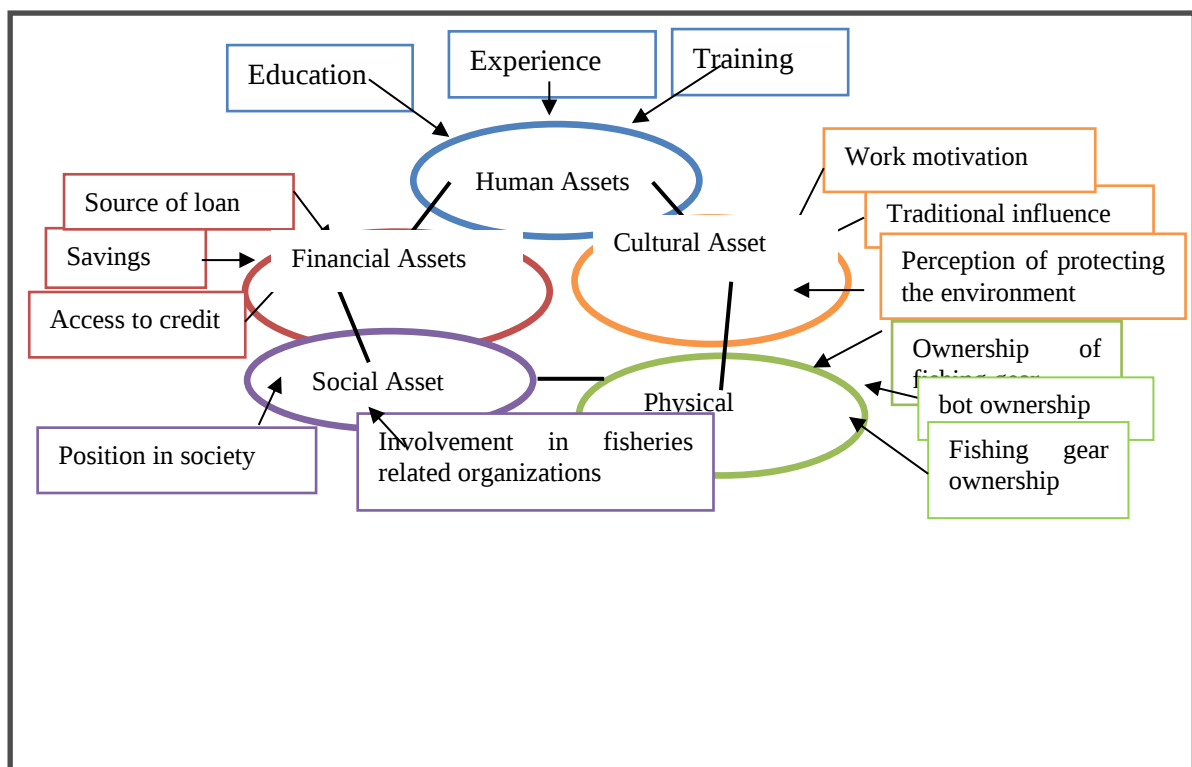


Image 1. Ownership of fishermen's livelihood assets in Jangka District

4. RESULTS AND DISCUSSION

Identification of Fishermen's Asset Ownership Status in Jangka District

The results of this study are explained by using tables and graphs to see the profile or characteristics of fishermen in Jangka sub-district based on a sustainable living framework, which

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includes asset ownership, life strategies and vulnerabilities faced. Asset ownership is the main support for the sustainability of a family's life, where the availability of these assets can cause a person to be able to design to lead a more perfect life. Asset ownership will show the difference in a person's social level in a society. In this study, assets are classified into five types of assets, namely human assets, cultural assets, financial assets, social assets and physical assets.

4.1. Human Assets

Ownership of human assets can be seen from the aspect of fisherman's capacity which includes their age, education stage, experience and knowledge of marine fishery activities. In addition, attendance and participation in training related to fisheries is also used as a proxy to measure the level of knowledge of fishermen. Table 1. formulates information on human assets by sub-sector of fishermen. The sample used in this study was 100 fishing households in the Jangka District, Bireuen Regency. In this section, the characteristics of respondents based on age, education level, experience, participation in training and family dependents will be discussed. The characteristics of these fishermen can be seen in the table 1 below.

Table 1. Characteristics of Fishermen based on Human Assets in Jangka District

Fisherman Characteristics	Number of people)	Percentage (%)
1. Age group		
21 – 64	69	69
65	31	31
Amount	100	100
2. Education		
SD	20	20
Junior High School	34	34
Senior High School	40	40
College	6	6
Amount	100	100
3. Experience		
15 years	13	13
6 – 10 years	27	27
11-15 years old	22	22
>15 years old	38	38
Amount	100	100
4. Take Training		
Yes	76	76
Not	24	24
Amount	100	100
5. The number of dependents		
2 - 3	69	69
4-5	26	26
> 5	5	5
Amount	100	100

Source: Primary Data, processed data (2022)

Human assets are the most important assets in life that enable a person to carry out life strategies and achieve their livelihood goals (Wijayanti, Baiquni, & Harini, 2016). Human capital is needed to manage the other four assets of life.



The age of fishermen is one of the most influential factors on the high and low income of fishermen. BAPPENAS (2017) states that the age of the population is divided into three groups, namely (a) the young age group, under 15 years; (b) productive age group, 15-64 years old; and (c) the old age group, aged 65 years and over. Fishermen who are of productive age certainly have optimal physical conditions in carrying out fishing activities, meaning that fishermen of productive age have better stamina and physicality than fishermen who are of age, this will affect fishing activities and the number of catches that will be obtained. so that it indirectly affects the increase in income received.

Based on Table 1. shows that the age level of fishermen starts at the age of 21 years. The distribution of respondents according to the age level of the highest fishermen in the Term District, Bireuen Regency is in the productive age group, namely at 21-64 years with the number of fishermen as many as 69 percent. Meanwhile, the lowest distribution of respondents was in the old age group, namely > 65 years with 31 percent. These results indicate that fishermen in Term District, Bireuen Regency still have good physical strength so that they can launch fishing business activities at sea. The age factor has important implications for the progress of the agricultural sector, see that the older group has difficulty accepting change and prefers to carry out traditional activities (Adhiana et al. 2009). However, to ensure skills and productivity in the marine fisheries sector to be more competitive, the introduction of modern technology is a major requirement.

Educational stage is an indicator of socioeconomic status. Education can show the knowledge possessed by the respondent. The education referred to in this study is the length of the respondent's formal education. The higher the formal education taken can affect the way fishermen think and it is easier to implement innovations or new technologies. This of course will affect the income to be obtained. From the results of research conducted in Term District, Bireuen Regency, there has been no innovation and new technology applied. Fishermen's fishing activities in Term are still traditional, there are no innovations or new technologies applied. The fishing gear used is still traditional.

Based on Table 1. it can be seen that the distribution of the frequency of respondents according to the highest level of education is at the high school level. The number of fishermen is 40 people or 40 percent. While the smallest frequency is at the tertiary level, namely the number of fishermen, namely 6 people or 6 percent. The level of education of fishermen in the Term District, Bireuen Regency is classified as upper middle school, which is only for 9 and 12 years or only at the junior and senior high school levels. Even in the research area there are 6 fishermen who are highly educated, and this shows that current fishermen are not only dominated by those with low education. The results of this study are not different from several previous studies (Roslina, 2011).

Most of the skills possessed by the respondents were acquired from generation to generation. The experience of fishermen in the research area is quite high, i.e. 10 years and over. It is illustrated that the people there are experienced in the field of fisheries. This experience is the basic capital so that fishery productivity can increase. With more experience, a fisherman certainly has strong capital in solving problems or difficulties at sea (Yurike & Syafruddin, 2022).

In addition to the education stage, the experience of fishermen related to marine fisheries is also a major aspect for the development and continuity of these activities which in turn ensure the lives of fishermen and their households. The results of the study found that 40 percent of fishermen had less than six years of experience. While most fishermen have experience in the related field

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between 6 to 10 years. The remaining 60 percent of fishermen have experience between 11 to more than 15 years.

Hereditary experience is used as a guide at sea. Therefore, a government program is also needed by holding counseling and skills training to hone the skills of fishermen so that they can produce goods/services that can help life, especially the economic life of the fishermen. (Yurike & Syafruddin, 2022). The participation of fishermen in training activities will increase their ability to carry out fishing business at sea, in addition to increasing their ability to manage fishing business activities that they do every time. Based on the research, it was found that 74 percent of respondent fishermen attended training to increase their knowledge.

Family dependents are the number of people who are borne based on needs or financed in the family. The number of family dependents will greatly affect consumption. This is because more and more family members are borne, it will encourage a fisherman to be even more active in finding income either in fishing or other side jobs because of the large burden and increasing household needs. Thus, income must also be increased. The number of dependents of fishermen's families in Term Regency, Bireuen Regency can be seen in table 1 above.

Based on Table 1, it can be seen that the frequency of distribution of respondents according to the number of dependents in the Term District, Bireuen Regency, is the most in the number of 2-3 dependents, namely 69 percent. While the lowest frequency is in the number of > 5 dependents. In addition to the capacity of fishermen, human assets are also seen from the number of dependents in the family. The number of family dependents is one of the factors that affect the amount of income to accommodate household spending. Overall, the number of dependents of fishermen's household families in Jangka District is small, as many as 2-3 people.

The high dependency ratio indicates that there are many family members who do not work and do not contribute to the total income of fishermen's households. The large number of dependents in the family causes the dependency level of a family to be higher if most of the family members consist of children and are still not working. In addition, the age factor of the head of the family also affects the level of this dependence. For example, the dependency ratio is high because most household heads are in their late 30s and early 40s and at this age usually the children are still in school and cannot contribute to household income. Fishing communities have special characteristics that distinguish them from other communities and fishermen are identical with poverty, the large number of children in the family and low education (Kusnadi, 2008: Rahman, at.al, 2006).

4.2. Cultural Asset

Social capital is the ability of the community to be able to work together to achieve a common goal in various groups. This social capital affects the creation of a network of cooperation and information as well as compliance with mutually agreed rules or norms, (Azhari & Mawardi, 2018). Cultural capital is an important aspect in people's lives in the Jangka District, Bireuen Regency in carrying out various activities to fulfill their basic needs. In this study, there are several aspects found by knowing the perceptions of the fishing community. Cultural assets can be seen from the aspect of fishermen's motivation to work, the influence of the panglima laot traditional institution, and the importance of protecting the natural environment. All these aspects can be identified by their perceptions with five categories, namely strongly disagree (STS), disagree (TS), Neutral (N), agree (S), and strongly agree (SS), which can be seen in Table 2.



Table 2. Fishermen's perceptions based on cultural assets in Jangka District

Statement	Strongly Disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly Agree (5)		Total	
	Amount %		Amount %		Amount %		Amount %		Amount %		Amount %	
Cultural Asset												
1. Motivation to work to improve living standards	3	3	1	1	3	3	16	16	77	77	100	100
2. The influence of the Panglima Laot traditional institution	0	0	1	1	4	4	91	91	4	4	100	100
3. Protecting the environment is very important	0	0	0	0	33	33	57	57	10	10	100	100

Source: Primary Data, 2022

From the results of the study, it was found that the motivation of fishermen in working to improve their standard of living was 77 percent strongly agree, and 16 percent agree, while only 4 percent disagree. This means that the desire of fishermen to improve their standard of living is very high and this is the main motivation for them to work. Respondents who agree that the traditional institution of the Panglima Laut for fishermen greatly influence them in carrying out marine fishing activities are 91 percent compared to those who disagree with only 1 percent and those who are neutral are 33 percent. This shows that the fishermen need the panglima laot customary institution, because the function of the customary institution is also to resolve conflicts if they occur between fishermen. This study is in line with research (Adhiana, 2017).

Furthermore, the attitude of the respondents who agree that protecting the natural environment is very important for maintaining a sustainable life, which is 67 percent. This attitude is shown by respondents who carry out cleaning work and mutual cooperation every weekend to clean the village and plant mangrove trees around the beach.

4.3 Financial Assets

Financial capital is a source financial resources that can be utilized and used by the community to achieve livelihood goals which include reserves or inventories, whether privately owned or financial institutions, and in the form of routine funds (DFID, 2014). Financial capital includes financial resources used by respondents to achieve their life goals. This includes activities derived from fish catches, savings, loans and donations from family members. Loans were also made by respondents to accommodate spending in the marine fisheries sector. The capital used in one operation using this fishing gear is quite large, because this fishing gear absorbs a workforce of 15 ± 20 people per fishing unit, (Pontoh, 2010). Figure 1 shows the financial sources obtained by fishermen to carry out capture fisheries activities.

There are three main sources of capital, namely from the fishermen's own financial sources, loans from agents or business owners and assistance from cooperatives or other agencies. The source of finance itself includes fishermen's savings. While the sources of loans consist of loans from relatives and friends, banks, and from cooperatives. In this study, the majority of respondents made loans in their business as fishermen, as many as 78 respondents (78 percent) and only 22 people (22 percent) who used their own sources of funds for capture fisheries.

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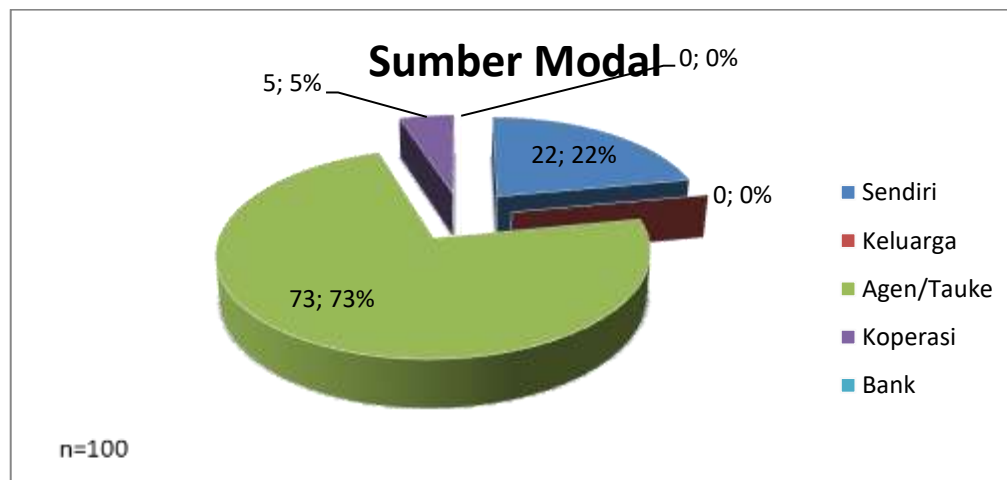


Figure 1. Fishermen's Capital Source

Most fishermen take loans from agents or business owners where they work, as many as 73 people or (73 percent). In addition, fishermen also receive village assistance funds provided by the government to help increase fishermen's income, but the payments are made through cooperatives in each village. Loans from cooperatives are only 5 respondents (5 percent). While the source of capital from the fishermen themselves are as many as 22 people (22 percent). The results of this study are not different from the results of the study (Sofyan at al. 2015). Limited access to financial capital this causes fishermen to be unable to access physical capital in the form of more modern fishing technology (Widodo, 2011). From financial assets, the income of fishermen in the sub-district is Rp. 4,775,000.00 per month on average.

Fishermen's financial sources come from catching fish, shrimp, and crabs, and laborers no fisherman get a loan from a bank/providing institution other loans. Common problems encountered by fishermen to get capital is a financial institution (banking or pawnshop) considers fishing as risky high, uncertain results, and dependent in season, the same from the results of the study (Yurike & Syafruddin, 2022). Figure 2. below shows that most respondents have savings for future needs, namely 98 people or (98 percent). From the results of the study, it was found that 51 people or (51 percent) of fishermen save at the bank, 26 people or (26 percent) of fishermen save at social gatherings, and 19 people or (19 percent) save at home, 2 people or (2 percent) save in cooperatives. , and the remaining only 2 people or (2 percent) who do not save. This situation shows that respondents in the research area have a high awareness of saving as a preparation for them to face a better future in living their lives.

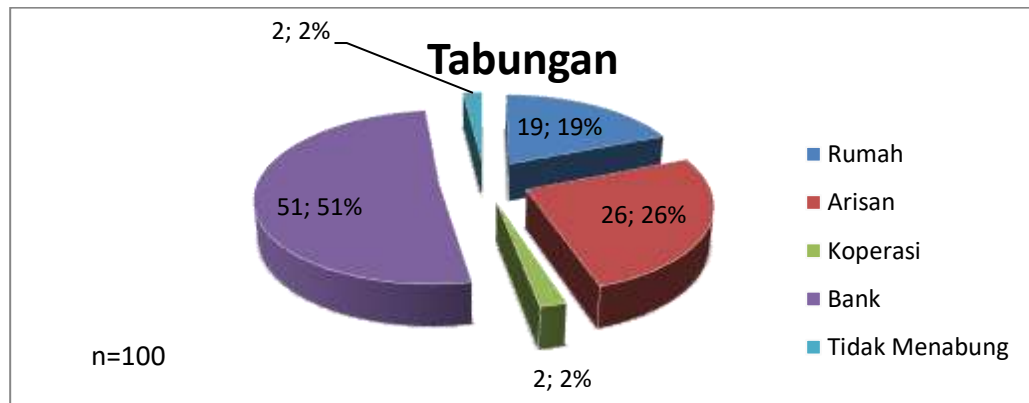


Figure 2. Overview of Fisherman's Savings Place

4.4 Physical Assets

Physical capital is the basic infrastructure and other facilities built to support people's livelihoods (DFID, 2014). Almost all fishing households have a outboard motorship and Motorboat 5 -10 GT which is used to catch fish as well as fishing equipment such as props, docks, nets, and traps. The type of boat used by fishermen to catch fish has a relatively small size with a minimal engine capacity. Physical assets include infrastructure or facilities owned by an individual which is a contributing factor in increasing income. There are facilities provided by the government such as roads, markets and fish auction places (TPI). The physical assets owned by fishermen include ownership of types of fishing gear, ownership of fishing boats and types of ownership of fishing boats , and ownership of fishermen based on physical assets can be seen in table 3 below.

Table 3. Ownership of Fishermen by Physical Assets

Table 3: Ownership of Fishermen by Physical Assets		
Physical Asset Ownership	Total Percentage (%)	
Ownership of fishing gear		
Trawl	10	10
ring net	46	46
fishing rod	8	8
Net	73	73
Types of fishing bots		
Outboard motorship	35	35
Motorboat 5 -10 GT	57	33
Motorboat 10 -20GT	6	6
Fishing bot ownership status		
Personal	13	13
Share	14	14
Rent	23	23
Overlap	47	47

Source: Primary Data, 2022

The physical assets owned by fishermen in the form of ownership of various types of fishing gear, ownership of fishing boats and types of fishing boat ownership determine the activities of fishermen in increasing family income. The more diverse types of fishing gear you have, and the larger the fishing boats you have, the greater the tendency for fishermen to earn higher incomes. In addition, it is also supported by the type of ownership of fishing bots. If the

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fishing boats are owned by themselves, it will provide a greater opportunity for fishermen to earn higher incomes compared to renting or overlapping boats with others.

In terms of ownership of fishing gear, most fishermen use nets and nets as a tool to catch fish, as many as 73 fishermen or 73 percent. The rest use trawls and fishing rods. Circumstances explain that these fishermen have started to modernize. Of the types of fishing boats, most fishermen have used 5 – 10 GT motor boats, namely 57 fishermen or 57 percent, and outboard motorship as much as 35 percent, the rest using 10-20 GT motor boats. This shows that local fishermen are already using an adequate fleet to fish at sea. Meanwhile, the ownership status of fishing bots reached 47 percent, those who rented bots as much as 23 percent, the rest are used jointly or jointly, and private bots are 13 percent. From the ownership status of the bot as a fishing fleet, more respondent fishermen ride on the tauke to go fishing in the sea. This situation shows that most fishermen still have limited capital in procuring facilities to work at sea.

4.5. Social Asset

Social assets are networks and relationships of individuals in society to increase self-confidence and ability to carry out group activities (Pontoh, 2010) and (Azhari & Mawardi, 2018) Fishermen should have groups or organizations to carry out activities at the community level as a channel of information from relevant agencies in an effort to provide better support. But unfortunately in the study area most farmers and fishermen do not take advantage of agencies provided by the government such as agricultural development institutions.

Table 4. Fishermen's Participation Level in Social Activities

Fisherman Engagement	Yes		Not	
	Amount	Percentage (%)	Amount	Percentage (%)
Position in society	15	15	85	85
Get involved in a fishing group	90	90	10	10
Strong social relationship	95	95	5	5

Source: Primary Data, 2022

Table 4. shows the percentage of fishermen involved with groups or organizations related to marine/catch fisheries activities, positions in the community. It was found that the number of fishermen holding positions such as village heads, youth leaders, penghulu, mosque youth, people's representatives, traditional officials, and so on was too small compared to the number of respondents interviewed for the fisheries sector. The role of social capital in each individual affects the capacity and quality of the group. Social capital that is used effectively can provide impetus for business development, while social capital that is not utilized effectively can hinder opportunities in business development.

The results showed that most fishermen were involved in fishing groups and organizations as much as 90 percent. This situation is because they want to get various information, assistance and guidance from related parties, such as the marine department. So that by joining various forms of unity will make it easier for them to get help. Meanwhile, only 15 percent have positions in the community, 13 percent are administrators of village government institutions, and 2 percent are village heads. Social relations with the community are still very strong where their social life is very close, such as studies (Pontoh, 2010) and (Adhiana, 2017). The role of social capital in each individual affects the capacity and quality within the group. Social capital that is used effectively

will provide impetus for business development, while social capital that is not utilized effectively will hinder opportunities in business development (Azhari & Mawardi, 2018). (Nasution, 2016) says that social capital can increase the ability society and reduce the amount of poverty, as well as life more optimistic society. Then the increase in the welfare of the community will achieved if there is a will from the community to increase their social capital. Grootaert and Bastelaer (2001) on a macro level says that social capital is able to have an influence on development.

5. CONCLUSION

The results of this study can be concluded that the ownership status of fishermen's life assets consists of five types of assets, namely human, cultural, financial, physical, and social assets. In terms of human assets, it was found that most fishermen are of productive age, have secondary education and above, experienced between 10 to 15 years and above, most have attended training or courses, have relatively small family responsibilities, namely 2- 3 people. From a cultural perspective, most fishermen have a very agreeable perception of their motivation in working to increase family income. Meanwhile, 91 percent agree with the strong influence of the Panglima laot customary institution on fishermen, and 67 percent agree with the need for environmental protection.

When viewed from the side of financial assets that the main sources of capital for fishermen are their own costs, loans from agents or business owners and assistance from cooperatives. The main source of capital for the fishermen is borrowing from the owner, cooperatives and only a few have their own capital. This situation indicates that the fisherman is experiencing a lack of capital. But most fishermen have savings, and they save money in the banks, social gatherings, cooperatives and at home, and this is done to save for their lives in the future. Based on physical assets, most fishermen have nets as fishing tools, many use 5-10 GT and 10-20 GT motorized boats as fishing boats. ownership status of fishing boats most fishermen use jointly by riding and renting. Based on social assets, most fishermen join fishermen's organizations or groups, and a small number of fishermen have positions in the community.

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REFERENCE

- Adhiana. (2017). Analysis of Identification of Farmers' Asset Ownership Post-Tsunami in Aceh. *Jurnal Agrifo*, 2(2), 34-49.
- Azhari, F., & Mawardi, M. K. (2018). The Role of Social Capital in the Development of Small and Medium Enterprises Network (Case Study at Padang Restaurant). *Jurnal Administrasi Bisnis*, 59(1), 153-162. <https://doi.org/10.1017/CBO9781107415324.004>.
- BPS. (2021). *Kabupaten Bireuen Dalam Angka 2021*. Bireuen: Central Statistics Agency
- [DFID] Department for International Development. (2014). Sustainable Livelihoods Guidance Sheets. Department for International Development. <http://www.livelihoods.org>

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Suryadi, Adhiana, Riani, Rizza AlArabi

- Farrington, J. (2013). *Sustainable livelihoods, rights and the new architecture of aid*. Overseas Development Institute, <https://agris.fao.org/agris-search/search.do?recordID=US201300075544>.
- Grootaert, C., & Van Bastelaer, T. (2001). Understanding and measuring social capital: A synthesis of findings and recommendations from the social capital initiative. Social Capital Initiative Working Paper No. 24. Washington, D.C.: The World Bank. <https://openknowledge.worldbank.org/handle/10986/14098>
- Jensen, H.G.P., Pender, J., Damon, A., and Shipper, R. 2006. *Rural Development Policies and Sustainable Land Use in the Hillside Areas of Honduras : A Quantitative Livelihood Approach*. Research Report 147. International Food Policy Research Institute (IFRI): Washington.
- Kuncoro, R. &. (2011). *Cara Menggunakan dan Memaknai Analisis Jalur (Path Analysis)*. Jakarta: Alfabeta.
- Kusnadi, 2007. Fisherman Community Life Strategy Coastal Community Empowerment Team . PSKP Jember © LkiS Yogyakarta.
- Mukherjee, Hardjono, Carrere. (2011). *People, Poverty, and Livelihood. Link for Sustainable Reduction in Indonesia*. The World Bank and Department for International Development (DFID), UK.
- Moser, C. 1998. The Asset Vulnerability Framework: Reassessing Urban Poverty Reduction Strategies. *World Development*. 26 (1) :1-19. <https://www.sciencedirect.com/science/article/abs/pii/S0305750X97100158>
- Mitlin, D. (2002). *Reducing Urban Poverty: Some Lessons From Experience – Satterthwaite*:173-179. <http://www.manchester.ac.uk/research/diana.mitlin/publications>
- Mulyadi S. 2007. *Marine Economics*. Jakarta: PT. Raja Grafindo Persada.
- Murray, Janet and Ferguson, M. (2001). *Women in Transition Out of Poverty*. Toronto: Women and Economic Development Consortium. January. <http://www.cdnwomen.org/eng/3/3h.asp>.(19)
- Nasution, A. (2016). The role of social capital in reducing household poverty in rural Indonesia. *Jurnal Ekonomi & Kebijakan Publik*, 7(2), 171-183. <https://jurnal.dpr.go.id/index.php/ekp/article/view/672>.
- Pontoh, O. (2010). Identification and Analysis of Social Capital in the Context of Empowering Fishermen Communities in Gangga Dua Village, North Minahasa Regency. *Journal of Tropical Fisheries and Marines*, 6(3),125-133.
- Rachman (2006). Prospects of Home Business Diversification in Supporting Food Security and Poverty Reduction, *Agroeconomics Forum*. Vol. 24 No.1 Juli 2006.
- Rakodi, C. (1999). A Capital Asset Framework for Analyzing Household Liferelhood Strategies: Implications for Policy. *Development Policy Review*, 17(1), 315-342. <https://onlinelibrary.wiley.com/doi/10.1111/1467-7679.00090>
- Roslina, K. (2011). *Pembangunan Akuakultur di Kedah : Analisis Impak Ekonomi, Sosial dan Alam Sekitar Menggunakan Pendekatan Kehidupan Lestari*. Kuala Lumpur: Thesis Phd Institut Alam Sekitar dan Pembangunan, Universiti Kebangsaan Malaysia.
- Salvestrin, H. (2006). Sustainable Livelihoods Approach And Community Development In Practice In Engineering Organizations. <http://epress.lib.uts.edu.au/scholarly-works/bitstream/handle/2100/301/02WholeThesis.pdf>
- Serrat, O. (2008, Desember 3). *The Sustainable Livelihoods Approach*. Retrieved Desember 1, 2020, from <https://www.adb.org/sites/default/files/publication/27638/sustainable-livelihoods-approach.pdf>



Sugiyono.2016. *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta.

Santoso, S. (2011). *Structural equation modeling (SEM) : Konsep dan aplikasi dengan AMOS 18* . Jakarta: Elex Media Komputindo.

Turton, C . (2008). The Sustainable Livelihoods Approach and Program Development in Cambodia. Working Paper 130. Overseas Development Institute (ODI) 2000, publications@odi.org.uk

Widodo, S. (2011). Strategies of Sustainable Livelihood for Poor Household in Coastal Area . *MAKARA, SOSIAL HUMANIORA*, 15(1), 10-20.

Wijayanti, R., Baiquni, M., & Harini, R. (2016). Asset-Based Community Sustainable Livelihood Strategy in Pusur Sub-watershed, Bengawan Solo Watershed. *Jurnal Wilayah Dan Lingkungan*., 4(2), 133-152.

Yurike, & Syafruddin, Y. S. (2022). Analysis of Community Livelihood Assets in Two Conditions of Mangrove . *J. Sosek KP*, 17(1), 63-73.

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BIREUEN REGENCY**

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