

Identification of Problems and Analysis of Needs for Coastal Fisherman Empowerment Program Based on Economic Education and Off Fishing in Minahasa Utara District, North Sulawesi Province

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Abstract

This study aims to identify the problems of coastal fishermen and describe the process of analyzing the needs of empowering coastal fishermen in North Minahasa Regency, North Sulawesi Province through the internalization of economic education and technical training based on off fishing. This study used a qualitative descriptive research design using survey methods, field observations, in-depth interviews and Focus Group Discussion (FGD). The research subjects were North Minahasa coastal fishermen totaling 40 fishermen spread over two sub-districts, namely Wori Sub-District and Kema Sub-District, North Minahasa Regency, which have a fishing capacity of 10 Gross Tons and below. Research findings include identifying the poverty problems of North Minahasa coastal fishermen, namely low levels of education, minimal economic literacy, inability to diversify other livelihoods besides fishing, inability to manage all coastal and marine economic potential into something of high economic value, minimal knowledge on how to access venture capital, minimal knowledge on how to build business partnerships, minimal knowledge regarding the mechanism for forming and validating productive groups and fishermen's economic institutions, minimal knowledge of coastal potential-based entrepreneurship and low literacy in family financial management. The results of the needs analysis were identified through observation, in-depth interviews and focus group discussions which were confirmed by survey results showing that 87.5% of fishermen needed knowledge and understanding of the characteristics, attitudes and principles of being a successful entrepreneur that can be implemented in productive business activities on the coast, while 92.5% need an understanding of creativity and innovation and forms of implementing creativity and innovation, 90% need knowledge of business diversification based on coastal potential and the sea, 90% stated that they needed knowledge and understanding of the processing of processed fish products, because raw materials were abundant, 80% stated that they needed an understanding of how to build business partnerships and business networks with other business groups, 90% stated that they needed an understanding regarding the procedures for forming business groups with fishermen and how to develop these business groups. 92,

Keywords: *Fishermen's Problems, Needs Analysis, Fishermen Empowerment, Economic Education, Off Fishing*

A. INTRODUCTION

Coastal communities have so far been considered as part of the poorest and marginalized groups of people (Maria, et al 2012). Most of these community groups work in the fisheries sector or work as fishermen. Fisheries development programs that focus on economic growth through the industrialization of capture fisheries do not always have a positive impact on the economic income of small fishermen (Nazmar, 2012). Coastal community empowerment programs are a necessity for comprehensive coastal resource development (Maria, et al 2012). One of the ideas of the empowerment process is through the development of human resources which in turn are able to manage the coastal environmental resources that they have been working on so far. Basically, coastal communities have diverse characteristics, however, in general they work as fishermen with various levels of fishing technology used. The livelihoods of coastal communities are dominant in the marine-based resources utilization sector, namely fishermen, fish farmers and marine aquaculture (Fauzi, 2000).

Another characteristic is that most of the coastal fishermen are traditional fishermen who generally have the same characteristics, namely the level of education that is still low, because they think that higher education is not needed to catch fish in the sea and are more concerned with or rely on their energy and experience (Maria, et al. 2012) . With a low level of education, it is difficult for fishermen to switch professions outside their profession as fishermen. The livelihoods of coastal communities are dominant in the marine-based resources utilization sector, namely fishermen, fish farmers and marine aquaculture (Fauzi, 2000).

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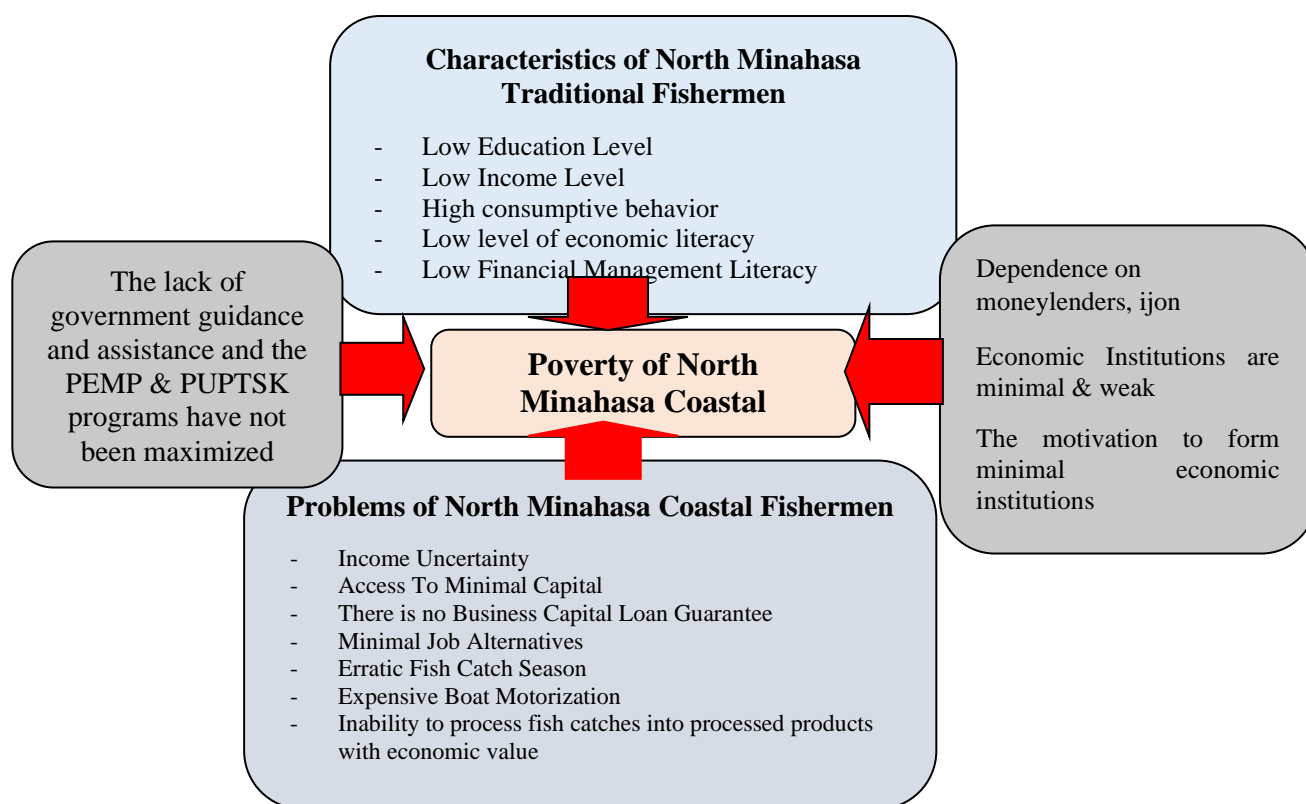
With a low level of education, it is difficult for fishermen to switch professions outside their profession as fishermen. Another characteristic is that most of the coastal fishermen are traditional fishermen who generally have the same characteristics, namely the level of education that is still low, because they think that higher education is not needed to catch fish in the sea and are more concerned with or rely on their energy and experience (Maria, et al. 2012) . With a low level of education, it is difficult for fishermen to switch professions outside their profession as fishermen.

Poverty and economic limitations which are the main problems of coastal fishermen, especially traditional fishermen, are caused by many factors. In addition to the low level of education, other factors are natural factors such as weather and fishing season, fishing technology which is still very simple, competition with modern fishermen or fishing corporations, high fishing costs caused by the high cost of production facilities and infrastructure, fuel prices. Oil for fishing is high, the dependence of traditional fishermen on moneylenders or fish middlemen, there is no alternative livelihood other than as traditional fishermen, the economic income of traditional fishermen is uncertain and far from a decent life (Ferdriansyah in Indarti and Wardana, 2013).

The causes of fishermen's poverty are also caused by external and internal factors. Kusnadi (2003) states that fishermen's poverty is caused by internal factors, namely the limited quality of fisherman human resources, limited business capital, limited fishing technology, working relationships between fishing boat owners and fishermen and fisherman workers who are less harmonious, dependence on the fishing season, and lifestyle or fisherman consumptive behavior. For external factors, Kusnadi (2005) states that the problem of fishermen's poverty is mostly caused by fisheries development policies that are still not in favor of fishermen, a fishery product marketing system that only benefits intermediary traders, as well as problems of damage to marine ecosystems through sea water pollution, destruction of coral reefs, the use of non-environmentally friendly fishing gear, fishermen's lives still depend on marine products, which are increasingly difficult as a means for fishermen to improve their quality of life. On the other hand, the catch, which is the main source, is sold not to direct consumers, but to middlemen or other fishermen with better economic conditions (fish baskets or fish traders), who have two functions, namely as fish traders and moneylenders (Indarti and Wardana, 2013).). The absence of alternative livelihoods other than fishing fishermen keeps fishermen trapped in poverty. Government programs related to fishermen's lives such as the coastal community empowerment program (PEMP) and the small-scale capture fisheries business development program (PUPTSK) have not optimally answered the problem and are not evenly felt by all traditional fishermen on the coast of North Minahasa Regency. Production facilities assistance programs cannot answer the problem of fishermen's needs as a result of the absence of prior identification and analysis of fishermen's needs so that empowerment programs experience many failures. Analysis of the needs of coastal fishermen in Minahasa district is urgently needed in identifying the main problems and needs of fishermen so that the program approach to empowering coastal fishermen in North Minahasa Regency can be maximized.

Socio-economically, coastal and marine areas have an important meaning in national development because most of the territory of the Unitary State of the Republic of Indonesia is sea territory. About 75 percent of Indonesia's territory is water, with a total of 17,508 islands which is the largest archipelagic country in the world and with the second longest coastline after Canada, namely 81,000 kilometers. Flanked by the two continents of Asia and Australia and two oceans namely the Pacific and the Indian Ocean, Indonesia is a very strategic country and has abundant marine natural wealth, ranging from various types of fish, minerals, diverse coral reefs, petroleum and many other marine assets. others (Apridar, et al 2011). This abundant potential of maritime resources is then not followed by an increase in the welfare of coastal and marine communities, as a result of the management of marine resources that has not been maximized and is in favor of coastal communities. The potential for abundant coastal resources is also owned by North Minahasa Regency, North Sulawesi Province, but has not been optimally managed so that it has not had much impact on the income of coastal fishermen

Figure 1: Overview of the Preliminary Survey on the Condition of Traditional Coastal Fishermen in North Minahasa Regency



B. THE PURPOSE OF PROBLEM IDENTIFICATION AND NEEDS ANALYSIS FOR EMPOWERMENT OF COASTAL FISHERMEN BASED ON ECONOMIC EDUCATION AND OFF FISHING

Identification of problems and analysis of needs for empowering coastal fishermen in North Minahasa Regency, North Sulawesi Province aims to identify problems and needs of fishermen in order to answer any problems identified in fishermen on the coast of North Minahasa. Needs analysis was carried out as a basis for compiling material for the empowerment model of coastal fishermen in North Minahasa Regency. Needs analysis was carried out on the socio-economic aspects of coastal fishermen, aspects of educational level and literacy of coastal potential utilization, aspects of coastal fishermen's economic institutions, and aspects of financial management of fishermen's families.

C. LITERATURE REVIEW

1. The Concept of Out-of-School Education with Community Empowerment.

Some actualization programs outside of school education (PLS) include literacy, equality, homeschooling, training, courses, life skills, early childhood education (PAUD), alleviation of street children, and community empowerment (Moedzakir, 2010). One of the actual programs of non-formal education is a community empowerment program. The community empowerment program is a program that will always deal with various social problems, because this program aims to bring about changes in the target community of students. Community empowerment programs really need a transformative process

(Moedzakir, 2010). The need for out-of-school education through community empowerment is indispensable in order to improve the standard of living and literacy of a community.

2. The Concept of Non-Formal Education in Empowering Coastal Fishermen

Non-formal education is any type of educational activity that is organized outside the formal education system, either carried out separately or as part of a larger activity, which serves specific student targets with specific learning objectives. The concept of non-formal education by Evans (1981) is an organized educational activity outside the formal education system. Evans places non-formal education as part of the overall integrated concept of the education system. In that concept, Evans emphasizes the following characteristics: very broad distribution, participatory, involving the work of community organizations, private associations, more concerned with action at the local level. For those who for various reasons do not have the opportunity to go to school, Non-formal education is needed as a substitute for equivalent education or for education in earning a living (Marzuki, 2012). Meanwhile, for those who are currently in school, non-formal education functions to complement and add to certain knowledge and skills because at school they only acquire a little or have not obtained it at all. All the learning needs needed by these groups are intended to improve life skills so that they can overcome life's difficulties or in other words, can overcome environmental challenges, both the physical environment and the social environment. Non-formal education functions to complement and add to certain knowledge and skills because at school they only get a little or they don't get it at all. All the learning needs needed by these groups are intended to improve life skills so that they can overcome life's difficulties or in other words, can overcome environmental challenges, both the physical environment and the social environment. Non-formal education functions to complement and add to certain knowledge and skills because at school they only get a little or they don't get it at all. All the learning needs needed by these groups are intended to improve life skills so that they can overcome life's difficulties or in other words, can overcome environmental challenges, both the physical environment and the social environment.

3. Internalization of Economic Education and Its Implications on Fishermen's Economic Behavior

The educational environment both formal, informal and non-formal provides a variety of knowledge, develops feelings, emotions, motivation, will, skills, values to internalize all of that in each individual (Akbar, 2007). From this statement it can be concluded that the knowledge, feelings, emotions, motivation, will, skills and values obtained from a good educational and learning environment will have positive implications for encouraging changes in individual behavior towards a better one.

One of the issues raised in this study is regarding the poverty of coastal fishermen caused by one of them is the economic behavior of coastal fishermen in North Minahasa who are consumptive and less productive in their economic actions. Behavior (behavior) is the actions (actions) or reactions (reactions) of an object. Behavior can be conscious or unconscious, overt or tacit, voluntary or involuntary. Behavior is a real action taken by someone in the form of general or uncommon behavior, acceptable or unacceptable behavior in accordance with evaluated social norms (Jogiyanto, 2007). While economic behavior is the actions or reactions of an object in the form of rationality, morality, lifestyle, efficiency in consumption activities and effectiveness in production activities (Basri, 2011). Irrational economic behavior, low economic morality, consumptive lifestyle and ineffective production activities of coastal

fishermen in North Minahasa in this study are economic problems that have implications for fishermen's poverty.

Economic education is carried out with the aim that North Minahasa coastal fishermen are able to take positive economic actions, including 1.) Be frugal and have a high interest in saving and investing 2.) Have a high interest and motivation to increase work productivity, 3.) Consider the principles of economic rationality so that economic activity can be productive and efficient, 4. Able to avoid emotional consumption traps (able to consider limits of ability, intensity of needs and able to manage desires), 5.) Having the ability to manage finances effectively. 6.) Having skills and expertise in managing coastal economic potential

4. Community Empowerment Concept

The concept of empowerment in the context of community development is always associated with the concept of independence, participation, networking and justice. (Sipahelut, 2010). According to Hikmat (2006) empowerment is defined as a psychological understanding of the influence of individual control over social conditions, political power, and their rights according to law. Meanwhile, according to Mc Ardle (1989) defines empowerment as a decision-making process by people who consistently implement the decision. People who have achieved collective goals are empowered through their independence, it is even a must to be more empowered through their own efforts, accumulation of skills and knowledge and other resources in order to achieve their goals without depending on help from the external environment (Sipahelut, 2010). Empowerment can also be interpreted as giving power or strength to someone because he is considered powerless or power to someone because he is considered powerless or the power is so small that he can hardly do anything (Marzuki, 2012). The same thing was stated by Tery Wilson 2004 (quoted by Morales, et al, and 2013) who stated that empowerment is the transfer of power to increase motivation and achieve good results for a community.

Human development and empowerment is the process of human development so that they have full capacity, have wider choices and greater opportunities so that they achieve a more dignified and more prosperous life (Suyono, in Marzuki, 2012). Empowerment is giving resources, opportunities, knowledge and skills to the community to increase their ability to determine their own future and participate in it and influence the lives of their people (Harunisyah, 2014). Thus, in order to encourage the creation of an empowered society, it is necessary to carry out more comprehensive and far-sighted and sustainable (sustainable) community empowerment efforts (Harunisyah, 2014). The empowerment carried out is how the government and other stakeholders are able to synergize in planning programs and still consider existing social values and local wisdom (Harunisyah, 2014).

To encourage the creation of an empowered society, it is necessary to carry out community empowerment efforts that are more comprehensive and far-sighted and sustainable (Harunisyah, 2014). The empowerment carried out is how the government and other stakeholders are able to synergize in planning programs and still consider existing social values and local wisdom (Harunisyah, 2014). To encourage the creation of an empowered society, it is necessary to carry out community empowerment efforts that are more comprehensive and far-sighted and sustainable (Harunisyah, 2014). The empowerment carried out is how the government and other stakeholders are able to synergize in planning programs and still consider existing social values and local wisdom (Harunisyah, 2014).

According to Terry Wilson, 1996 (quoted by Mubarak, 2010), put forward seven stages in the community empowerment cycle. The first stage is the desire of the community itself to change for the better. In the second stage, the community is expected to be able to let go of obstacles or factors that are resistance to progress within themselves and their communities. In the third stage, the community is expected to have received additional freedom and feel they have a responsibility in developing themselves and their community. The fourth stage is more of a continuation of the third stage, namely efforts to develop broader roles and responsibilities, this is related to the interest and motivation to carry out better job. In this fifth stage, the real results of empowerment begin to appear, wherein a greater sense of ownership results in a better performance output. In the sixth stage, there has been a change in behavior and impression of himself, where success in improving performance can increase psychological feelings above the previous position.

In the seventh stage, the community has succeeded in empowering itself, feeling challenged for greater efforts to get better results. This community empowerment cycle describes the process of individual and community efforts to follow the journey towards higher achievement and satisfaction. Where success in improving performance can increase psychological feelings above the previous position. In the seventh stage, the community has succeeded in empowering itself, feeling challenged for greater efforts to get better results. This community empowerment cycle describes the process of individual and community efforts to follow the journey towards higher achievement and satisfaction. Where success in improving performance can increase psychological feelings above the previous position. In the seventh stage, the community has succeeded in empowering itself, feeling challenged for greater efforts to get better results. This community empowerment cycle describes the process of individual and community efforts to follow the journey towards higher achievement and satisfaction.

5. Fishermen Empowerment Based Off Fishing

The concept of Off Fishing in the context of empowering fishermen is to provide alternative jobs for fishermen besides catching fish (Elfindri, 2002). The concept of Off Fishing is a diversification of fishermen's livelihoods by not leaving their profession or main job as fishermen (Nazmar, 2012). One of the main factors for the powerlessness of traditional fishermen on the coast is the absence of alternative jobs other than fishing (Indarti and Wardana, 2013). The dependence of fishermen on sources of livelihood as fishing fishermen is very high and they lack alternative jobs other than fishing fishermen (Kusnadi, 2005). Other alternative jobs based on off fishing have not been carried out in many fishing villages even though off fishing based livelihoods have provided many important roles for the source of income for traditional fishing households (Nazmar, 2012). Alternative livelihoods for fishermen renew business or economic activities that are being developed to reduce or eliminate pressure on fish resources, as well as to increase the income of fishermen's families (Soeprijadi, L.Dkk, 2013). The forms of off fishing-based fishermen empowerment models can be in the form of training and improving fishermen's skills in managing fishery production into processed products that have high economic value. Fishermen have many factors of production that can be used as capital for their survival. These capitals include fishermen's human resources, natural resource capital and fishermen's social capital (Mukherjee, et al, 2008, in Soeprijadi, L. et al, 2013).

D. RESEARCH METHODS

This research is an initial series or initial stage of the 6 stages of research on developing a model of empowering coastal fishermen based on economic education in North Minahasa Regency, North Sulawesi Province. The initial stages of this research are part of the design based research (DBR) stage of the DBR model adopted from the Reeves model, original design based research (2000) cited by Cotton. Wayne. dkk (2009). This design based research stage contains 6 stages of development research. In this article, we will describe the results of problem identification and analysis of the needs of the coastal fishermen empowerment model based on economic education and off fishing.

1. Types of research

This study uses a qualitative descriptive research design using survey, observation and focused discussion methods to identify and analyze the problems and needs of coastal fishermen for empowerment models based on economic education and utilization of coastal potential by off fishing or based on livelihoods other than fishing.

2. Research subject

The research subjects were coastal fishermen in two sub-districts, namely Kema and Wori sub-districts, North Minahasa district with a sample of 40 traditional fishermen with a fishing capacity of 10 gross tonnes and below.

3. Data collection technique

For data collection techniques and research information, direct observation techniques, surveys, in-depth interviews and through Focus Group Discussions (FGD) were used. Researchers involve themselves directly in the process of collecting research data and information. Direct observations were made by researchers and community empowerment experts to see the activities of coastal fishermen directly. For the survey, a questionnaire was provided which was filled out by coastal fishermen. Meanwhile for the Focus Group Discussion method, researchers involved fishermen, empowerment facilitators as well as community leaders and representatives from the marine and fisheries service.

4. Data Analysis Techniques

The data analysis technique uses descriptive qualitative data analysis techniques in the form of simple percentage analysis. The data analyzed through percentage analysis through surveys on research subjects was strengthened by the results of analysis from in-depth interviews and the results of responses and input to Focus Group Discussions (FGD).

E. RESEARCH FINDINGS AND DISCUSSION RESULTS

In the early stages of the research, the researcher identified the problem and analyzed the needs. Problems can be identified based on input from fishermen through observation and in-depth interviews. From identifying the problems of coastal fishermen, it can be analyzed and identified the needs of coastal fishermen. The results of observations and in-depth interviews were then discussed again in Focus Group Discussion activities to confirm their basic needs which were a priority scale. Focus Group Discussion (FGD) was carried out with fishermen's groups, the government, and facilitators of fisherman empowerment, related agencies and academics observing fisherman empowerment. After conducting a Focus Group Discussion,

1. Education Level of North Minahasa Coastal Fishermen As Research Samples

In this study, researchers collected information about the education level of 40 coastal fishermen in two sub-districts, namely Kema and Wori sub-districts, which were the research samples. Data on the level of formal education and the level of non-formal education that fishermen have participated in is based on a survey via questionnaire that was distributed to 40 fishermen who are members of fishermen groups in the two sub-districts. The following is presented in a table of background education levels of the 40 fishermen who were the research subjects.

Table 1: The educational background of the fishermen who are the research subjects

Formal education (%)						Non-formal education (%)		
No school	Didn't graduate from elementary school	Graduated from elementary school	Middle school graduate	Passed SENIOR HIGH SCHOOL	Graduated S1	Join Training	Never Participated in Training	Participate in Other Non-Formal Education
0	15%	22.5%	45%	17.5 %	0	30 %	65 %	5 %

Source: Data Processed by Researchers

Based on the presentation in the table above, it can be concluded that all the fishermen who were the subject of this study had a formal educational background, although there were 15% who did not complete elementary school, then the highest percentage level of education was junior high school or junior high school graduates with 45%, followed by elementary school graduates by 22.5% and high school graduates by 17.5%. In general, all fishermen who were the subject of the study were able to read and write. For the background of non-formal education in the form of education and training outside of formal education activities, the majority of fishermen, namely 65% have never participated in it, 30% have attended technical training and 5% have attended other non-formal education.

2. Knowledge, Literacy and Entrepreneurship Skills

In exploring the need for knowledge, literacy, entrepreneurial skills for fishermen, data was collected through questionnaire surveys, FGDs and in-depth interviews with existing fishermen groups. From the survey data, it can be explained that 65% of fishermen have never participated in education and training at all and 30% have attended education and training, but the education and training process does not touch on aspects of building knowledge and literacy and entrepreneurial skills. Meanwhile, 5% of the respondents who had attended other non-formal education and training had nothing to do with entrepreneurial skills. So it can be concluded that some North Minahasa coastal fishermen, especially those who are the object of this research, do not yet have the knowledge, literacy and skills regarding entrepreneurship. From the results of the information obtained in the Focus Group Discussion that most of the fishermen want to have alternative livelihoods other than fishing. They want technical entrepreneurship training and assistance in entrepreneurship.

The results of the researcher's interview with Mr. Ellias Wawoh, secretary of the Sarunta Waya fishermen group, Lilang village, Kema sub-district and Daniel Rumambi Members of the Sarunta Waya Fishermen's group, Lilang Village, obtained information about the average traditional fishermen in the coastal district of Kema, namely fishermen with a fishing capacity of less than 10 gross tons. Have entrepreneurial knowledge and skills apart from fishing (N.EW.01, N.DR.01). Other information obtained from the two fishermen confirms that there is no technical entrepreneurship training for traditional fishermen conducted by the relevant

agencies for fishermen (N.EW.02, N.DR.02). From the narratives of some of these fishermen, it can be concluded that fishermen do not yet have the knowledge and entrepreneurial skills to take advantage of the abundant coastal and marine potential. Fishermen are only trapped in one type of livelihood, namely fishing only and there are no other alternative businesses. The absence of business diversification other than fishing business is caused by knowledge and entrepreneurial skills that are not possessed by coastal fishermen in North Minahasa Regency.

3. Knowledge and Skills in Managing Processed Fish Products.

Based on observations and in-depth interviews, the researchers found that most fishermen did not have the expertise and skills to process fish into high-value economic products. From the results of Focus Group Discussions conducted with fishermen groups from Kema and Wori sub-districts, information was obtained that fish production is often abundant but fish prices are cheap and fishermen have difficulty marketing the fish they catch, while fishermen and their families do not have the skills and expertise to process fish into processed food products with high economic value and long shelf life. This information was also obtained from Mr. Rauf Pangumpia Traditional Fisherman from Kima Bajo Village, Wori District. He said that fishermen and fishermen's families on the coast of the Wori sub-district do not have the expertise to process fish into processed products that have economic value, even in their village the people can only enjoy fish meatballs and fish nuggets purchased from supermarkets in the city of Manado (N.RP. 01). From the results of the Focus Group Discussion and in-depth interviews, it can be concluded that the need for processed fish products is very large, the production of catches is abundant, but the expertise and skills in managing processed fish products that have high economic value by fishermen and their families are very minimal.

4. Knowledge and Understanding of Managing Fisherman Family Finances

From observations made by researchers regarding the economic behavior of fishing families, most of them still behave consumptively when earning income or income from fishing. The results of the survey to the research sample, 35% of fishermen who had participated in the technical training, did not receive training regarding the financial management of fishermen's families. Only 5 percent of fishermen who have attended other non-formal education and training have attended financial management education, but do not significantly master the knowledge of family financial management, while 65% of the research sample have never attended education and training including family financial management education and training fisherman.

Most of the income of fishermen on the coast of North Minahasa is allocated for household consumption, even to prepare capital for going to sea, they usually make loans to other people or to moneylenders. From the results of discussions in the Focus Group Discussion involving representatives of fishermen groups in Kema sub-district, the Maritime Affairs and Fisheries Service of North Minahasa Regency and fishermen empowerment facilitators, information was obtained that some coastal fishermen in Kema Sub-district did not know how to manage their family finances, had never planned budget allocations properly. Well and the average of them do not have savings and other investments. Results of interviews conducted with Mr. Lius Roring, a fisherman in Kema sub-district confirmed that he and his family had never saved any money in their lives and had never planned to manage their family's finances. What was earned today was spent in a few days and even had to owe or borrow money from other people (N.LR.01). The conclusions of the Focus Group Discussion with the needs analysis session of coastal fishermen in Kema sub-district, North Minahasa Regency stated that

fishermen needed training in family financial management in order to increase their knowledge about how to manage money, including how to save properly and make investments. In the FGD, data was obtained regarding their desire not to be trapped in consumptive behavior and not to be trapped in moneylenders and fish lenders who provide fishing capital loans with high interest and must be paid by selling the catch. Then to the fish traders with very cheap fish prices.

5. Knowledge About Business Capital And How To Get Business Capital

Fishermen's knowledge of access to capital in financial institutions or cooperatives that offer low interest rates is minimal. The results of an in-depth interview with Daniel Rumambi, a fisherman from Lilang Village, North Minahasa Regency, stated that so far capital for going to sea has only been obtained through loans from loan sharks or pajeko boat masters (large fishing vessels) or to fish traders, fishermen often have difficulty repaying it due to the high loan interest. So they really need capital loans for fishing and other coastal businesses from banks with easy repayment schemes, more flexible terms and low loan interest (N.DR.03). Fishermen need an understanding of business capital and how to obtain business capital credit assistance from banks. The same thing was stated by Mr. Hendrik Ombuh, a member of the Fishermen's Group of Kema District, who said that the average fishing capital for fishermen comes from loans to moneylenders with high interest. Fishermen do not know how to get business capital with little or no interest (N.HO.01).

Information regarding the minimal understanding of how to access business capital and how to obtain venture capital was stated by Mr. Ato Lamasa, a fisherman from the coast of North Minahasa Wori sub-district, he said that to finance his fishing needs he and his wife often pawned their electronic goods or valuables to loan sharks (N. AL. 1). On average, traditional fishermen have difficulty accessing business capital or finding capital for the fishing business they are involved in. who say that the average fishing capital comes from loans to moneylenders with high interest. Fishermen do not know how to get business capital with little or no interest (N.HO.01). Information regarding the minimal understanding of how to access business capital and how to obtain venture capital was stated by Mr. Ato Lamasa, a fisherman from the coast of North Minahasa Wori sub-district, he said that to finance his fishing needs he and his wife often pawned their electronic goods or valuables to loan sharks (N. AL. 1). On average, traditional fishermen have difficulty accessing business capital or finding capital for the fishing business they are involved in. who say that the average fishing capital comes from loans to moneylenders with high interest. Fishermen do not know how to get business capital with little or no interest (N.HO.01). Information regarding the minimal understanding of how to access business capital and how to obtain venture capital was stated by Mr. Ato Lamasa, a fisherman from the coast of North Minahasa Wori sub-district, he said that to finance his fishing needs he and his wife often pawned their electronic goods or valuables to loan sharks (N. AL. 1). On average, traditional fishermen have difficulty accessing business capital or finding capital for the fishing business they are involved in.

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6. Knowledge of Coastal Potential-Based Business Diversification

From the results of observations and in-depth interviews, most of the North Minahasa coastal fishermen do not have alternative livelihoods other than as capture fishermen, so that their survival mechanism is very dependent on the catch of fish and other marine products. This becomes a problem when they do not go to sea or face a fish famine season. Information on this problem was found by researchers from observations and interviews with fishermen. This becomes more difficult because most of them do not have the expertise to process coastal potential, namely raw materials available in the coast and sea into something of economic value. An interview with the head of the Sarunta Waya Fishermen Group, Mr. James Tatumpe, said that trash fish (lompa) has no economic value if it is sold as raw fish. Even if it is bought, it must be bought at a cheap price. Likewise with fish waste, crab waste (crab shells), which are widely available on the coast, are only thrown away and not processed (N.JT.04). Some businesses that fishermen and their families can develop, because the raw materials are available, are processing fish surimi (fish gel), fish meatballs, fish nuggets, fish crackers, chili sauce and fish floss. The diversification of the business of processing fish-based processed products can be used as a source of business or other livelihoods for fishermen and their families. The results of FGDs and in-depth interviews conducted by researchers show that the majority of fishermen and fishermen's families do not have the expertise to process processed products. Crab waste (crab shells), which are widely available on the coast, are only disposed of and not processed (N.JT.04).

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have the expertise to process processed products. Sambal and shredded fish. The diversification of the business of processing fish-based processed products can be used as a source of business or other livelihoods for fishermen and their families. The results of FGDs and in-depth interviews conducted by researchers show that the majority of fishermen and fishermen's families do not have the expertise to process processed products. Sambal and shredded fish. The diversification of the business of processing fish-based processed products can be used as a source of business or other livelihoods for fishermen and their families. The results of FGDs and in-depth interviews conducted by researchers show that the majority of fishermen and fishermen's families do not have the expertise to process processed products.

7. Knowledge About the Establishment and Validation of Joint Fishermen Business Groups (KUB Fishermen)

One of the findings of observations and interviews with researchers at the study site was that most of the fishermen on the coast of North Minahasa did not enter and were actively involved in fishermen's organizations or groups. On average they try individually in fishing activities. Even though they are not bound by a group, the behavior of helping each other, mutual cooperation, and strong social interaction is often practiced in their social life, both among fishermen and with other groups such as farmers, traders and other community groups. The results of the survey on the research sample found that 80% of them did not understand the procedures for forming groups or economic institutions such as fishermen's joint business groups or fishermen's cooperatives. Only 20% have the ability to organize the formation and validation of groups.

The results of the focus group discussion found information that fishermen actually have a desire to interact in fishing groups or institutions in order to improve their collective skills and expertise and to help each other. The same thing was obtained by researchers from the results of interviews with Mr. Elias Wawoh. Secretary of the Sarunta Waya Fishermen's group emphasized that all the work they do is better done together, including by diversifying businesses, but difficulties in initial formation, group validation and group management (N. EL. 02). The findings of the observation found that indirectly the fishermen implemented the cultural values of mapalus or gotong royong which is the social capital of the community in the midst of the North Minahasa community. Helpful social interactions and mutual trust (trust) as the main values of Mapalus culture have naturally been implemented in their lives. From the results of the FGD it was also identified that they wanted to form a fishing business institution in the form of a business group with fishermen because by forming groups or forming a formal group of fishermen they are entitled to assistance with production facilities from the government. The obstacles they face are how knowledge forms groups, group validation, group administration, compiling group programs including knowledge in adopting mapalus cultural values (gotong royong) in developing fishing business groups or institutions. From the results of the FGD it was also identified that they wanted to form a fishing business institution in the form of a business group with fishermen because by forming groups or forming a formal group of fishermen they are entitled to assistance with production facilities from the government. The obstacles they face are how knowledge forms groups, group validation, group administration, compiling group programs including knowledge in adopting mapalus cultural values (gotong royong) in developing fishing business groups or institutions. From the results of the FGD it was also identified that they wanted to form a fishing business institution in the form of a business group with fishermen because by forming groups or forming a formal group of fishermen they are entitled to assistance with production facilities from the government. The

obstacles they face are how knowledge forms groups, group validation, group administration, compiling group programs including knowledge in adopting mapalus cultural values (gotong royong) in developing fishing business groups or institutions.

8. Knowledge About Building Business Partnerships

One of the researchers' findings from observations and interviews conducted with fishermen is that some of them do not understand how to build fishing business partnerships with business groups or larger business partners. Interviews conducted with fisherman Mr. James Tatumpe, Head of the Sarunta Waya Fishermen Group, Kema District, confirmed that on average fishermen do not know how to build business relationships with other individuals and business groups. Fishermen only understand selling fish to tibo-tibo fish, selling fish to fish traders, and the rest have no knowledge about working with mutually beneficial business partners (N.JT.05). From the results of the Focus Group Discussion it was identified that fishermen do not have the knowledge to identify business partners and the forms of cooperation that they can carry out with business partners that benefit them. From the results of observations, interviews and FGDs conducted, it can be concluded that fishermen need knowledge about building business partnerships and business networks, maintaining business relations with business partners and knowledge about all forms of business cooperation that can be carried out from coastal and sea-based businesses planned by the group. Fisherman.

Table 2: Summary of Problem Identification Results and Analysis of Fishermen's Needs coast

Problem Identification and Needs Analysis	Problem Identification Results
<p>Observations, Interviews Through Discussions with Fishermen Groups and the North Minahasa KKP Office as well as Surveys through Questionnaires of Fishermen's Problems</p>	<ul style="list-style-type: none"> • Low Education Level • Pemp program by KKP is not optimal. • There are no alternative jobs during the famine and not the fishing season • Boat motorization assistance is inappropriate because the cost of going to sea is getting higher • Low family financial management literacy • Lack of marine and coastal product processing skills • Trapped by moneylenders and fish traders • High consumptive behavior • Less Entrepreneurial Motivation • Less Able to Build Business Partnerships • Less Familiar with Financial Institutions • Fishermen's economic institutions are minimal due to minimal capacity in the process of establishing and validating economic institutions.
<p><i>Focus group discussions</i>(FGD) With Fishermen Groups, KKP Service, Fishermen Empowerment Experts</p>	<p>Results of Needs Analysis</p> <ul style="list-style-type: none"> • Coastal & marine-based entrepreneurial literacy. • Marine product management literacy • Literacy skills in managing off fishing-based sources of livelihood • Business Diversification Literacy Processed Fish Products • Family financial management literacy • Literacy in forming business groups (KUB) or economic institutions

Data Source: Processed by Researchers

The results of the survey on the analysis of the needs for empowering fishermen based on economic education and off fishing can be summarized in the table below:

Table 3: Results of Analysis of Fishermen's Needs for the Empowerment Model through Learning and Training of Coastal Fishermen in North Minahasa Regency

No	Identified Components	Attitude of Fishermen	
		Agree	Don't agree
1	Fishermen Need Understanding of Attitudes, Characteristics and Principles of successful entrepreneurs through learning	87.5 %	12.5 %
2	Fishermen Need Understanding of Creativity and Innovation along with examples in coastal and sea-based businesses through learning and training	92.5%	7.5 %
3	Fishermen Need an understanding of the diversification (expansion) of coastal and sea-based businesses as an alternative livelihood through training	90%	10 %
4	Fishermen need an understanding of the processing of processed fish products that utilize all parts of the fish through training	90%	10 %
5	Fishermen Need Understanding Regarding building business partnerships and networks through learning	80%	20 %
6	Fishermen need an understanding of the procedures for forming and developing fishing business groups through learning	90%	10 %
7	Fishermen need an understanding of business capital and procedures for obtaining business capital	92.5 %	7.5 %
8	Fishermen Need an understanding of family financial management, financial allocation planning and an understanding of saving for fishermen through learning and training	85%	15%

Data Source: Processed by Researchers, 90% stated that they also needed knowledge and understanding about the processing of processed fish products because of the abundant raw materials, 80% stated that they needed an understanding of how to build business partnerships and business networks with other business groups due to limited ability to identify types or models of partnerships according to the business plan they are carrying out, 90% stated that they needed an understanding of the procedures for forming business groups with fishermen and how to develop these business groups based on mapalus cultural values that already existed in the North Minahasa community, 92.5% needed an understanding of business capital and how to access venture capital. 85% stated that they had minimal understanding of the financial management of fishing families.

F. CONCLUSIONS AND RESEARCH SUGGESTIONS

The results of the identification and analysis of the needs of the coastal fishermen empowerment model in North Minahasa Regency can be described as follows:

1. The fishermen who were the subject of this study had a formal educational background, although there were about 15% who did not complete elementary school, then the highest percentage of education level was junior high school or junior high school graduates with 45%, followed by elementary school graduates of 22.5 % and high school graduates as much as 17.5 percent. In general, all fishermen who were the research sample were able to read and write, making it easier for researchers to collect data by means of a questionnaire. For the background of non-formal education in the form of education and training outside of formal education activities, the majority of fishermen, namely 65% have never participated in it, 30% have attended technical training and 5% have attended other non-formal education

- that is not related to their livelihood. One of the obstacles in the coastal fishermen empowerment program in North Minahasa Regency that has been carried out so far is that the technical training and non-formal education that has been carried out has not yet touched on the priority needs of fishermen because a needs analysis has not been carried out beforehand so that it does not address their problems and needs. Suggestions from the results of this study that technical training is urgently needed related to the utilization of coastal potentials such as processing processed fish products based on zero waste production, technical training on alternative livelihoods for fishermen such as offshore fish farming, management of coastal and marine ecotourism as well as technical training on the utilization of coastal potentials based on in off fishing such as fish farming and seaweed.
2. From the survey data on the research sample, it can be concluded that 65% of fishermen have never participated in education and training at all and 30% have attended education and training, but the education and training process does not touch on aspects of building knowledge and literacy and entrepreneurial skills. While 5% of the respondents had attended other non-formal education and training, the education and training materials had nothing to do with entrepreneurship skills. So it can be concluded that some North Minahasa coastal fishermen, especially those who are the object of this research, do not yet have the knowledge, literacy and skills regarding entrepreneurship. From the results of the Focus Group Discussion, a lot of information was obtained regarding that most fishermen do not understand the knowledge and skills of entrepreneurship so that they experience difficulties and are not motivated at all to diversify coastal and sea-based businesses. The results of the fisherman needs analysis survey found that 87.5 percent of the research sample fishermen wanted entrepreneurship education and training. Meanwhile, 92.5 percent of fishermen wanted training on creativity and innovation in running coastal and sea-based businesses. Research suggestions, there is a need for technical education and training for fishermen in order to train their creativity and innovation in managing marine products. One of the technical trainings needed is processing fish into several derivative products such as fish surimi, fish balls, fish nuggets, fish sauce. Technical training is also directed at how to technically pack and improve the quality of processed fish products into products with high economic value.
 3. Based on observations and in-depth interviews with fishermen, researchers found that most fishermen did not have the expertise and skills to process fish into high-value economic products. From the results of the Focus Group Discussion with fishermen groups from the Kema and Wori sub-districts, information was obtained that fish production is often abundant but fish prices are cheap and fishermen have difficulty marketing the fish they catch, while fishermen and fishermen's families do not have the skills and expertise to process fish into fish. Processed food products with high economic value and long shelf life. From the results of the needs analysis revealed in the FGD as well as the results of a survey of fishermen's responses regarding the need for empowering coastal fishermen, it was found that fishermen really need expertise and skills in managing fish into several high-value economic products such as fish balls, fish surimi, fish nuggets and other processed products. This information is supported by the results of a survey after the FGD, namely 90% wanted training on processing fish into products of high economic value. For this reason, fishermen need to empower fishermen through non-formal education and training regarding the processing of processed fish products based on zero waste production (no waste). This information is supported by the results of a survey after the FGD, namely 90% wanted training on processing fish into products of high economic value. For this reason, fishermen

- need to empower fishermen through non-formal education and training regarding the processing of processed fish products based on zero waste production (no waste). This information is supported by the results of a survey after the FGD, namely 90% wanted training on processing fish into products of high economic value. For this reason, fishermen need to empower fishermen through non-formal education and training regarding the processing of processed fish products based on zero waste production (no waste).
4. The research findings explain the economic behavior of families of North Minahasa coastal fishermen, most of whom still behave consumptively when earning income or income from fishing. From the survey results to the research sample, 65% of fishermen had never participated in education and training including education and training in the management of fishermen's families' finances, 35% of fishermen who had attended technical training but did not receive training on the financial management of fishermen's families. Only 5% of fishermen have attended training in family financial management. From the results of the survey on the research sample that 95% or most of the fishermen who were the research sample really needed a model of empowering coastal fishermen based on economic education and off fishing through education and training in the financial management of fishermen's families. Research suggestions for fishermen to be able to take part in family financial management training and live frugal behavior. Another suggestion, fishermen can have savings for the future of the family and long-term plans and plan to invest through savings, invest in factors of production such as boats, fishing gear, agricultural land on the coast and avoid excessive consumption behavior.
 5. The results of observations and in-depth interviews show that most of the northern Minahasa coastal fishermen do not have alternative livelihoods other than as capture fishermen, so that their survival mechanism is very dependent on the catch of fish and other marine products. This becomes a problem when they do not go to sea or face a fish famine season. While the results of Focus Group Discussions and surveys of fishermen regarding the need for a model of empowering fishermen based on economic education and off fishing livelihoods explained that 95% or almost all fishermen who were the research sample wanted a model of empowering coastal fishermen based on economic education and off fishing which was implemented for them to improve their standard of living. It is very possible to diversify fishermen's livelihoods based on coastal potential without having to depend on marine products. Research suggestions for fishermen to take part in education and training regarding the utilization of other coastal potentials such as coastal and marine ecotourism, agriculture and animal husbandry as well as integrated coastal fish farming. An example of the form of integration of coastal fisheries, coastal agriculture, and coastal livestock is that fishermen can raise livestock while planting corn and cassava and look for trash fish as raw material for their livestock feed. Cornmeal, trash fish meal and cassava can be processed into high quality feed for fishermen's livestock such as poultry. Research suggestions for fishermen to take part in education and training regarding the utilization of other coastal potentials such as coastal and marine ecotourism, agriculture and animal husbandry as well as integrated coastal fish farming. An example of the form of integration of coastal fisheries, coastal agriculture, and coastal livestock is that fishermen can raise livestock while planting corn and cassava and look for trash fish as raw material for their livestock feed. Cornmeal, trash fish meal and cassava can be processed into high quality feed for fishermen's livestock such as poultry. Research suggestions for fishermen to take part in education and training regarding the utilization of other coastal potentials such as coastal and marine ecotourism, agriculture and animal husbandry as well as integrated

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6. The findings of the research are that most of the fishermen on the coast of North Minahasa are not actively involved in fisherman organizations or groups. On average they try individually in fishing activities. Even though they are not bound by a group, the behavior of helping each other, mutual cooperation, and strong social interaction is often practiced in their social life, both among fishermen and with other groups such as farmers, traders and other community groups. In the Focus Group Discussion it was identified that fishermen lack the ability in the mechanism of forming joint business groups or fishermen's economic institutions. The results of the survey after the FGD found that 90% of the fishermen wanted training on how to form groups and the mechanism for validating fisherman groups. Research advice, fishermen need to form fishermen groups or organizations with the aim of helping each other in fishing activities and other productive activities around the coast. With groups of fishermen can exchange information and knowledge and energy in order to increase their productivity and income.
7. One of the researchers' findings from observations and in-depth interviews conducted with fishermen is that some of them do not understand how to build fishing business partnerships with business groups or larger business partners. In the Focus Group Discussion, problems were also identified regarding the inability of fishermen to find and establish business partnerships with business partners who can support fishing businesses. The survey results regarding the analysis of the needs of empowering fishermen through education and training to build business partnerships, found that 80% of fishermen wanted a model of empowering fishermen through education and training on how to build business partnerships by fishermen with other parties that are mutually beneficial.
8. The research findings show that most fishermen do not have the ability to access capital. Fishermen are often trapped in debt to moneylenders with high interest rates. In covering the living expenses of the family and the cost of going to sea, fishermen are often trapped in debt. The results of a needs analysis survey for empowering coastal fishermen through training on how to access capital through types of capital assistance for fishermen confirmed that 92.5 percent of fishermen who were the research sample agreed that they wanted education and training regarding procedures for accessing capital and types of capital. Accessible to fishermen.
9. Research findings that most fishermen do not understand the mechanism of managing their family finances. On average, fishermen and their families do not have savings and do not know how to save at bank financial institutions. 85% of the research sample stated that they really needed knowledge in financial management, planning financial allocations and

correct saving procedures. Research suggestions need learning and training in family financial management for fishermen and their families.

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