Need Analysis of Coastal Fisherman empowerment Based on Economics education and Potential Coastal in Minahasa Regency of North Sulawesi

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Abstract: This research article aims to describe the need analysis process of coastal fisherman empowerment in North Minahasa Regency of North Sulawesi Province through internalization of economics education and technical training based on potential coastal. This research used descriptive qualitative research design by using survey, field observational interview and Focus Group Discussion (FGD) method. The research subjects were 40 coastal fishermen in North Minahasa Regency spread in two sub-districts, namely Wori Sub-district and Kema Sub-district in North Minahasa Regency, who have capture capacity of 10 gross ton sand below. The results of needs analysis were identified in observation, in-depth interview, and Focus Group Discussion (FGD), which was confirmed by the survey results indicating that 87.5% of the coastal fishermen need knowledge and understanding of characteristics, attitudes and principles to become successful entrepreneurs, which can be implemented in productive business activities on coastal area, while 92.5% of the coastal fishermen require an understanding of creativity and innovation and its implementation, 90% of the coastal fishermen require knowledge of business diversification based on coastal area and marine potentials, 90% of the fishermen stated that they need knowledge and understanding of the process of processed fish products because of the abundant raw materials, 80% of the coastal fishermen said that they need an understanding of the way to establish business partnerships and business networks with other business groups, 90% of the coastal fishermen stated that they need an understanding of the way to form fishermen joint business groups and the way to develop the business group. 92.5% of the coastal fishermen need an understanding of business capital and the way to access business capital, and 85% of the coastal fishermen said that they need to understand money management, the way to plan proper financial allocations, and saving procedures.

Keywords: Need Analysis, Fisherman Empowerment, Economics Education, Potential Coastal

1. Introduction

So far, coastal community is considered to be a part of the poorest and marginalized group [1]. Most of them work in fishery sector or work as fishermen. Fisheries development program that focuses on economic growth through capture fishery industry does not always have a positive impact on the economic income of poor fishermen [2]. Coastal community empowerment program is a
necessity for the development of coastal resources comprehensively [1]. One of the ideas of the empowerment process is through the development of human resources, which in turn are able to manage the coastal resources they have been involved in so far. Basically, coastal community has diverse characteristics, but generally they work as fishermen with different levels of fishery technology used. The dominant profession of coastal community is in the sector of marine-based resource utilization, namely fishermen and fish farmers, both with aquaculture and mariculture method [3]. Another characteristic is that most of the coastal fishermen are traditional fishermen who generally have the same characteristics, namely low level of education because they think that there is no need to get high education to look for fish at sea and they are more concerned or rely on their energy and experience [1]. With low level of education, fishermen find difficulties to switch into other jobs besides fishermen.

Poverty and economic limitations that become the main problem of coastal fishermen, especially traditional fishermen, are caused by many factors. In addition to low education level, other natural factors such as weather and fishing seasons, very simple fishing technology, competition with modern fishermen or fishery corporations, the great cost of fishing due to expensive production facilities and infrastructure, expensive fuel for fishing, dependence of traditional fishermen on moneylenders or middlemen, the absence of alternative livelihoods other than traditional fishing, the economic income of traditional fishermen that is uncertain and far from decent living [4].

The poverty of fishermen is also caused by external and internal factors. Kusnadi states that the poverty of fishermen is due to internal factors, namely limited qualified human resources among fishermen, limited business capital, limited fishing technology, unharmonious relationship between fishing boat owners and fishermen as well as fishing boat workers, dependence on fishing season, and lifestyle or consumptive behavior of fishermen [5]. For external factors, Kusnadi stated that the poverty of many fishermen is caused by the policies of fisheries development that are still not in favor of fishermen, the marketing system of fishery that is only beneficial to middlemen, damage of marine ecosystem through sea water pollution, coral reef destruction, the use of fishing gear which is not environmentally friendly, limited technology for post-harvest processing, and limited employment opportunity in non-fisheries sector (off fishing) in the fishing villages [6]. The livelihood of fishermen still depends on sea, which is increasingly difficult as a means of the fishermen to improve the quality of life. On the other side, the catch which is the main source is not sold to consumers directly but to middlemen or to other fishermen who have better economy (fish traders), who has two functions: as fish traders and moneylenders [4]. The absence of alternative livelihoods other than fishing leads fishermen to remain trapped in poverty.

Government programs related to fisherman's life such as coastal community empowerment program (PEMP) and small-scale fishing business development program (PUPTSK) have not been maximally answered and not equally felt by all traditional coastal fishermen in North Minahasa Regency. Assistance programs of production means cannot address the needs of fishermen due to the lack of identification and need analysis of fisherman in advance so, that empowerment programs experience many failures. The need analysis of coastal fishermen in Minahasa Regency is very required in identifying the problems and the main needs of fishermen, so that the approach of coastal fishermen empowerment program in North Minahasa Regency can be done maximally.

Socio-economically, coastal and marine areas have important significance in national development since most of the territory of the Unitary State of the Republic of Indonesia is maritime territory. About 75 percent of Indonesia is waters, with a total of 17.508 islands. Indonesia is the largest archipelagic country in the world with the second longest coastline after Canada, namely 81.000 kilometers. Being flanked by two continents, Asia and Australia, and being flanked by two oceans, pacific and hindia, make Indonesia a very strategic country and have abundant marine natural resources, ranging from various types of fish, minerals, diverse coral reefs, petroleum, and many other marine [7]. Abundant potential of maritime resource is not accompanied by the increase of coastal and marine community welfare due to the management of marine resources that have not been maximized and not in favor of coastal communities. Abundant potential of coastal resources is also owned by
North Minahasa Regency of North Sulawesi Province, but it has not been managed maximally so that it does not give much impact to the income of coastal fisherman.

2. Objectives of Problem Identification and Need Analysis of Coastal Fisherman Empowerment Program Based on Economics Education and Off Fishing Concept

Problem identification and need analysis of coastal fishermen empowerment program in North Minahasa Regency of North Sulawesi Province aims to identify problems and needs of fishermen in order to answer every problem identified in coastal fishermen in North Minahasa Regency. Need analysis is done as the basis for the material preparation of empowerment program of coastal fishermen in North Minahasa Regency.

3. Literature Review

3.1 Concept of Out-of-School Education with Society Empowerment.

Several actualization programs of Out-of-School Education (PLS) are literacy, equity, homeschooling, training, course, life skills, Early Childhood Education (PAUD), street children and society empowerment. One of the actual programs of out-of-school education is society empowerment program. Society empowerment program is a program that will always be faced with various social problems because this program aims to make a change in the targeted community of learners. Society empowerment program is really in need of transformative process [8]. The need for out-of-school education through community empowerment is very essential in order to improve the standard of living and literacy of a community. Out-of-School Education (PLS) is needed by coastal fishing communities including fisherman families in order to increase the literacy of coastal and marine natural resources utilization, so that coastal fishermen and their families live in prosperous life.

3.2 Concept of Non-formal Education in Coastal Fisherman Empowerment Program

Non-formal education is any type of educational activity which is organized outside formal education system, either implemented separately or as a part of larger activity, which serves particular learners with specific learning objectives. According to Evans, non-formal education is an organized educational activity outside formal education system. Evans places non-formal education as a part of overall integrated concept of education system. In that concept, Evans emphasizes the following features: very broad distribution, participatory, involving the work of community organizations, private associations, more concerned about action at local level [9]. For those who do not have the opportunity to study at school with various reasons, non-formal education is required as a substitute for equal education in earning a living [10], while for those who have an opportunity to study at school, non-formal education serves as complement and gains additional knowledge and particular skill because at school they only obtain a little knowledge and skill or even not at all. All learning needs required by these groups are meant to improve their life skills, so that they can overcome difficulties they find or in other words, they can overcome the environmental challenges, both physical and social environment.

4. Method

This research is a series of beginning or early stage of 6 stages of research development of coastal fishermen empowerment model based on economics education in North Minahasa Regency of North Sulawesi Province. The initial stage of this research is a part of design based research (DBR) stage of DBR model adopted from Reeves model [11]. Design based research contains 6 stages of developmental research. This article will illustrate the results of problem identification and need analysis of coastal fishermen empowerment model based on economics education and off fishing concept.
4.1 Type of Research

This research used descriptive qualitative research design by using survey, observation, and focused discussion method to identify and analyze the problems and needs of coastal fisherman on empowerment model based on economics education and utilization of coastal resources with off fishing concept or based on livelihoods other that fishing.

4.2 Research Subjects

In this research, the research subjects were coastal fishermen in two sub-districts, namely Kema Sub-district and Wori Sub-district in North Minahasa Utara with 40 research samples of traditional fishermen with capture capacity of 10 gross tons and below.

4.3 Data Collection Technique

In collecting data and research information, the techniques used were direct observation, survey, in-depth interviews and Focus Group Discussion (FGD). Researchers involve themselves directly in the process of collecting data and research information. Direct observation was done by researchers and experts of community empowerment to see the activities of coastal fisherman directly. In the survey, the questionnaires were filled in by coastal fisherman. As for Focus Group Discussion method, researchers involved fishermen, empowerment facilitators, community leaders, and representatives from Department of Marine and Fisheries. In Focus Group Discussion, the information about the problems and needs of coastal fishermen for the model or program of fishermen empowerment based on economics education and utilization of coastal resources based on off fishing concept is explored.

4.4 Data Analysis Technique

The data was analyzed by using qualitative descriptive data analysis technique in the form of simple percentage analysis. The data which was analyzed through percentage analysis through survey on the research subjects was supported by the analysis results of in-depth interview and the responses and inputs on Focus Group Discussion (FGD).

5. Results and Discussions

In the early stage of the study, the researchers conducted problem identification and need analysis. Problems can be identified based on inputs from coastal fishermen through observation and in-depth interview. From the identification of coastal fisherman’s problems, the needs of coastal fishermen can be analyzed and identified. The results of observation and in-depth interview were then discussed again in Focus Group Discussion to confirm the prioritized basic needs. Focus Group Discussion (FGD) was conducted with groups of fishermen, government, fishermen empowerment facilitators, related department, and academics monitoring fisherman empowerment program. After conducting Focus Group Discussion, the questionnaires were arranged and distributed to the research samples to find out the priority of coastal fishermen’s needs for the empowerment model, which would be identified in-depth interview and Focus Group Discussion.

5.1 Education Level of Coastal Fishermen in North Minahasa Regency Who Became Research Samples

In this study, the researchers explored information about the education level of 40 coastal fishermen in two sub-districts, namely Kema Sub-district and Wori Sub-district, who became research samples. Data of formal education level and non-formal education of the coastal fisherman was based on survey through questionnaires distributed to 40 fishermen who were members of fishermen groups in those two sub-districts. The education level of 40 fishermen who became the subjects of this research is presented in the following table.

Table 1. Education Background of Coastal Fishermen Being Research Subjects
| Formal Education (%) | Non-Formal Education (%) |
|----------------------|--------------------------|
| Never study at school | Did not finish primary school | Graduated from junior high school | Graduated from senior high school | Bachel or | Have followed training | Never followed training | Follow other non-formal education |
| 0 | 15% | 22.5% | 45% | 17.5% | 0 | 30% | 65% | 5% |

Source: Data processed by researchers, 2017.

Based on data in the table above, it can be concluded that all the fishermen who became the subjects of this study have formal education background, although there are 15% who did not complete primary school. Mostly, the coastal fishermen (45%) are graduates of junior high school, 22.5% of them are graduates of elementary school, and 17.5% of them are graduates of senior high school. In general, all fishermen who became the subject of research have been able to read and write. The most of the fishermen (65%) have never followed non-formal education in the form of education and training outside formal education activities, 30% of them have followed technical training, and 5 percent of them have followed other non-formal education. One of the obstacles in the coastal fishermen empowerment program in North Minahasa Regency so far is that the technical training and non-formal education conducted have not concerned on the priority of fishermen’s needs because there was no need analysis first, so it does not answer their problems and needs.

5.2 Knowledge, Literacy, and Entrepreneurship Skill

In exploring the need for knowledge, literacy, and entrepreneurship skill for fishermen, data was collected through questionnaires, FGD, and in-depth interview with existing fishermen community. From survey data, it can be seen that 65% of fishermen have never got education and training at all, 30% of them have got education and training, but the education and training process is not concerned on building knowledge, literacy and entrepreneurship skill, and 5% of the respondents have got other non-formal education and training which is not related to entrepreneurship skill. Therefore, it can be concluded that some coastal fishermen in North Minahasa Regency, particularly who became the objects of this study, do not have the knowledge, literacy and skill about entrepreneurship. From the information obtained in Focus Group Discussion, most of the fishermen want to have alternative livelihoods other than fishing. They expect technical training of entrepreneurship and the assistance in entrepreneurship.

5.3 Knowledge and Skill in Processing Fish

From the results of observations and in-depth interview, researchers found that most fishermen do not have skill in processing fish into high-value products. From the results of Focus Group Discussion which was conducted with groups of fishermen from Kema Sub-district and Wori Sub-district, it was obtained information that the catch of fish is often abundant but the price of fish becomes cheap and fishermen are having trouble marketing fish because fishermen and their families do not have skill and expertise to process fish into processed food products which are durable and have high economic value. From the results of focus group discussion and in-depth interview, it can be concluded that there is very high demand for processed fish products and abundant catch of fish, but fishermen and their families do not have expertise and skill in processing fish into products which have high economic value.

5.4 Knowledge and Understanding of Fisherman Family on Financial Management

From the observation conducted by the researchers about economic behavior of fisherman family, most of fisherman families still behave consumptively when they get income or fishing results. The results of survey to the research samples show that 35% of fishermen who had
participated in technical training did not get training on financial management of fishermen family. Only 5 percent of fishermen who had got other non-formal education and training had attended a financial management course, but they did not really understand the financial management of family, while 65 percent of the samples never attended any education and training including financial management education and training for fisherman families.

The income of coastal fishermen in North Minahasa Regency is allocated mostly for household consumption. Most of them even to get capital for fishing by borrowing money to other people or usurers. From Focus Group Discussion which involved representatives of fishermen groups in Kema Sub-district, Department of Marine and Fisheries of North Minahasa Regency, and fisherman empowerment facilitators, there was information that some coastal fishermen in Kema Sub-district did not know how to manage their family finance, had never planned to expenditure allocate well. Most of them have no savings and other investments. The conclusion of Focus Group Discussion with need analysis session of coastal fishermen in Kema Sub-district of North Minahasa Regency indicates that fishermen need family financial management training in order to increase their knowledge about how to manage money, including how to save and invest money well. Focus Group Discussion obtained data about the desire of fishermen not to get stuck on consumptive behavior and, usurers, and pengijon who provide capital loan for fishing with high rates of interest, which must be paid by selling their catch of fish with very low price.

5.5 Knowledge on Business Capital and How to Get It

Knowledge of fishermen on access to capital in financial institutions or cooperatives that offer low interest is minimal. The result of in-depth interview with a fisherman of Lilang Village in North Minahasa Regency, stated that so far the capital for fishing is only obtained from loan to usurers, to the owner of pajeko boat (big fishing boat), or to fish trader. Fishermen also find difficulties in returning it due to high interest rates of loan; therefore, they really need capital loans for fishing and other coastal businesses from banks with easy schemes of returning money, more flexible period of time, and small interest rate. Fishermen need an understanding of business capital and how to obtain business capital credit assistance from banks.

5.6 Knowledge on Business Diversification Based on Coastal Resources

The results of observation and in-depth interview show that most coastal fishermen in North Minahasa Regency have no alternative livelihood other than fishing, so they are highly dependent on fish and other marine resources. This becomes a problem if they do not go to sea or face fish famine. Information about this problem was found by the researchers from the results of observation and in-depth interview with fishermen. This becomes more difficult because most of them do not have ability in processing coastal resources, which are raw materials available on the coast and sea, into something with economic value. Some businesses that can be developed by fishermen and their families because the raw material is available is processing fish surimi (fish gel), fish balls, fish nuggets, fish crackers, fish chili sauce and shredded fish. Business diversification of processed products made from raw fish can be used as a reference of business or other livelihood for fishermen and their families. Results of FGD and in-depth interview conducted by researchers show that most of fishermen and their families do not have skill to process fish.

5.7 Knowledge on Establishment and Legitimization of Joint Business Group of Fishermen.

One of findings from observation and in-depth interview of researchers in the study site shows that most coastal fishermen in North Minahasa Regency are not actively involved in the organization or group of fishermen. Most of them work individually in fishing activities. Although they are not involved in group, they often help each other and have strong social interaction in their social life, both among fishermen and with other groups such as farmers, traders and other communities. The results of survey in research samples show that 80% of them do not understand the procedure of establishing a group or economic institution such as joint business group of fishermen or
fishermen cooperatives. Only 20% of them have the ability to organize group formation and group legitimization.

The results of Focus group discussion show that fishermen actually have a desire to interact within groups or institutions of fishermen in order to improve their skill and ability together and to help each other. Findings in observation show that indirectly, coastal fishermen implemented mapulus cultural value or mutual assistance, which is the social capital of society in North Minahasa Regency. Mutual assistance and trusting each other are the main cultural values of mapulus, which are naturally implemented in their life. Results of FGD also show that they want to establish fishermen's business institutions in the form of joint business group of fishermen because by grouping or forming formal group of fishermen, they are entitled to the assistance of production facilities from the government. The obstacles they face are the lack of knowledge to form a group, group legitimization, group administration, group programming, including knowledge in adopting cultural values of mapulus in developing groups or fisheries business institutions.

5.8 Knowledge on Establishing Business Partnership

One of the findings obtained by the researchers from observations and interview with fishermen is that some of them do not understand how to establish partnerships with fishermen business groups or larger business partners. The results of Focus Group Discussion show that fishermen have no knowledge on identifying business partners as well as the forms of cooperation that they can do with business partners which are beneficial for them. From the results of observation, interview and FGD which have been conducted, it can be concluded that fishermen need knowledge about building business partnerships and business networks, maintaining business relationship with business partners, and knowledge of all forms of business cooperation that can be done by coastal and marine business planned by fisherman group.

Table 2. Summary of the Results of Problem Identification and Need Analysis of Coastal Fishermen

| Problem Identification and Need Analysis | Results of Problem Identification |
|-----------------------------------------|----------------------------------|
| Observation, interview through discussion with fisherman group, Department of Marine and Fisheries in North Minahasa Regency, and survey through questionnaires of fishermen’s problems | • Low education level  
• PEMP program conducted by Department of Marine and Fisheries is not maximal.  
• No alternative job in fish famine and in not capture season  
• Inappropriate assistance of boat operational cost because fishing cost is increasing  
• Low family financial management literacy  
• Lack of skill in processing coastal and marine resources  
• Loan to usurers and pengijon  
• High consumptive behavior  
• Low motivation in entrepreneurship  
• Cannot establish business partnership well  
• Do not know financial institutions well  
• Minimal economic institution of fishermen due to minimal skill in establishing and legitimizing economic institution. |
| Focus group Discussion (FGD) with fisherman group, Department of Marine and Fisheries, Experts of Fisherman Empowerment | Results of Need Analysis  
• Entrepreneurial literacy based on coast and marine.  
• Literacy of marine resource process  
• Literacy of skill in livelihood based on off fishing concept |
- Literacy of Business Diversification of processed fish products
- Literacy of family financial management
- Literacy of establishing joint business group (KUB) or economic institution

Data Source: Processed by Researchers.

Results of survey of need analysis of fisherman empowerment program based on economics education and off fishing concept can be summarized in the following table:

**Table 3. Results of Need Analysis of Fishermen in Empowerment Model through Learning and Training for Coastal Fishermen in North Minahasa Regency**

| No | Identified Component                                                                                                                                                                                                 | Fishermen’s Attitude |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1  | Fishermen need an understanding on the attitude, characteristics, and principles of successful entrepreneurs through learning                                                                                       | 87.5% 12.5%          |
| 2  | Fishermen need an understanding on creativity and innovation as well as their examples in coastal and marine business through learning and training                                                                      | 92.5% 75%           |
| 3  | Fishermen need an understanding on diversification (extension) of coastal and marine business as alternative job through training                                                                                       | 90% 10%            |
| 4  | Fishermen need an understanding on how to make processed fish products utilizing the whole parts of fish through training                                                                                              | 90% 10%           |
| 5  | Fishermen need an understanding on establishing business partnership and network though learning                                                                                                                       | 80% 20%           |
| 6  | Fishermen need an understanding on the procedures of establishment and development of fisherman business group through learning                                                                                      | 90% 10%           |
| 7  | Fishermen need an understanding on business capital and procedures to get business capital                                                                                                                                 | 92.5% 7.5%         |
| 8  | Fishermen need an understanding on family financial management, expenditure allocation planning, and saving through learning and training                                                                                | 85% 15%           |

Data Sources: Processed by the researchers, 2017.

6. Conclusions

The results of identification and need analysis coastal fisherman empowerment model in North Minahasa Regency can be illustrated as follows:

1. Focus Group Discussion obtained a lot of information about most of coastal fishermen who did not understand entrepreneurial knowledge and skill, so that they found difficulties and they were not motivated at all to do business diversification based on coast and marine. The survey results of need analysis of fishermen, there are 87.5 percent of research samples expect entrepreneurial education and training, while 92.5 percent of fishermen want training on creativity and innovation in running coastal and marine business. The researchers suggest that there should be education and technical training for fishermen in order to train their creativity and innovation in managing marine products. One of the technical training that is required is processing fish into several derivative products such as fish *surimi*, fish balls, fish nuggets, and fish chili sauce. Technical
training is also directed to how the technique of packaging and quality improvement of processed fish products into high-value economic products.

2. The results of observation and in-depth interview with coastal fishermen, researchers found that most fishermen do not have the expertise and skill in managing fish into high-value products. From the results of Focus Group Discussion which was conducted with groups of fishermen from Kema Sub-district and Wori Sub-district, it was obtained information that the catch of fish is often abundant but the price of fish becomes cheap and fishermen are having trouble marketing fish because fishermen and their families do not have skill and expertise to process fish into processed food products which are durable and have high economic value. From result of need analysis revealed in FGD and survey of coastal fishermen’s responses about coastal fisherman empowerment need, it can be concluded that fishermen really need skill to manage fish to some products with high economic value like fish ball, fish surimi, fish nugget and other processed products. This information was supported by the results of survey which was conducted after FGD that 90% of coastal fishermen expect training of fish processing into high-value products. Therefore, fishermen need fishermen empowerment program through education and non-formal training on processing fish into products based on zero waste production (no waste).

3. The research findings show that most of fisherman families still behave consumptively when they get income or fishing results. The results of survey to the research samples show that 65% of the research samples never attended any education and training including financial management education and training for fisherman families, 35% of fishermen who had participated in technical training did not get training on financial management of fisherman family. Only 5 percent of fishermen who had got other non-formal education. From the results of the survey on the research samples, 95% or most of the fishermen who became the research samples really need coastal fisherman empowerment model based on economics education and off fishing concept through education and training of financial management for fisherman family. Fishermen are suggested to participate in family financial management training and live economical life. Another suggestion is that fishermen should have saving for the family's future, long-term plan, and plan to invest through savings, invest in production factors such as boats, fishing gear, coastal farmland, and avoid excessive consumption.

4. The results of observations and in-depth interview show that most coastal fishermen in North Minahasa Regency have no alternative livelihoods other than fishing, so their survival mechanism is highly dependent on the catch of fish and other marine products. This becomes a problem when they do not go to sea or face the fish famine. While the results of Focus Group Discussion and survey fishermen about the need for model of fishermen empowerment program based on economics education and off fishing concept show that 95% or almost all of the fishermen who become research samples wanted coastal fisherman empowerment model based on economics education and off fishing concept to be implemented to them to improve their standard of living. It is very possible to diversify livelihoods of fishermen based on coastal resources without having to rely on the results of fishing. From this research, fishermen are suggested to attend education and training on the utilization of other coastal resources such as coastal and marine ecotourism, agriculture, animal husbandry, and integrated coastal fish farming. In the integration of coastal fish farming, coastal farming, coastal animal husbandry, fishermen can farm while planting corn and cassava, and looking for rough fish as the fodder for their livestock. Corn flour, rough fish flour, and cassava can be processed into high-quality feed for the livestock such as poultry.

5. In this research, it was found that most coastal fishermen in North Minahasa Regency are not actively involved in the organization or group of fishermen. Most of them work individually in fishing activities. Although they are not involved in the group, they often help each other and have strong social interaction in their social life, both among fishermen and with other groups such as farmers, traders and other communities. In Focus Group Discussion, it was identified that fishermen lacked the ability to form a joint business group or fisheries economics institution. The results of survey after FGD found that 90% of fishermen expect training on how to form groups...
and how the legalization mechanism of fishing groups. From this research, fishermen are suggested to form a group or organization of fishermen with the aim to help each other in marine activity and other productive activities around the coastal area. With group, fishermen can exchange information, knowledge, and energy in order to increase their productivity and income.

6. One of the findings of researchers from observation and in-depth interview which were conducted to fishermen is that some of them do not understand how to establish partnerships with fishermen business groups or larger business partners. Focus Group Discussion also identified the problem of the inability of fishermen in finding and establishing business partnerships with business partners that can support the fishing business. Survey on the need analysis of fishermen empowerment through education and training to establish business partnerships found that 80% of fishermen expect fishermen empowerment model through education and training on how to build business partnerships with other mutually beneficial parties. Fishermen are suggested to be able to build networks and partnerships with other parties, individuals, economic institutions and corporations in order to transfer knowledge, marketing network of fish and processed fish products, market information, business capital assistance, technology assistance, and various partnerships with fishermen’s partners.

7. Research findings show that most fishermen do not have the ability to access capital. Fishermen are often in debt to usurers with high rates of interest. In covering the cost of family living and the cost of fishing, fishermen are often stuck in debt. The results of survey of the need analysis of coastal fishermen empowerment program through training on how to access capital through types of capital assistance for fishermen confirm that 92.5 percent of fishermen who became the study samples agreed that they want education and training on capital access procedures as well as types of capital which can be accessed by fishermen. It is suggested to conduct intensive training and assistance for fishermen groups, so that they have knowledge and ability in accessing fishery business capital and also other business capital in which fishermen are involved.

8. From the research findings, it can be seen that most fishermen do not understand family financial management mechanism. Most of the fisherman and their families do not have savings and do not know how to save in financial institution like bank. 85% of the research samples stated that they were in need of knowledge of financial management, planning for proper financial allocations, and saving procedures. There should be learning and training of family financial management for fishermen and their families.

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