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Vulnerability of a Fisheries Community under the Informal Economy: A Case Study of SendangBiru, East Java Province

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Abstract of Master's Thesis Academic Year 2014

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Summary

The main problem faced by developing countries is related to unbalanced portion of job seekers and job opportunities. Therefore, informal economy arises in order to accommodate a number of available workers. In Indonesia, about 68% workers are employed in the informal economy. Fisherman is one occupation that exists under the informal economy in its community.

This study is about fisheries communities' livelihood that is highly vulnerable because of the informal economy. There are some reasons that influence this condition. The main reason concerns the patron – client system between fishermen and middleman / middle woman in their working system. Other reasons relate to low education level, seasonal type of work, low income that is under the minimum wage standard, and exclusion to and/or from other community members in the village. The hypothesis of this research is because the fisheries community's livelihood is in an informal economy, so fishermen could not get out of the poverty cycle.

The objectives of this research are to study the informal economic activities in fisheries community's livelihood, to identify why fishermen are highly vulnerable to poverty, and to provide information of local conditions to increase government awareness and give consideration in making programs for fisheries community in Indonesia.

This research concludes that fishermen's high dependency to middleman / middle woman as their capital source, both for fishing activities and daily consumption needs, which makes them vulnerable to poverty. On the other hand, eliminating the role of middleman / middle woman means taking out the only resources in their livelihood. Therefore, to help fishermen, government should give pro – community assistances/programs based on the real problems faced by the community.

Keywords

1. Fisheries community, 2. Informal economy, 3. Vulnerability, 4. Poverty

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CHAPTER I INTRODUCTION

1.1 Fishermen's Poverty and the Informal Economy in Indonesia

The ocean covers 71 percent of the Earth's surface and contains 97 percent of the planet's water, yet more than 95 percent of the underwater world remains unexplored¹. This data indicates that job opportunities in marine sector is still promising and require a lot of workers to explore it. Besides, marine-related occupations should also provide benefits for the workers because of its huge natural resources. Unfortunately, the World Bank mentioned that over 20% of the world's 38 million full-time fishers earn less than US\$1 per day². This fact shows that marine-related jobs not always offer welfare for the employees; especially for the low scale fishermen who are only depend on their fisheries livelihood.

According to the Statistical Bureau of Indonesia, fisherman is an informal worker based on the type work categorization. The categorization is based on some characteristics of the fisherman, such as no fixed income, do not have job security, and do not have legal status. In addition, fishermen's activities are highly relying on the informal economy in their livelihood.

The informal economy in Indonesia is important since it absorbs a large number of workers without any specific requirements. According to Central Bureau of Statistics in 2009 as mentioned by The International Labor Organization (ILO)³, 68 percent of Indonesian was employed in informal economy often with low pay, danger working condition, and no social security. This number increased for about 4 percent from the data in 2000 as the effect of economic crisis; thus, people tried to create their own job in informal sector as their income source.

This research is about a fisheries community living under the informal economic activities in Sendang Biru, East Java Province. Sendang Biru is in

¹ <http://www.noaa.gov/ocean.html>

² <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTARD/0,,contentMDK:20451222~menuPK:1308455~pagePK:148956~piPK:216618~theSitePK:336682,00.html>

³ <http://www.ilo.int/jakarta/areasofwork/informal-economy/lang-en/index.htm>



Sumbermanjing Wetan sub-district, Tambakrejo village located in southern part of Malang regency. Geographically, Sendang Biru positioned in $08^{\circ}22'15''$ South Latitude and $112^{\circ}43'32'' - 112^{\circ}47'30''$ East Longitude bordered by Kedung Banteng village (North), Indonesia Ocean (South), Tambak Asri village (East), and Sitarjo village (West). The research area can be seen in the following figure.

Tambakrejo has hilly topography with medium slope in the height of 50 - 250 m from the sea level. Part of Sendang Biru is limestone and rock, on other part is a coastline of 50 - 100 m. Sendang Biru beach is a 20 m depth strain; besides, its direction of outflow is dominantly to the south.

The average temperature in Sendang Biru is 32°C influenced by dry season and rainfall around 1350 mm/year. In the south part, Sendang Biru is directly connected with Indonesia Ocean. Fortunately, Sendang Biru has Sempu Island as its natural barrier to cover the coast from direct ocean waves and this natural condition makes fishermen from other areas come to Sendang Biru.

The major occupation for people in Sendang Biru is fishermen and it is not an option for them as it is a hereditary livelihood in their family. Most of the local fishery communities in coastal area live under the life standard and unstable economic condition. In addition, fishermen do not have direct access to the government and market that making them become a fisheries community that highly dependent on informal economy in their livelihood. This condition leads to the problem of vulnerability for fisheries community that should become one of the government's concerns to be solved directly.

Figure 1.1 Location of the Research Site





Fishermen and Poverty in Indonesia

Fishermen usually has been generalized to live under the poverty line, as mentioned by Susilowati (1991) in Edy Yusuf (2011), because of their characteristics of subsistent condition, small capital, low technology/skill, traditional behaviors of skill, psychology, and mentality. Moreover, Raymond Firth in Badong Suyanto (2013) identified characteristics of poor fisherman livelihood: first, daily increment income of which amount is difficult to be determined and according to season as well as position (the owner or crew).

Second is low-level education. Third, since the catches are perishable and have to be sold immediately, fishermen depend on the middleman / middle woman to market the fish. Thus, fishermen could not determine their own fish's price in the market. Fourth, fishery activities need a lot of investment; thus, low scale fishermen prefer to have small-scale fishing. Fifth, poor fishermen/families are vulnerable to the loans trap.

Although some characteristics have been made to categorize fisheries community as a community living in poverty level, the fishermen themselves do not pretending to be a poor people. They can deal with the condition where they can earn income most based on their abilities and skill of fishing. Panayotou in Kusnadi (2002) mentioned that fishermen might live in poverty because of their preference for a particular way of life. It can be said that satisfaction in fishermen's life is obtained from catching fishes on the ocean, not merely income-oriented way of life. Because of this way of life, fishermen might not consider their own condition although other people said that they are living in poverty.

Additionally, most people determine that one poor or rich is by comparing those two conditions from social and economic level (occupation, income, assets owner, etc). It can be said that poverty is not only based on the economic condition, but also based on people's opinion. Therefore, it is government's task to alleviate poverty of its people based on national standard of living to stop the poverty cycle, especially for fisheries community.



It cannot be denied that government is not unaware to poverty problem of a fisheries community because some programs have been implemented to support and aid the fishermen in their activity. Some of the programs build good infrastructure of fishing ports so that fishermen could land their catches and have auction directly near the coast, economic development for coastal community program to improve welfare of poor fishermen, fishing equipment aid, etc. Another task to be answered by the government is how all these programs could meet the demand of fishermen as the doer/user of the plans, not merely providing tools without further action.

1.1.1 Fisheries' Contribution in Indonesia's GDP

It has been known that Indonesia is an archipelagic country with the largest number of islands. Furthermore, it also has long coastal line as the main asset in marine and fisheries development to improve public welfare.

Unfortunately, this gift has not been fully optimized as the focal source of economic development and still focused on processing industries of wood, paper, oil, etc.

Based on the data from Central Bureau of Statistics, manufacturing industry is the biggest contributor to national Gross Domestic Product (GDP) in 2013⁴ while other sectors almost have equal contribution to it. Fishery is included in the group of agriculture, livestock, forestry and fishery that contributes 14.4% of national GDP; while fisheries take the second rank after agriculture in that number. Moreover, contribution of fishery sector to national GDP is around 3.21% or Rp. 291,799.10 billion, equal to US\$29,179.91 million.

The low value of fishery GDP shows that the marine and fisheries sector have not reaches its maximum resources to improve the livelihood of coastal communities especially fishermen. In addition, it also means fishery sector still do not properly managed to develop the quality and quantity of

⁴http://www.bps.go.id/pdb.php?kat=2&id_subyek=11¬ab=0



fish. Fish quality in most fishing ports/coast in Indonesia is still far from the international standard for export purpose because of lack of infrastructure and lack of knowledge of the fishermen in handling the catches start from the boat until the market. Fishermen still focused on the amount of catches without taking consideration on implementing good handling practices. Consequently, productivity and sustainability of fishery sector is still low; thus, a large number of fishermen are highly vulnerable to poverty.

1.1.2 The Obstacles to Improve a Fisheries Community's Livelihood

As aforementioned, government has tried to develop the welfare of fisheries communities through some implemented programs. Also, government wants to improve the production and efficiency of fish catches but there are some obstacles in hold back the fishermen from development. The obstacle is not because fishermen do not want to be taken out from the poverty situation where they live in, but it is because of their internal factors in dealing with fishery activities such as low-level education, seasonal work type, and dependent on middleman/middle woman.

The level of education becomes one of obstacles in developing fishermen livelihood because government plans to help them could not be optimally used by fishermen who are the target of program. It is believed that education level can improve people life since they could utilize any opportunity given to them properly. In contrary, fishermen with low education level could not do other activities instead of what they used to; thus, it is difficult for them to stop from being poor. Government might also introduce the education group equal to formal school grade for those who want to get higher education. But because fishermen are a long time working (more than a week in the sea), most of fishermen do not have enough time to join the program and the program could not reach its goal to improve community education level.

The next obstacle is seasonal work type of fishing according to the natural condition of the sea and wind. Generally, there are 3 seasons of fishing: low catch season, mid catch season, and top catch season. Because of



the seasonal work, it can be said that fishermen have no fixed income every month or even do not get anything during the low catch season. This condition becomes the crucial factor of poverty cycles that are the poverty itself, vulnerability and powerlessness.

The combination of low education and seasonal work type leads to the last obstacle, dependence on middleman / middle woman. Low education make fishermen do not have enough knowledge and skill to sell their catches directly to the market. Therefore, fishermen depend on middleman / middle woman to purchase their fishes directly at the fish port. It means fishermen do not have bargaining price for their catches or they will have financial lost. Moreover seasonal work type without fix and regular income also drives fishermen to depend on others' loan to meet the need of their daily live consumptions and fishing activities. In one time of fishing, at least they need an amount of cost for food during fishing and fuel of their boat. It clearly shows that fishermen are highly dependent to others (middleman/middle woman) and seems difficult to get out from the tied of loans.

1.1.3 Migrant Fisheries Community in Sendang Biru, East Java Province

Fisheries community in Sendang Biru is part of the larger community of Tambakrejo village. However, their livelihood is excluded from other community members because they are not originally born in Sendang Biru (migrant from other areas). Besides, other members might underestimate fishermen who are usually having the lowest income in community and having no other skills instead of fishing.

As mentioned by Martin and Meliono (2011) the socio-economic livelihood in Sendang Biru was influenced by the arrival of migrants from outside such as Jember, Pasuruan, Probolinggo, Madura, and Banyuwangi. At first Sendang Biru and its natural barrier, Sempu island, is a protected area belongs to State-owned forestry but more people come and stay in this place to go fishing; so it becoming populated. Fishery community in Sendang Biru nowadays feels that they owned the village because of the promising aspect



of fisheries resources in this place. The important fish in Sendang Biru is tuna that according to them has a high economic value.

Beside those migrants that become permanent members of fishery community in Sendang Biru, there are also some new comers that temporary stay because they were invited to help in fishing activities or come with their own boat to have better catches. Low socio-economic level and education is the general feature of fishermen wherever they live (Kusnadi, 2000). Therefore, fishermen who come to Sendang Biru are those who want to find better live condition in which the same problems actually occur in every place of fisheries community. Although Sendang Biru consists of migrants from different places, fortunately, there is no significant conflict between fishermen in that place. They live peacefully side-by-side and create harmonious bound with each other.

1.2 Research Questions, Hypothesis, and Research Objectives

In general, it is believed that fishermen are the poorest group of community in Indonesia's society. Their type of livelihood makes them get more pressure to vulnerable in poverty.

The government has implemented a number of programs to alleviate poverty in fishery community, but it could not successfully eradicate the poverty condition. Unfortunately, many cases of corruption on government programs occur that make the assistance or aid could not reach the community completely. Otherwise, the assistance reached the community but the fishermen themselves could not optimally use it to increase their income and improve their living condition. These reasons can be the factor of why fishermen mostly live under the poverty line.

Suyanto (2013) mentions that it is not an easy way to solve the poverty problem in fisheries community that has been rooted in every aspect of their life. The difficulties may happen because some of the reasons mentioned before or other factors from the fisheries activity such as the existence of middleman/ middle woman that cut off their direct contact to markets, lack of access to government, and dependence on loans for their



activities. This situation makes the fishermen not only trapped in poverty but also vulnerable in their social economic sector.

Based on the above-mentioned background, the questions of this research are as follows:

1. What is the informal economy in a fisheries community's livelihood?
2. Why fishermen in informal economy are highly vulnerable?

Therefore, the hypothesis of this research is that because the fisheries community's livelihood is under the informal economy, so fishermen could not get out from the poverty cycle.

Moreover, this research tries to study the informal economic activities in fisheries community's livelihood and to identify what makes fishermen are highly vulnerable to poverty. This research would also provide information of local conditions to increase government awareness and give consideration in making programs for fisheries community in Indonesia.

1.3 Research Methodology

This research applies qualitative techniques and the data collection in this research using both primary and secondary data. Data collection techniques of primary data used in this research are participatory observations, open-ended questions and yes/no questions, also group and personal interviews based on questionnaires. Some groups of fishermen and fish processing plant workers were interviewed to answer the questions related to their livelihood. Meanwhile, data collection of secondary data was gathered from statistical data, literature, and village/regency office of local government.

Open-ended and yes/no questions

This type of questions seems to be the most comfortable way for respondents because they can express their own feeling and thinking about certain conditions. Although the respondents do not give direct answer to the problems, but their positive response is very helpful for the research.



Group and personal interviews

Personal interviews were applied to get their response related to their own living conditions, it is the most effective way to gather information although sometimes they seem to answer the questions carefully. While group interview may make the conversation became smooth because every member could freely speak. However, some people tend to follow opinion from the one who speak most or simply add something that still in the same line with the current answer. Interview was conducted in fish auction, fish market, house, and food stall.

Sampling of respondents was done mostly randomly based on their availability and willingness to be interviewed because not all fishermen were volunteered in responding the discussion. Target of this research is fishermen who are working for boat owner and middleman/ middle woman. There are 40 respondents that consist of fishermen, fishermen's families as fish vendors, traders (middleman/ middle woman), and workers of fish processing plant. In addition, local officers were also interviewed to identify what kind of government programs that has been made and implemented in the fisheries community. The evaluation of this research will relate to some factors of low-level education, alternative source of income other than fishing activities, fishermen seasonal type of work, and their dependency to informal economy in their livelihood.

CHAPTER II LITERATURE REVIEW

2.1 Poverty

In Indonesia in March 2013, the number of poor people (people with expenditure per capita per month under the poverty line) reached 28.07 million (11.37%), reduced size compared with 0.52 million people living in poverty in September 2012 (28.59 million or 11.66%)¹. From this number, East Java Province had 4.9 million or 12.73% of poor people that also decrease compared with the previous year (0.35% from 13.08%). Furthermore, the poverty line in East Java Province reached Rp. 273,758 per capita per month, which is equal to US\$ 22.8 per capita per month². Based on statistical data in 2010, Malang regency is the second poorest regency in East Java with around 156,000 poor families³.

According to World Health Organization (WHO), poverty is often defined in absolute terms of low income – less than 2 US dollars a day, for example. Poverty is also associated with health. The poorest of the poor, around the world, has the worst health. High risk of illness leads to the reduction of income, low learning ability, reduction of productivity, reduction of quality of life, or increase of the poverty level⁴.

From the above definition, it can be said that East Java Province has a very low income with around 0.76 US dollar a day, far from the standard income of 2 US dollar a day. This condition will contiguous with the threat of bad health and health service practice, vulnerability of school drop out, vulnerability of mother and child mortality, and social or political discrimination.

Fisheries community is usually live under the poverty line. Based on Susilowati (1991) in Edy Yusuf (2011), fishermen live under the poverty line is because of their characteristics: small capital, low technology / skill,

¹ <http://www.bps.go.id/?news=1023>

² http://jatim.bps.go.id/?hal=berita_detil&id=1

³ <http://lpm.uin-malang.ac.id/2010/12/kabupaten-malang-termisikin-kedua-di-jawa-timur/>

⁴ <http://www.who.int/topics/poverty/en/>



traditional behavior of skill, psychology, and mentality. Fishermen in coastal areas generally going fishing for not more than 200 miles from the coast because it is quite dangerous to go to the open sea with their small boat; as the result, their productivity and income is relatively low.

Fishing communities, written by Food and Agriculture Organization (FAO), are frequently characterized by overcrowded and sub-standard living conditions, low levels of education, and lack of access to services like school and health care and infrastructure such as roads and markets. Access to fishing ground may or may not be secured and alternative employment opportunities are few⁵. This characteristic is similar to the opinion proposed by Susilowati (1991) as mentioned in the previous paragraph.

There are many perceptions of poverty refer to human beings conditions related to different culture and languages. Rahnema in Sachs (1992) proposes four dimensions of poverty which one of them is materialities. The deprivation of materiality either of non-material and existential kind or of a material nature could be noticed as poverty. However, the next dimension (the subject's own perception of his condition) shows that materiality is not the only factor to understand poverty. The poor's perception of their own deprivations about their inability to overcome/improve their condition is perceived as poverty. The third dimension, how the others view the poor, is almost related to the second one. Besides their own perceptions of poverty, other people's opinion also determine whether one is poor or not compared to other people condition in the society. The fishermen characteristics mentioned above by some writers might come from the comparison between fishermen and other workers livelihood.

Moreover, Sen (1992) mentions that poverty is about the inability to pursue well being precisely because of the lack of economic means. Fisheries community in Sendang Biru is around 2,500 people that may live under the poverty line and might live in the poverty cycle. Those fishermen do not have

⁵ <http://www.fao.org/NEWSROOM/en/news/2007/1000544/index.html>



their own capital to do their activities and have no direct access to market that makes them could not improve their livelihood condition.

2.2 Informal Economy

The existence of informal economy in many developing countries such as Indonesia takes important part in national development. Informal economy, at least, during the economic crisis could provide alternative works for job seekers. The main problem faced by developing countries relates to unbalanced portion of job seekers and job opportunities in the country. Because of this condition, informal economic activities arise in order to accommodate a number of workers with cheap and low productivity employment.

According to International Labor Organization (ILO)⁶, the informal economy refers to all economic activities by workers that are not covered (or insufficiently covered) by formal employment arrangements. Moreover, Mulyadi (2003:p. 95) mentions that informal economy is economic activities that unprotected formally by the government. The absence of government protection creates vulnerability of informal economic activities, both in urban or rural areas. In fact, informal economy usually suffers discrimination and elimination from society (Rachbini, 1994). It is believed that informal sector related to low-income, low education level and unskilled workers whose presence is disturbing the development program.

Furthermore, as mentioned by Henando De Soto in Wauran (2012), the definition of informal economy refers to small capital, family ownership, adaptive technology, use indigenous resources, and low education workers. Most informal economy is never burdening the government, except for their legal status, security protection, simple and cheap bureaucracy processes. Unfortunately, informal economy that usually located in rural areas does not have enough power and access to reach the government in order to asking better condition for them. For example, fishermen lived in coastal area far

⁶ Informal Economy in Asia and the Pacific. <<http://www.ilo.org/asia/areas/informal-economy/lang-en/index.htm>>



away from the government center might not get enough attention from both national and local government because of unreachable location. National government might promote the program of poverty reduction, but it is not directly affected the informal economy that is usually associated with very poor people.

Informal economy, as aforementioned, could absorb a lot of workers. However, government seems has not fully help them in providing investments to support their activities. Compared to formal economy that becomes the target of banking market (bankable market), informal economy is interpreted as weak, small-scale, traditional and other negative attributes (Dieter Ever, 1991). For that reason, informal economy activities hardly access the formal banking system and rely more on informal capital source.

In this research, fisheries community is one of the workers that highly dependent on informal economic activities. They are unbankable market that could not get formal capital because of the reasons that become their characteristics as informal workers. Fishermen are more familiar to informal moneylenders such as loan sharks, middleman, pawnshop, and credit unions with high interest rate.

Informal economy plays an important role in providing job opportunities and reducing the number of unemployment. Besides, Bluch et.al (2001) argues that informal economy is not an independent sector but has interactions with formal activities such as providing cheaper goods and services to support the formal economic activities. Remembering these roles, government policies should start to focus more in developing informal economic management in order to give priority and benefit to its workers.

2.2.1 Concept of Informal Economy in Indonesia

Ministry of Manpower as mentioned by Nazara (2010:p. 8) defines informal economy as all commercial and non-commercial business (economic activities) that is not registered, no formal organization structure, and has general characteristics of family business, small-scale activities, adaptive technology and depend on indigenous resources. Moreover,



Statistical Bureau makes categorization of workers based on their status as follows:

- a. Individual activities
- b. Individual business helped by unpaid family workers
- c. Employer with permanent workers or paid workers
- d. Employees/ staff
- e. Seasonal workers in agriculture sector
- f. Seasonal workers in non agriculture sector
- g. Unpaid workers

Those are the categories of informal sector, except the employer with permanent/paid workers and employees/ staff that includes in formal workers. Not only based on the status, but Statistical Bureau also made other categories based on the type of work:

- a. Professional, technician, and other related workers
- b. Administration and managerial workers
- c. Clerical and other related workers
- d. Workers in sales
- e. Workers in services
- f. Workers in agriculture, animal husbandry, forestry, fishing, and hunting
- g. Production and related workers
- h. Transport equipment operators and workers
- i. Labor
- j. Others

This categorization is used to find out the development of informal sector in Indonesia.

According to the data from Statistical Bureau in 2012, employment of informal economy was calculated more than 60% and the remaining was working in formal sector. The growth of informal economy is predicted to continue in the future since the non-promising working opportunity in formal sector (Wauran, 2012). Furthermore, the cheap and low cost of informal economy activities have made formal industries prefer to outsource some of their services to them. This situation could influence the growth of informal economy in a nation.



2.3 Vulnerability

The aspect of poverty that makes people difficult to escape from the awful cycle is vulnerability. As aforementioned, fisheries community always live under the poverty line with low income less than 2 US dollars a day. This poverty condition comes along with the vulnerability of bad health, bad health service, education, mortality, and social discrimination.

Vulnerability itself, as defined by International Federation of Red Cross and Red Crescent Societies (IFRC)⁷, is "the diminished capacity of an individual or group to anticipate, cope with, resist, and recover from the impact of a natural or man-made hazard". Vulnerability is most often associated with poverty, but it can also arise when people are isolated, insecure, and defenseless or at risk, shock, and stress. Furthermore, vulnerability has also been defined as "a human condition or process resulting from physical, social, economic, and environmental factors, which determine the likelihood and scale of damage from the impact of given hazard" (UNDP, 2004).

Fisheries community that lives under the poverty line, regarding the definitions of vulnerability, is a community with high risk of vulnerability because their livelihood is influenced by the economic and environmental factors such as the marine fish stock that becomes the main source of their income. Moreover, having a limited opportunities of alternative income sources make the fisheries community only depend on fishing activities and income from their fishing yields which still has to be divided with the boat owner and other crews in one fishing time.

Economic vulnerability of fishermen, additionally, depends on their skill other than fishing. Most fishermen do not have other skill instead of fishing to create new income for their family. As the consequences, in heavy rainy seasons or the time when high tide in the sea occur and make it impossible to go fishing, fishermen do not have any activities to get additional income for their family. In this case, the families also get the effect

⁷ <http://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/what-is-a-disaster/what-is-vulnerability/>



of vulnerability of bad health, lack of nutritious food, and unfinished education for children.

Fishermen are also vulnerable in their activities on the ocean. The unpredicted changes of climate with traditional boat might bring them into danger in the middle of the sea without being noticed by the people in the coast. This situation was along the proposed meaning of vulnerability as risk as written in the term paper of Damas Philip and MD. Israt Rayhan (2004) as follows:

"Chronic exposure to risks is a crucially important source of vulnerability. Risks are varied in nature and can range from natural disaster, health hazard, and personal insecurity. Natural disasters involve housing and similar damages caused by cyclone, flood, river erosion as well as drought and rising salinity. Health hazards include both expenditures on member illness. Personal insecurity includes money cheating, physical threats, court/police expenses". (Damas Philip and MD. Israt Rayhan (2004:p. 6)

The abovementioned meaning does not explain about maritime sector. However, the same risks may occur for the fisheries community such as accidente in the sea because of high tide and traditional boat, housing damage because of natural disaster like flood, conflict between fishermen, or even personal insecurity of the fishermen's families when they have to work in a period of time for fishing. There are a lot of risks that make the fisheries community have a high possibility of vulnerable condition which the government might not give serious attention to improve the community live standard and to propose program for alleviating poverty for them.

2.3.1 Relation of Vulnerability and Poverty

The other universal aspect of poverty that makes it difficult to escape from it is vulnerability. The poor are more vulnerable than any other groups in terms of health, economic condition, injury and loss of livelihood. According to Damas Philip and MD. Israt Rayhan (2004), vulnerability and poverty are complex and interlinked between each other in such a way that



each causes the other. Poverty might make people vulnerable to any phenomena such as disease or natural disasters; on the other hand, vulnerability may worsen the poverty condition, which leads to more vulnerability in the future.

Historically, based on Moser (1998), vulnerability is a dynamic concept that recognizes and captures change while poverty has been seen as being static. However, Yaqub (2000) in Rayhan states that that poverty itself is dynamic. Poverty is not static because the poor condition is not poor all the time, it may change in line with some efforts or capability to improve the condition. From these two approaches, historical harmony has been established between poverty and vulnerability.

Vulnerability, according to Chambers (1989) has internal and external distinctions.

“Vulnerability thus has two sides: an external side of risks, shocks, and stress to which an individual is subject to; and an internal side which is defenseless, meaning a lack of means to cope without damaging loss. Loss can take many forms—becoming or being physically weaker, economically impoverished, socially dependent, humiliated or psychologically harmed”. (Chambers, 1989)

This statement means that external vulnerability is any condition that creates harm or risks for an individual. While internal vulnerability is the condition in which individual may not be able to overcome situation or defenseless.

Poverty is similar to the above distinctions of vulnerability. It means reduced or complete lack of access to material, economic, social, political, or cultural resources needed to satisfy basic needs (Rayhan, 2004:p.5). Besides, poverty also means lack of ability and entitlement to any resources in environment. The poor are commonly more vulnerable to negative conditions such as disaster, famine, malnutrition, and hunger. The high level of vulnerability could be characterized by low incomes condition of the people/community.



Vulnerability can be used to measure whether a community will fall into poverty or not. Therefore, it can be said that improvement of poor condition is influenced by its vulnerability. In condition where the community is able to cope their vulnerability, their condition might improve in a better situation.

Fishermen, as the target of this research, are generally lives under the poverty line as well as experience vulnerability that constructs their condition to statically in the cycle. Fishermen are vulnerable because of their lack of capital resources in supporting their activities. Besides, they are also vulnerable on deprivation issue that creates discrimination from the society as the consequences of their low level condition (low education, unskilled). Therefore, a strategic way to overwhelm the vulnerability of fisheries communities is needed to improve their livelihood condition. If they are able to manage or event reduce their own vulnerability; it can be predicted that the action will alleviate their poverty.

1.4 Deprivation as Factor that Might Keep Fishermen Vulnerable

According to Stephen G. Brush (1970:p. 24) relative deprivation is the tension between your real condition, and what you feel you should be able to achieve; relative deprivation is actors' perception discrepancy between their value expectations and their value capabilities. It can be said that someone or group of people might feel relative deprivation if they could not access to their basic need because it was took away from them. Based on the above-mentioned theory on poverty, fishermen might feel deprive when they are compared to other workers in different sectors who are able to gain more or regular income with higher level of education. Besides, treatment given to fisheries community by other community members' may also make fishermen experience a relative deprivation issue since they could not assimilate socially with the surrounding community.

On the other hand, fishermen in Sendang Biru that consist of migrant people from other areas are the result of deprivation in their livelihood. As migrant they might feel different from other community members who were



born in this area. It means the fishermen already have their own deprivation feeling. The deprivation feeling from fishermen make them dependent on middleman/ middle woman as their way to survive in the livelihood. Dependent on middleman/ middle woman as the main capital source in fishermen's livelihood might make them highly vulnerable to poverty. It means middleman/ middle woman is their main resources in their livelihood.

Subade and Abdullah (1993) propose an argument that fishermen will stay in the fisheries sector because of their low level of opportunity cost. The fishermen's opportunity cost can be define as possibility or alternative activities or other economic activities that can be done besides catching fishes. So, if the opportunity cost of fishermen is low, they tend to keep working in fisheries sector although this is not advantageous or non profitable for them anymore. Since changing their behavior not to depend on middleman/ middle woman is costly and might lead them to loose their main resources, fishermen in this fisheries community are still living in this livelihood condition so then make them highly vulnerable.

2.5 Marine Resources for Fishermen

Marine has its own resources such as coral reefs, fish and other marine species that are very valuable for the countries. Fishing community, especially the local and traditional one, depends on fish as marine resources to support their daily live. Erich W. Zimmermann (1993) in Jin Sato (2013:p.3) states that resource is not only what is exist, but also the meaning and value for human being.

Fish as marine resources does exist in the sea. However, fishermen need to develop their skills and equipment to get benefit from it not only for them but also for other people who need it. The argument also means that the resources should be sustained because it is not the freely available things for a long time without any responsible action in taking its advantage.

Further, Zimmermans (1993) also mentioned the word "resources" referring to a function that a thing or a substance may perform or to an operation in which it may take part, namely, the function or operation of



attaining a given end such as satisfying want. It means that marine resources do not directly refers to the marine biota inside the ocean, but how they give value to those dealing with the substance. In this case, it could be said that local fisheries community has their resources of fish since they perform an activity of fishing in order to take value of the substance in the form of income to give good health, food, and better education for their family members. In other words, a thing or a substance becomes resource for a group of people if it can give benefit for them. Not only fishermen that get income from the marine resources, but also consumers that get benefit of nutrition from the fish.



CHAPTER III FINDINGS AND DISCUSSION

3.1 Target and Characteristics of Respondents

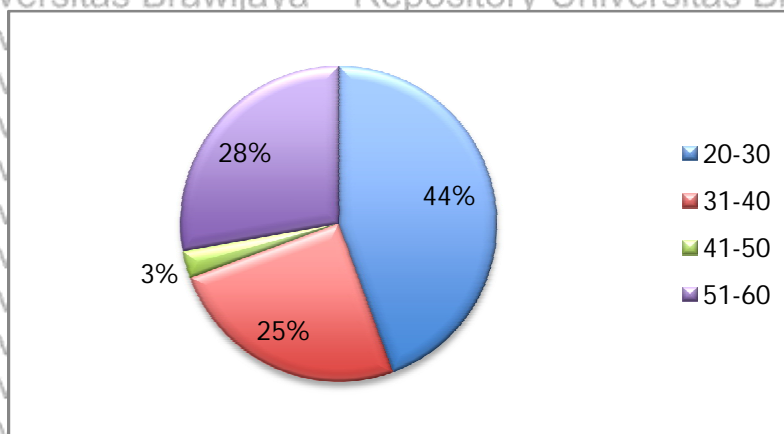
3.1.1 The Fishermen and Fishermen's Family

The target respondents of this research are fishermen who are working to boat owner and middleman/ middle woman in fishing activities. This group is those who have not their own capital or resources except from middleman/ middle woman for their fishing activities or for their daily need consumption.

The question regarding what is the advantage and/or the disadvantage of improving fishermen livelihood (that is more economic dependency) is a worth discussion. People probably see fishermen as the poorest of the poor, however fishermen themselves might not realize their condition that is poor. My argument is that fishermen who are working under the informal economy in their community's livelihood have provided nutritious food of fish with low price in domestic market for people around the area. Therefore, it becomes people's responsibility to give more attention to their living condition. That is why I interested to investigate the limitations of fishermen that make them highly vulnerable in poverty; thus, the approach has to be started from the fishermen in a fishing community.

Figure 3.1 shows the age of group respondents. The respondents is ranging from 24 to 59 years old and the majority are in the age of 26 to 30 years old that is a productive age for working.

Figure 3.1 The Age of Respondents

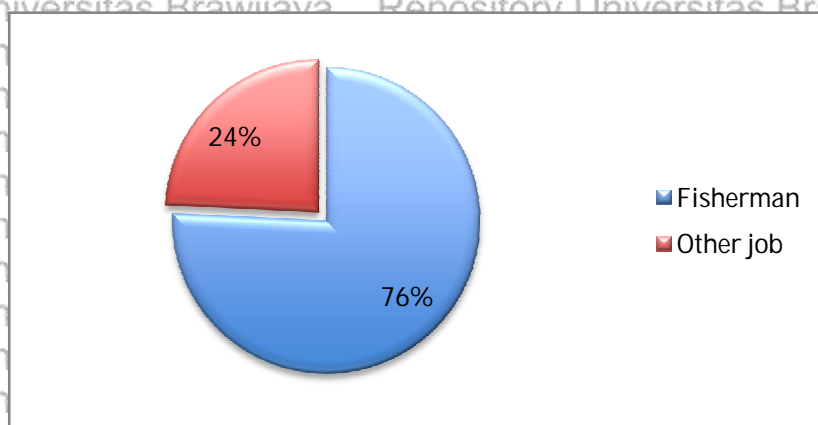




Mostly, other family members of fishermen's family are also working in fishing port area such as fish vendors in fish market near the fishing port or owned small coffee shop or food stall in their house. Besides, there is also one respondent whose wife are working abroad in Taiwan and providing school fee for their children. The children of respondents are mostly at school age, and there are students of elementary school and junior high school. However, there are also many children at their school age that do not go to school because the school expenses are high even for public school, though the government said it was free. The factual condition is that school tuition fee is free but other expenses such as parent donation for building, books, and uniform are expensive. This is probably typical reason why their children do not finish or even not go to school in this area.

Figure 3.2 depicts the fishermen's opinion about the future of their children. Majority of them expect their children to continue their activities as fishermen. Besides, their children have already help them fishing or working in fish market. However during the fieldwork, I found out that there is one respondent that pay attention to her children's education. Although because of the financial problem, one of her children has to take 1-year off from university so that his brother could enroll to the university.

Figure 3.2 Respondents' Opinion about Their Children in the Future

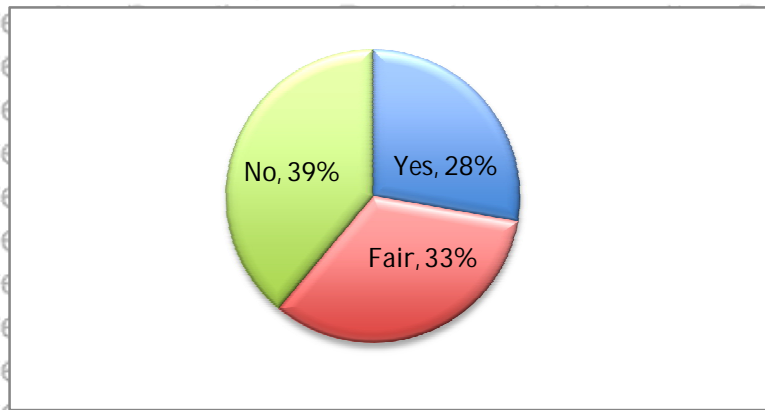


The respondents (39%) also do not have enough knowledge about the fishing location on the sea because they only follow the captain to catch the fishes as depicted in Figure 3.3. By not having enough knowledge about



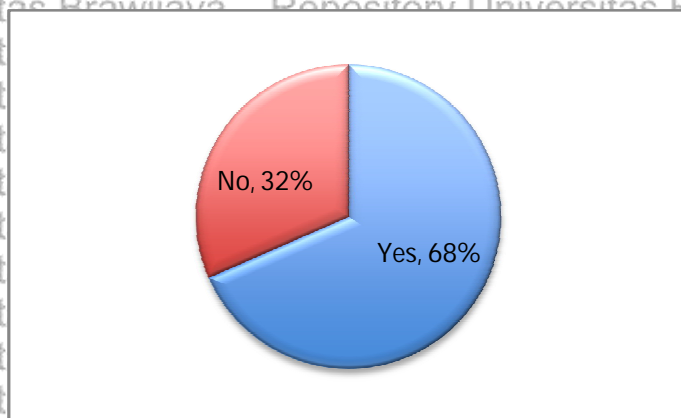
fishing location means they are the lowest workers at the fishing boat. In addition, they might be the one who have the hardest work with the smallest wage in the fishing activities. There are some training programs for respondents such as making boat and Fish Aggregating Devices (FADs) from the government, but those who participate in the program was only specific persons in the village. This means that the skills development programs are not equitably benefits for the fishermen.

Figure 3.3 Fishermen's Knowledge about Fishing Location



It is common that government programs are usually implemented through existing community group in certain area as the representative. To receive the government assistance, it is better for fishermen to become member of fishermen group in this area. However, during the fieldwork I found out that 68 % of fishermen are member of fishermen group but the longest time is only 2 years. The reason why they stop become member of fishermen group is because they do not get any benefit from the organization.

Figure 3.4 Member of Fishermen Organization





3.1.2 Workers of Fish Processing Plant

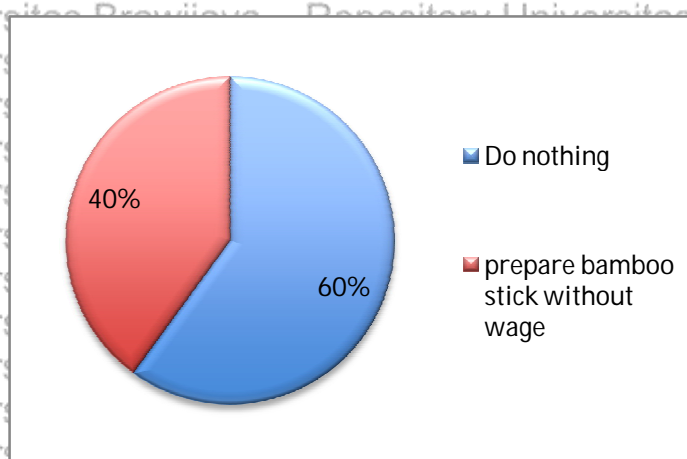
The number of respondents who work in fish processing plant is 5, consisting of 3 men and 2 women because the fieldwork is held during the low season. Usually during the top season the workers in fish processing plant are around 23 to 26 people, consisting of 15 or 18 men and 8 women.

The owner of fish processing plant is the traders or middleman/ middle woman in the fishing port.

The job for men is preparing fish, steaming fish, and delivering the steamed-fish to the market outside Sendang Biru. While women's job is preparing bamboo fish carrying basket as well as putting fresh fish in the basket. The respondents of fish processing plant are piece workers because their wage is depend on how much they could produce the steamed-fish.

Similar to fishermen, at the low season, workers in fish processing plant also do not have any activities except cleaning the plant or preparing bamboo basket without wage. This showed in the following Figure 3.5. Their wage is paid in the form of food and lodging to stay from the employer. My respondents said that if there is no fish in the plant, workers usually come back to their hometown and visit their family. Then, the employer will call them if they are needed in the fish processing plant. However, due to the lack of job opportunity in their hometown, some workers decided to stay in Sendang Biru although they have to prepare bamboo basket without getting any money for their wage.

Figure 3.5 Activities of Fish Processing Plant Workers





3.2 Findings

3.2.1 Informal Economy of the Fisheries Activities

According to National Statistical Bureau of Indonesia, the type of seasonal workers in non-agricultural sector such as fishery is included as informal workers. Moreover, Hernando de Soto in Warren (2012) mentions that the definition of informal economy refers to small capital, family ownership, adaptive technology, indigenous resources, and low education workers. Those mentioned characteristics are the same as fishery community condition with no stable income, no job security, and no legal status to cover their activities. Besides, their capital source is also informal because it is not included in formal banking system.

Alike other informal economic activity forms, fishery sector in Indonesia is also promising to absorb a lot number of workers. For instance, fishermen in Sendang Biru during the top catch season usually invite unemployed neighbors in their hometown to help them fishing on the ocean. These invited workers are temporary workers since they will go back to their hometown when the fish is not available. Therefore, remembering that many people live in this coastal area and depending their life from maritime resources, the development of fishery sector has to be a government priority.

3.2.1.1 Employment in Fisheries Community

There are no specific or formal requirements for becoming fishermen. However, not every person might be able to become fishermen since it needs specific skills, great patience and power to survive on the ocean. Besides, unpredictable and dangerous condition during the working hours could happen suddenly without prior notice or signal. In fact, working as fishermen is not an option for most people in this community because it is a hereditary job for them.

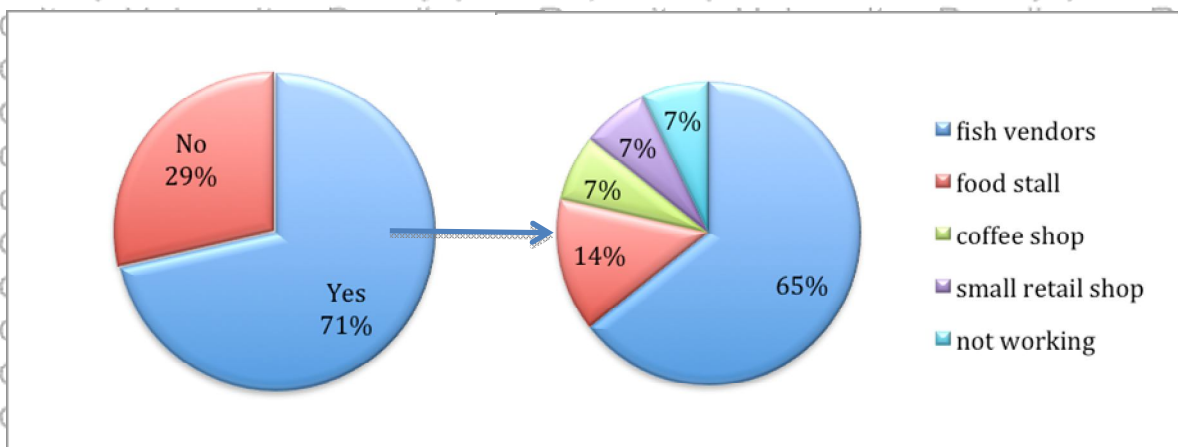
The fishermen are working based on informal relationship or invitation from the boat owner and other fishermen who already worked with the owner before. In the top season when the fish amount is abundant, usually boat owner invite more workers to come to Sendang Biru to help

them fishing. They are the temporary workers in this area coming from the same hometown of the boat owner. Therefore, generally the boat owner and crews have close relationship because they came from the same hometown and usually they have already known each other well. When the top catch season ended, those temporary workers will go back to their hometown because no job is available at that time. Permanent fishermen in Sendang Biru also have the same problem during the low catch season.

The type of boats that provide fish to the market is called sekoci and slerek. Those are the motor type boat that need fuel to operate and can going fishing further from the coast compare to small boat such as jukung (manual and 1 person boat) and cadik kayu (manual and 2-person boat). Sekoci might accomodate 5 people and going fishing for about 2 – 3 days on the ocean, while slerek accomodate 35 to 40 people for about 10 – 15 days fishing for more catches to be sold in the market. Fishermen from these two types of boat are mostly working for their capital provider called middleman or middle woman in the fishing port.

The following Figure 3.6 shows that fishermen's wives are also working to support their family.

Figure 3.6 Fishermen' Wives Working and Their Type of Occupation



Most respondents (79%) said that their wives are also working to support their family. The fishermen's wives are working as fish vendors in the market, small coffee shop, or food stall near the fishing port. While the wives of some boat owners (3 persons) usually become middle woman that



provide capital and markets the catches of their husband's boats and other boats working with her. In this case, fishermen's wives have double role as housewives doing domestic works and earn a living for the family (Susilowati, 2006). However, one respondent who is a boat owner said that his wife is not working and just taking care of their children at home.

Different from fishermen, the wives of fish processing plant workers also working in the processing plant. The women are preparing bamboo basket to place the fish before it steamed. Although they are piece workers and sometimes do not get wage of their activities, the employer provide them food and lodging to stay.

"It is better to stay and work here instead of going back to hometown but do not have any job" (Mrs. Ropiah, fish processing plant worker)

Also, Mr. Wahyudi prefers to stay in Sendang Biru although he has to leave his wife and 1-year-old daughter in his hometown because he could not get any job in his place. Same as boat owner, the employer of fish processing plant is also inviting workers during the top season to produce more steamed fish for market outside Sendang Biru. This type of work might create close relationship between workers.

Figure 3.7 Condition of Fish Processing Plant



One categorization of informal sector workforce according to the International Labor Organization / International Confederation of Free Trade Unions (ILO/ICFTU) symposium on the informal sector in 1999 is dependent workers, paid or unpaid, including wage workers in micro enterprises, unpaid family workers, apprentices, contract labor, homeworkers and paid



domestic workers¹. Based on this definition, workers in fisheries community in Sendang Biru can be said as informal workers because they are dependent to employers to have job in the area. All elements of fishery community consist of fishermen, fishermen' wives as fish vendors, workers of fish processing plant is depend on informal employers and sometimes do not get paid. However, the employers provide settlement and food for them in the area around the fish processing plant.

3.2.1.2 Informal Source of Capital in Fishery Community

Fishing activities involves three main groups that are 1) boat owner, 2) fishermen as crews, and 3) informal capital provider that also become middleman to market the catches. These three groups play important role in the informal economic activities in fishery community.

Most boat owners also become captain for their fishing activities on the ocean. However, there are some owners that are not going to fishing anymore because they are getting old and not able to going fishing anymore. In Sendang Biru, the boat owner and the middleman are usually from the same family. If the family has a boat, the husband will become the boat pilot and the wife becomes middleman/ middle woman as the informal capital provider. This means that the owner family will get double sharing of the catches after the fishermen come back to fishing port after fishing. However, the middleman/ middle woman could provide informal capital for other boat owners since the middleman have one or two boats only. With regards to the situation, this research will generalize the role of middleman/ middle woman as the provider of informal capital regardless of her family owns a boat or not.

The correlation between middleman and fishermen is in the form of informal economy since there is no specific contract among each other. The activities are based on collective agreement within each group consist of

¹ Concept of informal sector
<http://lnweb90.worldbank.org/eca/eca.nsf/1f3aa35cab9dea4f85256a77004e4ef4/2e4ede543787a0c085256a940073f4e4>



middleman, boat owner, and crews. The middleman provide informal loan given to the owners for financing their fishing activities for about 10 to 15 days on the ocean. Middleman does not provide informal loan for owners only, but they also give credit to fishermen/crews when experiencing financial difficulties in certain time. However, usually fishermen use loan from middleman to fulfill their daily consumption needs.

The expense for fishing operation in 10 – 15 days with 35-40 crews, according to some boat owners, is around 8 million rupiahs (equal to JPY 80,000). The operational cost includes the fuel, kerosene, and other equipment. This expense is borne by the boat owner, while fishermen only need to get fish as many as possible.

Table 3.1 Expenses of Fishermen

Expenses for fishing activities (per boat)	Expenses for daily needs (per person)
Fuel, diesel, kerosene, ice, accomodation for all crews, retribution in the port, permission, porter, boat keeper, boat cleaner, bamboo basket rental	Daily consumptions (food) and non food needs such as monthly contribution, staying permit, membership contribution, clothing, water, paying back loan

Moreover, when machine, equipment, or other parts of the boat is damaged or broken all expenses for repairing the boat will be borne by all crews from the profit of selling catches to middleman with some agreements (Kushadi, 2003). This sharing system affects the amount of salary received by fishermen.

The sharing system of earned income among boat owner, middleman and fishermen is based on the agreement that middleman get 2.5% of the priced catches. The remaining income is divided equally for the boat owner and fishermen. The part of fishermen is divided again based on the number of crews on that boat. It means fishermen only get a very small amount of income for their hard work on the ocean. This distribution of income is not quite fair for fishermen, but they cannot do anything for their own benefit.



My respondent Mrs. Astutik, who is a middle woman, said: "middleman/middle woman only get 2,5% from the price. The one who has bigger profit is still the boat owner instead of middleman".

On the other hand, one boat owner, Haji Fauzi, said that bigger portion given to the boat owner compared to fishermen is for the reason that boat owner have to pay the fishing cost and have to borne any consequences occurred if they do not get good catches.

For example, earned income of one boat with 40 crews after 15 days sailing is 20 million rupiah. From this equation, the proportion for middleman, boat owner and fishermen would estimate roughly as follows:

Middleman: $2,5\% \times 20 \text{ million} = 500,000 \text{ rupiah}$

Boat owner: $50\% \times (20 \text{ million} - 500,000) = 9,750,000 \text{ rupiah}$

Fishermen: $9,750,000 / 40 = 243,750 \text{ rupiah}$ (equal to JPY 2,100)

From this calculation, we could see that middleman that only provide financial loan but they receive bigger income than the fishermen who work hard on the ocean. Middleman would also get additional income after selling the catches in the market with higher price than what they pay to fishermen in the fishing port. Fishermen could not ask the boat owner to give them regular wage because the owner have to pay the fishing expenses and any risk if they do not get any catches after a few days of sailing.

With this kind of income distribution if fishermen and their family need more financial support the existence of middleman is very helpful because he could provide informal loan without complicated procedures. Besides, this kind of loan can be a chain between fishermen and middleman to work together.

The above processes of capital access are in informal form because the arrangement is based on an informal agreement among partners. There are no specific documents to be provided by each other to guarantee, but only trust and believe among them. This simple way of getting financial loan from middleman or boat owner create a close relationship between them and fishermen workers.



Regarding the factual condition that middleman is from their own community, it could be said that it is a mutual relation between middleman and fishermen (the boat owner or crews). Middleman is their way out to keep working because he provide informal loan to cover the fishing expenses. Middleman is also important to sell their catches to the market outside Sendang Biru because fishermen do not have access and enough knowledge about the market. However, for fishermen who have to work with high risk in dangerous condition on the ocean, the unequal distribution and low price of catches from middleman positioned the fishermen in a very difficult situation.

3.2.2 The Fishermen under Informal Economy are Highly Vulnerable

As mentioned in the previous part that fishery community consists of workers that are dependent on informal economic activities. Fishermen and their family, boat owner, fish vendors, workers in fish processing plant, and middleman/middle woman are all incorporated in the form of informal economy. It can be said that fishermen, boat owner, fish vendors are all working under the middleman/ middle woman. Boat owner also indirectly works to middleman since the financial loan for fishing is provided by middle woman. As the consequences, the catches have to be sold to middleman who will deliver it to other market both in Sendang Biru and other areas. Fishermen as crews in fishing boat are also connected to middleman in the form of loan for their daily consumption expenses.

Middleman/middle woman almost has total control in fishermen livelihood as the center of their informal arrangement. Fishermen, in this situation, are in vulnerable position. They are sustainable in their daily life by working for boat owner and middleman, but they are static in their condition or even becoming poorer. They are also weak since it might is impossible for them to have reserved based capital for their future.

According to Susilowati (1991) about the character of fishermen such as small capital, low skill, and traditional behavior or skill prove that fishermen are vulnerable to poverty. Fishermen are vulnerable and have risk

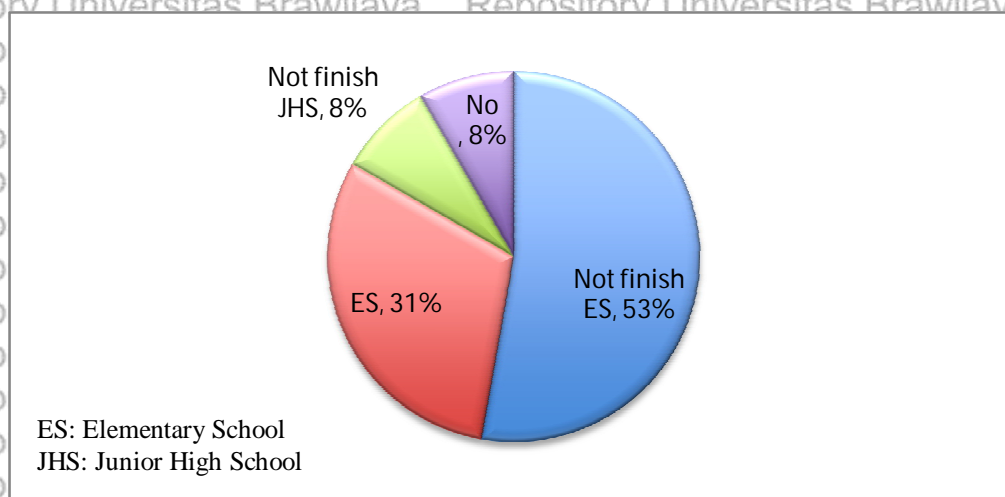


of unemployment, do not have stable income and speculative work; thus, regular income might become common dream for them (Kusnadi, 2003). Fishermen in Sendang Biru with their informal economic activities are vulnerable to poverty because of low education and high dependency to informal banking system.

3.2.2.1 Education Background

The educational background of fishermen is varying from elementary school, junior high school, or even not attending school. Majority of respondents admitted that they do not finish elementary school (53%) and some of them even not attend school (8%). The illustration of the fishermen's educational background can be seen in the following figure.

Figure 3.8 Education Backgrounds of Fishermen



The low education level of fishermen fits with the characteristic of informal economy according to Rachbini (1994) as mentioned in the previous chapter. Moreover, some children (7 respondents) are also not attending school because they think to be fishermen in the future. Also, those children are picking up dropped-fish of fish porter and sell it in the market. It means the children also earn money from selling the dropped-fish and make them think that school is not important anymore.

My respondent is a child who do not attend school said,



"I do not want to go to school because I will become fisherman. No need to go to school".

Other children in that group of respondents also agreed with this answer. Another respondent also said that playing around at the fishing port and picking the dropped fish is more valuable for them instead of going to school. He said,

"I do not need to go to school because now I can earn my own money already".

However, there are also other children who are going to school at their elementary school age.

As for fishermen with better wealth such as boat owner or middleman/ middle woman their children might have higher education level such as diploma or university. During the research, at least there are fishermen's children (4 person) who are taking higher education in the university. While the future of these children, their parent's expect that they will have better occupation in the city than just becoming fishermen.

Education is included as one of the basic human needs because it could improve knowledge in order to get better job, better income, and build relationship network that might help them in the future. It is believed that having good education will open the opportunity to have good livelihood in a community. Providing good education for all citizens is the important task of the government. One of the ways of government to guarantee every child in the nation has a job is by providing subsidy for education in which school fee is free. Although government ascertain that the tuition fee is free but in reality my respondent said that the school expenses is expensive. Parent need to pay certain amount of money for other reasons such as building fee, uniform fee, or additional contribution for school.

The low education level of fishermen and children that do not want to go to school make fishermen and their families become vulnerable to poverty and might not be able to go out of poverty cycle. Lack of knowledge about fisheries activities such as making relation in the market, marketing their own catches or bargaining prices of fish, shows that fishermen could not



compete with middleman/middle woman in the community. Fishermen is highly dependent on middleman that financing and marketing their catches to other market and distributors outside Sendang Biru. Having no access to formal financial loan also make fishermen depend on informal finance system that also informally bound their relationship in fishing activities.

3.2.2.2 Seasonal Type of Work

The type of fishermen activity is a seasonal type of work because it depends on the season of the ocean. In one year, there are three seasons for fishermen:

Figure 3.9 Calendar for Fishing



- Low catch season: usually during December to March. At this time the fish production is very low or even no production at all
- Mid catch season: the transition time in which the fish production start to increase, usually on April to June
- Top catch season: the highest fish production in the year that happens usually during July to December.

The hardest time for fishermen is in the low catch season when the ocean is too dangerous with its high tide and strong wind. In this time, fishermen might have to keep their boat and wait for better season.

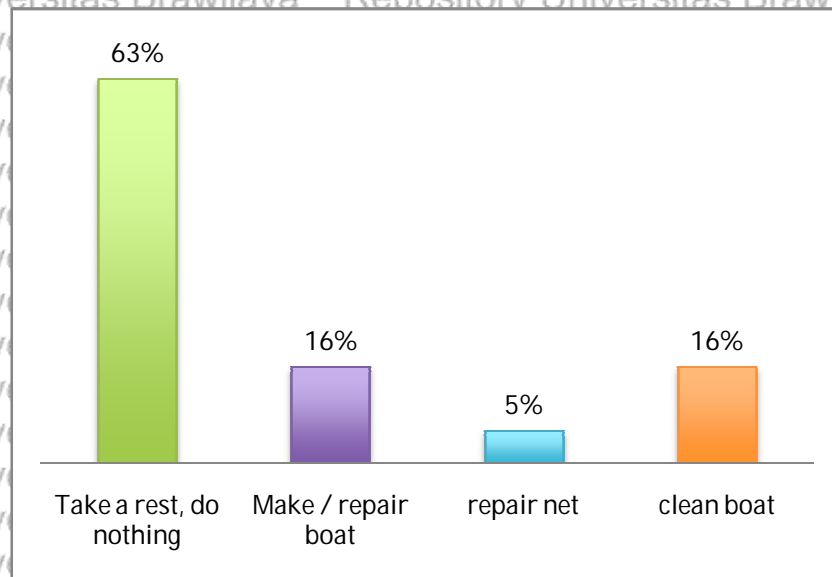
At the low catch season, fishermen are challenged to use their other skill to support their family capital. However, almost all my respondents said that they do not have other skill instead of fishing. This is the reason why most fishermen do not have any meaningful income generating activities during the low season. Majority of my respondents argued that it is the time to take a break after working so hard at previous months.

"If I am not going to fishing, I just take a rest at home or sitting on the coast. Sometimes I also chatting and playing cards with other fishermen" (Mr. Riyadi, fisherman)



Other fisherman, Mr. Joko, even answered that fishermen do not have a side job, fishing is the only activity and work they have to do for themselves and their family. This condition means that fishermen are very easy to be underemployed without income to support their family needs. Besides, other community member might have discrimination to employ fishermen in their field because fishermen mostly do not have other skill instead of fishing. It is also believed that fishermen community are usually seems to be considered as a very low class that is usually traditionally underestimated by other member of community.

Figure 3.10 Fishermen Activities in Low Season



Having no other skill and opportunity to try any income-generated activities during the low season might be caused by their low education level and lack of network in other job field. Those who have relatives in other place probably have some information about temporary job for them such as in construction work. However, many fishermen take this job because of hereditary reason that means their relative also works in the same sector.

3.2.2.3 Unstable Household Income of Fishermen and Loan Dependency

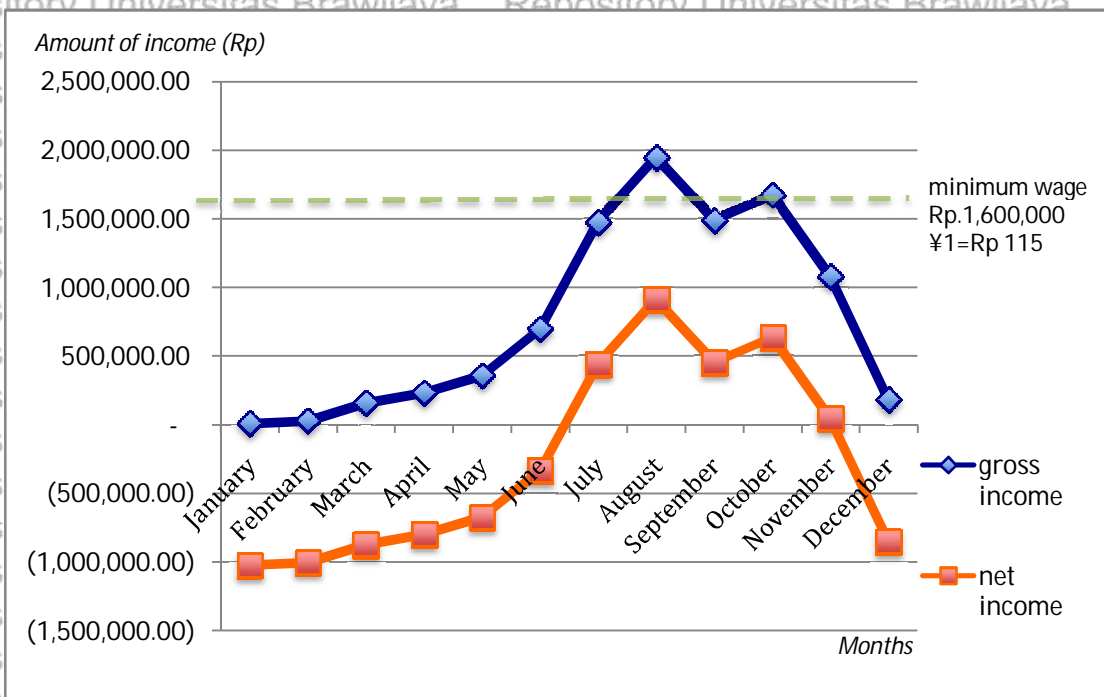
Because of the seasonal work in which at the low catch season fishermen might not have any income, it can be said that fishermen do not

have stable or regular income in one year. This is also a typical informal economic activity. Compared to minimum wage from a formal economic activity, fishermen's wage is far from the standard except during the top catch season. The illustration of fishermen's wage and their remaining income in one year is in the following chart.

This chart depicts that at the top catch season (5 months) fishermen could have a reserve based capital or surplus of income because they have more income or even exceed the minimum income standard in Malang regency. However, at the other 7 months (low and mid catch season), fishermen income start to decrease or even get less than the need for daily consumptions in one month. This is a hard time for fishermen and their family.

During the hard time, the close relation between fishermen and boat owner or middleman is very helpful for them since they could borrow money to meet their daily consumption needs without any difficult requirements. The loan agreement is that the fishermen have to work and sell the catches only to the specific middleman or boat owner. Here, the fishermen's ability and behavior determined their relationship in the community.

Figure 3.11 Calculation of Gross and Remaining Income for Fishermen





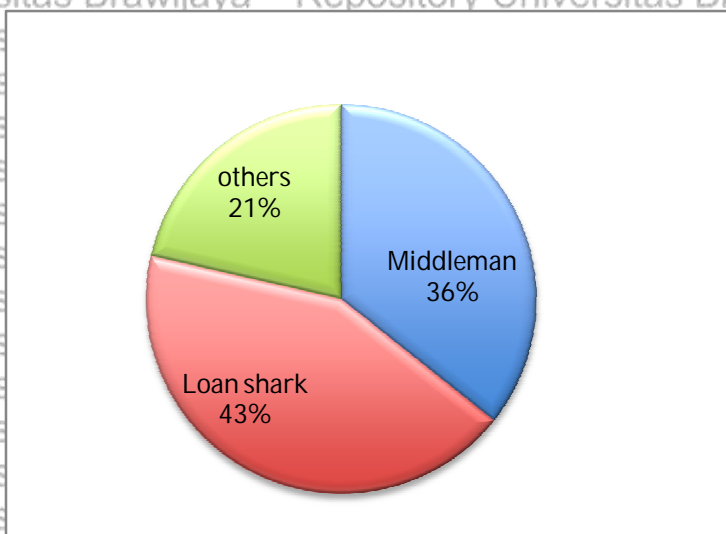
Majority of my respondents (90%) said that they are highly dependent on informal loans from middleman or loan shark. The one who borrow money from loan shark is usually the wife because the loan sharks are coming everyday in Sendang Biru. As an informal banking system, loan sharks do not need any complicated procedures to give loan for fishermen or fishermen's family. Trust is the only assets they need in the process of informal loan system.

Although loan shark give them high interest for the loan, fishermen's wives might not think it will burden them as long as they could have the finance. However, they are quite happy because they could pay the loan in installment way for 1 to 2 weeks duration.

"if I do not have enough money, it is easy to get loan here. A person usually come and offer loan for everyone without any complicated requirements". (Mrs. Supatmi, fishermen's wife/ fish vendor)

Another respondent, Mrs. Ropik, said that because of the interest given for loan is too high and she does not want to get it from that loan sharks. As the result, she tries to borrow money from her relatives or other person instead of the loan sharks. Those who are working as fish vendors under the middleman can usually borrow money from middleman with some agreements between them.

Figure 3.12 Source of Informal Loan





Looking at the pattern of unstable income and loan dependency of fishermen and fishermen family, it can be said that this community is highly dependent on informal loan given by middleman. With regard to the amount of income that might not sufficient for their daily consumption needs, having loan to support their family means having another loan to pay the previous one. Although they already get loan from middleman, it is not possible that fishermen/ their family still borrow money from loan sharks or other informal banking. This make fishermen and their family vulnerable to the web of loan which they even might not be able to pay it back. Furthermore, fishermen are vulnerable to poverty and might not get out of the poverty cycle.

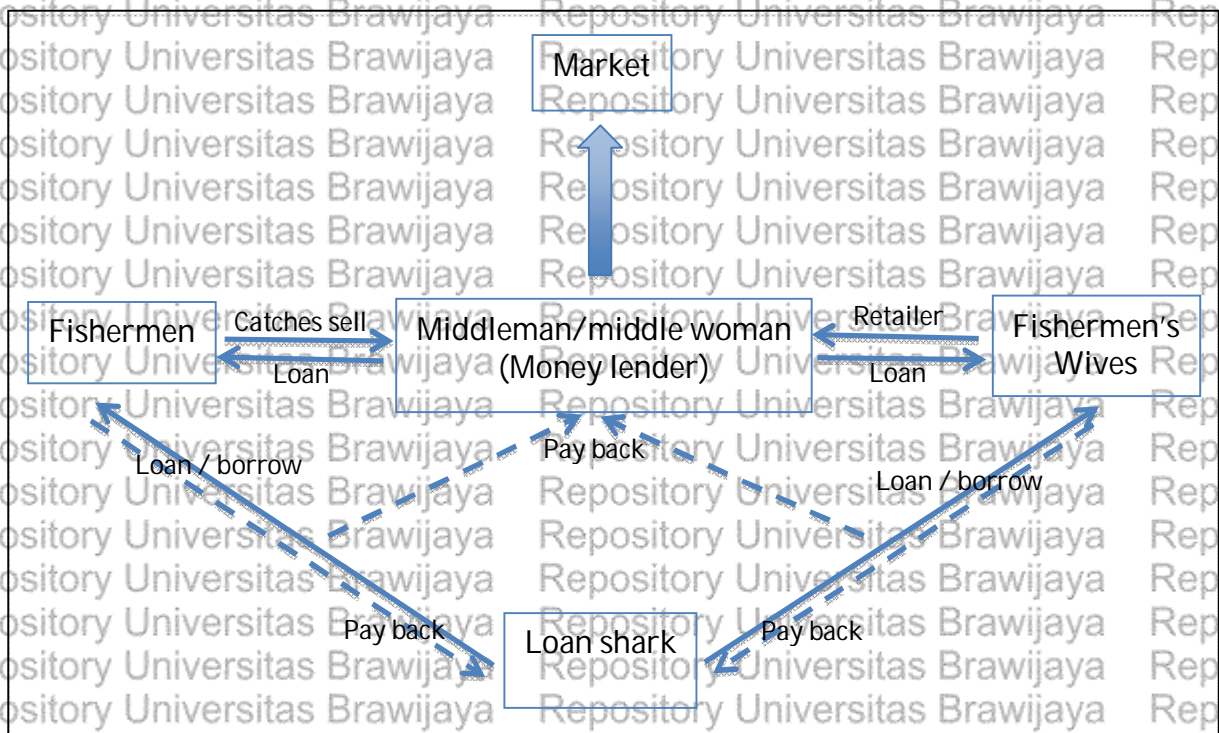
3.2.2.4 High Dependency to Middleman (Informal Economy)

The social relation between groups in fishery community is a kind of mutual relationship because one could provide others' need necessities. Middleman/ middle woman as the central role in the community could provide financial cost for boat owner in doing fishing activities. Fisherman is also benefitted with this relation because he could have a job of fishing with boat owner and could also borrow money to middleman. Fishermen's wives also have a mutual relationship with middleman/ middle woman by becoming fish vendors to sell fish in the market. Besides, the wives are also able to borrow money from middleman as their employer.

Regarding the cycle of fishermen's livelihood, the following figure shows the relations among social groups in fishery community. From the figure we can that middleman/ middle woman could provide loan for fishermen and their family with a tied agreement between them. Fishermen could get loan from middleman with condition that he will work with that middleman and boat owner (who also obtain financial loan from middleman). Also, the consequence of this agreement is that the catches of fishing should be sold to the middleman/ middle woman. The negative side of this agreement is that fishermen do not have any bargaining position in their work; thus, they also could not do anything for the unfair distribution of

income. Another negative effect is that fishermen cannot determine their own price of catches because middleman/ middle woman is the one who calculate the price of catches from fishermen. It means middleman might have double profit if they could sell and market the fish with higher price than what they bought from the fishermen.

Figure 3.13 The Role of Middleman/ Middle women in Fisheries Community



Source: Author, 2014

The same condition happens on fishermen's wives who are working under the middleman as fish vendors in fish market near the port. They could borrow money but they have to work only with the middleman with agreed wage. Again, the attitude and behavior of fishermen's wives could determine whether they could get the trust from middleman to get the job or to borrow money.

The web of informal loan started to happen at the time when fishermen/ family could not pay their loan from middleman/ middle woman. In this case they have to borrow money from loan sharks even with high interest rate to pay back the credit to middleman. The result is that they make new loan that keeps multiplying if they could not pay it on time.



Therefore, another loan will be used to pay other loans. This cycle might happen again and again since fishermen/ family could not pay the loan in full.

The vulnerability to poverty is clearly seen from this process.

3.2.2.5 Exclusion by Other Community Members

Fishermen in Sendang Biru consist of incorporation between native and migrant fishermen. The native are those who do fishing as their alternative way to get fish for their own consumption. While migrants are fishermen from other area outside Sendang Biru, such as Madura or Banyuwangi, that only depend on fishing as their main income source. These migrants finally could mix together with native people that finally decided to work as fishermen together with the migrant. Now, those migrants had become permanent citizen of the village of Tambakrejo in Sendang Biru hamlet for about 40 – 50 years. Besides, there are some temporary fishermen invited to Sendang Biru during the top season to help in fishing activities.

The combination of migrant status and their occupation as fishermen might make other community member underestimate their existence in this village. Because of that reason, fishermen are not able to get any job during their off time since other community members do not want to work with them. As the result, fishermen live in Sendang Biru might make their own fisheries' community apart from other community in the village. In short, it can be said that fisheries community and their social relations among other member in community including middleman/ middle woman is the result of relative deprivation they experienced in the whole village community.

Moreover, fisheries community is generally viewed as the lowest class in community or the poorest community. This condition might make other community members do not want to socialize with them in their social relation. For instance, because of their poor condition and limited skill, fishermen are discriminate and excluded by other community members. Additionally, the fishermen might also excluded themselves from the other community members due to their different gap condition from those members.



3.3 Discussion

Informal economy might absorb a large number of workers due to its characteristics that do not need special requirements, no legal status, and under the government policy. Fisheries community is beyond the informal economy, which almost all of their activities are included into informal sector. However with the situation where their education level is low, type or work and income that is not regularly achieved, exclusion from other community members, and dependency to informal economy (middleman/middle woman) will make them highly vulnerable.

From the findings mentioned, I would try to analyze the reason of high vulnerable condition of fishermen in their community. First is related to their educational background that both parents and children of fishermen's families are not attending school. Because the children are also do not get education, the condition of this community might getting worse and become more vulnerable in the future. However, this is related to preference or individual choice in their way of life. The decision not to attend school can be explain on the basis of rational choice. When the children go to school, it means they probably do not get income from their job of selling dropped-fish at the fish harbor. On the other hand, if children choose to work they could not go to school and even worse these children might not be able to improve their standard of living.

Second, fishermen activities are based on season (top, middle, low catch seasons) that leads them to have irregular income for their household. In this condition, during the low to mid catch season fishermen are highly possible to involve in loan dependency. Fishermen obtain their informal loan from middleman/ middle woman and also loan shark with high interest rate. They are highly vulnerable in poverty. Fishermen and their families are possible to trapped in loan cycle from one informal lender to other informal lender. Besides, fishermen can borrow money from middleman/ middle woman to support their family consumption need but most middleman/ middle woman do not allow them to pay back all the loan if they are able to



pay it. This patron-client system makes fishermen always dependent to middleman/ middle woman and will stay in vulnerable condition.

Third, exclusion issue faced by fisheries community. Fishermen are the result of deprivation that they have faced in the community. They are deprived because others take their basic needs away such as job opportunity, social relationship, and access to community's facility. Therefore, fishermen might experience being excluded by other community members because of their condition of low education level, limited skill, and their occupation as a fisherman. Being excluded by other community members mean that fishermen do not have alternative income-generated activities (job) during the low catch season. Other community members would not hire or recruit fishermen to help their working because they do not have the skill. This exclusion also limits their access to social relationships outside the fisheries community. Actually, better networking with other society might help them in marketing their catches directly without the role of middle woman.

The last and the most important factors that make fishermen highly vulnerable is their high dependency to middleman/ middle woman or informal economy as the source of their capital. They are depending on informal loan from middleman/ middle woman and loan sharks for financing their fishing activities and their daily consumption needs.

In short, it can be said that middleman/ middle woman is the main resource for the fisheries communities. It becomes their resource because they could not do their activities without influence from middleman/ middle woman. Besides, the preference of fishermen to depend on middleman/ middle woman in their community has become their way of life. To stay in their livelihood and dependent to informal loan for their financial source is a risk behavior for fisheries community. While, changing their way of life might cost a lot for their livelihood since it may eliminate their main resources in the community. Thus, it can be said that fishermen do not have option in their livelihood instead of dependent on informal economy and it makes them highly vulnerable.

CHAPTER IV CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

Fisherman is the oldest occupation in Indonesia, which is an archipelagic nation. Besides, Indonesia also has a long coastal line as the main asset of marine and fisheries development to improve public welfare especially for the fishermen. However, it is believed that most of fisheries communities in coastal area still under the living standard and unstable economic condition. Fishermen are usually classified as the low level community and do not get much attention from the central government.

In this research, the fisheries community condition in Sendang Biru is one of the typical coastal communities in Indonesia. The fisheries community not only consists of fishermen and their family, but also workers in fish processing plant located in the area of the community. However, both fishermen and workers of informal processing plant are in the same condition of depending on unstable fisheries activities.

Fisheries activities are included as informal economic activities according to the employment system and capital sources. As for the employment system, there are no specific or formal requirements to become a fisherman, yet commonly the occupation is hereditary from the family. The fishermen and workers of fish processing plant worked based on informal relationship or invitation from the boat owner or introduced by other fishermen already worked with the owner. Besides, to support the family most of the respondents' wives are also working in the fishing area as fish vendors and retailers in small coffee shop or food stall.

Regarding the capital source, fishermen are dependent on informal loan given by middleman/ middle women since they do not have their own capital to finance their fishing activity. The correlation between middleman/ middle women and fishermen in the form of informal economy is that there is no written contract among them. It seems to be a mutualistic cooperation in which both sides need each other as their source of income. However,



according to the sharing system of earned income between middleman and fishermen it can be said that there is an exploitation of fishermen by middleman. Fishermen only receive the smallest portion of the share income for their catches although it is them who have to work very hard on the ocean.

This kind of informal economy makes the fishing community highly vulnerable. This vulnerability is compounded by their lack of education, seasonal type of work, low household income, total dependence on the middleman and loan shark, and also exclusion by other members of community.

First is their lack of education. Most of the respondents do not finish elementary school or do not even attend school. Besides, children also do not attend school because they will only become fishermen like their parents in the future. The lack of education in all generation cause fishermen and their families could not compete with middleman/ middle woman to market their own catches. Further, they will always be dependent on informal loan to support their activities as well as to meet their daily consumption needs.

Next is their type of work that is seasonal only and resulted in unstable low income. In going fishing fishermen have to be aware on the seasonal changes because it relates on the amount of fish in the ocean. It means that their household income is also depend on how many catches they could get during the fishing activities. In one year there are about five months for abundant of catches, however, another seven months are not promising for them to go fishing. These are the time when they need to come back to the solution of engaging again with informal economy from middleman.

From those two abovementioned factors of fishermen's vulnerability, it can be concluded that fishermen and their families are totally dependent on middleman or loan shark. Middleman and loan shark is the source of their capital, both for financing fishing activities and their daily consumption needs. They might get trapped in loan cycle since they have to borrow money from middleman/ middle woman to pay back to loan shark. On the other hand, they might borrow loan shark to pay their loan back to middleman/



middle woman. With higher interest rate of informal loan than formal loan, their amount of credit will increase continuously. Therefore, the informal loan will keep them in the debt and poverty cycle.

The last is fishermen's exclusion by other members of the community. This exclusion shown from the responds of other members of the community when the fishermen do not have any income-generated activities during their low fishing seasons. Except their lack of skill other than fishing, willingness of the community is urgently needed to give chances for fishermen to help them in their activities. Unfortunately, become a fisherman always get underestimated by other community members.

Other reason related to exclusion issue is the fact that fishermen in Sendang Biru are migrant from other places around the area, therefore this fisheries community is excluded themselves from the community. It might come from their decision to exclude themselves and also excluded from the community members. Both are influential in making the fisheries community highly vulnerable to poverty. Exclusion from the community is the reason why fishermen could not mix together with others from different sector or occupation. It also limits their access and network that might help them in finding other alternative incomes during their off time from fishing.

We can see that fisheries community in Sendang Biru is highly dependent on informal economy due to the form of their employment, capital source for their income and loan, education, occupation type, and community response to their existence. Those informal economies make them highly vulnerable and might not be able to get off of the poverty cycle in their livelihood.

4.2 Recommendations

In order to cope with the problems of fishermen's livelihood that commonly live under the poverty line, the local government must give more attention on how to increase the fishermen's welfare and improve their livelihood. Besides, local government should also aware on how to provide alternative income-generates activities for fishermen during their off time



work. Recently, the government (both local and central government) has tried to improve their skill by giving training to the fisheries community on making boat or repairing net. Besides, government also provides aid such as fishing net for the purpose of increasing their production. Nevertheless, those programs are not directly affected the fishermen's livelihood and they are still living under the poverty line.

Based on the findings of this research, I would like to propose some recommendations to the local government to improve the fishermen's livelihood. Those recommendations are:

1) Dealing with the uneducated fishermen and their children, local government has to provide informal education system such as writing and reading training for fishermen and their family. The government should encourage the fisheries' community because education might give them chances to learn more on the way to make network and market their catches on their own. In this way, fishermen might reduce their need of middleman to sell their catches.

Furthermore, local government should also provide school for fishermen's children near the area with some scholarship programs for outstanding children. By providing special school for fishermen's children, they could study and get education similar to other children in the community. It is believed that education might cut off the poverty cycle; therefore, local government has to pay much attention on providing the school for children.

2) In order to decrease their dependency on informal loan, government has to provide microcredit programs particularly for fishermen that might not have any collateral to get the loan. However, local government might start to identify those who would like to develop their fishing activities by giving microcredit agreement with low interest rate. Besides the microcredit institutions and local government should also monitoring and give advocacy for those fishermen to slowly reduce their dependency to middleman/ middle woman.



3) To support family income, local government could also alternative activities for fishermen by providing training both for fishermen and their wives. For fishermen, local government could proposes alternative activities such as seaweed cultivation or selfish and oyster aquaculture in the coast. While for fishermen's wives, the training could be related with how to produce fish become other products with higher values such as abon (side dish, seasoning of meat in fiber, shredded fish), fish nugget, fish cake, jelly, or kerupuk (crackers). In the case that the wives have skill to reproduce the fish, they will not be dependent again to work under the middleman/ middle woman.

4) Local government should promote and support the fisheries community to keep on traditional mutual assistance (gotong royong) to solve their problems. Local government should also provide mentoring the fisheries communities to help them survive and stand on their own without being highly dependent on influential person such as middleman/ middle woman.

5) Local government should also bring back the function of fish auction with government control. With the existence of government monitoring in fish auction activities, middleman would not be able to decide the price of fishes on their own. Furthermore, fishermen will have bargaining position to sell their catches to the highest price given by certain middleman/ middle woman.

4.3 Limitations of the Study

This research has several limitations. Mainly, this study was limited by the small number of respondents and not varies in ages, gender, etc. More respondents would have improved the results obtained in this research. Besides, further information might be obtained by conducting more in-depth interview to the respondents based on the answer given previously. In short, because of the limit of time in taking data, this research observation is limited in the scope of fishermen and families' activity and live pattern in scope of social economic point of view.

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