

LIVELIHOOD ASSETS AFFECTING THE SUCCESS OF FISHERMAN'S HOUSEHOLDS MOVING OUT OF POVERTY

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ABSTRACT

A research has conducted to find out the aswere of “Why a few of fishermen’s household successfully moving out of poverty (escaped from trap of poverty) while most of them still remain in poverty trap”, is a an important feedback dealing with fishermen’s household empowerment. Specifically, this research aims to compare the performance of the ownership and management of livelihood assets ranging from initial conditions, among households of fishermen who are still poor with success fishing households moving out of poverty this time; and to determine the effect of variables ownership and management of livelihood asset toward the success of households of fishermen moving out of poverty. The result of the research are: 1) there is not different the ownership of livelihood assets between the fishermen’s household that are still in poverty trap and the fishermen’s household moving out of poverty; but different livelihood asset management, where livelihood asset management by fishermen’s household successful much better; 2) Variable ownership and management of livelihood asset influence on the chances of success of fishing households moving out of poverty in a row from the top are: investation performance; utilization of home for trading; utilization home for home industry; performance of fishing boat; multiple-husband’s work; ownership garden; livestock ownership; liveliness husband in fishermen group; household sustainability in the fishermen groups; economic life of the fishing boat; formal education of wife; and formal education of husband. Thus the success of fishermen’s households moving out of poverty (out of poverty) is determined by the management of livelihood assets driven by asset management of household financial capital; and the success of fishermen’s households moving out of poverty (out of poverty) is determined by an alternative business, either in the form of off fishing namely the home business industry fishery product processing; and non fishing, namely trade, plantation, and livestock. The findings of this study, in addition to contributing to the neo-classical theory, and to the development of sustainable livelihoods concept that was originally developed by Chambers and Conway (1992), also contribute to the concept of community empowerment.

Keywords: Fisherman’s Household, Livelihood Assets, Moving Out of Poverty

1. INTRODUCTION

Fishing community is a community that is important in relation to the utilization of marine resources, but most of them are still underserved communities. Fishing communities are still the dominant communities of poor people inhabit coastal areas, especially in countries that are developing or third world. FAO (2007) states that the poverty of fishermen is a very serious matter. Several studies conducted in Indonesia described the lives of fishermen are not prosperous, entangled with debt (Hariansyah, 2013; Soeprijadi, 2013; Retnowati (2011); Ridwan, 2009; Mussawir, 2009; Sugiharto, 2007; Karjadi dan Muhammad Imam Farisi 2006; Elfındri, 2002; Saedan, 1999; Mubyarto, 1984). Likewise studies conducted in other countries, also depicts the life of traditional fishermen are not much different. Results of the studies in Bangladesh, describe the life of the fishing community is the lowest class in the hierarchy of social life, the poor, and underestimated, can not meet basic needs, and can not buy or repair tools and good fishing fleet (Abdullah et al, 2013; Kabir et al; Hossain, et al,

2009; Hossain, 2005; Jahangir, 2005); poverty situation of fishermen in India as reported by Bhattacharya (2011), Datta and Ruma Kundu (2007), Salagrama (2006), Dhanuraj (2004); and Sathiadhas, Panikkar and Kanakkan (1994); research conducted in Oman illustrate that traditional fishermen less developed, a limited level of education, their lack of alternative livelihoods, and they need a modern fishing gear (Al-Marshudi, et al, 2006). The state of poverty of traditional fishing communities also occurred in South Africa as reported by Isaacs (2013); in Combodia and Thailand, as well as the state of traditional fishermen in Combodia presented by: Navy and Madhusudan Bhattarai (2009); Thuok and Lieng Sopha (2008); Keskinen (2003); Namso (2000); and in Thailand as reported by AFP (2008); in the Philippines by Rahman (2002); and in Nigeria as presented by Araoye (2002) that the fishing community in Nigeria is the poorest communities in category.

From the review studies relating to poverty fisherman previously indicated that studies conducted so far have always focused on the poor

fishermen, so the concept of a solution that is born also at the level of the narrow, focusing only on how to increase the income of fishermen. There are no studies that reveal the answer "Why fraction of fishing households success moving out of poverty (out of the trap of poverty), while others are still trapped," and this is a gap of knowledge and is a fairly important feedback in terms of the empowerment of households of fishermen.

Furthermore, based on the concept of Sustainable Livelihood, a household perpetuate life and livelihood rests on livelihood assets owned or accessible. The assets include human capital assets, capital assets of natural resources; financial capital assets; social capital assets; and physical capital assets (Mahdi 2009; Ellis, 2000; Ashley and Carney, 1999; Bebington, 1999; DFID, 1999; Carney. 1998; Chambers, 1995; Chambers and Conway, 1991). Thus to reveal the answer "Why fraction of fishing households success moving out of poverty, while others remained trapped" is used sustainable livelihoods framework developed initially by Chambers and Conway (1992).

For this purpose it is in this study developed several variables ownership and management of livelihood assets to be analyzed in relation to success households of fishermen moving out of poverty. Thus the study specifically aims: to compare the performance of the ownership and management of livelihood assets ranging from initial conditions, among households of fishermen who are still poor (trapped in poverty) with success fishing households moving out of poverty this time; and to determine the effect of variables ownership and management of livelihood asset toward the success of households of fishermen moving out of poverty (out of poverty).

2. LITERATURE REVIEW

Allison and Ellis (2001) stated that, the livelihoods approach has its origins partly in a literature concerned with understanding the differential capability of rural families to cope with crises such as droughts, floods, or plant and animal pests and diseases. This literature focuses attention on the assets of rural people, and how different patterns of asset holding (land, stock, food stores, savings etc.) can make big differences to the ability of families to withstand shocks (Swift 1989). This set of concerns also links to the concept of vulnerability; defined as a high degree of exposure to risk, shocks and stress and proneness to food insecurity (Chambers, 1989, and Davies, 1996). Vulnerability has the dual aspect of external threats

to livelihood security due to risk factors such a climate, markets or sudden disaster; and internal coping capability determined by assets, food stores, support from kin or community, or government safety net policies.

The sustainable livelihoods (SL) approach has its origins in studies concerned with understanding the differential capability of rural families to cope with crises such as droughts, floods, or plant and animal pests and diseases. The approach also borrows ideas from an ecological literature concerned with the sustainability of ecosystems or agroecological systems (Holling, 1973; Conway, 1987). Sustainability is defined as "the ability of a system to maintain productivity in spite of a major disturbance, such as is caused by intensive stress or a large perturbation" (Conway, 1985). The concepts of resilience and sensitivity as livelihood attributes also originate in this context (Bayliss-Smith, 1991). Resiliencerefers to the ability of an ecological or livelihood system to "bounce back" from stress or shocks; while sensitivity refers to the magnitude of a system's response to an external disturbance.

According to Ashley and Carney (1999), that Sustainable livelihoods (SL) approach is a way of thinking about the objectives, scope and priorities for development, in order to enhance progress in poverty elimination. Sustainable livelihoods (SL) approaches rest on core principles that stress people-centred, responsive, and multi-level approaches to development. These Sustainable livelihoods approaches have been applied flexibly, in contexts ranging from project and programme preparation, to research and sub-sector reform. The key ways in which Sustainable livelihoods approaches have been used and found useful include: (1) supporting systematic analysis of poverty and its causes, in a way that is holistic; (2) placing people and the priorities they define firmly at the centre of analysis and objective-setting; and (3) promoting a wider and better informed view of the opportunities for development activities and their likely impact.

Furthermore, base on Sustainable Livelihoods Guidance that developed by DFID (2001), the Asset Pentagon is an important component in the Sustainable livelihoods Framework (SLF), as a visual representation of information about people's livelihood assets. It brings to life important inter-relationships between the various assets, and asset status that refers to an individual's or group's access to livelihood assets. A change in asset status may involve an increase or decrease in access to livelihood assets or a change in the composition of the livelihood assets to which

there is access. The Sustainable Livelihood Framework (SLF), developed by Chambers and Conway (1992), and later by DFID, schematically formulates the interaction between the internal and the external factors of livelihood, Base on this interaction determine household strategies and outcomes (Koeberlein2003). Internal factor comprises five capital assets, namely: human resources capital asset; natural resources capital asset; financial capital asset; social capital asset; and physical capital asset. External factors are the vulnerability context and the transforming structures and process, which vulnerability comprises the risks, stresses, emergencies, and contingencies.

The research which has relationship with livelihood asset has been done by previous researchers, namely are: The correlation between livelihood asset and poverty (De Jainvry and Sadoulet, 2000; Moser,C, 2005; Adato, Carter dan May 2004; Carter dan Barrett, 2004); The correlation between asset and prosperity (Ellis, 2000; Soini E,2005); The function of asset as pillars (*buffer stock*) and consumption (Gomez-Soto, 2007; Holmes et al, 2008); The relationship between farmers acces with bussinesses diversification in non-farm field,(Reardon.1997; Baker,1995), as quote by Tacoli, 1998; Dercon dan Krishna, 1996), de Janvry dan Sadoulet, 1996); The realltion between asset acces with another diversification livelihood and to keep the minimum consumption dealing with the changes as: *trends, cycles and shocks* (Moser.C,1998; Swift, 1989; Sen, 1981); The relationship between asset function with livelihood strategy (Moser, 2005; Dorward, et al, 2001); Critical function and capabilities in improving social prosperity and individual and household dealing with the decrease of poverty (Carney 1998; Ashley and Carney 1999); The relationship between fragility and asset ownership (Moser, 1998; World Bank 2000; Holzmann and Jorgensen 2000); The role of asset in dealing with the climate risk and the changes of market prices (Hiroyuki Takeshima and Yamauchi, 2010); The relation between asset owned by the poor and the productivity in non-farm bussinesses (Christopher, Reardon, and Patrick, 2001; Olusola and Adenegan. 2011); The policy of asset accumulation and decrease of poverty (Sherraden, 1991; Moser, 2006); and the research about house as household productive in *generate income* and decrease cost living (Kordesh dan Alejo, 2005), and Base on the research, Allison and Ellis (2001) conclude by offering some alternative suggestions, or points for discussion, that emerge from a livelihoods perspective on small-scale fisheries management and development: 1) Livelihood diversification is a feature of many fishing communities; 2)

Development in rural areas where fishing is important may not be best served by intervention to increase fishing incomes, but rather to support complementary household activities; 3) Geographical mobility is necessary to sustain catches on mobile or fluctuating fish stocks; 4) The remittance economy is important in rural areas, and whether or not remittances are invested in fishing can act to regulate capitalisation in fisheries; 5) Within the fisheries sector, the FAO Code of Conduct for Responsible Fisheries, with its provisions to protect small-scale fishers' livelihoods from conflict with larger-scale commercial interests, 6) A livelihoods approach does not imply that all technology development in fisheries is bad. Livelihoods analysis can help to target technologies that fit within peoples' constraints, opportunities and investment strategies; 7) barriers to entry and to mobility does not imply a laissez-faire approach to management; 8) Fisheries sector development analyses have tended to focus on what small-scale fisherfolk do not have-Facces to infrastructure, finance and technology-Frather than what they do have adaptable and flexible income-generating strategies, resilient re-source management institutions, knowledge, skill and social capital. The key to sustainable fisheries management and development is to facilitate small-scale fisherfolk to find their own routes out of poverty by building on their existing capital and capabilities.

3. METHOD

This research was conducted by using a combination of quantitative and qualitative methods. The Survey was conducted in 10 coastal villages on the island of Bengklais, Riau Province, Indonesia, by in depth interviewing 191 sample of fishing households randomly selected (See Figure 1, Map of researh location). The performance of ownership and management of livelihood asset was analyzed descriptively, and to analyze the effect of variable ownership and management of livelihood asset toward the success of households of fishermen moving out of poverty (out of poverty), need to build a model in the form of the model stocahstik (econometric). Variable ownership and management of livelihood asset as independent variable, while the succes of households of fishermen moving out of poverty (out of poverty) or they are still poor (trapped in poverty) as dependent variable. According to Chambers and Conway (1991); Chambers,1995; Carney (1998); DFID (1999); Bebington (1999); Ashley and Carney (1999); and Ellis (2000), in the concept of SLF (Sustainable Livelihood Frameworks), that a family unit or a particular community to continue

is not potential to grow and do not build self-reliance. While the husband, the head of the household is currently a successful fisherman, in addition to 100.00 percent do double work ranging from initial conditions, also tend to do the alternatives job such as trading activities, gardening, and farming, where this type of work in addition to the potential for growth, long-term oriented, also while building self-reliance

Neither fishing households are still poor or trapped in poverty trap, nor fishing households that are successful moving out of poverty; both use the wife and child labor in supporting the household economy. But the visible differences in the type of work that they do, where the wives and children of the fishing household who are still poor (trapped in poverty) tend to work as laborers (making rubber), and help to fishing, where this type of work in addition to short-term oriented, difficult to grow, do not build self-reliance; while housewives successful fishermen moving out of poverty (out of the poverty trap), tend to do the job: trade, home industry, gardening, and farming, where this type of work in addition to long-term oriented, also has the potential to grow, while building self-reliance, and does not hinder children to improve education.

4.2 Ownership and Management of Natural Resources capital asset

In relation to the ownership of natural resources capital assets shows that the initial conditions, spacious yard owned by households of fishermen who are still trapped, more narrowly, as well as the percentage of households that utilize spacious yard to sustain the household economy more small, and orientation activities are subsistence, only for its own consumption needs and short-term. While successful fishermen household, land use largely yard, business-oriented and long-term. Likewise, the percentage of households who are still trapped fishermen who have gardens or crops, and livestock, as well as smaller, tend to plant crops, and livestock are short orientation and subsisten. While a successful fishing households tend to plant crops plantation, and livestock are business orientation and long-term. This indicates that capital asset management of natural resources by household successful fishing households moving out of poverty (out of poverty) are better than domestic fishermen who are still poor (trapped in poverty).

4.3 Ownership and Management of Financial capital asset

The income of fishing households per month who are still poor (trapped in poverty) from fishing effort on the initial conditions, higher than household income per month of successful fishermen moving out of poverty. Meanwhile, income per month from outside the fishing effort obtained by households of fishermen who are still trapped in poverty is lower than the a month income households successful fishermen moving out of poverty. However, household income of fishermen who are still trapped in poverty in total in the initial conditions did not differ with household incomes of fishermen are successful moving out of poverty.

In the management of the financial capital asset visible difference among households, where the pattern of use of total revenue for the primary and non-primary consumption, households are still trapped higher than households successful fishermen moving out of poverty. While on the other hand in making savings anticipated, the percentage of households who are still trapped fishermen much lower than fishing households that are successful moving out of poverty. Likewise there are different types of anticipated savings made, where households are still trapped tend to anticipate savings in a piggy bank at home and savings in the form of jewelry; whereas a successful fishing households moving out of poverty, tend to anticipate savings in the form of direct investments in assets, and in the form of social gathering, where both types of savings is oriented to investment. Thus financial capital asset ownership on the initial conditions did not differ between households of fishermen are still trapped and successful fishing households out of poverty trap. but the financial capital asset management are different, where the management of financial capital assets by fishing households that are successful moving out of poverty (out of poverty) beter than management by households who are still poor (trapped in poverty) till today.

4.4 Ownership and Management of Social capital asset

The number and types of social and economic relations fishing households are still trapped no different than the number of social and economic relations fishing households successful moving out poverty. But looks forms of social and economic relations are different, where it shows the relationship management by fishing households thar are succesful much better. Forms of social and

economic relations fishing household are still poor with fish dealer tend to be asymmetrical. whereas successful fishing households tend to be symmetrical. Likewise, in connection with fishing groups and social groups, households are still trapped tend to be passive, whereas a successful households tend to be active. And the level of continuity in the group of fishermen, households are still trapped lower than that successful households moving out of poverty. Thus social capital asset ownership on the initial conditions did not differ between households of fishermen who are still trapped and successful households moving out of poverty today. But the social capital asset management by fishing households that are successful moving out of poverty (out of poverty) better than management by households who are still poor (trapped in poverty) until today.

4.5 Ownership and Management of Physical capital asset

Size and condition of the house owned by households of fishermen who are still trapped, no different than those owned by households successful fishermen moving out of poverty. But in terms of physical asset management of this home, with regard to utilization home to trade and home industry, the percentage of households who are still trapped is much smaller, compared with households that successful moving out of poverty.

Types of vehicles owned by households of fishermen are still trapped is no different to that held by households successful fishermen moving out of poverty. But visible differences in management, where the percentage of utilization of

these vehicles for economic activity by households who are still poor is smaller, compared with a successful moving out poverty.

The type and gross tonnage fishing boats, as well as weights and brands of machines owned by households of fishermen who are still poor in the initial conditions, no different than those owned by households successful fishermen moving out of poverty this time. But visible difference in its management, where the economic life of the fishing boat and ship engines owned by households that are still poor lower than that possessed by the household a successful fisherman. Likewise percentage of utilization of fishing boats to activities other than fishing, fishing households who are still poor lower than a successful fishing households moving out poverty. Things above indicate that ownership of physical assets in the initial conditions did not differ between fishing households are still poor and successful households moving out of poverty. But the management of physical assets ranging from initial conditions by successful fishing households, better than the households who are still trapped in poverty.

5. VARIABLES OF LIVELIHOOD ASSETS THAT INFLUENCE THE SUCCESS OF HOUSEHOLD OF FISHERMEN MOVING OUT OF POVERTY

Based on the processed, it can be built binary logistic model performance of domestic fishermen, as follows:

$$\ln \left| \frac{p}{1-p} \right| = -1,863 + 0,263 \text{ FEH}^b + 0,567 \text{ FEW}^c - 0,009 \text{ THoF}^a + 1,483 \text{ MHW}^b + 0,570 \text{ UWL}^a + 0,254 \text{ UCL}^a + 1,315 \text{ OG}^b + 1,264 \text{ LO}^b + 0,110 \text{ THI}^a + 2,602 \text{ IP}^c + 0,635 \text{ ASER}^a + 1,097 \text{ LHiFG}^b + 0,772 \text{ HSFG}^b + 2,179 \text{ UHfT}^c + 1,656 \text{ UHfHI}^b + 0,267 \text{ GTFB}^a + 1,531 \text{ PoFB}^b + 0,663 \text{ ELoFB}^b$$

-2 Log likelihood = 116,519; $R^2 = 0,68$; ^a not significantly effect in the real level of 5 per cent; ^b significantly effect in the real level of 5 per cent; ^c significantly effect in the real level of 1 per cent

Based on the analysis, the variables livelihood assets have significant effect on success of fishing households moving out of poverty are: Husband Formal Education (HFE); Formal Education Wife (FEW); Multiple-Husband's Work (MHW); Ownership Gardens (OG); Livestock Ownership (LO); Investment Performance (IP); Liveliness husband in Fishermen Group (LHiFG); Household Sustainability In Fisherman Group (HSFG); Utilization of Home For Trading (UHfT); Utilization Home For Home Industry (UHfHI); Performance of Fishing Boat (PoFB); and

Economic Life of Fishing Boat (ELoFB). While variable: Total Hours of Fishing (THoF); Utilizing Wife Labor (UWL); Utilizing Child labor (UCL); Gross Tonnage of Fishing Boats (GTtoFB); Total Household Income (THI); and the Amount of Social and Economic Relations (ASER), did not significantly affect the success of fishing households moving out of poverty.

Based on parameter of β and the numbers of $\exp(\beta)$ obtained, in relation to the success of fishing households moving out of poverty, it is known that: formal education of husband provide

opportunities figure 0.57 and the numbers exp (β) of 1.301, means giving the effect of 1.3 times; formal educational of wife provide opportunities figure 0.64, and the numbers exp (β) of 1.762, meaning the effect of 1.7 times; multiple-husband's work provide opportunities figure 0.82, and the numbers exp (β) of 4.406, meaning the effect of 4.4 times; ownership gardens provide opportunities figure 0.79 and the number exp (β) of 3.724, meaning the effect of 3.7 times; livestock ownership provide opportunities figure 0.78, and the numbers exp (β) of 3.538, meaning the effect of 3.5 times; investment performance provide opportunities figure 0.93, and the numbers exp (β) of 13.497, meaning the effect of 13.5 times; husband liveliness in fishing groups provide opportunities figure 0.75 and the numbers exp (β) of 2.995, meaning the effect of 3.0 times; household sustainability in the fishing groups provide opportunities figure 0.68 and the number exp (β) of 2.163, meaning the effect of 2.2 times; utilization of home for trading provide opportunities figure 0.90 and the numbers exp (β) of 8.839, meaning the effect of 8.8 times; utilization home for home industry provides opportunities figure 0.84 and number exp (β) of 5.237, means giving effect of 5.2 times; fishing boat performance provide opportunities figure 0.82, and the numbers exp (β) of 4.622, meaning the effect of 4.6 times; economic life of fishing boat provides opportunities figure 0.66, and the numbers exp (β) of 1.940, means giving effect of 1.9 times to the success of fishing households moving out of poverty.

These findings reveal that an important factor that gives the greatest opportunity at success of household of fishermen moving out of poverty are: 1) management of livelihood assets driven by asset management of household financial capital in the form of the preliminary part of household income for invest to assets directly; and 2) the development of alternative business, either in the form of off fishing, namely the home business industry fishery product processing; and non fishing, namely trade, plantation, and livestock.

The findings of this study, in addition to contributing to the neo-classical theory, and to the development of sustainable livelihoods concept that was originally developed by Chambers and Conway (1992), also contribute to the concept of community empowerment. 1) The contribution of this study is to neo-classical theory, which studies have revealed a relationship between variables of livelihood assets with success of households (fishermen) moving out of poverty (out of poverty); 2) The contribution of this research to the concept of sustainable livelihoods, is, where this research

has developed variables ownership and management of livelihood assets in relation to the success of households (fishermen) moving out of poverty; and 3) The contribution of this research to the concept of empowerment of households (fishermen), is where this research has found the concept of empowerment of households (fishermen) based on ownership and management of livelihood assets, and the development of alternative business in the form offishing and non fishing.

6. CONCLUSION

- 1) Ownership livelihood asset on initial conditions, almost no different between the households of fishermen who still poor and a successful moving out of poverty. But look for differences in the management of livelihood assets, where the management of household livelihood assets by successful moving out of poverty is much better. Thus the success of households of fishermen moving out of poverty is tent to determined by livelihood asset management.
- 2) Variable of livelihood assets enormous influence on the chances of success of fishing households moving of poverty a row from the top are: variable management of financial capital asset, namely the investment performance; followed by the variable management of physical capital asset, namely the use of the house for the trade, the use of the house for home industry, fishing boat performance; variable management of human resources capital asset, which is multiple-husband's work; variable ownership of natural resources capital asset, namely ownership gardens, and livestock ownership; variable management of social capital asset, namely: the liveliness of husband in a group of fishermen, and the sustainability of households in the group of fishermen; variable management of physical capital asset, namely economic life of fishing boat; and variable management of human resources capital asset, namely the husband of formal education, and formal education wives. Thus the success of households of fishermen moving of poverty is determined by the management of livelihood assets driven by asset management of household financial capital; and the success of households of fishermen moving of poverty is determined by an alternative business, either in the form of off fishing, namely the home business industry fishery product processing, non fishing, namely trade, plantation, and livestock.

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