THE CHANGE OF LIVELIHOOD AND MINDSET OF FISH FARMER EMPOWERMENT IN THE VILLAGE OF INDONESIA

1Zulkarnain, 2Djuara P Lubis, 3Arif Satria, 3Musa Hubeis

1Lecturer at Department of Social Economic of Fisheries, University of Riau; Doctoral Candidate at Department of Agriculture and Rural Development Communication, Bogor Agricultural University
2Lecturers at Department of Agriculture and Rural Development Communication, Bogor Agricultural University
3Professor at Department of Agriculture and Rural Development Communication, Bogor Agricultural University
e-mail: zulnuzula@gmail.com

ABSTRACT

The research is done in two sections, the preliminary research in July 2012. The Data Collected in December 2013 to Mei 2014. This research was done to identify the empowerment activities and to see the change happened in livelihood and mindset among of fish farmer by comparing the data in 2012 and 2013. The method used on the research is survey. The population used in purpose (purposive sampling) and sample taken in census method. This analysis is used see the change of livelihood and mindset after the empowerment activities done. The result shows that there are good changes in livelihood and mindset especially in job opportunity, sanitation and hygiene, activities in group and the level of technology adoption in aquaculture.

Keywords: change, livelihood, mindset, empowerment, fish farmer.

1. INTRODUCTION

The concept of empowerment, according to Prijono and Pranarka (1996) human is the subject of himself. The process of empowerment mainly in the process of giving the ability to the community, to have power, to push or to motivate individual to have competency or power to determine his own life. The concept of empowerment in the term of community development is always connected with independence concept, participation, network, and Justice. Basically, empowerment is depend on the strength of individual and community.

According to Hikmat (2004) empowerment implying the present of strong and tough mentality. Empowerment as the process of decision making by the people who consequent apply it. People who have the same goal are empowered through their independence and even its a must to empower them by using their own efforts and knowledge, skills, and other sources to reach their goal.

Slamet (2003) stated the definition of empowerment is competency, power, understand, comprehension, motivated, have opportunity, able to use the chance, energetic, able to work in a team, know many options, brave to take a decision and risk, capable of getting information and take actions. Community empowerment is the effort to give motivation and encouragements to the community in order to enlarge self potency and brave to take action to develop so that he can be independent. Empowerment is a form of development and a process of increasing community livelihood.

Empowerment aquaculture in Koto Mesjid Village, Kampar Regency of Riau Province in Indonesia has done since the community run their business in aquaculture as individual. In the following years, this business got some help from private company and government. In 2008 a form called Partnership Communication Forum with PT Telkom was built. PT Telkom as a partner of the empowerment gave a grant called Corporate Social Responsibilities (CSR) for aquaculture in Koto Mesjid Village. In 2011 this village become the center of aquaculture in Riau Province and got some achievements as well.

The achievement of the empowerment by the fish farmer in Koto Mesjid Village significantly shown in the improvement of their livelihood such as economy and socialwelfare. Based on the above explanation a question arise how the change of livelihood and mindset of the aquaculture farmer in the empowerment in Koto Mesjid Village Kampar Regency in Indonesia, to see and to analyze the change of livelihood and mindset as a result of empowerment activities.
2. LITERATURE REVIEW

Development as a process of social changes into a better life is not a new phenomenon. Human civilization will not expand as now if there was no sustainable social change with much intensity previously. Development formulated as a planned process from a situation to a better situation with good improvement (Moeljarto, 1995). Tikson (2005) said that development is an economy, social and culture transformation purposely by using policy and strategy toward desired purpose.

According to Jahi (1988) development is a process of social changes held by giving many opportunities to community to take part, to gain improvement both social and material including equality, freedom, and other quality to be better by controlling their environment. According to Amanah (2007) development without attitude transformation will fail to establish a prosperous community.

The Change of Livelihood and mindset are part of the social changes. This statement was said by Sumardjian (1962) that the social change is all changes in society institution, which influence the social system including the value, attitude and behavior among groups in society. Sometimes, social change is also called culture change, that are change in knowledge, social institution system, information and technology, livelihood system, religion system and language and art system.

Wiganda's research result (2010) explained that farmers livelihood and mindset improvements in the agricultural business expand through intervention of changes on farmers’ livelihood and mindset in Banjar Regency, West Java mainly on the improvement of group's income and capital. The main input for expanding aquaculture businesses are fish seed and food. In developing countries, most governments provided fish seed for aquaculture businesses (Edwards and Remains 1998).

Frankic and Hershner (2003) said that a sustainability aquaculture concept has three dimensions which are: environment, economy, and social. Furthermore, the practices of sustainable aquaculture businesses are not only to improve the profit but also to decrease the damage such as the bad side effects to the social and nature environments.

Wiganda (2010) said that intervention toward farmers’ livelihood and mindset changes has a significant influence to the development of farmers businesses in the village. That's why the efforts to change farmers’ livelihood and mindset become a crucial component so that the empowerment and sustainable aquaculture will be run smoothly.

3. METHOD

This research conducted in 2012 and then in December 2013 until May 2014 in Koto Mesjid Village Kampar Regency Riau Province Indonesia. The location was chosen because it is a model area as the center aquaculture production in Riau Province. This location is the place of aquaculture empowerment from Government and PT Telkom. It is the area of Corporate Social Responsibility (CSR) held and as nomination of CSR award 2011. This area has a potential to grow as minropolitan with agribusiness based along with government policy.

The research is conducted by using survey method. Population of the research are all of the aquaculture farmers in partnership with PT Telkom who got the grant in 2009 periodic in the number of 90 farmers. The respondents are determined by using purposive sampling technique which are chosen purposely in census.

Prime data was gathered through interview guided by questioner. The prime data are collected from the farmers and the secondary data are taken from village office and fishery department, communication form partnership with PT Telkom headquarter, office of community seeding unit Graha Pratama Fish.

Data analyzing was done to know the changes of livelihood and mindset of the fish farmers. The analysis is done by monitoring and evaluating the empowerment activities in the research area by using one of the tools which is called Vectorial Project Analysis (VPA).

VPA is a method of project monitoring and evaluation developed from SWOT analysis. By using VPA, the development position and status from the target facilitation groups can be known in all periods of time, from the beginning, in the middle, and at the end of the program. Furthermore, VPA can also track which factors already reached the target and which factors need more attention. Due to the benefits, VPA is adopted and adapted as one of the monitoring and evaluation tool.

VPA is a monitoring and evaluating method which was developed by project management unit Special Programs For Food Security (SPFS) - FAO, Indonesia in February 2007 and got the award from BR Sen Award FAO in December 2007. VPA has been used by four country that are Indonesia, bangladesh, Laos and Sri Lanka. This is adopted with some modifications adjusted for the need of the program of independent food production from the farm department in 180 regencies. (Purnama & Saifullah, 2008).
The evaluation of livelihood status and mindset reached by the receivers of the benefit from the empowerment program basically measured by some progress indicators. There are two major indicators that are: (1) livelihood development indicators, (2) mindset indicators. These two indicators are chosen because the community empowerment mainly focus on the status of food secure holistically and comprehensively not only the increase of prosperity but also the improvement of human capability shown by the improvement of a better mindset. These two indicators mainly based on the reality in the field that the components of community empowerment are not only focus on physic activity but also on institution and villager capability to increase food supply (Purnama & Saifullah, 2008).

The Indicators of the livelihood is classified as physical indicator or the indicators which can be measured quantifiically. This indicator will describe the progress of food supply status which is measured by some sub indicators: (1) Income (2) Job opportunity (3) Food Consumption (4) Sanitation and Hygiene. Indicator of mindset is classified as non physical indicator (intangible) or indicators which can only be measured qualitatively but in VPA analysis, these indicators are measured quantifiically. These indicators consist of some levels of sub indicators: (1) Activity in farmer groups (2) The level of technology adoption (3) Saving habit (4) Self confidence (5) Children education oriented (6) Gender mainstream (7) Practice and businesses oriented.

4. RESULT AND EXPLANATION

The development of aquaculture in Koto Mesjid Village

The early years of the new village, The job opportunities of the villagers in Koto Mesjid in 1999 merely depended on the rubber tree production, not many of them run aquaculture. In 2000, the Catfish (Pangasius hypophthalmus) aquaculture in ponds firstly introduced by a field advisor from Board of Farm Research Technology from Marpoyan Pekanbaru Riau. After a while, the Catfish aquaculture has attracted more farmers so they gathered and formed some groups which founded by the elders of the village and some farmers.

Aquaculture in Koto Mesjid developed since then and gain profits for the farmers. To expand the businesses scale, the farmers need more money to open new ponds, water drilling, irrigation, and buying raw materials for making fish pellet. Then one farmer tried to send a loan application to a program called Community Development Corporation (CDC) PT Telkom as much as 30 millions Indonesian Rupiah. Starting from that day, officially he became a partner of PT Telkom. Seeing the benefits got by their friends, more farmers joined the program and applied the loan as well to expand their businesses.

The vast development of aquaculture can be seen from the increasing number of Catfish ponds and the establishing of a Catfish seeding center by one of the farmer and also because they can return the loan from CDC PT Telkom. In 2008 the fish cultivation partnership with PT Telkom officially founded and the amount of the grant to expand the Catfish aquaculture was increase.

In 2011, Koto Mesjid Village, Kampar Regency Riau Province Indonesia is chosen to be a center of aquaculture in Riau Province by fish ministry affairs on behalf of Riau Government. Many empowerment activities are held in this area one of them is the continuation of the grant from PT Telkom and techniques aids from the government. Until 2011, the partnership grant given by PT Telkom is 5,328.100.000 IDR and Community Development funds is 634,367,000 to this area. The increasing amounts can be seen in table 1 below.

<table>
<thead>
<tr>
<th>No</th>
<th>Years</th>
<th>Partnership funds (IDR)</th>
<th>Com. Development funds (IDR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2007</td>
<td>1,357,500.000,-</td>
<td>46,607,000,-</td>
</tr>
<tr>
<td>2.</td>
<td>2008</td>
<td>3,064,500.000,-</td>
<td>152,007,000,-</td>
</tr>
<tr>
<td>3.</td>
<td>2009</td>
<td>3,596,100.000,-</td>
<td>210,917,000,-</td>
</tr>
<tr>
<td>4.</td>
<td>2010</td>
<td>4,994,100.000,-</td>
<td>252,917,000,-</td>
</tr>
<tr>
<td>5.</td>
<td>2011</td>
<td>5,328,100.000,-</td>
<td>634,367,000,-</td>
</tr>
</tbody>
</table>

Source: Prime Data, 2012

Until 2013, the development of aquaculture in Koto Mesjid Village is excellent. This area is called as 'Catfish Village' with the number of ponds 916 ponds, 52 Ha in widt hand fresh Catfish daily production in the average of 8 to 10 tons per day.

The distribution of Catfish (Pangasius hypophthalmus) production is not really a problem because many buyers from local and outside the region daily come to meet their need directly to the ponds. Local buyers buy the fresh Catfish to be...
processed into smoke fish. Tree tons of fresh Catfish can produce one ton of smoke fish. The smoke fish are sold to many places, and even exported to Malaysia and Singapore. On the other hand, outside buyers sold the fresh Catfish to traditional markets and restaurants and resellers.

The Pattern of Partnership PT Telkom and Fish Farmer In Koto Mesjid Village

Koto Mesjid Village is one of the village chosen to be the location of empowerment program by giving the grant partnership program from PT Telkom. As one of the government’s company in Indonesia, PT Telkom has run partnership and environment care program as the community wish for. Until 2012, the partnership of PT Telkom grouped in 11 groups, each group consist of 20 to 40 fish farmers.

Any farmer who wants to join the partnership program is welcome and facilitated as long as he meets the requirements based on the partnership rules. The partnership rules are: knows each and every role, duty, function, and structure, understand each other capability, keep in touch, approach each other, willing to help and asking help from others, support each other, and respect each other (Budiana, 2012).

Some empowerment activities have been done in Koto Mesjid Village. The activities are done by PT Telkom and Government of Kampar Regency or Riau Province as shown in table 2.

<table>
<thead>
<tr>
<th>Year</th>
<th>Empowerment Activities</th>
</tr>
</thead>
</table>
| 2000 | - The training held by the region goverment for groups of fish  
           - Built the Kasih Ibu Kindergarten |
| 2001 | - Giving The soft loan for fisherman  
           - Giving rehabilitation program for rubber farms |
| 2002 | - The first head of village election  
           - Providing fresh water for Pincuran Billa sub village |
| 2003 | - Giving soft loan and environment care from PT Telkom |
| 2004 | - Region week exhibition for province level |
| 2005 | - Giving soft loan and environment care from PT Telkom |
| 2006 | - Building 4 box culverts, sewage, 500 m drains, and soft loan PT Telkom |
| 2007 | - The second head of village’s election  
           - Building 1 box culvert from PNPM budget  
           - Building river bank for fish center  
           - Giving soft loan and environment care from PT Telkom |
| 2008 | - Aspalt project for hot mix street 1.200 m  
           - Giving soft loan and environment care from PT Telkom |
| 2009 | - Aspalt project for hot mix street 1.100 m and drain 1.080 m  
           - Giving soft loan and environment care from PT Telkom  
           - Building an aquaculture center  
           - Providing Catfish seeds  
           - The training and fishery business meeting in Yogyakarta  
           - The center of Agropolitant XIII Koto Kampar |
| 2010 | - Making a new road to PLTA dam and drain 506 m by PNPM  
           - Training of fresh water fish for fish farmer  
           - The best Catfish fish production in Riau area  
           - Giving soft loan and environment care from PT Telkom  
           - Internet training for the villagers of Koto Mesjid Village |
| 2011 | - Expose program todlers’ nutrition improvement  
           - Giving soft loan and environment care from PT Telkom |
| 2012 | - Training and workshop of development of aquaculture and fish production  
           - The training for micro credit access for fish farmers |

Source: Secondary Data, 2011

The empowerment activities are done to improve community's livelihood capacity. Morgan (2008) said that the aspects of community's capacity which need to be developed are: consciousness, skills, knowledge, motivation, commitment, and self confident. The activities done to improve community capacity such as infrastructure development, education and training, support to
budget access and structure strengthened. These activities are also done in Koto Mesjid Village Kampar Regency.

The Change Livelihood and Mindset of Aquaculture Farmers

The implementation of empowerment activities for aquaculture farmers in Koto Mesjid Village Kampar Regency in Indonesia are held as a place to facilitate the process of community social economy changes in the hope that aquaculture farmers will get the measurable social economic benefits as follows:

1. Approach of livelihood improvements, by building the system of development of access to community budgeting through a board of village economy which will fix and boost community economic level.

2. The approach of mindset improvement, by the process of board of farmers group development, organizing and strengthened community capacity to the continuation of community development program that is the prospect of the community in running the empowerment activity by themselves or independently.

VPA survey in Koto Mesjid Village on the farmers who have joined the partnership program with PT Telkom in 2009 period as many as 90 farmers. The percentage of the sample are sufficient to represent all aquaculture farmers in Koto Mesjid Village.

The Vectorial Project Analysis of Fish Farmers in Koto Mesjid Village.

The indicator of livelihood improvement is physical indicator (tangible) and the mindset indicator is nonphysical indicators (intangible) occurred in Koto Mesjid Village as shown in picture 1.

From the picture can be seen that there are some changes happened in livelihood and mindset level in the partnership groups of PT Telkom in Koto Mesjid which are represent all empowerment target of aquaculture farmers in Koto Mesjid Village. It indicates that there is a significant good effect of empowerment activities through implementation of facilitator and grants access from PT Telkom. This finding describes the community’s comprehension toward the program which is shown in mindset and correlate with the livelihood level.

From the VPA graphic most of the members of partnership group with PT Telkom in Koto Mesjid Village already above the poverty level, both in livelihood level and also mindset level. This fact is the result of previous programs held by the government of Kampar Regency which gave the farmers education and training in fishery long before PT Telkom came to the village. The program has effected farmers’ mindset in general. The farmers’ livelihood level in VPA in average already above the poverty level because the price of Catfish (pangasius hypophthalmus) are increase lately.

The development of community livelihood in Koto Mesjid Village significantly increase. Most of the farmers already above the poverty level. The development of indicator of livelihood of farmers who follow the partnership program with PT Telkom in Koto Mesjid Village (7.32 - 5.46 = 1.86), in the beginning of the research year 1 and 2
(2011-2012) the indicator was in quadrant I and in the second and the third year (2012-2013) it was in quadrant II means that the farmers groups partnership with PT Telkom increase themselves into development phase. The significant development also occurred in farmers mindset indicator which reach \((6.00 - 3.90=2.10)\). This finding shows that aquaculture farmers have experienced a good quality of life since the empowerment program applied in the village. And the program result in 2013 changed from phase II (growing) into phase III the development.

Table 3. Vector growth in Koto Mesjid Village.

<table>
<thead>
<tr>
<th>Description</th>
<th>X</th>
<th>Y</th>
<th>Growth</th>
<th>Vector</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>3.90</td>
<td>5.46</td>
<td>X</td>
<td>Y</td>
</tr>
<tr>
<td>2013</td>
<td>6.00</td>
<td>7.32</td>
<td>2.10</td>
<td>1.57</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2.10</td>
<td>1.57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Prime Data, 2013

The last monitored VPA coordinates of aquaculture farmers who follow partnership with PT Telkom in Koto Mesjid Village was in growing phase \((5.46:7.32)\) while the food security or the up line of poverty level on a community is in coordinate \((5.00:5.00)\). It means that empowerment programs for aquaculture farmers in Koto Mesjid Village in the third year already able to boost and support community empowerment toward independent community which directly change the community mindset to sustain the increasing of livelihood to be better.

Based on the graphic VPA Koto Mesjid Village, it is known that there is a balance movement between the increase of livelihood and the increase of mindset of farmers in Koto Mesjid Village. The good movement can be seen from the value of X (development mindset) and Y (livelihood) which form 45 degree. The movement balance of increasing of livelihood and mindset in VPA can be the scale for the continuation and community independent to organize the next grant access so that the community's development can reach quadrant III and IV or the development and independent phase. The indicators analysis result in all VPA variables in Koto Mesjid Village can be seen in picture 2.

The empowerment activities in Koto Mesjid Village through the loan and organized the community and strengthened the capacity by partnership group with PT Telkom and strengthened structure by the government of Kampar Regency has given a significant effect toward the aquaculture community mindset. From the picture 3 above, we can see that there is significant development in some VPA indicators in Koto Mesjid Village, that are: job opportunities, food consumption, group activities, saving habit, technology adoption level and businesses practices. There is also a change occurred in VPA indicator phase from phase I (preparation) in 2011-2012 into phase II (growing) in 2013.

Some indicators in VPA have a minor improvement, that are income, sanitation, and cleanliness and also businesses practices. The more explanation about the improvement of livelihood and mindset of aquaculture farmers in Koto Mesjid Village can be seen in the average of analysis result in table 4.

![Picture 2. VPA indicator analysis in Koto Mesjid Village](image-url)
Table 4. The level of livelihood and mindset changes of aquaculture farmers in Koto Mesjid Village

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>The Level Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Preparation</td>
</tr>
<tr>
<td>Livelihood</td>
<td>Income</td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td>Job opportunity</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Food Consumption</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>Sanitation and hygiene</td>
<td>5.0</td>
</tr>
<tr>
<td>Mindset</td>
<td>Activity in farmer groups</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>Adoption of technology</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>Saving habit</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Self confidence</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>Education oriented for children</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>Gender mainstream</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>Business oriented</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Source: Prime Data, 2014

Based on the above table 4, the average changes of livelihood and mindset aquaculture farmers in Koto Mesjid Village Kampar Regency in Indonesia as the benefits of empowerment activities within 3 years from 2011 until 2014. The significant changes in some indicators; the job opportunities are increase from 4.0 to 6.7, sanitation is increase from 5.00 to 8.9, group activities are increase from 3.6 to 5.3, technology adoption is increase from 2.9 to 5.6, self confident is increase from 3.7 to 7.1 and the gender is increase from 3.3 to 5.5. This result explained that the empowerment program for aquaculture farmers in Koto Mesjid Village has successfully improved the level of livelihood and mindset among fish farmer. In vectorial side the farmers’ household showed the condition is security food level.

To make conscious change in a community, needy required community’s empowerment by optimally using all potencies. The empowerment reach by the aquaculture farmers in Koto Mesjid Village is the establishment of prosperity with the changes of livelihood and mindset as part of social and economy aspects in their households. This empowerment happened because the farmers themselves participated in running the aquaculture activities as good as possible.

5. CONCLUSION

Based on the analysis and explanation above, it can be conclude that:

1. The implementation of empowerment aquaculture farmers after the development of Koto Mesjid Village area keep on improving.
2. The activities of aquaculture farmers empowerment showed the good changes on the livelihood and mindset significantly. The significant changes occurred on some indicators that are job opportunities, group activities, technology adoption, gender, and businesses orientation. The changes of livelihood level and mindset level on the farmers increase the phase from preparation phase into growing phase.
3. So that, the empowerment activity on the aquaculture farmers of Koto Mesjid Village has brought the improvement on the farmers’ livelihood and mindset. Vectorial data indicated that the level of food supply of the aquaculture farmers in Koto Mesjid Village is in food security.

REFERENCE


