

# POVERTY MAPPING AND POVERTY ERADICATION STRATEGY FOR FISHER HOUSEHOLDS AT BANTAYA SUBDISTRICT, PARIGI DISTRICT, PARIGI MOUTONG

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**Abstract**— Research was aimed to construct poverty map based on the socioeconomic life conditions; to analyze factors of strength, weakness, opportunity, and threat in SWOT analysis; and to formulate poverty eradication strategy of traditional fisher households in the coastal area of Bantaya Subdistrict. Method of research was survey with descriptive quantitative approach. Sample was taken with cluster sampling technique resulting in the size of 100 fisher households. Result of research indicated that the poverty among traditional fisher households was caused by some reasons: low human resource; traditional fishing technology; huge burden of family dependences; lack of diversification to non-fishery activities; poor capitalization; susceptibility to the default loan; low income; low accessibility to marketing; low bargaining power; and lacking of saving and asset. Poverty eradication strategy was formulated through SWOT analysis, and this strategy was defensive, meaning that poverty eradication from fishers may be hardly accelerated if only emphasizing on previous program of poverty eradication strategy. Alternative strategies were needed to increase tactical advantages. This research recommended various priorities of strategic formulation, such as: increasing the capital access, developing the technology and scale of fishery business, developing the access to marketing, protecting the poor fisher household, supporting structures and infrastructures of fishery management, and developing the industry of household fishery.

**Keywords**— Poverty Map, SWOT, Fisher Household.

## I. INTRODUCTION

Poverty among fisher communities was usual condition in fisher villages of Indonesia. Coastal villages were the pouches of more chronic structural poverty than agrarian villages (Suyanto, 2013). Most coastal inhabitants lived in very low and uncertain standard of living. It trapped them into heavy burden of life, powerlessness, and vulnerability.

Improving the welfare of coastal community was not easy. Various strategies and efforts were taken to eradicate poverty. Basically, poverty root differed across regions. It was caused by different characteristics of region and community. Therefore, mitigating poverty at coastal area may differ from that in mountainous area.

Poverty problem in traditional fisher households was multi-dimensional. Proper and comprehensive rather than partial solutions were needed. Therefore, the problem root causing

poverty in traditional fisher households must be recognized first. Kusnadi (2003:18-20) mentioned that the cause of fisher poverty divided into two, internal and external. Internal factor was related with human resource at fisher households and their activities. External factor was associated with the condition beyond the self and out of work activities of fisher.

Fishers were often vulnerable to poverty and economic pressures. Other social groups in coastal communities were also disadvantageous such as labourer fishers, retail fish merchants, small scale industry owners, worker suppliers, and other micro business entrepreneurs. Few social groups in coastal community were benefited from the development of coastal villages, such as boat owners, upscale fish merchants, and informal credit suppliers. Few coastal villages had its economic supported by fishery and captured fishing activities. Economic fishers determined intensity and dynamic of village economics. Poverty at fisher community prevented them from mobilizing their work and also from developing their socioeconomic wellbeing in the coastal area.

Various coastal development treatments and policies were set for eradicating the poverty at fisher community. Significant result was not apparent. At the level of poverty eradication policy for fisher community, it lacked of knowledge and comprehensive review about what was the real cause of poverty. Therefore, social, economical, cultural and organizational approaches must be taken by fisher community because it may help them to solve their problem. As said by Edi Susilo (2004) in Kusnadi (2004), current data showed that the development of fishery had successfully increased production, foreign exchange, and fish consumption of Indonesian community. National fishery development, however, still failed to improve the wellbeing of traditional fishers and fisher labourers. It cannot be denied that aggregate data did not describe reliable micro condition of fisheries, and it stood still away from feasible.

Various activities for natural resource development in Parigi Moutong Regency were not significantly influential to the reduction of poverty rate. But, poverty rate in Parigi Moutong Regency reduced from 21.73% in 2008 to 17.03% in 2013. However, this figure was still quite higher than total poor community in Central Sulawesi Province. In 2013, poverty rate in this Province rated at 14.32 % compared to 11.37% of

national poverty rate. This national rate was lower than Central Sulawesi Province and Parigi Moutong Regency. As shown by BPS (2014), this poverty rate was quite significant and was one significant reason to mitigate poverty in Parigi Moutong Regency. Poor inhabitants in Parigi Moutong Regency reached 75,463 persons or 17.03 percents in 2013. Poverty eradication effort seemed needing for proper, systematic, planned and directed strategy. It may need a synergy or cooperation across elements of government, private and community. A synergy would be significant to increase the life quality of poor community who lived at the coastal area.

Consistent with the commitment of the government of Parigi Moutong Regency, a sustainable development system that was people-oriented, inclusive and emphasizing on people participation (Participatory Based Development), then economic policy was made in favour of poor people (Pro Poor Growth). The Document of Local Middle-Term Development Plan (RPJMD) of Parigi Moutong Regency on 2013-2018 included priorities of local development such as the acceleration of poverty eradication and the empowerment of community based on people economy (RPJMD in Parigi Moutong Regency, 2014). The local government of Parigi Moutong Regency was committed to the efforts of poverty eradication and local economic-based empowerment for the community living at coastal area. People economic development based on marine and fishery resources was directly and indirectly implemented to accelerate the poverty eradication for fisher community in the coastal area of Teluk Tomini.

Poverty at Parigi Moutong Regency was a main agenda deserving immediate solution from the government of Parigi Moutong Regency. Various policies and programs of poverty eradication were set by the local government of Parigi Moutong Regency. Some programs were self-reliant or also the product of policies made by the government of Parigi Moutong Regency. Other programs derived from central and provincial governments to be implemented at Parigi Moutong Regency.

This review of poverty eradication at Bantaya Subdistrict, Parigi District, Parigi Moutong Regency, was underlined by several considerations.

First. Fisher community in Parigi District, especially at Bantaya Subdistrict, still dealt with problems of poverty and socio-economical difficulty that disturbed their work mobility and income stability. These problems were not experienced by fishers at low scale but also upscale fishers, including the owner of Pajala boat at Bantaya Subdistrict. Climate change in Teluk Tomini impacted on economical difficulty on fisher community. As shown by BPS data (2015), poverty rate in Bantaya Subdistrict was quite higher because it affected 354 fisher households or 22.23% of 1504 households in the subdistrict where the majority of inhabitants were fisher.

Second. Fisher community living in coastal area of Teluk Tomini at Bantaya Subdistrict were traditional fisher. They have different characteristic from modern fisher. Traditional fisher was described with their low capitalization; the lack of social, financial and organizational supports; and the limited usage of technology. This limitation was shown by the use of non-motorized boats or patched motor boats, the absence of information technology, and the very simple fishing gears.

Third, The structure of economic resource in Parigi District was diverse and potential. It was important prerequisite for coastal development. At Bantaya Subdistrict, the existing potentiality of economical and environmental resources was captured fishery, fishery trade, and low scale industry or household industry (fish processing). If economical resource was developed through integrative measures, it may raise the dynamic of regional economy at Bantaya Subdistrict although it was hardly to find farming activities (horticulture and coastal farming), tourism (marine/coastal-based tourism), and breeding. Reason may be that administrative region of Bantaya Subdistrict was quite narrow and therefore, it was less possible to cultivate farmland at this Subdistrict.

Fourth. Socio-economical structures and infrastructures to support the development of village, especially Bantaya Subdistrict, and the effort to fulfil villagers' livelihood, were less available. It disturbed socio-economical mobility of the population which prevented community from progressing. The improvement on structures and infrastructures was urgent necessity.

From four reasons above, there will be contextual and visionary reasons for the necessity toward coastal development at Bantaya Subdistrict, Parigi District. Main problems in this research involved "How can the factors causing poverty in traditional fisher households be mapped or grouped?" and "What poverty eradication strategy can be formulated for coastal area of Bantaya Subdistrict to improve economic self-reliance and social welfare in that Subdistrict? Research was conducted to answer these questions.

The implementation of poverty eradication strategy for fisher community was expected to mitigate poverty, to ensure economical justice, and to improve social welfare of coastal community, especially fisher community at Bantaya Subdistrict in optimal and sustainable ways. The paradigm of poverty mitigation process followed generally accepted principles, but the formulated poverty eradication strategy still varied with local characteristics or specific conditions such as geographical condition, social structure, custom and culture, local organization, and potential resources. The formulation of poverty eradication strategy for fisher households may be useful for fisher community at Bantaya Subdistrict, Parigi District, Parigi Moutong Regency.

Based on the background and problems previously explained, the author insisted to carry on a scientific research about Poverty Mapping and Poverty Eradication Strategy For Fisher Households at Bantaya Subdistrict, Parigi District, Parigi Moutong. Research problems were formulated. (1) How can poverty map be developed based on socio-economical condition of traditional fisher households at coastal area of Bantaya Subdistrict?; (2) What factors were supporting and constraining poverty eradication for traditional fisher households at coastal area of Bantaya Subdistrict?; and (3) How was the formulated poverty eradication strategy for traditional fisher households at coastal area of Bantaya Subdistrict?

## II. METHOD OF RESEARCH

Method of research was survey with quantitative descriptive approach. Location was determined purposively at Bantaya Subdistrict, Parigi District, Parigi Moutong Regency, Central

Sulawesi Province. Sample was taken with probability sampling and cluster sampling. Final sample was 100 fisher households after determination with Slovin Formula. Data source emanated from primary and secondary. Data collection technique involved questionnaire, interview, observation, and documentation. Data analysis technique included descriptive statistic analysis and SWOT analysis to determine the priorities of poverty eradication strategy for traditional fisher households. SWOT Analysis (strength, weakness, opportunity and threat) was implemented to formulate poverty eradication strategy, and it was preceded by analyzing factors systematically. Logic competence was used as the base in SWOT analysis because it helped result of this analysis to maximize strength and opportunities as well as to minimize weakness and threats (Rangkuti, 2014).

### III. DISCUSSION

#### A. General Description

Administratively, Bantaya Subdistrict was 0.47 km<sup>2</sup> width or 2 percents of total width of Parigi District (23.50 km<sup>2</sup>). This area was dominated by the coast. Population rate was 6,866 persons with density of 14,609 persons/ km<sup>2</sup>. Geographically, the eastern part of Bantaya Subdistrict was the waters of Teluk Tomini, and it was classified as the National Strategic Area. The fishing ground for Bantaya Subdistrict's fishers was located at Teluk Tomini waters widely spreading throughout North Sulawesi, Gorontalo Province, and Central Sulawesi Province. In Parigi Moutong Regency, Teluk Tomini had coastline of 472 km. It was crossed by equator line and remained at strategic position as the heart of coral triangle. This strategic position declared Bantaya Subdistrict as very potential spot for captured fishery sector.

#### B. Poverty Mapping Based on Socio-economical Characteristics

##### 1. Social Life of Traditional Fisher Households

Social life of traditional fisher households was the indicator whether fisher households were assigned as poor or not. Some social components were understood:

(1) Number of the Dependent Cared by Household Head Fisher households usually consisted of wife and child. Daily necessities and school tuition must be met. There were 100 respondents saying that in average 84% fisher households had 1-9 children to care, and 57% were at school. Besides wife and children, household head must still care other family member or relatives who stayed together in the house. This non-main member of the household was additional burden as perceived by 10 respondents. Noor (2005) asserted that the number of household member was negatively influential to poverty. The more the household member, the lower the income per capita, and the poorer the household was.

##### (2) Formal Education Rate Among Household Heads

Traditional fisher was a coastal community group with economical vulnerability and relatively socially remote (Dahuri in Kusnadi: 2003). Villagers who lived in coastal were almost of them traditional fishers who were not highly educated. Most household heads were formally educated. Of 100 respondents, most of them had low education. There were 83% unschooled or graduated from elementary school. It means that human

resource of poor fisher households must be low. Kusnadi (2009) added that an underlying problem of coastal community was poor quality of human resource due to their low education. Low education was caused by low economic rate of fisher households and low awareness to education. Such low education may influence work ethos of fisher, can force them into despair, and did not learn how to utilize the information about optimally sustainable management of coastal economical resource.

##### (3) Business History of Traditional Fisher Households at Bantaya Subdistrict

In general, most the heads of traditional fisher households at Bantaya Subdistrict remained within their productive age. It was shown by 100 respondents who admitted that 96 % of them were aged at 17-64 years old, 94 respondents still had average productive age for 1-40 years. The interesting finding was that the youths who aged at 17-25 years old worked as fisher because traditional occupation of their parent required or force them to become fisher. As noted by Kusnadi (2009), they worked as fisher by perforce, because they were hardly finding another job, due to limited employment chance or the excess of unemployment at the coastal area.

##### (4) The Role of Member of Fisher Households

Traditional fisher households, especially the poor fishers, mostly sent all household members, including wife and children, into productive work. Utilizing household members, especially wife and children, was like taking benefits from their role within the social system and also establishing clear division of work among them. Geography and livelihood at coastal area represented socio-economical characteristics of fishers and their wife.

##### (5) Expertise on Technology

Traditional fishers at Bantaya Subdistrict still relied on traditional fishing gears, and very simple fishing methods and tactics. The simplicity of technology used in the captured fishery was one cause behind the poverty among fisher households. Fishing gears may vary with the captured fish species. Of 100 respondents, 86 % were admitting that they used patched motorboats, while 6% used non-motorized boats. Fishers at Bantaya Subdistrict who used fishing-hook were estimated from 73% of total respondents. During the transition of fishing season, fishers at Bantaya Subdistrict failed to adjust their very simple fishing gears to more modernized fishing tools. For exploiting the fishing technology, the utilization of crews into traditional fishery was also important. Fisher as the occupation was mostly done by 61% household heads of 100 respondents. Crews were derived from household members, including wife and children. The utilization of household members may reduce production cost. Fishing technology also developed over time as the outcome of the long-lasting relationship between fishers and their environment as the livelihood source (Masyuri, 1993). Hardiness was also emerging because not all fishers had upscale motorboat to deal with big wave. They merely depended on small patched-motorboats and thus, it limited their capacity to afford offshore waters. This condition underlined the fact why their haul was always few.

##### (6) Ownership of Asset

Ownership of asset was the amount of movable and immovable commodities on the prevailed market value. The welfare rate of

fisher households can be seen from the status of house ownership because it distinguished poor fisher households from the wealthy. Welfare rate of traditional fisher households, including the poor, was significant as indicated by 65 % respondents admitting to have self-owned house as their asset, while others still stayed along with relatives or rented a house.

### C. Economical Characteristics of Traditional Fisher Households

(1) The Financing Pattern of Captured Fishery Effort  
Poor fishers at Bantaya Subdistrict still used simple (traditional) fishing technology. The limited technology impacted on huge demand of production capital. The working capital for fishing was mostly spent on fuel and logistic. But, the rate still depended on the size of boat fleets, the number of crews and the length of fishing journey. Result of survey from 100 respondents indicated that the working capital for production was still low. There were 58 fishers (58%) admitting that their working capital for sailing was less than 100,000 IDR. Bantaya fishers often sailed alone to spare their cost or because they still used simple and traditional gears. Kusnadi (2003) insisted that fishers still had limited capacity in their working capital and fishing technology. Besides a problem of small working capital, the capital financing of poor traditional fishers often derived from informal finance institution. Result of survey showed that 27 respondents (27%) admitted that they loaned their working capital from the collector-trader (Palompo') or usurer. They found easier to sell their haul to Palompo' than to sell it to Parigi Central Market at Kampal Subdistrict. Palompo' would pay the haul in cash or pay with instalments but be settled on days to come. But, fishers still owed debt to Palompo' for buying fishing structures and infrastructures. In the context of capitalization, Palompo' was the key person whom fishers relied on to make the loan. Economical relationship between both of them was hardly inseparable. Masyuri in Najib (2013:16) said that the financing at the captured fishery sub-sector was always informal, and it was managed by non-bank financial institutions. Banking organization never conferred credits to the fishers at the captured fishery sub-sector. Fishers often failed to pay debt regularly, whereas the bank did not control fishers' work.

#### (2) Marketing of Fishers' Haul.

The marketing of fisher's haul at Bantaya Subdistrict had various prices to set. This low price was accepted by fishers defencelessly, and even, it became a tradition. Reason was the limited supporting structures, such as refrigerator and fish auction centre (TPI). The scarcity of ice rock prevented fishers from sailing because the quality of fish ruined. Fishers did not dare to sail for more than a day because they must sell it immediately. It was made worse by the absence of auction center at Bantaya Subdistrict. Fishers did not find another option other than selling their haul to Palompo'. Therefore, the price of the haul was set dominantly by Palompo'. It forced the price lower than market value, and less surprisingly, the flat price was set regardless fish species. In real market, the prices of cakalang, tongkol and katombo were differed to each other. Palompo' did that because they needed a lot of ice and expensive transportation cost. Palompo' from out of Bantaya

Subdistrict, such as those from Palu City, always needed great cost.

A simple fish marketing system at Bantaya Subdistrict should be redesigned. The existing way of marketing was after landing, the haul was sold to Palompo' and retailer (minor Palompo'). A big merchant (Palompo') may purchase directly the haul at fish landing site. Palompo' then sold the commodities to traditional markets in Palu City and offered them to traditional markets around Parigi District. The collector-merchant sold fishers to retailer. The retailer, finally, marketed the commodities to consumers at nearby subdistricts.

In general, the marketing methods used by fishers at Bantaya Subdistrict were: (1) selling the haul directly to the market; (2) selling the haul directly on the beach or at land site; (3) selling it in wholesale to big merchant (Palompo'); and (4) selling it to the capital debtor. Economic activities of fishers were limited only to the capturing of fishes and its production. For getting it to consumers, fishes must pass through marketing stages. Fishers were separated away from these stages, and therefore, their bargaining power was overwhelmed by the price of fishery commodities.

Fish auction was usually conducted by fishers at Bantaya Subdistrict. The sale price of fishers' haul was determined by indicators such as: the size of fishing boat; whether they sold directly the haul to the market; whether they sold it directly on beach; whether the haul was bought by big merchant; and whether it was sold to loan the capital.

As shown by the survey on 100 respondents, there were 59 persons (59%) admitting that they sold their haul to the creditor. Usually, fishers asked for panjar (early capital) from their customer merchant (Palompo'), and they agreed that the loan was paid with the sale of the haul or by the requirement that the haul must be sold to Palompo'. In this position, fishers cannot determine the price based on market value because Palompo' was superior to them in setting the price. Fishers received their share after deducing their loan. Although it was not beneficial, fishers still made a loan from Palompo' before they sailed.

Some fishers did not have such dependence with Palompo'. They freed to seek marketing alternatives. They sold the haul directly to traditional markets at Kampal Subdistrict, Parigi District. This activity was shown by 13 persons (13%). They admitted that the sale price was higher than selling on the beach or to Palompo', although they still incurred the cost to bring the haul to Parigi Central Center at Kampal Subdistrict. There were 19 persons (19%) admitting that they sold the haul on the beach because some collectors (major Palompo') were dauntless to buy at higher price than others (minor Palompo'). There were 9 respondents (9%) asserting that their haul was bought in wholesale by Palompo' on the landing spot because fishers were regular customers and still willing to offer good price. At least, such buying ensured the stability of income source among fishers.

Fishers' income can be used as the base to understand the causal factor of poverty among fishers at Bantaya Subdistrict. Lower income may subject individual or social groups to the difficulty to fulfil their minimal demand on various complex issues. The income of fishers would measure the welfare rate of fishers. It means that the greater the income of fishers, the better was their welfare rate. When their income was low, their

welfare rate declined. Low income was closely related with the poverty among traditional fisher households. Poverty means the incapacity to meet the staples such as food, cloth and shelter, and mostly, it was due to their low income.

(3) Survival mechanism among fisher households was greatly associated with their capacity to deal with hardness. During scarcity season, fishes were rare and the weather was not friendly. Great wave came, and most fisher households at Bantaya Subdistrict were helpless to wait until it subsided. Some fishers may do alternative jobs but other fishers were not capable to seek or to enter another job. Scarcity season should be annoying their household economic.

As informed by some fishers at Bantaya Subdistrict, their survival mechanism was to cope with life pressures during scarcity season. They may look for job out of fishery sector, and be stubborn enough to sail although they would risk of losing assets. Their boat may be damaged easily due to the strike of huge wave of eastern season. Their life was also on bet. Based on the survey of 100 respondents, there were 17 persons (17%) admitting that they have side jobs. When they were not sailing, livelihood was met by doing business out of fishery, such as being artisan, construction worker, rented vehicle, and managing shop/kiosk.

However, Bantaya fishers only had few side jobs out of fishery, and 83 respondents (83%) proved it. Without side jobs, they determined to sail by risking their life swallowed by gigantic wave. They knew this risk, but they did not have other choice besides sailing. They chose the more calm fishing ground, usually around Makakata Island not far from mainland. It isolated them from the effect of storm and high wave. They dived to sea base to capture ikan batu. Moreover, Bantaya fishers also relied on their saving to meeting their daily staples or made a loan to the grocery by promising that they settled the loan after they had money.

Most fishers at Bantaya Subdistrict, however, were not habitual to save their money. This reason answered why they were vulnerable to poverty. Uncertain and small income was a reason why fishers found difficulty to save their money and were easily trapped into debt. Lifestyle of fishers was lavish without orientation to the future. The saving was considered less important. They set a concept that if the money run out, they can get it from sailing. As shown by the result of survey on 100 respondents, 5 persons (5%) admitted that they saved their money, while 95 persons (93%) did not have a saving. It means that the life of Bantaya fishers was vulnerable to poverty. This vulnerability forced them to owe debt, and selling or pawning their assets to settle the default debt. This action only led them to be poorer and susceptible to the worse poverty.

The situation above was consistent to the vulnerability concept of Chambers as explained by Suyanto (2013:247). It was said that vulnerability was measured from the incapacity to save money. The saving should be useful for the poor fisher households in dealing with the emergency situations such as natural disaster, harvest failure, and epidemic.

#### D. Analysis on Factors Supporting and Constraining the Eradication of Poverty among Fisher Households at Bantaya Sub district.

This analysis examined potentials, problems, opportunities, and threats in relative with poverty eradication strategy for the poor fisher households at the coastal region of Teluk Tomini, especially in Bantaya Subdistrict, Parigi District, Parigi Moutong Regency.

##### 1. Strength

Strength must be developed to keep fisher households at the coastal area of Bantaya Subdistrict adequately capable to improve their economic. Strength was explained as following.

- (a) Natural resource may be developed for economic welfare (at marine sector). Marine natural resource at Teluk Tomini can be utilized as income source for nearby community. This natural resource was also useful for the industrial raw material for fishery processing (small, medium and large industries).
- (b) Employment should be made available. The demography of Bantaya Subdistrict involved 6,686 persons. The majority lived at the coastal area, and they depended on marine and coastal resources. In 2015, there were 1250 persons (63%) of population total who worked as fishers at Parigi District.
- (c) Most respondents of coastal area were under 64 years old, and it was productive age to work as fisher.

##### 2. Weakness

Weakness was a factor hampering economic activities of fisher community. It impeded the acceleration of poverty eradication strategy for fisher community at the coastal region of Teluk Tomini. It was described as following.

- (a) Human resource for economical development was low. Respondents had low educational background. Most of them were unschooled or graduated from Elementary School.
- (b) They hardly diversified their fishery work. Innovativeness in fisher households was low, especially when they must develop non-fishery business.
- (c) Fishing technology was simply traditional. Fishers considered it as legacy. They have low knowledge about modern fishing operation, and they were ignorance with their less maximum haul.
- (d) Their capitalization and fishing technology were limited. Most Bantaya fishers were on small and middle scale.
- (e) Access to marketing was also limited. Fish Auction Center (TPI) was lacking. This condition forced fishers to sell their haul to Palompo' (collector merchant). The accommodating capacity of fish purchase would be low, and the fish was priced by perforce to low.

##### 3. Opportunity

Opportunity may come externally but it influenced the model of the accelerated poverty eradication for fisher community at the coastal area of Teluk Tomini. The related aspects were illustrated as following:

- (a) Fishery resource was not optimally utilized. In 2014, the utilization rate of fishery resource at Parigi Moutong Regency was still low, or nearly 17.41%, or equaled to 24,004.6 tons/year.
- (b) Job opportunity in fishery work at Bantaya Subdistrict provided wide opportunity of new employment. Fishers may

work as farmer. The cultivated fishery, marine tourism, and other fishery businesses may also provide vacancies.

(c) Government must set policies in favour of fisher community. These policies can be set to accelerate economical development at coastal area. Poverty eradication programs had been designed, such as capital aid, technological support, and protection for the poor from vulnerability. Ministries and relevant agencies should assure the implementation of programs. Infrastructures can be provided at the coastal area, including roads, electric utilities, clean water networks, and telecommunication devices.

#### 4. Threat

Threat means the perception of loss due to external cause which influenced the acceleration of poverty eradication for fisher community at the coastal area of Teluk Tomini. Relevant aspects were described as following:

(a) The existing marketing system still benefited middlemen. Traditional fisher households did marketing their haul by depending on the mechanism of local market. This mechanism was not regulated and not standard. The reasonable price for fish was hardly set. Fish Auction Center was not functional and this forced fishers to sell their haul to Palompo' at low price.

(b) Unfavorable conditions of nature and climate, and the fluctuated seasons, were greatly influential to small scale fishery. Operational work of fishery in a year only covered 8 months while the remaining 4 months were idle, especially on November to February when huge wave and storm existed.

#### IV. SWOT ANALYSIS

Method of analysis was SWOT (Strengths-Weaknesses-Opportunities-Threats). It involved IFAS (Internal Strategic Factors Analysis Summary) dan EFAS (External Strategic Factors Analysis Summary).

Table 1. SWOT Matrix of Poverty Eradication Strategy for Fisher Community at Bantaya Subdistrict.

<b>Internal Factors (IFAS)</b>  <b>External Factors (EFAS)</b>	<b>Strengths</b> (1) Workers were available. (S1) (2) Productive age of coastal community. (S2) (3) Diligence or motivation of coastal community. (S3)	<b>Weakness</b> (1) Low education background. (W1) (2) Fishery technology was very simple. (W2) (3) Low capitalization. (W3) (4) Limited access to marketing. (W4) (5) Unconditioned to have saving and easily trapped into debt. (W5) (6) Limited facility that supported fishery. (W6) (7) Low income. (W7) (8) Vulnerable to poverty. (W8)
	<b>Opportunities</b> (1) Fish resources were not utilized optimally. (O1) (2) Job opportunity was widely open at fishery sector. (O2) (3) Fishery sector was supported by the policies of local government. (O3)	<b>SO Strategy:</b> Fishery work of small scale fishers must be developed (S1 to S3, O1 to O3)
<b>Threats</b> (1) The existing marketing system only benefited middle merchants. (T1) (2) Unfavorable conditions of nature and climate, and the fluctuated seasons, prevented fishers from sailing. (T2)	<b>ST Strategy:</b> Household scale fishery industry must be developed. (S3, T1, T2)	<b>WT Strategy:</b> A program to protect fisher households from being poor must be designed. (W5, W8, T1, T2)

Based on the result of SWOT Analysis shown in the table above, therefore, six priority strategies were formulated as the alternatives for poverty mitigation effort for fisher community based on their local competence. These strategies were explained as following:

- 1) The development of fishery work scale for small scale fishers;
- 2) The founding of financial agency based on local competence;
- 3) The improvement of access to the marketing of the haul;
- 4) The provisioning of structures and infrastructures that supported the management of the haul;
- 5) The design of the program that protected fisher households from being poor; and
- 6) The development of fishery industry at household scale.

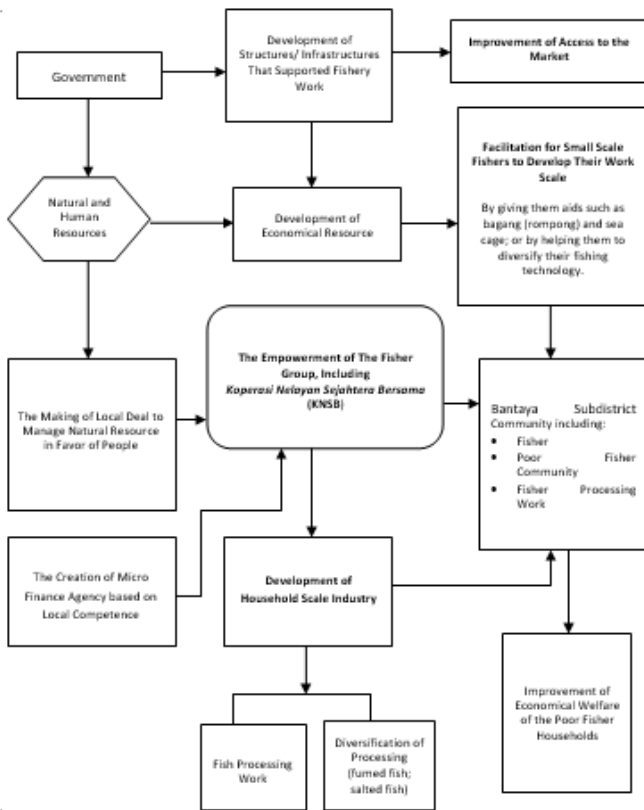


Figure 1. The Proposed Scheme of Poverty Eradication Plan for Fisher Households at Bantaya Subdistrict based on Local Competence.

### Conclusion

Research provided several conclusions.

1. Poverty map based on the socio-economical characteristics of fisher households at Bantaya Subdistrict would be the indicator of the poverty condition of fishers. Socio-economical aspects divided into social and economical matters. Social characteristics included (1) low education background, (2) traditional fishing gear or technology, (3) number of dependent persons to care; (4) bad environmental health; and (5) less diversification into non-fishery work. Economical characteristics involved: (1) limited capital; (2) entrapped into debt; (3) low income; (4) poor access to the marketing channel; (5) less bargaining power; and (6) the lacking of savings.

2. Some factors determined the poverty among fisher households. These included strengths, weakness, opportunities and threats. All of them underlined the design and the model of poverty eradication strategy for fisher community at Bantaya Subdistrict.

(1) Factor of Strengths. It was related with the natural resources available for economical development (marine sector). Human resource was also available. The coastal inhabitants were in their productive age.

(2) Factor of Weakness. The location may be less strategic because it was narrow and less attractive for investment. Natural resource was not optimally developed. Human resource was not competent for economical development. Diversification of fishery work was difficult. The access to capital and fishing technology was limited. The access to marketing channel was also limited. There were few facilities

supporting fishery work and also quite few post-harvest technologies.

(3) Factor of Opportunities. Fishery resource was greatly potential. Job opportunities at fishery sector were widely open. There was governmental support to this sector.

(4) Factor of Threats. The marketing system was benefiting middle traders. Unfavorable conditions of nature and climate, and fluctuated seasons, prevented fishers from sailing. Fishers still used disruptive fishing technology.

3. The recommended strategy was Defensive Strategy. It means that the acceleration of poverty eradication at Bantaya Subdistrict would be difficult if it only relies on previous poverty eradication strategy. Various tactical strategies must be considered. Some strategies came to be priorities, such as: (1) the development of fishery work scale that was proper for small scale fishers; (2) the founding of financial agency based on local competence; (3) the improvement of access to marketing channel; (4) the provisioning of structures and infrastructures that supported fish processing; (5) a program that was aimed to protect poor households; and (6) the development of fishery industry at household scale.

### Suggestion

1. The development of fishery work at Bantaya Subdistrict was hampered by the limited capacity of traditional fisher households to access the marketing channel for their haul. Their income was vulnerable to their low capacity to access the market. They cannot control the price of their haul, and even cannot push into the standard. Merchants had bought their haul with the lowest price. Fishers suffered the loss because fish was perishable. As a consequence, fisher community at Bantaya Subdistrict was unwilling to diversify their fishery work to non-fishery business. Therefore, Fish Auction Center (TPI) should be built immediately at Bantaya Subdistrict by the local government to increase the access to the market and to protect fisher community from the fluctuated fish price. The development of auction structures would indicate the intention of local government to facilitate other relevant activities, such as organizing business gathering, attracting investment into fishery sector, and also promoting and socializing the sector through mass media, internet, and other communication media.

2. Fisher-based Cooperative was a national program but it could be implemented at Bantaya Subdistrict. Local-based Cooperative would answer the problem of limited capitalization among traditional and modern fishers. In the future, all these initiatives would be set at the locality, and be accommodated through cooperative program. Empowerment program can be also designed to mitigate poverty among the poor fisher households, and also to empower them toward better welfare and sustainability.

3. The development of work unit by modernizing fishing gears that were previously traditional may give positive impact on the income rate of traditional fishers. However, there were still weaknesses in this initiative because it impacted negatively to the excessive exploitation of natural resources (overfishing) which produced environmental damage. Therefore, modernization program should be redesigned by giving attention to the socio-cultural characteristics of fisher community at the coastal region of Teluk Tomini. It may minimize local conflict and environmental damage.

4. Economical empowerment program for the coastal community was emphasizing on socio-economical organization, but it was the weakness. Fisher group and fisher cooperative at Bantaya Subdistrict were not seriously attended. Given lack of support, all of them were hardly to develop into the self-reliant and sustainable organizations. Therefore, capacity building program must be set for empowering the organization. People can be given trainings and educations about how to manage people-oriented organization.

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