

# The Characteristics and Poverty Level of People in Sukolilo Fisherman Village Surabaya Based on Sustainable Livelihood Approach

Ardiyanto Maksimilianus Gai, Ida Soewarni  
Urban and Regional Planning Department,

Faculty of Civil Engineering and Planning, National Institute of Technology (ITN) Malang

## Abstract

The reality of social, economic, and ecological problems in coastal area and even poverty of fishermen community have not been resolved to date. In Surabaya, one of big cities in Indonesia, these problems occur around Sukolilo Fisherman Village. Therefore, a more comprehensive approach is needed to solve this multidimensional poverty problem. In this case, sustainable livelihood is considered as an effective and relevant approach to reduce poverty since it defines and describes poverty with the perspective of poverty itself. Livelihood is said to be sustainable when it can be integrated to reduce shocks, stress, and risks, as well as maintain and develop assets owned with no risks and threats to the environment in its utilization. This research aims to comprehensively identify and assess poverty level of the people in Sukolilo Fisherman Village through sustainable livelihood approach. Descriptive statistics analysis and content analysis were employed in this research. The results show that the people in Sukolilo Fisherman Village have not been able to achieve sustainable livelihood. Most fishermen are only able to have limited access to the assets of sustainable livelihood. From the pentagon access chart, it can be seen that: (1) human asset in SLA (Sustainable Livelihood Access) level of 65%, (2) social asset is around 20%, (3) natural/environmental asset is 50%, (4) infrastructure asset is 60%, and (5) financial asset is 30%. From the analysis result of SLA, the highest asset is in human asset while social asset is the lowest. However, this condition is very alarming.

**Keywords:** poverty, sustainable, livelihood, fisherman village

## 1. INTRODUCTION

Poverty is an undesirable situation with many limitations. Poor people are known for their low education, work productivity, income, health, nutrition, and other welfare factors that show their inability in the social circle. Poverty can be caused by limitations in human resources as a result of low education level either formal or informal. Therefore, it causes low understanding of informal knowledge (Supriatna, 1997). Emil Samil (in Supriatna, 1997: 82) stated that there are five main characteristics of poor people, which are: 1) Do not have their own production factor, 2) Cannot get production asset with their own power, 3) Low education level in general, 4) Most of them do not have main facilities, and 5) Most of them are young people who do not have capable skills or education.

Furthermore, Kotze (in Hikmat, 2004: 6) confirmed that poor people have relatively capable abilities to get good sources through available options in society. Even though sometimes external support is needed, it does not necessarily mean that poor people depend their lives on that external support. This empowerment approach is considered unsuccessful because by isolating them from other society, poor people cannot live and develop properly. The isolation causes passive attitude, even makes them poorer than before.

Essentially, poverty cannot be separated from environmental management problems since poverty and environment are two crucial phenomena that have to be discussed altogether. Poverty cannot be seen from economic and social aspects only, but also from ecological and other aspects.

Sustainable livelihood is considered as an effective and relevant approach to reduce poverty since it defines and describes poverty with the perspective of poverty itself. Livelihood is said to be sustainable when it can be integrated to reduce shocks, stress, and risks, as well as maintain and develop assets owned with no risks and threats to the environment in its utilization (Nugroho, 2011).

Livelihood concept was developed in 1990 by the Department For International Development (DFID). Then, in 1999, DFID provided a concept which formulates programs to implement projects that could overcome poverty and social disabilities in developing countries (DFID, 1999). Livelihood is defined as the combination of many resources which includes assets (human capital, natural capital, social capital, financial capital, and physical capital) owned by the members of society or households, and resources accessibility in daily activities (Ellis, 2000 and Clayton et. al., 2003).

Social, economic, and ecological problems in coastal area and even poverty are happening in the fisherman community in Surabaya. The fishery profile of Surabaya (Department of Agriculture, Surabaya, 2012) illustrated that most of the fishermen lived in an alarming level of welfare. Moreover, the fishermen's problem also occurred in the human resources sector. This problem can be seen from the education level which indicates about

45% of fishermen did not get formal education or stopped going to school after graduated from elementary school (Bappeko Surabaya, 2011). According to Harlianingtyas et. al. (2013), the majority of fishermen and their wives' latest education were in the elementary school level.

Low quality of human resources in fisherman community in Surabaya causing problems in their income due to their low productivity. The fishermen's income is 29.30% below the minimum income of workers in Surabaya with monthly expenses around IDR 1,200,000. Furthermore, about 34.80% of fishermen's houses are still semi-permanent with 49% of them do not supported by common facilities due to its high-maintenance cost, such as boat and motorcycle that need fuel, television or radio that rise the electricity cost, and handphone as a communication tool that increase the expense of buying the provider's credit (Harlianingtyas, Kusri, and Susilaningrum, 2013).

The emergence of poverty are almost evenly distributed across Surabaya with most of them are spotted in the northern area. They are spotted at Ujung, Bulak Banteng, Wonokusumo, Sidotopo Wetan, Tanah Kali Kedinding, Bulak, Dupak, Bongkaran, Sukolilo, and Moro Krembangan.

Therefore, studies about comprehensive approaches on poverty case and its causative factors are needed to be done to formulate the strategy in overcoming and reducing poverty. This research aims to comprehensively identify and assess poverty level of the people in Sukolilo Fisherman Village through sustainable livelihood approach.

## 2. RESEARCH METHODOLOGY

### 2.1 Research Setting

This research was conducted in Sukolilo Fisherman Village Surabaya.



Figure 1. Sukolilo Fisherman Village, Bulak Sub-district, Surabaya

### 2.2 Analysis Method

To analyze the characteristics and poverty level based on sustainable livelihood approach in the coastal area of Surabaya, descriptive statistics method was used. Indriantoro (2009) described that descriptive statistics method works by describing or portraying collected data as it is without making general conclusion.

Then, the content analysis method was used to describe the causative factors of poverty in the research area. This method's main role is to analyze data that depends on scientific methods to be processed, for instance, objectivity attention, intersubjectivity, a priori design, reliability, validity, generalization ability, replication ability, and hypothesis testing. Furthermore, this method can be applied to variables that may be measurable, or in the context in which messages are created or given (Kaur, 2012). Content analysis method is used to analyze categories which consist of reducing data technique by coding and thematic tool (Marques, 2016). This content analysis method is conducted through these steps: 1) code determination, 2) code-based data classification, and 3) data prediction (Martadwiprati, 2013).

## 3. RESULT AND DISCUSSION

### 3.1 Sustainable Livelihood Characteristics Analysis in Sukolilo coastal area, Surabaya

Sustainable livelihood characteristics can be measured by looking at sustainability of human resources, social, natural and environmental resources, financial and infrastructure, and people's access. Therefore, structured interview about sustainable livelihood approach based on content analysis method is the most suitable instrument to be used.

#### ● Code-based Data Classification

Several new variables are found in data collection process that describe additional economic activities of the fishermen and boat types they use in their daily activities. Those variables became supporting factors in

describing the characteristics of fishermen community in sustainable livelihood in the coastal area of Surabaya. Indicator encoding in the interview transcript can be seen in the following table.

**Table 1 Indicator Encoding in the Interview Transcript**

No	Asset	Indicator	T1	T2	T3	T4	T5	Remarks
1	Human	Severe Diseases Patient Frequency	T1.1	T2.1	T3.1	T4.1	T5.1	Confirmed
		Education Level	T1.2	T2.2	T3.2	T4.2	T5.2	Confirmed
		Skill	T1.3	T2.3	T3.3	T4.3	T5.3	Confirmed
		Work Ability	T1.4	T2.4	T3.4	T4.4	T5.4	Confirmed
2	Social	Organization Participated	T1.5	T2.5	T3.5	T4.5	T5.5	Confirmed
		Level of trust among residents and organizations	T1.6	T2.6	T3.6	T4.6	T5.6	Confirmed
		Community network that can increase efficiency	T1.7	T2.7	T3.7	T4.7	T5.7	Confirmed
3	Natural/ environmental	Environmental health	T1.8	T2.8	T3.8	T4.8	T5.8	Confirmed
		Water production	T1.9	T2.9	T3.9	T4.9	T5.9	Confirmed
		Land ownership	T1.10	T2.10	T3.10	T4.10	T5.10	Confirmed
		Fishery products	T1.11	T2.11	T3.11	T4.11	T5.11	Confirmed
4	Physical	Amount and types of fishery production tools	T1.12	T2.12	T3.12	T4.12	T5.12	Confirmed
		Accessibility	T1.13	T2.13	T3.13	T4.13	T5.13	Confirmed
		House condition	T1.14	T2.14	T3.14	T4.14	T5.14	Confirmed
		Clean water availability	T1.15	T2.15	T3.15	T4.15	T5.15	Confirmed
		Vehicles owned	T1.16	T2.16	T3.16	T4.16	T5.16	Confirmed
		Sanitation condition	T1.17	T2.17	T3.17	T4.17	T5.17	Confirmed
		Drainage condition	T1.18	T2.18	T3.18	T4.18	T5.18	Confirmed
5	Financial	Daily income	T1.19	T2.19	T3.19	T4.19	T5.19	Confirmed
		Expenses	T1.20	T2.20	T3.20	T4.20	T5.20	Confirmed
		Amount and types of saving owned	T1.21	T2.21	T3.21	T4.21	T5.21	Confirmed
		Loan	T1.22	T2.22	T3.22	T4.22	T5.22	Confirmed
		Other supporting activities	T1.23	T2.23	T3.23			New

• Data Prediction

The results of identification process showed that fishermen community characteristics in sustainable livelihood in the coastal area of Sukolilo, Surabaya are:

a. Financial Asset

Among the available characteristics of economic activities, several new characteristics were found, which are:

- Fisheries products processing is a promising economic activity.
- Micro-economic activities quite support households finance.
- Its close distance to Taman Hiburan Pantai Kenjeran (Kenjeran Coastal Amusement Park) indirectly affecting economic activities.

b. Social Asset

- People who hold business in every kind of economic activities depend on each other. It is known because of economic chain link that is started from the raw fisheries products from fishermen, processed to be ready to eat or merchandise products, and at last, the products are distributed to merchants.
- Organizations in the area are poorly functioned, such as the social community of fishermen that could not optimize the economic activities. Then, the cooperative unit could not support the members.

c. Physical Asset

- In the middle of highly advanced fishery infrastructure, contrast facts were found in this area. It was found that fishermen changed their fishing gears into small-scale gears due to bad quality of fish caught by using big-scale gears.
- Considering several characteristics on accessibility to economic resource indicator, it was found that fishermen preferred to buy fuel from retailers rather than from available official stations.

d. Natural or Environmental Asset

- Prominent fishery products in the Fisherman Village are shrimp, sea cucumber, mackerel, tuna, bamboo

clam, in which each catch resulting 4 kg mackerel, 6 kg tuna, 3 kg sea cucumber, and 2 kg bamboo clam. The stipulation and marketing were done through collectors and distributed to the customers directly. Besides that, appropriate technology for fish drying, boat manuals, fumigation and burning, cultivation of milkfish and tilapia are still exist. Environmental sanitation that has been improved, drainage or river, average dependents in a family is three people, average income each time going to the sea around IDR 100,000 to 160,000. Other businesses such as selling groceries, stall, food vendors, shell craftsmen, and *ojek* (motorcycle taxi driver). Fish processing done are salting, fumigation, cracker making, and shrimp paste making. Not going to the sea for two days is usually done in Sukolilo. Fishermen community in this village is Maju Makmur where the fishermen can borrow capital. The existing social activity is pengajian (Islamic general studying in a community).

e. Physical Asset

- Until now, fishermen in Sukolilo are still using traditional fishing gears such as *waring* or black nets and wooden boats under 5 GT. The fishermen's catch in Sukolilo before the construction of a new bridge in the UPTD tourism area Taman Hiburan Pantai Kenjeran Surabaya is very abundant. The fishermen who work as tourism fishermen can also take passengers from the beach. The bridge construction in the UPTD tourism area Taman Hiburan Pantai Kenjeran Surabaya makes most of the people in Sukolilo experience profit loss since they catch less and cannot go to the beach anymore. The regulation given by the management of UPTD tourism area Taman Hiburan Pantai Kenjeran Surabaya to the surrounding community is only a selling location in the tourism area. Meanwhile, the tourism fishermen did not get any regulation. The catch of fishermen in Sukolilo was sold to the collectors since the fish market in Bulak is already closed. Considering the minimum catch and profit, assistance from the DKP including fishing gear and boat machine can help the fishermen in Sukolilo.

### 3.2 Sustainable Livelihood Level Analysis in Coastal Area of Sukolilo, Surabaya

Sustainable livelihood level analysis in coastal area of Surabaya was done descriptively by using questionnaire as research instrument. The questionnaire consists of indicators or items used to understand the description of variables measured. Descriptive statistical analysis technique resulting frequency value of each indicator (item) being questioned. The frequency values displayed covers amount and percentage. The analysis results for sustainable livelihood can be seen as follows:

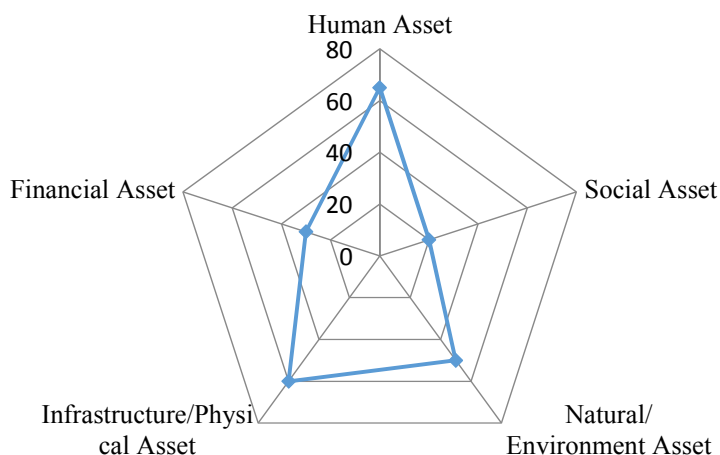
Etymologically, the meaning of 'livelihood' covers assets or capital (nature, human, financial, social, and physical), activity in which access to those assets is mediated by the institution and social relations that dictate the results obtained by both individual and family. Sustainability has many dimensions that must be attained since those dimensions have the same level of importance.

A sustainability occurs if the following conditions are met:

- being flexible in facing shocking occurrences and external pressures;
- independent, do not rely on external assistance and support (or if dependent, the aid itself should be economically and institutionally sustainable);
- maintaining long-term natural resources productivity; and
- not harming the livelihood or sacrificing the available livelihood access for others.

This sustainable livelihood level can be described by pentagon. This pentagon can be used to show the access difference of the society. The center of the pentagon, where the lines meet, shows zero access to the assets, while the outer border represents maximum access to the assets. On this basis, a different pentagon can be modified for other social groups in the society (Saragih, et al., 2007).

The research results on the fisherman households in Sukolilo show imbalance attainment of livelihood assets and fisherman households limited access to the five assets in SLA. For more details, the results of sustainable livelihood assessment in Sukolilo Fisherman Village can be seen in figure 2.



**Figure 2 Sustainable Livelihood Level in Sukolilo Fisherman Village Surabaya**

In fact, the fishermen community in Sukolilo, coastal area in Surabaya, has not been able to achieve sustainable livelihood. Most fishermen are only able to optimally access the assets of sustainable livelihood. From the pentagon access chart, it can be seen that: (1) human asset in SLA (Sustainable Livelihood Access) level of 65%, (2) social asset is around 20%, (3) natural/environmental asset is 50%, (4) infrastructure asset is 60%, and (5) financial asset is 30%. From the analysis result of SLA, it can be seen that the highest asset is in human asset and social asset is the lowest. However, this condition is very alarming. Based on the Sustainable Livelihood Level of Desa Balane, there is no equivalent level between the five assets so that the dimension of sustainability cannot be achieved.

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