

Community Characteristics Sebangau National Park Buffer Zone Based Sustainable Livelihood Approach

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Abstract Sebangau Peat Swamp Forest is one of the Nature Conservation areas (KPA) which is defined as Sebangau National Park by decree of the Minister of Forestry No. SK. 423 / Forestry/II/2004 on October 19, 2004. Determination Sebangau area as a national park is expected to save the peat ecosystem and its biodiversity and natural uniqueness (landscape) for the benefit of improving the quality of human life present generation and future, one community in the buffer zone, and is expected to provide benefits to the ecology and economy around national parks, or community buffer zones, as a buffer zone believed to reduce negative impacts and enhance positive impacts, both from the conservation area to the surrounding community and vice versa. The purpose of this research is to determine the level of community sustainable livelihood no buffer zone of the national park Sebangau. The approach used in this study is a rationalistic approach that considers something as real, if there is coherence between the scheme rational. The empirical research method in this study is the Participatory Poverty Assessment. Data was collected through in-depth interview technique on stakeholders, focus group discussions, and direct observation. Results of the study on household fishermen Sebangau National Park buffer zone, showing achievement imbalance of assets or access to household livelihood of fishermen on the five capital (assets) in the SLA is very low. Fishing communities in the buffer zone of the National Park Sebangau factually not been Able to Achieve sustainable livelihoods (sustainable livelihood). Most fishing communities are only able to access any optimal. From the picture looks achievement pentagon access to any capital is below 50% and the highest is only the financial capital and natural capital or environmental.

Keywords Peat swamp forest, Buffer zones, Sustainable livelihood

1. Introduction

One of the objectives of forestry according to Law No. 41 of 1999 is to improve the ability to develop capacities and empowerment of communities in a participatory, equitable, and environmentally friendly, so as to create the resilience of social and economic as well as resilience due to external changes (Aliyub, 1999). So even with Sebangau peat swamp forests, which is one of the forest zone that is designated as a National Park since 2004 through a decree of the Minister of Forestry No.SK. 423 / Forestry / II / 2004 on 19 October 2004. Sebangau National Park has an zone of 568 700 ha ± flanked by the presence of two rivers, the River Sebangau and Katingan River, which lies in three districts, namely Home Knives, Palangkaraya City and County Katingan (Sebangau National Park Management Plan 2007 to 2026).

Determination Sebangau zone as a national park is expected to save the peat ecosystem and its biodiversity and natural uniqueness (landscape) for the benefit of improving the quality of human life today and the generations to come, one of the communities in the buffer zone (Mahin 2011). Through determination Sebangau zone as a national park is expected to provide benefits to the ecology and economy of communities around national parks, or community buffer zones, as a buffer zone (buffer zone) believed to reduce negative impacts and enhance positive impacts, both from the conservation zone to the surrounding community as well otherwise (Wild & Mutebi, 1996).

A buffer zone itself is an zone adjacent to a conservation zone land use is limited to provide additional layer of protection for conservation zones and also benefit the surrounding communities (MacKinnon et al., 1993). The approach can be used to measure and identify the life of the community in the buffer zone of the national park Sebangau is sustainable livelihood. Sustainable Livelihood is a system which aims to establish the degree of socio-economic welfare is not only oriented to the accumulation of capital for a moment, but rather focus on meeting the needs of future

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generations so that at least they can enjoy a life of at least the same quantity and quality in the present. The model of this study refers to the approach to Farrington et al. (1999). The approach is based more on a variety of local contextual facts that are in the midst of society.

Ahmed (2009) in his research using the sustainable livelihood approach (SLA) in the development of the fisheries sector in Bangladesh showed how fishermen can achieve sustainable livelihoods through improvement access to livelihood assets. So too is Ali (2011) in his research related to the optimization of the concept of Sustainable Livelihood Approach in poverty reduction in Africa have shown that the process of social change, economic and dynamic environmental to opportunities, but are likely to pose a threat to access various livelihood assets. Optimization approach of sustainable livelihood can be used as a platform to encourage fishing communities in order to be able to build a sustainable livelihood strategies (Ali, 2011).

Basically Sustainable Livelihood Approach (SLA) is the main approach in development programs that aim to reduce poverty and vulnerability of fishing communities (Neilanddan Bene, 2004). Implementation of Sustainable Livelihood Approach (SLA) in the fisheries sector more emphasis on a wide range of strategic sectors that support the life of the fishermen, including formal and informal justice which affect the livelihood of fishermen, natural resource management, social heterogeneity and economic fishermen household, as well as various aspects important that could be considered to address the problem of poverty in fishing SLA can help households fishermen in determining what the

priorities or less are required to support them, so that the community of coastal able to manage resources effectively without damaging the preservation (Allison and Horemans, 2006). Therefore, this study is important to determine the level of community sustainable livelihood is no buffer zone of the national park Sebangau.

2. Research Method

The approach used in this study is a rationalistic approach that considers something as real, if there is coherence between the empirical to rational scheme (Muhadjir, 2000) This type of research is a combination of quantitative and qualitative descriptive. Quantitative descriptive used to provide an assessment of the qualitative data so that it is easier to interpret (Kusmayadi and Sugiarto, 2000). Collection technique used was a survey of secondary and primary form of field observations and interviews to the informant so that the data can be based on real facts.

In this study, the object to be studied is the community fishing settlement Sebangau National Park buffer zone by taking a sample of the population. Determination of the number of sample households conducted by purposive sampling method. The research method in this study is the Participatory Poverty Assessment (PPA). PPA expressed the importance of commitment to the importance of the inclusion of the perspective of the poor themselves in analyzing poverty and formulate poverty reduction strategies (Norton, et al 2001).

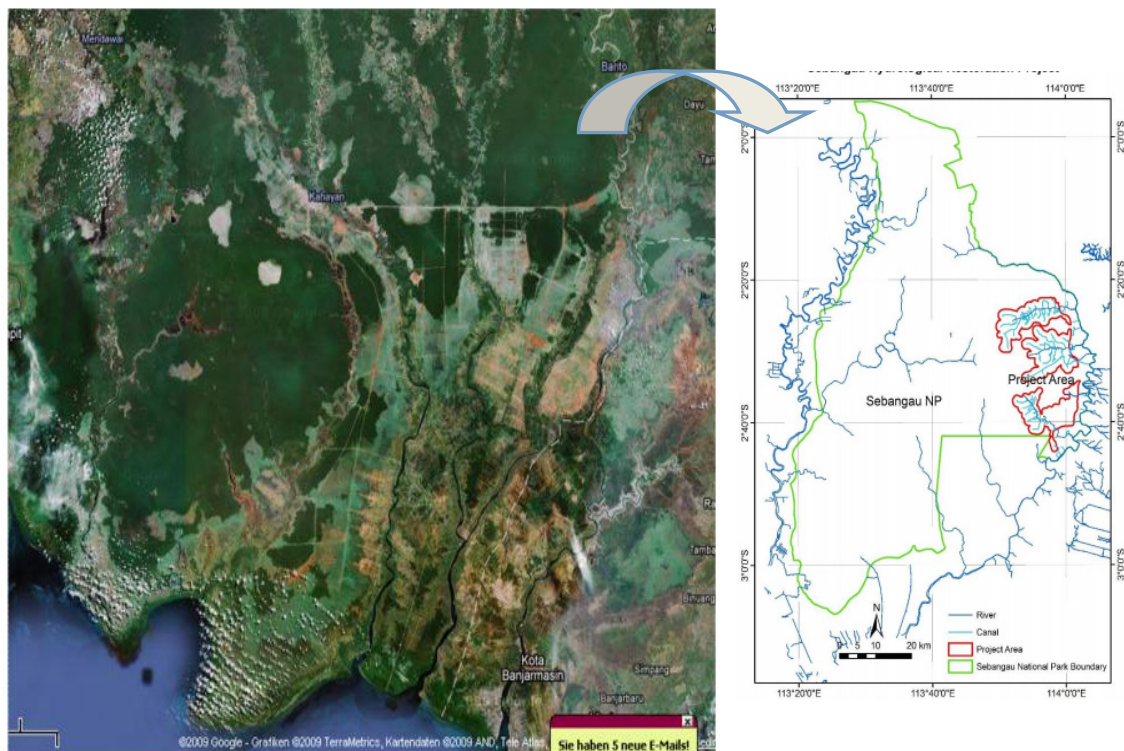


Figure 1. Research Location Map

Data collected by several techniques, among others, in-depth interviews on key informants consisting of members of the household of fishermen, community leaders and government. (Focus Group Discussion / FGD) is intended to gather information, and agreement on a common perception community level or community. In addition it also conducted observation, which aims to get the data phenomena, events or activities undertaken by poor households in the study site.

The analytical method used is descriptive analysis that puts the poor fishermen as the respondent and the main source of information. Then analyzed using descriptive statistics resulting frequency value of each indicator (item) in question. Frequency values are displayed as a percentage.

3. Results and Discussion

3.1. Indicators of Sustainable Livelihood

There are five types of capital that influence people's livelihoods, which developed into the main indicator in the approach of SLA, namely: human capital, natural capital, social capital, physical capital, and financial capital (Allison *et al.*, 2006). Here are the results of the analysis of the ability of fishing communities in the buffer zone of tropical peat forests Sebangau National Park in accessing resources / capital became the main indicators in sustainable livelihoods.

3.1.1. Human Capital

Considers that the concept of human capital is a form of human capital or capital as well as other forms of capital, such as machinery, technology, land, money, and material. Human beings as human capital is reflected in the form of knowledge, ideas, creativity, skill, and labor productivity. Unlike other forms of capital are simply treated as tools, human capital can be invested themselves through various forms of investment of human resources, including formal education, informal education, work experience, health, and nutrition and transmigration (Fattah, 2004). Human capital is now seen as a major growth engine that has a role to mobilize and boost economic growth. The importance of human capital in economic growth has prompted a number of development economists focused his studies on the role of human capital in economic growth and development. (Abbas, 2010)

Claire (2005), in his research mentioned that human capital that is able to describe the conditions of sustainable livelihood in the life of fishing communities can be viewed from the aspect of education and skills of fishermen. Furthermore, Muhammad (2012) define the indicators in the achievement of human capital in the life of a fisherman is fishing Education and Participation of family members with vocational training. Indicators of human capital is very important because it provides a variety of benefits to the lives of fishermen Sebangau National Park. Benefits of investing

their achievement of human capital or human capital is as follows:

- a. Can improve the attitudes and behavior of fishermen TN Sebangau
- b. It could broaden the TN fishermen Sebangau
- c. Adding the ability and skills possessed TN fishermen Sebangau
- d. Can choose jobs and professions more diverse
- e. Can improve the economy and the welfare of fishermen

The majority of people who responded or object of study are in the productive age, the age at which a person is considered to have to work to make money to make ends meet. The results showed that by age group, the majority of respondents, or object of study are in the productive age has ranged between 15-55 years of age. While respondents were at non-productive age with age above 55 years. Human capital indicators (human assets) are the essential elements supporting the Sustainable Livelihood in the buffer zone Sebangau National Park is the number of people of working age who have completed secondary education (junior high school and senior high school) and the fishing community's participation in training activities.

Fishing communities in the buffer zone of the National Park Sebangau most of the work as traditional fishermen, who generally have the same characteristics, namely low educated. This occurs because a job as a fisherman is a tough job, someone who is a fisherman's hard to imagine another job easier and in accordance with their capabilities. Besides work as fishermen are menial jobs that rely more on muscle and experience, therefore whatever degree of education fishing communities will not affect their proficiency in fishing (Sudarso, 2005). With income is always dependent on natural conditions, then it makes it difficult for fishing communities to change their lives for the better. The appalling conditions which lead to low capacity and skills of fishing communities so as to make them live in poverty (Winengan, 2007).

Lack of education, skills and abilities that indicates low human capital indicators of fishing communities in the buffer zone Sebangau National Park. Whereas human capital is now seen as a major growth engine that has a role to mobilize and boost economic growth. If the quality of the human capital indicator is low, it is automatically of economic growth in the region can not develop rapidly. It also occurs in Sebangau National Park fishing communities that have slow economic growth. This is due to lack of public awareness of the importance of school and business training or activity utilization of aquatic resources, or a type of training that is able to contribute to the socio-economic condition of the family.

Unknown if the people who did not finish elementary school has the highest percentage value, reaching 40%. Public junior high school graduates has a percentage of 11% and no community college graduates. This indicates that the level of public education in Sebangau National Park is still very low.

It can be seen that only 16% of fishing communities in the buffer zone Sebangau National Park are able to complete secondary education (junior high school and senior high school), while the remaining 63% have not been able to complete advanced education. The phenomenon of everyday people around Sebangau National Park, the daughter of the man or woman began since childhood has been involved in the process of fishing jobs, ranging from the preparation of parents for the sea to sell the catch. This is certainly an impact on the continuity of the education of children of fishermen (Pengemanan, 2002). In general, households in fishing communities lack careful planning for their children's education. Education for the majority of families in the community still has not become an important requirement in the family. It can be said that the enthusiasm for education in fishing communities in the buffer zone of the National Park Sebangau is still relatively low.

Furthermore, from the identification results known that none of the fishing communities that have been trained at least 1 type of training related to the business or activities of utilization of water resources or similar training are able to contribute to the socio-economic condition of the family.

The results showed only 16% of people who are able to access the human capital in good condition. It mean not less than 84% of households of fishermen are not able to access the human capital. With limited access to the community in education, job skills, and he did not have sufficient cause labor can not access decent employment opportunities.

Based on the percentage value can be concluded if human capital in Sebangau National Park is still very low. Whereas the role of human capital will affect the overall economic development of society Sebangau National Park. Some cases the success of a region because of the good human capital despite its lower SDA has occurred in several countries. According to Backer (1984) Successful development and rapid economic growth in East Asian countries are poor capital / natural resources, but rich in capital / human resources, shows that the role of human capital in the overall economic development in the countries of East Asia have a notch strategic. East Asian countries like Japan, South Korea and Taiwan, have exacting widespread investment in human capital.

Based on that you can imagine if Sebangau National Park which has abundant natural resources could be supported by a good human capital, the sustainability of Sebangau National Park as well as the community's economy will also be good.

3.1.2. Natural / Environment Asset

Important aspects that need to be observed in relation to environmental sustainability is a "Natural asset", this can be interpreted as a natural resource that flows and resource services that available (such as land, water, forests, air quality, erosion protection, biodiversity, etc.) it is useful in the inventory of existing sources of livelihood (DFID 2000). This is related to the livelihood of the poor people who are from or based on the existing natural, and also relates to base

their activities. Susceptibility that occur in nature also affect the types of livelihood there, it is closely related to natural disasters caused by natural and human factors (DFID, 2002).

Main indicators used to measure the level of sustainable livelihood-related natural asset in the buffer zone Sebangau National Park is a condition of settlement of fishing communities, the status of ownership and capacity of land, closely related to the condition of the settlement as well as the existence of forest resources is also related to the ability of people to access and maintain an environment, Limited land and land tenure which does not belong to the fishermen, making fishing communities in the buffer zone Sebangau National Park live in situations that are prone to natural disasters. Most fishermen have conditions settlements vulnerable to natural disasters.

The fishermen of the river to build settlements with groups such as the deployment of patterns Ules, Rasau, Timba, Karanen, Selowati, Mangkok, Bangah and Baluh. Almost all the settlements that were near or around the mouth of a small river, for example Bakung river, Rasau, Bangah, Partner, and Bandera. Meadow behind the settlement are low or low-lying zones that can be accessed from the river Sabangau through trenches or small rivers. While in front of the house there is a river Sabangau which is the main river. In Bangah, the settlement was built along the river estuary and overlooking the river Bangah Bangah. Because the water is inundated throughout the year, then the houses or huts built on stilts simple, between the house one with another house connected by a wooden footbridge. Settlement patterns constructed linear patterning in a row from the border river. Right and left side, and rear of the house is a place to store tools and other equipment. When catch flooded, under the house is a place to store the boat engine called Alkon. Riverside located in front of the house used as a place to put the cage-floating cages to keep and maintain fish. In front of the house there is Also a rod or a wooden raft that serves as a port moored boats motors, as well as a shower, sink and toilet (MCK). Home or cottage built there were temporary, semi-permanent, temporary permanent. Cottage even poorly constructed and emergency department, with poles and round wood flooring, as well as the walls and roof of leaves or leaf thatch roofed kajang. Even no bark Galam and wall bark. There are some cottage roof had begun to leak in the important aspect that needs to be examined in relation to the environment is a "Natural Capital", this can be interpreted as natural resources are flowing and resource services (such as land, water, forests, water quality, erosion protection, biodiversity degree and service rates are already available (such as soil, water, forests, air quality, erosion protection, biodiversity, etc.) it is useful in the inventory of existing livelihoods (DFID, 2000). This is related to the livelihood of the poor people who are from or based on the existing natural, and also relates to base their activities. Vulnerabilities that occur in nature also affect the types of livelihood there, it is closely related to the natural disasters caused by natural and human factors (DFID, 2000). The benefits of capital investments in natural asset / environment Sebangau

National Park buffer zone in the form of direct and indirect benefits are as follows,

- Value directly Sebangau National Park (TN): the abundance of forest products, foodstuffs, raw materials medicine and recreation benefits
- Value indirectly Sebangau National Park: flood control, water supply, storm protection, nutrient cycling, global life-support in the form of carbon sequestration / pollutants and climate change control, protecting human health and others.

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- a. Poorly constructed temporary huts and emergency department, with poles and round wood flooring, as well as the walls and roof of leaves or leaf thatch awning. There is even a roof and walls Galam bark bark. There are some cottage roof had begun to leak here and there. If it rains, the water will go into the house. Therefore, it is coated with a tarp.
- b. Semi-permanent cottage built with the aim that can be used longer. Therefore to lodge pole used wood strong

long-lasting and not just logs. To get the wood so, people are looking for logs Blangiran fallen due to fire and has long been buried in the ground. Blangiran logs that they dig, taken part terrace or trunk core, cut and made pillars cottage. But there are also fishermen who cut timber blangiran young to pole blangiran they call logs. The floors and walls of the cottage can be made of thin boards that they bought from the village of Kereng Bangkirai. While the roof can leaf thatch.

- c. Permanent cottage huts of the fishermen are settled. Because inhabited every day, then building their huts more robust and better. With a wooden pole Blangiran or Ulin, floors and walls are made of thick boards, as well as wearing a tin roof.

For the fishermen of the river, the lodges are built not just a place to stay merely. That cottage was built to demonstrate the accessibility and control of their holdings at the same time to all the resources contained in the estuary and upstream of the small river that was near and around their settlements (fish, timber, Gemor, pantung, hangkang, nyatu, katiau). That cottage was once a "marker" that swamp lowland flooding or located around the lodge, it has no owner or managers. It was further strengthened with the spread tool catches which are owned by occupants of the cottage.

Search results history, shows that the settlement named after the nearby river, except settlement Selowati. In the beginning, the settlement was named Tangkaran Janggut. Is so named because it is a place of rest (captive) people who commute, coincidence dwells settled in this zone bearded man (beard) so-called Tangkaran Janggut. In days of wood, a timber company named Selowati entered into this settlement, since the name was changed to Selowati.

Degradation of peatland ecosystems in and around the national park due to the construction of canals and clearing will cause the ecosystem is sensitive to fire. This condition has been demonstrated in 1997 when the El Nino drought disaster occurs, which in that year there has been a disastrous fire which was superb with the burnt zone is relatively very large. Based on the results of monitoring of satellite data before and after the fire in 1997 in the study zone of 2.5 million hectares in Central Kalimantan is known that 32% (790,000 ha) of the zone burned, and 91.5% (730,000 ha) is peatland. From the results of field measurements (ground measurement) in the peat fire, believed to have been released carbon into the atmosphere as much as 0.19 to 0.23 gigatonnes (Gt) as a result of peat fires in the carbon released and propagated well by 0.05 Gt as a result of fire crown (overlying vegetation). Extrapolating results indicate that as a result of peat and vegetation fires in Indonesia in 1997 has been released carbon dioxide (CO₂) into the atmosphere by 0.81 to 2.57 Gt, where it is equivalent to 13-40% of the average global annual carbon emissions generated from fossil fuels, and the effect of these fires resulted in atmospheric CO₂ concentration the most since the beginning of the measurement of the concentration of carbon in the

atmosphere in 1957. The effects of these fires contribute significantly to smog that covered much of Southeast Asia and also causes a decrease in air quality and an increase in issues related to human health (Susan E. Page et al, 2010)

Peat forests in Sebangau National Park is one type of ecosystem that plays a very important role in regulating the water cycle so that droughts and floods can be prevented. However, the high destruction of peat forests in the surrounding zone, especially peat forests in the project zone of one million hectares of peat land and the ongoing illegal logging activities in the park causes frequent floods.

Related capital nature / environment in the buffer zones Sebangau National Park site conditions indicate rampant illegal logging and forest fires caused forest conditions in Sebangau quite alarming, such as the loss of a number of plant species, threatened peatland, to threaten the existence of orangutans and other animals.

Destruction of peat swamp forests, he said, began in 2001 at which time it was a lot made trench towards the hinterland. Ditch made for access into the interior of the vessel as well as to transport the harvested timber wildlly. At least 150 companies processing timber felling timber without permission so 66 thousand hectares of timber lost. To restore degraded land for it, he said, the WWF until the moment at least has planted trees of various kinds of 1,000 hectares by involving the community in the buffer zone. Almost communities are actively involved in monitoring activities and safeguards the existence of TN Sebangau. Based on these descriptions can be concluded that the nature of capital investment in Sebangau National Park has decreased., Including : (a). The decline in the quality of peat swamp forest, (b). The loss of some plant species, (c). Under Threat existence of the orangutan in TN Sebangau, (d). There is commercial exploitation of the wood utilization, (e). The proliferation of Illegal Logging and (f). The occurrence of forest fires committed by irresponsible people.

Analysis shows the majority of 90% of the people live in poor environmental conditions, associated with vulnerability to natural disasters and the capacity of residential land. It is encountered is 90% of the people contribute positively to supervision and the protection of nature around Sebangau National Park, although there parties- party damage. Based on the Law of the Republic of Indonesia Number 5 of 1990 About the Conservation of Natural Resources and Ecosystem, natural capital in the form of abundant natural resources, both on land, in water and in the air which is the basis of national development in all fields. Therefore, the authorized capital of natural resources should be protected, maintained, preserved, and used optimally for the welfare of society.

Because of its extensive and concerns the interests of society as a whole, then the conservation of natural resources and its ecosystem is the responsibility and obligation of the Government and the community. The participation of the people to be directed and driven by the Government through the efficient and effective. To that end, the Government is obliged to improve education and outreach for the

community in order to be aware of conservation.

Achievement of the benefits of natural capital is marked by the achievement of three goals of conservation that can be done through the conservation of natural resources and ecosystems, namely:

1. Ensure the maintenance of ecological processes that support life support systems for sustainable development and human well-being (protection of life support systems);
2. Ensure the preservation of the diversity of genetic resources and the types of ecosystems that can support development, science, and technology to enable the fulfillment of human use of natural resources for the well-being (the preservation of germplasm resources);
3. Controlling ways of exploiting natural resources to guarantee its sustainability. Side effect of the application of science and technology that are less discreet, yet harmonious use and allocation of land and has not been successful conservation goals optimally, both on land and in water can lead to the onset of symptoms genetic erosion, pollution, and depletion of natural resources (utilization sustainable)

3.1.3. Social Asset

Putnam (2000) states that social capital refers to the essence of social organization, such as trust, norms and social networks that enable the implementation of a more coordinated, and community members can participate and work together effectively and efficiently to achieve common goals, and affect the productivity of individual or in groups.

Social capital can be summarized as networking and social values that can facilitate individuals and communities to achieve common goals in an effective and efficient. As a term, some experts rather reluctant to use the term "capital" in the concept of "social capital". The reason is, because the term "capital" is more widely used for economical sense, which marks the social transaksional. Pencapaian exchange for social capital provide a variety of benefits to the fishermen Sebangau National Park buffer zone include:

- a. Preserving traditions and local knowledge that is in the buffer zone Sebangau National Park
- b. Increase the value of togetherness among the fishermen despite coming from different regions
- c. Minimize the possibility of conflict between fishermen

By Putnam (1993), social capital is measured on the basis of (1) generalized trust, (2) norms, (3) reciprocity, and (4) networks. Generalized trust is the core of social capital. Generalized trust is an indication of the potential of community readiness to cooperate with each other. This collaboration goes beyond the limits of kinship and friendship and equation (Rothstein and Stolle, 2002). In the social arena, generalized trust simplify life in a diverse society, encourage tolerance behavior, and accept differences. So that life becomes easier, happier, and more comfortable with the presence of generalized trust in a heterogeneous society (Uslaner, 2002).

By Muhammad (2012), social capital can be measured in the lives of fishermen in terms of culture / traditions / customs are maintained, preserved in the lives of fishermen. Next is the institutional aspect that is related to participation, contributing organization or organization (institutional) formal and non-formal in the lives of fishing communities, and kinship. Indicators of social capital (social assets) are the essential elements supporting the Sustainable Livelihood in support of people's lives in the buffer zone Sebangau National Park is an aspect of cultural, institutional, and community participation in the organization of fishermen.

From the results of the identification has been almost no cultural event that becomes a habit hereditary long ago by the ancestors of the fishermen. Only about 5% of fishing communities that still carry out cultural activities but not optimal, just as a formality culture and modern elements collaborated with the development.

Of all respondents, 90% felt that aspects of the institution / organization both formal and non-formal is not optimal to contribute to fishermen society. Result of the research shows people's access to the institutional sector is still below 10%. Low community participation in activities or social activities is due by the lack of a functioning institutional aspects in promoting and fostering a sense of brotherhood and mutual cooperation through social activities, and other activities that can contribute to society through cooperatives and farmer groups of fishermen. From the research results fishermen household access to social capital that supports various livelihood activities is only about 5%, and 95% showed how social capital is not optimal role for the socio-economic life of fishing households.

3.1.4. Physical Asset / Infrastructure

Physical asset relating to public access to facilities and infrastructure supporting the fishing community life, among others: the availability of residential infrastructure services that include the availability of utility services, namely the availability of electricity, garbage, sanitation and clean water as well as the communication network. Achievement of physical capital / infrastructure it gave the benefit to the fishermen, including

- The need for underserved communities, both the need for health education and other means,
- Facilitate the communities of fishermen in the marketing and development of fishermen because the results of adequate infrastructure.

Basically the entire region into an area of research has been met well with pretty good shape just still need improvement and enhancement, 85% of all people are not able to reach access to infrastructure or the infrastructure of the city. Furthermore, the settlement of the existing availability of services means each region showed that the regions fishing settlement has not been served well by means of settlement (75%), as a means of education, health facilities, and places of worship.

3.1.5. Financial Assets

Financial assets are the sources from which funding is obtained. Financial asset refers to funds provided by lenders (and investor) or the funds paid by the owners of real capital to purchase equipment to produce the goods / services. Financial asset = liabilities + equity. Indicators of financial capital which is used as a measure of sustainable livelihoods in the buffer zone of the National Park Sebangau is household income, comparison of income and expenditure, savings and fishing opportunities to obtain additional working capital in the form of soft loans. Achievement of this financial capital can provide benefits to fishing communities Sebangau National Park buffer zone, including

- a. Revenues high society can improve the lives of fishermen Sebangau National Park buffer zone
- b. The loan fund or investors could develop the business of the fishermen.

Can be seen if the income of the people in Sebangau National Park is still below the minimum wage. Most fishermen household consumption expenditure per month from Rp 750,000 to Rp 1,500,000 with a percentage of 59% of the overall sample and the rest on top of that. This is because the expenditure is also influenced by the number of family members, a growing number of family members, the greater the consumption expenditure. No household fishermen who have deposits in the bank and never obtain capital relief either loans or grants.

The unmet basic needs is dependent on the level of income. Low levels of the income of fishermen affected by various factors such as skills and technologies, low quality of human resources, lack of assistance to fishermen, lack of access to capital, access to information, lack of government support and donations correlated to economic conditions (financial) community.

3.2. Level Sustainable Coastal Livelihood

Etymologically, the meaning of the word 'livelihood' include assets or capital (natural, human, financial, social and physical), activities in which access to assets is mediated by institutional and social relations) which together dictate the results obtained by individuals and families. Sustainability has many dimensions that must be achieved everything because it has the same importance.

A sustainability happen if it meets the following requirements:

- a. Elastic in the face of shocking events and the pressure of external pressure;
- b. Does not depend on aid and external support (or if dependent, help itself economically and institutionally to be sustainable);
- c. Maintain long-term productivity of natural resources; and
- d. Does not harm the livelihoods of, or sacrificing livelihood options open to, others

This level of sustainable livelihood can be described by a pentagon (pentagon). The Pentagon can be used to indicate differences in access to society. The center point pentagon, where the lines meet, demonstrate zero access to assets, while the outer limits indicate the maximum access to assets. On this basis, pentagon with different shapes can be made for other communities or other social groups in society. (Saragih et al 2007).

Results of the study on household fishermen Sebangau National Park buffer zone, showing achievement imbalance of assets or access to household livelihood of fishermen on the five capital (assets) in the SLA is very low. For more details on the results of the assessment of sustainable livelihood Sebangau National Park buffer zone can be seen in Figure 2.

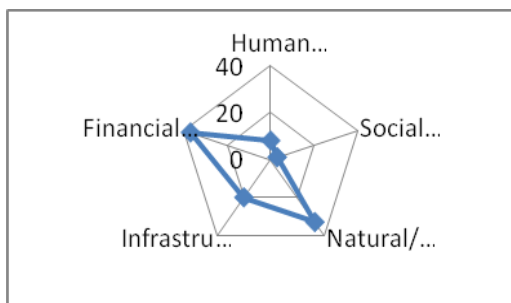


Figure 2. Level of Sustainable Livelihood in the Buffer zone of Tropical Peat Swamp Forest National Park Sebangau

Fishing communities in the buffer zone of the National Park Sebangau factually not been able to achieve sustainable livelihoods (sustainable livelihood). Most fishing communities are only able to access any sustainable livelihoods capital optimally. From the picture looks achievement pentagon access to any capital is below 50% and the highest is only the financial capital and natural capital or environmental. Yet this condition is very alarming. Fishing communities in Sebangau National Park buffer zone can be said to have a sustainable livelihood if it reaches dimensions of sustainability, including

- Sustainability and ecological environment is achieved when the productivity of natural resources and which sustains life preserved or enhanced for use by future generations.
- Economic sustainability is achieved when a certain level of economic units (households) maintain a certain level of expenditure is stable (expenditure often a proxy indicator in assessing the welfare of households, rather than revenue because more easily measured). Poor economic sustainability is achieved if the basic level of economic prosperity can be achieved and sustained (economic basic pattern seems to depend on the specific situation, although it can be understood narrowly alias 'reductionist' with 'dollar a day' of the Millennium Development Goals (MDGs).
- Social sustainability is achieved when social exclusion is minimized and social equity maximized. In other terms, meaningful social sustainability gap is

suppressed and increased social capital.

- Sustainability is achieved when the institutional structures and processes that take place able to continue to function and contribute positively to the livelihoods of communities in the long term.

Based on the results of the Sustainable Livelihood The level of Buffer zone in Tropical Peat Swamp Forest National Park Sebangau still no equal level between the five assets so that the dimensions of sustainability can not be achieved. The high value asset assets financial and natural asset showed a tendency that the relationship between financial asset and natural asset. Financial asset has a high value because people Sebangau National exploit the abundant natural capital in Sebangau National Park as a source of economic. These conditions provide certain advantages,

- The higher the natural capital, the financial capital (income) is also higher because natural capital is a source of economy of fishing communities.
- Low human capital (education and skill level) does not affect the financial capital decrease fishermen because of its human capital of fishing communities is a skill passed down without the need for higher education and new skills.

But the high financial capital and natural capital without being followed by the achievement of other capital provide weaknesses in the achievement of sustainable livelihoods of fishermen Sebangau National Park. The weaknesses including the following

- Low attainment of social capital raises vulnerability to conflict settlement between fishermen from various tribal zones.
- Low capital infrastructure / physical assets will result in low human capital, because the infrastructure is not yet available. Example: the unavailability of education and health facilities to make the low level of public education and a high level of susceptibility to disease.
- Low human capital will make the fishermen are not elastic in the face of shocking events and the pressure of external pressure. For example in case of natural disasters so the fishermen can not seek other employment because of the low human education and have no other skills.
- No implementation of the achievement of the five assets makes financial capital will not grow and only have value as today's financial capital. This is because the fishermen no willingness to develop a natural capital to support human capital, and social infrastructure.

4. Conclusions

Results of the analysis of characteristics of the buffer zone shows almost every assets in sustainable livelihood in the buffer zone Sebangau National Park is under 50% achievement. These appalling conditions showed that how

the lack of the ability to access the resource livelihoods and low utilization of the existing resources around the National Park that should be utilized optimally and responsibly.

5. Recommendations

After knowing the condition of poverty is reflected in the percentage of the ability to access assets that is owned by the sustainable livelihood of fishing communities in the buffer zone of the park's Sebangau. To reduce negative impacts and strengthen the positive development, the author has compiled general recommendations and suggestions oriented measures to increase capacity society and governance Sebangau National Park and the buffer zone.

Opportunities to reduce poverty and improve the well-being depend on the natural resources around Sebangau National Park that can be used, the environmental conditions surrounding and community social conditions. Government support and the Sebangau National Park became one of the important aspects that can support improved quality of life of fishermen and their families. To improve welfare, especially poor people's ability to be utilized and strengthened. The next, local governments must learn strategies for existing local livelihood, and ensure the alternative strategy not losing. Local government creating institution to support strategies for improving the well-being and sustainable self-help,

1. Optimization of the opening of public access in the education sector, through scholarships or aid learning for children fishing in the buffer zone Sebangau National Park.
2. Procurement training to increase skills both with regard to the management of the fisheries sector and other sectors as alternative jobs become another source of income to meet the needs of society.
3. The need for cooperation of Sebangau National Park management authority, local governments, and communities in the buffer zone in the management of natural resources and the environment.
4. Increased community participation in social activities, to foster a sense of brotherhood and mutual cooperation. Increasing values ancestral cultures in environmental management, and other cultural events as social asset that is capable of contributing to the increased participation and cooperation in the community.
5. Providing capital assistance landing or soft loans, and assistance in improving the economic capacity of households of fishermen. Socialization of the importance of saving or investing for the future of the family.

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