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THE SUSTAINABILITY OF LIVELIHOODS OF VILLAGES AROUND THE TIN MINE IN BANGKA ISLANDS

Sulista*
Regional Development Planning and Research Advancement Agency of Bangka Belitung Islands Province
(BAPPEDA Provinsi Kepulauan Bangka Belitung)
Kompleks Pusat Perkantoran dan Perumahan Pemprov. Kep. Bangka Belitung
Jl. Pulau Belitung No. 2 Kel. Airitam Pangkalpinang 33149

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Abstract

Massive tin mining activities in Bangka Belitung Islands Province have caused a detrimental effect that reduces the livelihoods of the people living around the mining area. On the other hand, there has been a shift in livelihoods from agrarian communities to mining communities that increase anxieties on the livelihoods in the future. The purpose of this study is to obtain information about the sustainability of the switched people livelihoods which concentrated in villages around the tin mining area. The study utilized qualitative methods, collected data through interviews and focus group discussions on community leaders, village government officials, and mining actors to analyze aspects of vulnerability and household livelihood strategies based on a sustainable livelihood framework. The results of the study reveal that miner groups that work with mining owners and tin artisanal miners have the most vulnerable livelihood resources because their main source of income from tin mining activities is only able to meet their daily needs. Furthermore, the group has very limited land and social relationships that rely solely on elements of kinship and moneylender services when faced with financial difficulties. However, most of these households began to respond to the end of the post-tin economy in the pepper plantation and trade sub-sector. In addition, business opportunities in the sub-sector of livestock, horticulture, and capture fisheries for coastal villages have been utilized by mining owners as the alternative livelihoods.

Keywords: Vulnerability, Livelihood Strategy, Community Livelihoods.

I. INTRODUCTION

Tin has been mined for more than 300 years, in Bangka Island since 1711 and in Belitung Island since 1852 (Sujitno, 1996). Mining activities occur in the land (49.40 percent) and in the oceans (50.60 percent), with a total area of 997,761.80 Ha (Dinas Energi dan Sumber Daya Mineral, 2016). Community mining activities penetrate production forest areas, conservation forests, protected forests, in watersheds or those who dig the tin sand in pepper gardens and home yards without the obligation to reclaim (Sidabukke, 2011; Zulkarnain, 2005).

As a consequence, this activity caused damage to an area of 125,875 ha (Sukarman & Gani, 2017), reduced the quality of soil fertility (Asmarhansyah, B Badayos, B Sanchez, C Sta Cruz, & M Florece, 2017), reduced seawater quality (Bidayani, 2009), and contributed to the spreading of heavy metals from the ground released into the waters (Wahyuni, Sasongko, & Sasongko, 2013). In addition, the river where mining activities take place has a smaller diversity of fish compared to natural rivers (Zulfikri, Umroh, & Utami, 2016).

The impact of widespread damage does not reduce the number of mining activities. BPS (2016, p. 35) recorded a total of 73,939 mining and quarrying workers dominated by the tin mining sector. Mining is a form of adaptation of the Bangka Belitung community, not only for farmers in facing the decline in pepper prices on the international market and supported by policies after regional autonomy in 2001. For some fishermen, tin mining is an option to increase income (Adiatma, Bambang, & Purnaweni, 2013; Azis, Napitupulu, Patunru, &

* Corresponding Author
Phone : +62 821 5519 5591
Email : sulista.25051986@gmail.com

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Resosudarmo, 2010; Marfirani & Adiatma, 2012). Even so, not all people of Bangka Belitung depend on the tin, there are those who continue to work as fishermen and farmers even though some others continue to mine (Ibrahim, 2016).

The area, where the company is located, is the first party to feel the direct impact after the tin mining ends. The end of the contract of work of the tin mining company PT. Kobatin, whose majority of its operating area is located in Bangka Tengah Regency on March 31, 2013, caused the local government revenues from royalties and land rents to decrease by 35.24 percent received between 2012 and 2013 (Bakuda, Bangka Belitung Islands Province, 2018). The further impact is a decrease in people's purchasing power observed from the per capita expenditure value. In 2010 until 2013, the average growth rate of expenditure per capita was 3.59 percent while from 2013 to 2016, the growth rate stagnated at 0.31 percent (BPS, 2017). In addition, field tracking shows certain individuals claiming the ownership of the former tin mine PT. Kobatin. Lampur Village, Central Bangka Regency, became a half-dead village after PT. Timah Tbk, which has been operating since the 1970s, no longer conducts mining activities in the village (Indra, 2013). The economy of the citizens becomes sluggish, even while operating, the company does not provide social, economic and environmental changes in a positive direction for the village. The agricultural sector is the main occupation of the population with a proportion of more than 32.18 percent (BPS Provinsi Kepulauan Bangka Belitung, 2018) while the mining and quarrying sector is the largest non-agricultural employment capable of absorbing labor at 21.80 percent (BPS, 2016). However, mining activities are a non-renewable sector. On the other hand, the agricultural sector is the most affected sector due to mining activities. For farmers, land and natural resources are the most important capital, loss of land causes the loss of sustainable livelihoods. The unilateral claim of ownership of ex-mining land by certain elements has led to the increasingly limited public access to land. Therefore, analyzing assets is important to do in the midst of shifting patterns of behavior from farmers to miners.

Ahmed, Siwar, & Idris (2011, p. 810) state that a sustainable livelihood framework can be used to analyze the level of socio-economic welfare of poor and vulnerable households by considering livelihood assets that are owned, controlled, claimed, and accessible by every household. Livelihoods consist of three things, namely the ability, assets, and activities needed to survive, while the meaning of sustainable is to be able to overcome and recover from stresses and shocks, able to maintain and improve capabilities and assets, provide opportunities for sustainable livelihoods in future generations, and contribute benefits on other livelihoods at the local and global level in the short and long term (Chambers & Conway, 1992).

Scoones (1998, p. 7) divides livelihood assets into four capital namely natural capital, economic/ financial capital, human capital, and social capital. While the Department for International Development (DFID) (1999, p. 17) divides it into five capitals known as the Pentagon assets consisting of human capital, social capital, natural capital, physical capital, and financial capital. Human capital consists of skills, knowledge, ability to work, and health. Social capital consists of networks and connections, membership in groups, associations, and trust relationships. Natural capital consists of land, water, air, other genetic resources, and environmental services. Physical capital consists of basic infrastructure, technology and production equipment, water supply, adequate sanitation, clean energy, and access to information. Financial capital consists of cash that can be sourced from savings and pension funds, as well as credit/ loans (Department for International Development (DFID), 1999; Scoones, 1998).

Meanwhile, livelihood activities needed to ensure sustainability consist of strategies based on intensification or extension of agriculture, livelihood diversification, and migration (Scoones, 1998). In addition, according to Saragih, Lassa, & Ramli (2007, p. 5), the livelihood strategies consist of natural resource (SDA) and non-natural resource (non-SDA) based activities. Natural resource activities consist of agriculture, cash crops, livestock, non-farm natural resources, collection of forest products. While non-natural resources activities consist of trade, services, manufacturing, remittances, transfers that can increase income, stabilize income, reduced risk, and maintain ecological sustainability.

Within the framework of sustainable livelihoods, Helmi & Satria (2012, p. 68) analyzed the strategies of fishermen households in Pulau Panjang Village, South Kalimantan in dealing with ecological vulnerabilities through diversifying income sources and fishing gear, changing catchment areas, and utilizing family relations. Aldrich & Meyer (2015, p. 10) highlighted the important role of social capital and networks at a communal level in survival and disaster recovery through strengthening social infrastructure. Azzahra & Dharmawan (2015) analyzed farmer household livelihood systems in Sukabakti Village, Bekasi Regency. Meanwhile,

paddy farmer households in Indramayu Peninsula have strong social capital combined with various agricultural strategies, migration, and non-agricultural diversification to deal with droughts and flood events (Abdurrahim, Dharmawan, Sunito, & Sudiana, 2014).

In the aforementioned studies, they concentrated on various capital of agricultural activities that did not change in the face of various crises, in contrast to the conditions of the people of Bangka Belitung who had experienced a shift in behavior from farmers to miners. The sustainability of small and artisanal mining activity is threatened by a lack of skill development programs and the creation of opportunities to build a human resource base of these communities (Baah-Ennumh, Forson, & Mmbali, 2017).

In addition, there are not enough references on how the sustainability of miner's households in Bangka Belitung is. Therefore, this study focuses on the vulnerability aspects of tin mining activities that affect mining household income, analysis of natural capital, financial capital, social capital, human capital, and physical capital owned by mining households, and livelihood strategies undertaken by these households when facing vulnerabilities by taking into account the characteristics of the village under study.

II. METHOD

The method used is descriptive qualitative. The researcher intends to explore the lives of miners without controlling and manipulating research variables that systematically describe the facts, objects, or subjects under study as they really are (Sudaryono, 2017). Respondents were selected purposively in accordance with the objectives of the livelihood framework, namely (1) mapping the assets of community livelihoods that are directly affected if the mining is no longer reliable, the respondent consists of tin lobby workers, tin artisanal miners, unconventional mine worker, mine owners , and robin worker (Sulista, 2019), (2) knowing the livelihood strategies of the community in facing various crisis conditions in mining activities, the respondents are people who had worked in the mining sector then shifted to non-mining consisting of farmers and ranchers, (3) analyzed local capacity and policies with respondents community and village apparatus who understand how mining influences the character of the local community (Bumdes Chairperson of Penyak Village, Chairman of Bumdes Desa Cit, Secretary of Penyak Village, Head of Cit Village, Head of Lampur Village, Chairman of BPD Penyak Village, Chairman of BPD Desa Cit, Chairman of BPD Desa Lampur, Neighborhood Head of Penyak Village, Head of Hamlet of Lampur Village Complex, Head of Sungai Pasir Village, Lampur Village, and Hamlet Head of Cit Village).

The technique of the collection of respondents is through snowball, begins with in-depth interviews with groups or one relevant respondent and asks the relevant person to appoint other prospective respondents who have the same specifications. In the process, interviews are recorded using a tape recorder.

Data consists of primary data and secondary data. Primary data is obtained through interviews and focus group discussions, while secondary data is in the form of sustainable livelihood literature, literature review of research reports on livelihood strategies, mining data from the Department of Energy and Mineral Resources of the Bangka Belitung Islands Province, and Central Statistics Agency data on the main employment of Bangka Belitung residents and Welfare Indicators of the Bangka Belitung Islands Province.

The location of the study was conducted in Penyak and Lampur Villages in Central Bangka Regency and Cit Village in Bangka Regency. The research location was chosen with consideration, namely (1) Penyak Village is in the IUP area of PT. Koba Tin whose contract ended in 2013, (2) Lampur Village is in the IUP area of PT. Timah Tbk, which is still active but there are no more mining activities managed by PT. Timah Tbk, (3) Desa Cit is in the IUP area of PT. Timah Tbk and is still active, under the supervision of PT. Timah Tbk, (4) Residents in the three villages are actively involved in large-scale community mining activities, and (5) land in all three villages is also controlled by private oil palm companies. The time of research is conducted in mid-2016 until mid-2017.

The data processing is through four stages. The first stage is compiling the transcription results of the interview consisting of questions according to interview guidelines and respondent's answers. Second, coding is compiling the aspects, variables, and indicators of each aspect to be analyzed, namely vulnerability, assets (natural capital, financial capital, social capital, human capital, and physical capital) and village capacity. Third, the extraction stage is to sort data and information related to research variables and indicators in transcription documents. Fourth, grouping interview results based on extraction results to see and validate the tendency of data obtained. Subsequent analysis was carried out exploratively to interpret the categorized data to answer the research objectives.

III. Results and Discussion

A. The Vulnerability of Villages Around the Mine

Cit Village and Lampur Village are old mining villages, characterized by housing for PT. Timah Tbk employees and the acculturation of cultures from various tribes and religions. There are Malay, Bugis, Batak, and Javanese tribes, and descendants of China who live side by side without interfering with each other.

Typologically, the three research villages are agricultural villages that rely on agriculture with a percentage of 30-35 percent, the tin mining sector with a proportion of between 20-30 percent, the rest is the trade sector, civil servants, services and private employees, and others. Vulnerability is a characteristic of a person or group and the situation at hand that affects their ability to anticipate, pay for various basic needs, overcome economic and restrain the effects of natural events (Wisner, Blaikie, Cannon, & Davis, 2003).

People are vulnerable when they have limited ability to overcome unpredictable crises and shocks such as floods, droughts, diseases, environmental degradation and deteriorating trade conditions (TzPPA, 2003). Buxton (2013, p. 6) states that small-scale and artisanal mining activities are sources of livelihood that expose the perpetrators to vulnerability. Unstable mineral prices affect the ability of households, cash causes women and children to be very vulnerable where men limit or hold money for household needs, and are vulnerable to exploitation in trafficking, criminal activity, and increasing health risks. Soelistijo (2011, p. 14) suggests that unlicensed mining activities function as a high-risk economic safety valve when formal work is very difficult to obtain.

Tin mining revenues contribute significantly to the total family income per month, for example in Lubuk Kelik at 93.4 percent, Silip Village at 95.1 percent, and Desa Bencah at 89.1 percent, while pepper and rubber only contribute to under 3 percent (Nurtjahya, Agustina, & Putri, 2008; Nurtjahya, Franklin, Umroh, & Agustina, 2017). But according to Harliyana (2008, p. 3), welfare improvement does occur in mine owners but is not comparable with economic risk and work safety.

The context of the vulnerability of tin mining activities can be observed in Table 1.

In Penyak Village, around 80 percent of the people started mining activities since 2011. At that time, miners who worked for mine owners earned 8 million - 12 million rupiahs/month. In 2013, the group earned an income of 4 to 6 million rupiahs/ month. In 2015 - 2016, the income of mining workers declined to 1.5 million - 3 million rupiahs/ month. In 2017, the income of miners is under 2 million rupiahs/month. In Lampur and Cit Villages, mining activities have been going on since the 1990s where communities mined on PT. Timah Tbk used simple equipment.

Table 1.
Economic and Social Vulnerability of Tin Mining Households

No	Aspects	Vulnerability Remarks
1	Economy/Financial	• Price fluctuation and cash obtained influence household economy • The constant decrease of income for tin mining activities from 2011 to 2017, with an average decrease of 40-50 percent annually
2	Social	• The behavior of mining households is consumptive, prioritize secondary and tertiary needs rather than investing • Mine owners have high hopes for abundant tin products, so they are willing to sell land to support mining capital • The attitude of mining actors is very individual even though they work in groups so that the working relationship that exists is solely on the basis of employment

Source: Primary Data (2016 and 2017)

People's mining activities began to bloom since the 2000s, the majority of the community carried out mining activities. Uncertainty in income has been felt since 2008. Mine owners are faced with the difficulty of getting the location of tin reserves and price instability. Mine owners claim that the results obtained are not able to cover the number of operational costs so that they lose money. Mining activities were rampant again in 2011, triggered by rising world tin prices. The income of the mine owner is tens of millions per week and the workers got a nominal of more than 3 million per week. However, since 2014, the uncertainty of world tin prices and the depletion of tin obtained had caused a decline in income. The income of mine owners was only able to cover operational and daily needs, while mining workers had an average income of 70 to 80 thousand rupiahs per day.

In 2011, when income was high, mining households bought various types of electronic equipment, built and renovated homes, and bought two-wheeled and four-wheeled vehicles even with a credit system. Some were willing to sell their agricultural land as capital to open new mining units in the hope that they will get multiple profits.

However, far from expectations, these households actually lost land assets in the midst of erratic income. Based on the results of interviews, mine owners who have benefited multiple times have valid data on tin reserves in a location. In addition, although mining activities are carried out in groups (one mining unit consists of 3-4 workers), the characteristics of the group of workers are individual. Social relations with mine owners are limited to working relationships between subordinates (mine workers) and bosses (mine owners).

B. Strategy for Livelihoods of Villages Around the Mine

Mining households, especially those living in research locations, are required to be able to survive and continue their livelihoods through natural resource and non-natural resource-based activities that have created social layers in these communities (Abdurrahim et al., 2014; Hidayati, Nurdin, & Budiandrian, 2015).

1) Social Stratification, Livelihood Assets, and Access to Livelihood Assets

In the context of tin mining, the owner of the mine is the boss of the mine worker and the buyer of tin is the boss of tin. This coating is formed because the owner of the mine and the buyer of tin are the parties that issue capital, both guarantee the continuity of mining operations and pay the salaries of the workers. While other households are groups that work for mine owners and tin buyers, who are the salaried parties (mine workers and tin lobbyists) and groups that depend heavily on tailings from the mining operations which consist of tin artisanal miners and robin machine owners.

The comparison of income received by mine owners and mine workers is approximately 70 percent compared to 30 percent. Washing tin and robin machine owners have almost the same net income as mine workers. The average mining activity is carried out between 5-6 working days. While workers who work for tin buyers have a higher and more stable income with a relatively less working time of 2-3 days. While tin buyers have revenues that way more than the proceeds from the sale of tin. The buyer or collector performs a further washing process which is then dried using a manual furnace so that the tin content obtained can be directly melted.

Stratification of mining households can be observed in Table 2. While the conditions of mining household land ownership can be observed in Table 3.

Table 2.
Stratification of Tin Mining Households

No	Mining households	Role in mining activities
A	The top layer (a group that issues capital)	
1	Small scale tin buyer	buy tin and approximately 500 kg/ week with 1-2 workers
2	Large scale tin buyer	buy tin sand approximately 2 tonnes/week with 6-8 workers
3	Mine Owner	has a mining unit with a number of workers 3-4 people per unit
B	The lower layer (groups that directly carry out tin sand mining/washing activities/working group)	
1	Mine Worker	operate mining units from mine owners
2	Tin Artisanal Miners	mining tailings, mining waste using simple equipment such as trays and plates.
3	Robin Machine Owner	mining tailings, mining waste using a water pump.
4	The worker who works for the tin buyer (Tin Lobbyists)	Responsible to wash and dry the tin and check the tin content.

Source: Primary Data (2016 and 2017)

Table 3.
Mining Household Ownership of Land Assets in Penyak Village, Lampur Village, and Cit Village

No	Mining Households	Land Area (ha)	Land Status
A	**Top Layer**		
1	Small scale tin buyer	1-3	Own Land
2	Large scale tin buyer	>10	Own Land
3	Mine Owner	3-5	Own Land
B	**Lower Layer**		
1	Mine Worker	±0.5	Family Land
2	Tin Artisanal Miner	±0.5	Family Land
3	Robin Machine Owner	±1	Family Land
		±1	Private Land
4	The worker who works for the tin buyer	±0.5	Family Land

Source: Primary Data (2016 and 2017)

In Penyak Village, mine washers and workers have limited land assets that rely on parental land with an area of approximately ½ ha. The group is on average 35 years and under and has 1 (one) or 2 (two) children. In addition, there are fewer identified parental land because it is sold to oil palm companies and certain individuals in the village (mine owners and tin buyers). Therefore, tin buyers have private land assets with an area ranging from 1/2 s.d. 3 ha. In fact, there are several mine owners and large-scale tin buyers with land up to tens of hectares.

In Cit Village, mining operators who are around 40 years old have more than 1 ha of land. However, most mining workers and tin artisanal miners aged 20-30 years do not own their own land and rely on parental land with limited area. Most of the land used is forest area. Similarly, what happened in Lampur Village was that most of the residents' plantation land is regional forests that were owned by certain individuals. Mining workers and tin artisanal miners utilize family land for gardening with an area of no more than ½ ha. While upper-level households have private land of 2-3 ha to tens of hectares.

Kinship is also a mainstay when lower-income households experience financial difficulties. Mining households in these three also use the services of moneylenders to help the family economy. In addition, the results of the study show that the characteristics of the mining workers group have a low level of education or primary school graduates This data is similar to the data displayed by BPS Provinsi Kepulauan Bangka Belitung (2018, p. 45) which shows that the average length of school life of villagers is equivalent to grade 2 in junior high school. While upper-class households are high school graduates, 66.48 percent of Desa Cit residents are temporary high school graduates in Lampur Village, indicated by the existence of a Stania Lampur High School.

2) Strategy and Transition of Livelihoods sources for Village Communities Around the Mine

The strategy and transition of livelihoods of mining households are Natural Resources and non-natural Resources based activities.

a) Natural Resources and non-natural Resources based activities

The pepper plantation sub-sector is a livelihood activity carried out by almost every mining household in both the upper and lower layers. The activities of the horticulture and palm oil plantations sub-sector are carried out by households (mine owners, large-scale tin buyers, and robin machine owners) who have sufficient land with sandy or swampy land types. Meanwhile, the marine potential in Penyak Village is used by upper-level households as coastal fishermen (mine owners) and as boat owners (large-scale tin buyers). While non-natural resources-based activities carried out by mining households constitute the trade sector. Livelihood activities can be observed in Table 4.

In Penyak Village, pepper gardening activities have been going on since 2014. Several large-scale mine owners and tin buyers have thousands of pepper sticks, tens of oil palm hectares, and use sandy soil to grow horticultural crops (chili, durian, and pineapple) and own boats. However, fishing activities are carried out when mining activities are not carried out or only part-time work. Meanwhile, mine workers, tin artisanal miners, and robin machine owners plant pepper with the number of stems that vary between 100 and 750 stems. Robin engine owners also plant horticultural crops such as pineapple.

In addition to the agricultural sector, large-scale tin buyers have shops that sell mining equipment and supplies, some mine owners also have groceries, and the wives of mine workers have a grocery shop. Small-scale tin buyers and workers working for tin buyers have not been seen doing this agricultural activity. This correlates with the age and status of workers, which aged 25-35 years, with the number of 1-2 children having orientation for other needs first, such as building a house. However, small-scale tin buyers have the financial capacity to buy land in preparation for agricultural activities in the future. In Lampur Village, mine owners began pepper and palm gardening up to tens of hectares since 2010. Whereas tin mining and washing workers began gardening pepper since 2016 with a limited number of stems of around 500 stems. To help increase family income, the wives opened a grocery shop. In Cit Village, since 2010, several mine owners have extensive pepper plantations of more than 2 ha and palm oil plantations of tens of hectares, as well as chili plants, vegetables, fruits such as

Table 4.
Livelihood Activities of Natural Resources and non-natural Resources Based Mining Households in Penyak Village, Lampur Village, and Cit Village

No	Mining Households	Natural Resources based livelihood activities	Non-Natural Resources based livelihood activities
A	**Top Layer**		
1	Small scale tin buyer	-	-
2	Large scale tin buyer	Pepper plantations (aged 2-3 years), palm oil (production age) and boat owners for those who live in coastal areas	Provider of mining equipment goods and services (Lifespan of more than 3 years)
3	Mine Owner	Pepper plantations (aged 2-3 years), palm oil (producing plants), horticulture plants, and coastal fishermen for those living in coastal areas	Grocery stores
B	**Lower Layer**		
1	Mine Worker	Pepper plantation, pepper age 1-2 years	Grocery stalls managed by wives
2	Tin Artisanal Miner	Pepper plantation, pepper age 1-2 years	-
3	Robin Machine Owner	Pepper plantation, pepper age 1-2 years and horticulture plants	Grocery stalls managed by wives
4	The worker who works for the tin buyer	-	-

Source: Primary Data (2016 and 2017, 20-30 percent of village residents that conducted tin mining activities, except washers and workers who work for the tin buyer, starting to do agricultural activities as a source of long-term livelihoods in addition to the mining sector which is recognized as a source of short-term livelihoods.

oranges, coconuts, and guavas. Whereas mine workers, robin machine owners, and tin artisanal miners began gardening pepper since 2015 with approximately 500 stems. The decline in mining activity income forced their wives to help the family's economy by selling snacks and soft drinks.

b) The transition of mining household livelihoods towards agricultural households

The transition in the livelihoods of the mining sector have been carried out by several upper-level households, namely mine owners, motivated by income uncertainty. The support of financial assets, land ownership, and business capabilities in the plantation sector provided opportunities for mine owners to earn income which was initially obtained from mining results to other sectors, especially horticulture and livestock crops. In addition, a better level of education and relations provides an opportunity for mine owners to enter work in the formal sector as a village government apparatus.

In Penyak Village, mine owners can shift because they already have the income to meet the daily needs of palm oil plantations that have been planted since they were mining. Several mine owners and robin machine owners opened a groceries business and planted pineapple and oranges for additional income. In addition, the marine sector is also utilized by mine owners in addition to pepper gardening.

In Lampur Village, some mining owners who are losing money use revenues from the sale of horticultural crops (coconut and vegetables), work as village officials, and take advantage of the opportunities of the Central Bangka Regency Government self-sufficiency program as a long-term investment. Not much different from Cit Village, the mine owners chose pepper and palm gardening and planted various vegetables such as chili and mustard plants. Some of the mine owners also become village officials (Head of

Neighborhood, BPD Head, and Hamlet Head).

Meanwhile, financial capacity is a reason for lower-level households to be in trouble to shift. There are not enough jobs that can meet daily needs while mining products can be sold directly. The nature of activities that can generate money quickly is what attracts this sector, making it difficult to abandon (Zulkarnain, 2010). Although tin production is reduced, workers will tend to survive in this sector. Financial unpreparedness and limited access to get a better life cause worker to come back again to mine in hopes that mining activities can yield multiple returns.

C. Local Strengths and Capacity, Policy and Livelihoods of Villages Community Around the Mine

The Bangka Belitung community is an agrarian society that relies on pepper plantations, horticulture plants, and catching fishermen. As an agrarian society, the nature of mutual cooperation has taken root in forming the character of the community known as "besaoh", namely carrying out activities together without remuneration or wages such as building houses, cleaning graves, repairing damaged roads and clearing land for agricultural activities.

The Regional Government and the Central Government are trying to move the people's economy in accordance with the characteristics of the agrarian community in Bangka Belitung Islands. These policies, among others, encourage the realization of an independent food area and the development of rural agribusiness areas. The two programs aim to realize village independence through various businesses from savings and loans, agricultural businesses, subsidized fertilizers, grocery stores, to processing fishery products. In addition, to mobilize the economy of rural communities, the government has also encouraged the development of Village-Owned Enterprises (BUMDES) with the aim that every potential that exists can be managed properly and become a genuine source of village income.

Even so with the existence of village funds, where villages can manage their own household affairs. In order to support the running of every activity program in the community both in the form of physical assistance and capital support, the government carries out assistance and guidance efforts through extension staff and village assistants placed in scattered villages. The presence of extension agents and assistants spearheads the success of each program and activity that run in the community.

As a consequence of each mining activity, there is ex-mining land in the form of sandy and vacant soil. The Cit Village government at the time of the research was currently submitting an application for part of the former tin mining land to become a village asset. This is one of the choices for the village government in dealing with the problem of limited land.

Government policy is indeed in harmony with the conditions and alternate livelihoods chosen by mining actors. But there is no bridge between the two. The mining community (especially the working group) is not a household that will get assistance from the government since to obtain such assistance, the community must fulfill various requirements, such as business certificates and can be identified as agricultural communities incorporated in farmer groups and Joint Business Groups (KUB).

The integrated role between the government, community leaders, village officials, various extension staff, and village facilitators to foster and assist these marginalized groups has not yet been formed. On the other hand, the character of individuals of the mining community, who do not bother to take care of all forms of requirements, is a challenge for the government.

IV. Conclusion

From the description above, it can be seen that mining activities have formed new social classes in the community, namely upper-level households that have abundant assets and lower-level households that have limited land, social relations, and finance. Mining households have reduced revenue from mining activities with a variety of agricultural and trade activities, namely horticulture plants, pepper plantations, livestock, grocery stalls, and groceries.

On the other hand, government programs in the community have not been able to intervene in this group of workers. An initiation to turn ex-mining land into village assets does answer the limitations of assets and access to land. However, its utilization and management must be able to involve these marginal groups.

Meanwhile, switching mining operators are dominated by mine owners who cultivate pepper and oil palm and carry out livestock activities as a long-term investment. As a substitute for daily income sources, the group cultivates horticulture crops. These households can play a role as village

driving figures and a successful example that releasing dependence on mining activities is possible.

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