Vulnerable people and sustainable livelihoods in the face of replanting phase in oil palm industry in Jambi - Sumatra

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Abstract. This article aims to discuss the threat of vulnerability in the oil palm industry-based village. This vulnerability occurs because oil palm which has been the source of people's livelihoods has to be uprooted and replanted. Among the social structures of the village community, the most vulnerable are local farmers and plantation workers who do not own land and the work in oil palm plantations has been their main job. The data collection in this paper was conducted using document study techniques, focus group discussions, in-depth interviews and observations from the end of December 2016 to January 2017. This paper has two main findings: firstly, the main source of livelihood for the community relies on oil palm plantations, but it is limited to producing fresh fruit bunches and they have not been able to process any further because the palm oil is transferred to the plantation company. If replanting is to be carried out, the residents' main source of livelihood will be automatically threatened. Secondly, the most vulnerable community groups are the second generation and so on, where they do not have land for gardening and can only work as farm laborers or work in plantation companies.

1. Introduction

The oil palm industry is a model for the plantation industry which involves many actors from global and national scale companies to smallholders and oil palm plantation workers at the local level. One of the phases in the process of the oil palm plantation industry is when the oil palm trees enter old age, so they must be uprooted and then enter the palm tree replanting phase. In this situation, one of the parties that have the potential to experience income vulnerability is small-scale oil palm farmers and oil palm plantation workers.

This paper discusses the threat of environmental and livelihood vulnerability before and during the replanting process of oil palm trees in the village of Tanjung Makmur, Tanjung Jabung Barat Regency, Jambi Province. In the mid-2017s, the village's oil palm plantations entered the felling and replanting phase after being planted since the 1990s. The problem is, what about the environmental conditions and socio-economic life at that time? This is important to discuss because oil palm
plantations have become the main source of livelihood for villagers, both farmers and agricultural laborers.

This paper's main argument is that environmental and plantation management changes have disrupted people's livelihoods. The dependence of residents for years on oil palm plantation products has made it difficult for residents to obtain a livelihood source in other sectors when plantation management enters the phases of felling and replanting.

The booming of oil palm plantations outside Java, one of which is the island of Sumatra, cannot be separated from the aspects of the transmigration policy [2]. In addition to increasing people's income and the country's economy [3], oil palm plantations also contribute to village environmental problems such as deforestation and environmental degradation [4,5] as well as narrowing the livelihoods of residents where oil palm products are the main focus of residents by putting aside other sources of livelihood [5].

In addition, talking about vulnerability in the oil palm plantation sector, uncontrolled expansion of oil palm plantations in villages is one form of vulnerability that must be considered so that it will not be repeated in the future [6] where in the case of Tanjung Makmur village, it can be seen from the conversion of home gardens that were originally used for secondary crops to become oil palm plantations. This change of function's main impact is to make oil palm the main source of livelihood and make other plantation sectors less attention.

Another vulnerability that occurs when the age of oil palm plantations is entering its final stage or is 20 years and over. At this stage, like it or not, oil palm plantations will soon enter one of the crucial phases, namely entering the replanting period. One of the problems that often arise is the problem of financing or the availability of funds to carry out all stages of replanting [7].

This paper selects the village of Tanjung Makmur as a case study, which is an expanding area of the main village of Tanjung Benanak in Merlung sub-district, Tanjung Jabung Barat District, Jambi province on the island of Sumatra. Geographically, Tanjung Makmur village is a village with a wide stretch model where the majority of the land is oil palm plantations. The residents' yards that were originally used for secondary crops have also changed their function to oil palm land.

The trans-migrants who arrived in the 1990s can be categorized as the first generation of the village. Currently, the majority of them are entering old age and have adult children. The majority of these first-generation residents have a house in 36 meters, 2 hectares of garden land, and 0.5 (half) hectares of yards. During its development, a number of residents who owned plantation land chose to sell to neighbors or other people and then returned to Java.

This paper aims to identify actors involved in the management of the oil palm plantation industry and identify vulnerable groups, especially when the replanting process is carried out in oil palm plantation.

2. Method

2.1 Location and time
This paper selects the villages of Tanjung Makmur-Tanjung Jabung Barat-Jambi as a case study. The author chooses this location because it can provide a comprehensive picture of the conditions of the most vulnerable groups of people when the oil palm industry enters a logging and replanting period. Another consideration is that the people living in these locations have a high livelihood dependence on oil palm plantations. In addition, this village is also interesting to be used as a study location because it is a typology of this village where the majority of the villagers are transmigrants who moved from Java to Sumatra in the 1990s.

2.2 Technique of collecting and analyzing data
The research method used is a qualitative approach. The approach taken is observation, live in, document review, in-depth interviews and focus group discussion (FGD). This research was conducted in the last week of December 2016 to early January 2017 involving various informants ranging from village heads, village secretaries, Deputy heads of the Village Consultative Body (BPD), heads and managers of Village-Owned Enterprises (BUMDes), management of farmer groups, farmers, peasants cultivating
land R (village land), farm laborers, middlemen, garden foremen, former administrators and employees of the Village Unit Cooperative (KUD), as well as managers of farmer group associations (Gabungan Kelompok Tani/Gapoktan-ind).

3. Results and discussion

The arrival of residents from various regions in Java to the island of Sumatra is to overcome the vulnerability of life and helpless conditions in their home areas [1]. Referring to interviews with several informants, there are two aspects that encourage them to become trans-migrants, namely poverty and unemployment due to difficulties in getting the desired job. Migrating to Sumatra, especially in the Tanjung Jabung-Jambi area, was the right choice because the government made an offer that was considered favorable. For residents who are willing to move, the government will provide houses in a type of 36 meters, 0.5 hectares of land, and a year of living allowance, including the distribution of 2 hectares of land for oil palm plantations for each family head. In the 1990s, the government's offer attracted many residents' attention, so they were willing to move from Java to Sumatra.

After living for more than 20 years, the threat of vulnerability comes again. Oil palm plantations, which have been the main source of livelihood for residents, will experience rejuvenation because they are more than 20 years old. In fact, most families' main income depends on the harvest of palm oil, which is usually done twice a month. Meanwhile, the land that was originally designated for growing crops or vegetables has turned into all palm oil. In addition, the majority of residents do not have many other economic activities apart from being in the palm oil sector.

There are three important aspects that need to be studied and become the focus of this paper. First, related to the mapping of the main actors involved in the oil palm plantation industry. Second, what and how are the sources of livelihood in oil palm plantation-based villages. Third, the condition of local farmers and plantation workers who are vulnerable groups in the management of the oil palm industry.

3.1 Actor in the oil palm industry in the village

Oil palm plantation management is a portrait of plantations and trade that involves various parties, from plantation workers, farmers or planters, to plantation companies. In the context of oil palm plantations in Tanjung Makmur village, smallholders who own oil palm lands are the main actors in the oil palm industry chain. But these farmers do not move alone because they need the support of other actors, namely a combination of farmer groups (Gapoktan), plantation workers, and middlemen. Gapoktan has the role of being a fertilizer provider either by paying cash or debt. Gapoktan has a savings and loan cooperative that can also provide the money needed by landowners to meet their daily needs and other needs related to oil palm land. Meanwhile, plantation workers play a greater role in the maintenance sector and when harvesting fruit. Almost the majority of oil palm landowners are people who have entered old age or are outside the village. The plantation workers are mostly children or siblings from the first generation.

After harvest, the main actors involved are middlemen, cooperatives and plantation companies. Middlemen are economic intermediaries that bridge landowners and companies. There are two models that occur. First, the middleman is also the head of the farmer group who helps harvest the palm oil products, then take it to the KUD and finally take it to the plantation company. Second, it is not uncommon for farmers to hand over their garden products to middlemen in cash. This happens because farmers want to take the practicalities or because they usually have borrowed money first from the middlemen, so they can't help but sell their garden produce to the middlemen.

The KUD's role is more on the actors who document the results of the palm oil count and compile the results and every month deposit a recap of the results of the oil palm plantation that must be paid by the company. After the company's money is transferred to the KUD, the KUD then divides it into farmer groups according to the income from their oil palm plantations. Another role of the KUD is to cut garden produce from farmers to hand over to the village and KUD (10 rupiah / kg).

In the oil palm plantation industry in Tanjung Makmur village, the village government contribution is only providing the village's infrastructure. However, this has also just been enjoyed by residents in 2016 after using village funds to harden roads throughout the village after previously it was still a dirt road that was muddy and tended to get muddy when it hit the rain so it was difficult to pass.
If you look at this map of actors, it can be seen that the results of oil palm plantations are the main source of livelihood for villagers. Small-scale village farmers (farmers who own 2 hectares of land plus a half-hectare yard) and plantation workers are the ones who really depend on income from the oil palm sector. If the oil palm plantations have to be uprooted and rejuvenated, their income will potentially be threatened.

3.2 Exploring the sustainability of livelihood in oil-based villages

The main source of livelihood for residents has been oil palm plantations. The term is from Hery, the village government secretary, that the villagers have "divine" the results of the oil palm and have been lulled by the results of the oil palm heads, which used to be enjoyed three times a month but now twice a month. The yards that were originally required to be used for planting crops have also been turned into oil palm plantations. The same thing was conveyed by Supomo, a resident of Tanjung Benanak village and former head of the KUD, who said that when the community first moved to the Tanjung Jabung area, there was no other choice but to dwell in the oil palm plantation area. It is important because Supomo is one of the earliest generations who knew the origin of the land in the Tanjung Benanak area, which in turn became the village of Tanjung Makmur. In addition, his structural position as the former head of the KUD was also seen as significant for the interview.

The majority of male farmers work in the palm oil sector. Meanwhile, the majority of women become housewives. It is rare to find women who are involved in the management or harvesting process of oil palm plantations because their type of work is considered too physical. When viewed from the harvest process, which is very physically exhausting, it is understandable that the majority of workers in the garden are men. As an illustration, based on the author's observations, the weight of one palm fruit freshly harvested from a tree (commonly known as fresh fruit bunches-FFB) can reach between 25-30 kg per seed. When harvested, this fruit will be placed near the palm tree to be collected and brought to the garden area's fruit collection point.

When traced, there are also other sectors developed by residents, namely cattle and chicken farming, but they have not developed well. In fact, according to Rina, cow dung, both liquid and solid can be used to be processed into organic fertilizer, which is very useful for cultivating oil palm plantations. A cattle group has managed dozens of cows since 2013, but several residents complained that because the benefits only revolve around group members.

In the 1990s, the area of Merlung, to be precise, the area which is now known as Tanjung Benanak village and Tanjung Makmur village, was a dense forest. Only in 1991-1993, residents from various regions on the island of Java came to the area through the transmigration program. When the residents arrived, the land was ready for planting oil palm trees. In other words, these trans-migrants already know that they have come to work on the oil palm land and have no other choice. Supeno, a resident of Tanjung Benanak village and former head of the KUD, said that at the beginning of their arrival, the trans people became plasma farmers, namely farmers fostered by an oil palm plantation company, in this case PT Inti Indosawit Subur (IIS), a subsidiary of the Asian Agri group, because they are working on land in the concession areas of large company plantations.

According to Supeno, for about 2-3 years, trans people worked in the garden starting from planting until finally the first harvest around 1995-1996. After the first harvest, the land distribution began, where each head of the family received two hectares of land. For the record, this land is not obtained by residents for free, but must pay in installments to the company by cutting it from the oil palm plantation. It was only in the 2000s that, on average, residents had paid off, and there were no more deductions or production sharing with oil palm plantation companies. After it was deemed paid off, the residents obtained a certificate for the two hectares of oil palm land.

In addition, Rasyid, a farmer, a resident of Tanjung Makmur village, and the chairman of 2 Gapoktan villages in Tanjung Benanak-Tanjung Makmur, explained that after the land certificate was held, the status of the Trans farmers can be said to be independent farmers and not plasma farmers anymore. The yields from oil palm plantations are no longer shared with the company but are fully owned by the farmers. In other words, the division of the land as much as two hectares in the end was not owned for free but was paid in installments of around 3-4 years until it was calculated as paid off.
After farmers fully owned the land, Boneto, a resident of the land cultivator, said that it could be said that they started a new phase of livelihood where this was the beginning of enjoying a source of livelihood from oil palm plantations after working odd jobs in their hometown. Oil palm plantations provide extraordinary results because they can be harvested every 15 days. In fact, according to the stories of some residents, in the early days they could harvest once every ten days. In other words, they can get money, or the term payday can be two or three times a month. It can be said that the main source of livelihood for oil palm farmers is the produce of oil palm plantations, which currently provide the income of 3-4 million per month for those with two hectares of plots. "It’s just that, with the age of the palms that are getting older by about 20 years, when the trees are getting taller, it is difficult to harvest so that automatically reduces the fruit that can be taken,” said Boneto Effendi, one of the farmers cultivating land R in Tanjung Makmur village.

Meanwhile, the life of a farmworker depends on the orders that come to him. Ujang, the head of RT 04 who is also a plantation worker, explained that he usually works around 25 days between 08.00-14.00 hours in one month. The monthly salary he earns is between 900 thousand and 1.6 million. The threat of vulnerability is that the job of harvesting oil palm is the only job that has been occupied for years. Ujang is not alone. When the writer met him in the garden, Ujang and his friend, Koko, were the collectors of oil palm fruit and brought them to the harvest place using a modified motorbike. If Ujang is the profile of a plantation worker who does not own land, while Koko is more fortunate because he can still plant oil palm on industrial forest plantations (HTI), "if you are not desperate, you will not be able to earn income or to increase family income,” said Koko.

3.3. Farmers, plantation workers and vulnerability threats
In the stretch of Tanjung Makmur village and Tanjung Benanak village as the parent village, the oil palm land has a Roundtable on Sustainable Palm Oil (RSPO) certificate. This land certification is on two hectares of land that belongs to farmers, not on oil palm land in their yards or what is commonly referred to as land R. yard land.

However, even though the farmers own and hold the main rights to the fresh fruit bunch from the oil palm plantation, they are not the only ones who determine the price, but also company and local government representatives. There are four parties involved in pricing, namely government agencies (Bappeda, Ekbang Bureau, Plantation Service, Disperindag and Diskop Umum), farmers (representatives of PIR garden farmers, representatives of independent smallholders), associations of farmers and entrepreneurs, and companies (representatives of plantation companies palm).

Regarding price, every Friday morning a new price is announced for the next week. For example, when doing research, the price of oil palm 2021/kg for the period 16-22 December 2016. This price becomes a reference in the next week. When viewed, the price of FFB when this research activity was carried out was in a high position compared to the previous few weeks. However, it should be noted that this price applies to FFB produced from official oil palm plantations, which have been supervised by plantation companies from the start.

Apart from the question of price, the most obvious vulnerability is the threat of losing the main source of livelihood from the palm oil sector, especially when in the next 1-3 years there will be replanting of oil palm trees which will be preceded by uprooting all the oil palm trees. There are two parties most affected, namely farmers who have been relying on oil palm land as their main source of livelihood and plantation workers who have been depending on their livelihoods from the oil palm plantations owned by these farmers.

When viewed from the oil palm justice movement's perspective, the most vulnerable actors are local farmers with limited land and plantation workers who depend on jobs in oil palm plantations. The absence of sufficient knowledge that oil palm trees have a "golden age" for harvesting and fruiting means that these two groups have no other source of livelihood apart from oil palm plantations. The absence of non-palm oil village economic institutions makes the threat of vulnerability become real. On a village scale, the discussion about expanding the non-palm oil plantation business only surfaced in mid-2016. Based on an interview with Budi Kahono (one of the BUMDes administrators in the production facilities sector, one alternative to preventing economic and social vulnerability is establishing and developing a joint venture through the BUMDes forum. It's just that knowledge about
BUMDes is still minimal, so it requires guidance and facilitation from outside parties. So far, BUMDes administrators and village officials have prepared a BUMDes office location and a plan for a chicken farm.

From the results of interviews and observations, this non-palm oil economic institution was indeed prepared to become a source of livelihood during the replanting process until waiting for the first harvest of oil palm plantations. The challenge is how villagers, especially local oil palm farmers and plantation workers, find the right activities and can generate alternative sources of livelihood during the transition of oil palm plantations.

4. Conclusion
This paper discusses the situation and conditions of vulnerability that two actors potentially face, namely local farmers and plantation workers. Both are the parties most vulnerable to losing their source of livelihood because they have relied on income from the oil palm industry, as shown by the data above.

Referring to the case of oil palm land in the village of Tanjung Makmur, it can be seen that oil palm plantations have limited people's livelihoods and depend heavily on oil palm products. This fact is supported by the change in yard land's function, which was originally intended for palawija land and eventually used for oil palm.

Additionally, this case shows no awareness and real steps from an early age related to land diversification. When oil palm plantations experience a decline in yields and enter the replanting process, there are alternative livelihoods for farmers plantation workers. On the other hand, this also shows that the economic interests in the area of the palm oil industry do not think about economic alternatives for non-palm oil, which is shown by the absence of village economic institutions that are able to support or support residents when oil palm economic activity declines or slows down.

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