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## **Techniques of Mining and Land Grabbing: Destruction of Agricultural Activities in Kerta Buana Village, East Kalimantan - Indonesia**

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### **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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### **ABSTRACT**

Land grabbing is a big problem in developing countries because a land-large acquisition as an act of land grabbing that made small-farmers had lost their access to the land. The small-farmers as the dwellers in Kerta Buana village who were invaded by the government through transmigration project in 1980 had got negative impacts of the land grabbing. On the one side, some farmers had lost their farm land because it was bought by coal mining companies. They did not have an ability to reject company's persuasions to take off their lands with some money. On the other side, some other farmers had left their farm lands because they could not cultivate them properly due to the environmental ecosystem surrounding them had already damaged. The presence of two coal mining companies is the main factor in making the farm cultivation uncondusive. Through this paper, we would like to explain how the land grabbing by coal mining companies work, and how the method change of coal mining have accelerated the destroy of agriculture activity in Kerta Buana village.

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## 1. BACKGROUND

This paper aims to describe the process of land acquisition by coal mining companies in a very large area and the negative impact caused by the existence of agricultural activities in Kerta Buana village and its surroundings. The control of land by coal mining companies in the village is a big problem for the sustainability of agriculture and the existence of the people who live there. Such a control of land by mining companies has resulted in the loss of many farmers' agricultural lands, because their ownership rights have been transferred to employers. In fact, land for a farmer with agricultural activities is a very essential asset [1], and is a main resource for the livelihoods of the poor [2] which usually also operate in agriculture. As a result, many farmers became farm laborers in their own farm lands or rented lands owned by other farmers to work on. In addition, mining activities damage the surrounding ecosystem so that the agricultural products from the remaining fields are not optimal.

The problem of farmers losing land is because the controls have shifted to companies that have bought it with various mechanisms, not only in the Kerta Buana village, but also in various places in Indonesia, even throughout the world such as Kenya [3], Tanzania [4], Argentina [5], Malawi [6], and Cambodia [7] to mention several countries. The use of land resulting from land grabbing is for the development of large-scale agricultural activities such as tea plantations and also the development of plants to produce biofuels. This resulted in a drastic reduction in the composition of the world population working in the agricultural sector. In 1970, for example, the population engaged in the agricultural sector was still around 2 billion and not agriculture as much as 1.7 billion. The composition changed with a very large ratio in 2010 because the population working in the agricultural sector was only 2.6 billion, while non-agricultural people reached 4.2 billion [8]. In other words, the agricultural sector is no longer an attractive field of work so many are abandoned, even though agricultural products are very important for the survival of humans who inhabit this earth.

Indonesia is one of the countries that convert agricultural land functions into other functions, including coal mining concessions. For example,

during 1979-2002, the extent of conversion of agricultural land in Indonesia reached 3,247,737.5 hectares, equivalent to 141,205.98 hectares per year. Agricultural land conversion is one of the factors causing the food crisis [9]. The government tried to replace the converted land by printing new paddy fields, but the effort was unsuccessful due to various factors. The results of Siburian's study [10] in Sei Kayu village, Kapuas District, for example, show that the 50 hectares of rice fields printed by the government in 2017 and 200 hectares in 2016 have not produced results until 2018, especially with the prohibition of land clearing with how to burn. The newly printed rice fields, the cultivation is done by not burning. Land that has been opened if it is not burned, local people term the land still 'crude', so it is not fertile if it has to be planted with rice. The process so that the land is still 'crude' and newly printed that can produce optimally takes a long time and must be treated specifically.

The method of extracting coal from the ground is divided into two, namely: underground pit mine and open pit mine. The selection of mining methods carried out by a company correlates with the volume of production obtained, the cost of production that must be spent by the company, and the environmental impact it causes. If the mine in the production process is done manually (underground pit mine) so that the human power needs are preferred, it is different from the inner mine which uses mechanization and automation (open pit mine), so that the heavy equipment that is operated by skilled and specialized personnel is used. Therefore, the production volume produced by open pit mining is much greater than the underground pit mining method. Example of coal production by PT. Kitadin from 1983 to 2003, the volume of coal production from open-pit mining tended to be above the volume of mine production, and even in 1995, open mining production volumes continued to increase, while underground pit production tended to decline [11]. In fact, the explanation from Bambang, the external part of PT. Kitadin, said that in those days coal production from open-pit mining was not concentrated or still in certain points and the area was relatively small which was termed the turtle system. If from 2001 to 2006, the production volume of open pit mining was above one million metric tons per year, the volume of mining

production was still below 300 metric tons per year [12]. Damage of land surface using open pit mining method is so following large of production volume, otherwise the damage of land surface using underground pit mine is following the very small volume of production as well.

Through this study, with the occurrence of land grabbing in Kerta Buana village, this paper wants to answer three questions: 1). How does the land grabbing process take place in the village of Kerta Buana?; 2). What are the impacts of land grabbing that is happening to local communities, especially farmers who are in the village?; and 3) How did the role of the government in the process of change land functions from agricultural land, including settlements, to mining areas? The role of the government is very important in these cases because the permit to the coal company for exploitation is given by the government.

## 2. CONCEPTS AND METHODS

Land grabbing is defined as the power to control the land in a very large area by the company (trans) nationally as a form of capital accumulation. This was done in response to the food crisis, the impact of climate change in the short and long term, and the global financial crisis. Land grabbing that leads to the purchase or acquisition of large areas of land is intended to produce food, biofuels and animal feed [13]. Referring to Cotula, Vermeulen, Leonard, and Keeley [14], the purchase transactions labeled "large scale", the extent reached between 1,000 and 500,000 hectares.

The control of land by the company in a large area is intended to increase food production. Therefore, Batterbury and Ndi [13] further explain that the definition of land grabbing does not include the acquisition or purchase of large areas of land for mining activities or the construction of underground infrastructure, because the activity often gets benefits in the form of adequate water supply. Franco *et. al* [15] added that land grabbing as written on paper was carried out in 'empty', 'marginal', 'unemployed' or 'degraded' lands, mostly uninhabited, unused, unproductive, and impossible to compete with local food production. In short, land grabbing is done to increase land productivity so that it is more optimal in responding to the ongoing food crisis.

In the context of this paper, the definition of land grabbing uses a broader understanding, not just

the acquisition or purchase of land which is solely aimed at producing food, biofuel, and animal feed, but rather the impact caused by acquisition, both on society farmers and overall food production. Therefore, land grab in this context refers to Batterbury and Ndi [13] which states that in land grabbing cases, the signal at the place where land acquisition takes place leads to the loss of farmers' access to their agricultural land. The loss of access to land resulted in the community experiencing a process of impoverishment and marginalization. Or also the definition of Twomey [16] that land grabbing is a form of transfer of use rights or control over the land, traditionally used by the community, to foreign investors for commercial purposes, often in the agricultural sector. Entrepreneurs are often facilitated by strong domestic partnerships, justified by the investments they bring, for example opening employment and improving the regional economy. In other words, the investment brought by entrepreneurs can convince the local government that the investments made are beneficial, at least in the interests of the region. When farmers are no longer able to carry out their activities as farmers because they no longer have proper agricultural land, one day they may be uprooted from the land and social landscape that has made it a place to express social, cultural and religious life freely. They get satisfaction from expressing that social, cultural and religious life. When the social landscape is gone, the condition will make farmers suffer even more.

In addition, the benefits obtained from mining activities and the construction of underground infrastructure that allow these activities not to be categorized as land grabbing in the above definition do not occur. It is possible that when the definition of land grabbing was made by Batterbury and Ndi [13], the underground mining activities carried out still use underground pit mining methods. The mining method that has occurred recently, especially for coal mining, is open pit mining by dismantling the land above the coal to be extracted. The method not only damages the soil surface, but also the underground layer containing water (aquifer) in certain places.

In line with Batterbury and Ndi, Cochrane [17] also defines land grabbing in a broader scope, namely: "selling or renting land that is used permanently, seasonally, or based on cycles carried out by individuals who actually have not agreed to the transfer of land owned, regardless

of whether the land was taken illegally, with or without violence". That is, the process of transferring land tenure is important to see, because even though the sales process is carried out in a normal and reasonable manner, including at a high price, if the release of land is forced, it also becomes part of land grabbing. Because, according to the Cochrane, land grabbing occurs in various contexts, and results in a variety of negative results. Consequences usually include displacement, loss of income and livelihoods, increasing vulnerability, occurrence of food insecurity and malnutrition, loss of biodiversity, and environmental damage including air, soil and water. Based on these consequences, referring to Onoja [18] farmers will be the first victims of the land grabbing action. The existence of land grabbing causes farmers to lose their farmland as well as their livelihoods [19], even his identity as a farmer is also eroded.

Ethnography method was used to collect the data in Kerta Buana village. By the method, the authors lived in the village to follow daily life of villagers in the end of 2015 till the early of 2016. While living in the village, the authors also conducted in-depth interviews with various informants such as farmers, landowners, government staff, head of the village, heads of community organizations, company staff, and village officials. The questions asked were not the same for all informants, but related to the position of the informant itself. Then, we also conducted some observations on the activities of the daily life of the village community, including observing the environmental conditions in the village. Written data from various agencies were also collected to support the results of the in-depth interviews.

### 3. SITE OF STUDY

Kerta Buana village which is the location of this study is part of the Tenggarong Seberang Sub-district, Kutai Kartanegara Regency, East Kalimantan Province (See the Map). Kerta Buana village was originally the location of transmigration with three other villages known as the Teluk Dalam Transmigration Settlement Unit (*Unit Permukiman Transmigrasi-UPT*) which was occupied in 1980. Three other villages before was split as an autonomous village were Bukit Raya (UPT Teluk Dalam I), Manunggal Jaya (UPT Teluk In II),<sup>1</sup> and Bangun Rejo (Teluk

Dalam III). Kerta Buana village itself is the UPT Teluk Dalam IV.

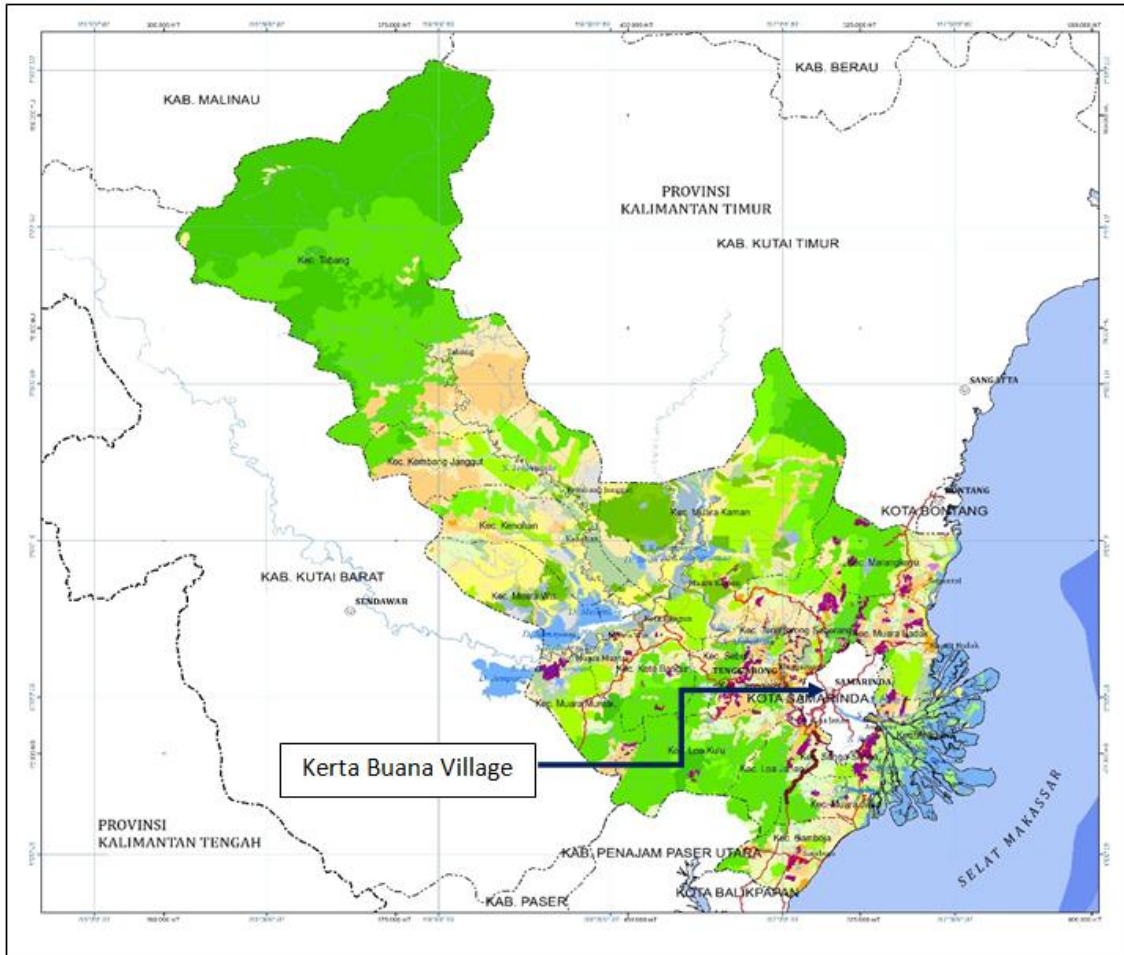
The government invited transmigrants came to Kerta Buana village in 1980. The transmigrants came from two islands, namely Bali and Lombok. Nevertheless, there were three ethnic groups of the transmigrants, namely Bali, Sasak (by the people in the Kerta Buana village who know him better than Lombok), and Java. The Javanese sent to Bali were those who have long lived on the island of Bali as nomads. While the religion adopted by the transmigrants was automatically identified according to their ethnic groups, such as the religion adhered to from the origin of the transmigrants. Transmigrants with Balinese ethnic groups embrace Hinduism and transmigrants with Sasak and Javanese ethnic groups are Muslim.

In addition to bringing transmigrants from Bali and Lombok Island, the government also accommodated local people as transmigration participants, referred to as local transmigrants through the Allocation of Transmigration Regional Settlements (*Alokasi Penempatan Permukiman Daerah Transmigrasi-APPDT*) programs, totaling of them around 20% of the total transmigration participants placed in an area. The large of the land was received, both general transmigration participants and local transmigrants in the APPDT program, was the same, namely 2 hectares. The difference of land was in determining the location of the land received. If general transmigration participants receive land parcels based on the lottery results, the parcels of land received by local transmigrants are based on their own choice without drawing, so that the transmigrants may choose land that has been previously worked on or land in other places as desired [11].

The population of Kerta Buana village transmigration participants stationed in the village in 1980 was around 430 family heads (KK) or about 1,913 people, with areas from West Nusa Tenggara 76 families or 314 people, Bali 300 families or 1,333 people, and local transmigrants 54 KK or 266 peoples [11]. The ethnic groups that inhabited the area in 1980 were Java, Bali, Sasak (Lombok), and Kutai. Thirty-five years later or in 2015, as a comparison, the population inhabiting the village has increased dramatically, to 5,411 people. The

<sup>1</sup>In 2004, Karang Tunggal village as a village result of the division of Manunggal Jaya village based on the Decree of

the Regent of Kutai Kartanegara Number: 140/290/PD-III/SK/VI/2004.



**Map 1. Map of Kutai Kartanegara District**

Source: <https://www.google.com>  
(Accessed on February 18<sup>th</sup>, 2019)

ethnic groups that inhabit that region have also increased, namely Kutai, Dayak, Java, Sasak (Lombok), Bali, Bugis, Batak, Manado, Banjar, Flores, Sunda, Sumbawa, Bali-Lombok, Madura, and Chinese. The dominant population remained in the four tribes who were transmigration participants in 1980, namely Bali, Sasak (Lombok), Java, and Kutai [11]. The population increase of around 306% is inseparable from the presence of coal mining companies in the villages of Kerta Buana and surrounding villages.

Kerta Buana village with an area of around 23.25 km<sup>2</sup> borders the village of Brambai (Sempaja village, North Samarinda District) in the east, Separi village in the west, Bukit Pariaman village in the north, and Bangun Rejo village and Embalut village in the south. The village with 26 neighborhoods (*rukun tetangga-RT*) is further

divided into 4 hamlets, namely Rapak Rejo (7 RT), Rinjani Indah (6 RT), Sida Karya (7 RT), and Budi Daya (6 RT). Nevertheless, the division of village areas based on blocks which are inherited from the Transmigration Settlement Unit (UPT) is better known by villagers than based on hamlets and RTs. In other words, the identification of villages divided by blocks is more familiar to villagers and it is easier for them to designate their existence. Kerta Buana village is divided into 5 blocks, namely Block A, Block B, Block C1, Block C2, and Blok D. The villagers in Block A and Block B are more populated by Javanese and Sasak (Lombok) with the religion adopted by Islam. Blocks C1 and Block C2 are mostly inhabited by Balinese with Hinduism. While residents living in Block D, the numbers are balanced between Balinese and Javanese and Lombok people.

#### 4. RESULTS AND DISCUSSION

Land grabbing in Kerta Buana village has destroyed the livelihood of villagers as farmers. Long time ago before open pit mining operated in this village, the villagers step by step built their capacity as farmers and made Kerta Buana village as the center of rice in Tenggara Seberang subdistrict, the farmers' ability to change peatland to be paddy fields. However, since 2005 at the time the government invited open pit coal mining investors to invest in Kerta Buana village and its surrounding, Kerta Buana village as settlement and agriculture land seems to be disappeared soon. The following explanations constitute the answers of three question above.

##### 4.1 Kerta Buana Village: From the Location of Transmigration, Agriculture, to Mining

The Kerta Buana village is currently used for three functions at once, namely settlement, agriculture, and mining. The village as a settlement location began in 1980 as the location was made as a transmigration settlement. The transmigrants after arriving in the village of Kerta Buana received a land area of 2 hectares, divided into three fields. Land with an area of  $\frac{1}{4}$  hectare is residential and yard land, and on that land houses have been built to be occupied by transmigrants. One hectare of land known as one business land is wet land, intended as a place to plant rice. Another land area of  $\frac{3}{4}$  hectare is dry land in the form of a garden which is used to grow *palawija* crops.

When the transmigrants arrived in Kerta Buana village, initially the land in the village consisted of deep peatland. The land is rarely dry, making it difficult to be used as agricultural land. The shelter for transmigrant settlements built by the government, at that time stood on peat. For transmigrant's houses stand on peat swamps, transmigrants often fish in the peat swamps from inside their homes. The first two years when the transmigrants were stationed there, it was difficult to carry out agricultural activities. Food eaten to enable them to survive is a guarantee of life provided by the government, such as rice and side dishes. If usually the life insurance provided lasts for only a year, but for transmigrants in the Kerta Buana village, the provision of life insurance lasts for 1.5 years because agricultural businesses such as crops are carried out by

transmigrants in the first year that no one can grow in their grounds are always wet.

Capitalizing on farming skills brought from their home areas (Bali and Lombok) and patience to keep on working on it, they can 'juggle' the peatland becoming agricultural land. Until 2000, the area of rice fields that were successfully printed by transmigrants in the village of Kerta Buana was approximately 1,000 hectares. Almost all of the peatland in the village became rice fields at that time. Given the land provided by the government in the form of peat and swamp, the efforts made by the transmigrants to make it as fertile rice fields have not been easy. There needs to be a hard struggle and patience, because with such land types there is no hope of success in agriculture. This condition resulted in many transmigrants who then returned to their hometowns or scattered households because on the one hand the wife did not want to live in the location of the transmigrants while on the other hand, the husband tried to stay afloat, so what happened was divorce due to no meeting point between husband and wife.

The remaining rice fields can still be found on either side of the axis road in Block D. The success of the Kerta Buana village and other transmigration villages in Tenggara Seberang District built rice fields, so that the rice fields from the sub-district contribute significantly to the supply of paddy for Kutai Kartanegara Regency, while making it a rice barn for the district. The Mulawarman District Government appreciated the farmers in the sub-district by establishing a rice processing unit (RPU) in Manunggal Jaya village in 2001. Although in its later journey, the existence of the RPU was not welcomed by farmers because of the business mechanism implemented by regional companies it is considered not to benefit farmers [11].

When rice production from paddy fields in the Kerta Buana village is at its peak, the government actually presents a coal mining company with an open pit method. The Kerta Buana village including the area of rice fields inside it pawned on mining companies by making it a mining concession, especially for two mining companies, namely PT. Kitadin and PT Mahakam Sumber Jaya. PT. Kitadin has actually been operating in the village of Kerta Buana since 1978 (exploration) and 1982 (exploitation), but the method of mining that is applied is better known as inner mining, although at the same

time open mining has also been operating but its area is relatively small so it is less significant to damage the environment.

At the beginning of PT. Kitadin operates in Kertas Buana village, exploited land is land that has not been certified. The position of the land is on the edge of the village, outside the yard, business area one, and business land two. The area of non-certified land is wider than certified land. If the area of Kerta Buana village is 23.25 Km<sup>2</sup> or 2,325 hectares, after deducting certified land as part of the 2 hectares transmigration package for 430 family heads, then the non-certified land reaches 1,465 hectares. The non-certified land includes restoration land, reserve land and land for public facilities such as fields, roads and village roads, village head offices, schools, mosques, and public temples. Reserved land is the most extensive, and mining companies initially operated in these lands. In 1994, the company began to release certified land owned by transmigrants, as stated by Yusuf,<sup>2</sup> as follows:

*"In the beginning, the company still (worked on) land that had not been certified. (At) in 1994, (the company) began to enter transmigration land. In the past, the company compensated farmers. What is compensated by the company is the plants grown on it and their management. Land area itself. However, when compared to the price of land which is a compensation, the compensation value is far below. The price of land per hectare is IDR 8 million. Land is valued at a low value because transmigrants consider the presence of the company as a government program".*

Massive demolition of land began in 2005, as PT. Mahakam Sumber Jaya, and is intensifying with the return of PT. Kitadin in 2009. Since 2005, the process of demolition of land in Kerta Buana village took place in a certain way, resulting in agricultural activities continue to experience disruption due to the negative impact it caused. Rice fields that have been planted with rice and then submerged in mud-filled water in the rainy season, have often happened. On the other hand, rice fields experience drought during the dry season because the forest in the upstream

part of the rice fields has been damaged so that the natural water storage area during the rainy season is also damaged.

As more and more of the land belonging to transmigrants has been freed and has also been exploited by mining companies, this has resulted in mining activities no longer far from residential settlements. This condition actually violates the applicable regulations, namely the Regulation of the Minister of Environment of the Republic of Indonesia Number 04 of 2012 concerning Environmentally Friendly Indicators for Business and / or Open Coal Mining Activities, in the Attachment of the mining stage in mining material extraction and extraction which states that "Distance the edge of the excavation is at least 500 (five hundred) meters from the boundary of the IUP (initial hue adjacent to the settlement)". While the conditions that occur, the distance between the IUP and the residential areas in the Kerta Buana village is less than 500 meters. Mining activities at several points are located right next to people's homes. Therefore, the Kerta Buana village is now better known as coal mining than its agricultural activities, because the remaining agricultural land, especially rice fields, is no longer so extensive. The results obtained by farmers are no longer as long as they were when mining was still carried out with deep mines. In other words, farmers in Kerta Buana village are no longer able to rely solely on agriculture as a livelihood. The village economy has also been very dependent on mining activities, so when in 2015-2016 coal prices declined in the international market which resulted in many employees being laid off, people who did not work in mining companies complained about the condition. Many of the economic activities of the community were disrupted because layoffs made some employees leaving Kerta Buana village, even though they were consumers of economic activities carried out by the village community.

#### **4.2 Mining Methods and Their Impact on Farmers**

As long as mining is present in the village of Kerta Buana, officially started in 1980 as the mining business permit was issued in the village, there are two types of mining methods that have ever operated. The first company operating in the village was PT. Kitadin, with an exploration permit from the Director General of Indonesian General Mining with Decree (SK) No. 1562/SK-DJ/213/DUP dated May 28, 1980, and

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<sup>2</sup>Yusuf (not his real name), was a Javanese who became a transmigration participant with the origin of the island of Bali. The interview was conducted on the terrace of his house in the village of Kerta Buana on August 31, 2015.

exploitation permits based on Decree No. 25 K/231/030000/1984 dated June 28, 1984. The land area that became the company's concession at that time was only 973.6 hectares. Because the area of the concession is still below 1,000 hectares, it means that land ownership by the mining company does not include land grabbing activities if it refers to the definition proposed by Cotula, Vermeulen, Leonard, and Keeley [14] above. However, since 2000, the concession area of PT. Kitadin added 2,000 hectares so that the total concession area of the company to 2,973.6 hectares was spread in four villages of Tenggara Seberang District, namely Kerta Buana, Bangun Rejo, Embalut, and Separi.

When the company started operations, the well-known mining method was underground pit mining, even though the actual method of open mining had been carried out in small areas (only a few points). With the underground pit mining method, the company does not damage the land surface. Land that is damaged is actually the interior of the land by building underground tunnels as access to take and lift coal to the surface. Therefore, the land surface with the underground pit mining method can still be used by farmers for agricultural activities. Mining activities that take place underground do not interfere with agricultural activities on it, even farmers themselves do not know whether the tunnels made by the company have arrived at their farm or not.

Changes in mining technology to a better direction will directly lead to a reduction in the workforce that will be recruited [20]. In fact, what often happens is the dismissal of special unskilled workers. Such conditions occur due to changes in mining methods from deep mines which are considered simpler to be more modern open pit mines. If the mine is relying on large numbers of human power, then the open-pit mining method of the company prioritizes the skills of the workers themselves with a smaller amount. If human power in the inner mine is used to dig the soil so that coal can be extracted from the ground, while in the open pit the skill is used to operate heavy-duty vehicles that are all mechanical and automatic.

When mining methods are carried out with deep mining, companies with farmers need each other. Farmers can work in companies as miners to get cash in the form of cash so they can buy their living needs. Instead, companies need large and inexpensive transmigrants to be employed in

underground tunnels. The first two years after the transmigrants were placed in the village of Kerta Buana, there were no expected agricultural products so that the existence of mining companies by making them miners was very helpful. At that time, the company could easily and cheaply find workers who were willing to work under the ground without having to bring it from other regions with higher costs. The working mechanism applied by the company was very helpful for transmigrant farmers. When workers are needed more in agricultural activities, they can easily leave the mine work temporarily and come back again after agricultural activities are finished. Not only that, if there are workers who quit the company within a few months, it can easily be done. If the 'rest period' has finished and wants to go back to work, the worker can only communicate with the foreman to be accepted to work again. In addition, to get the cash, there were also transmigrants who became wood pickers from inside the forest to the shaft road. This is possible because the upstream part of the Kerta Buana Village is a forest area that is the concession of a company that owns a forest concession right (HPH).

The negative impacts experienced by farmers and agricultural activities have only emerged after mining technology has changed from mining into a fully open pit mine. Called thorough because the mine no longer operates in total. Some said the closure of the mine was triggered by a landslide that occurred at a deep mine site in 2005, leaving five miners dead (three people died at the shelter and two people died in the hospital) [11]. In other words, the security system in mining in those days was relatively low. In fact, the risk of workplace accidents in deep mines is greater than in open pit mining [21]. Through an accident at the mine site in PT. Kitadin was added to other management problems, such as the absence of land to be exploited, eventually the mining of PT. Kitadin who was in Kitadin Village stopped operating completely in mid-2006.

When PT. Kitadin stopped operating and stopped the miners inside, a year before that (2005) open mining companies had operated, namely PT. Mahakam Sumber Jaya. Because the mining method between the inner mine and open pit is different, so the workers who are dismissed by PT. Kitadin cannot be employed or accommodated in the company PT. Mahakam Sumber Jaya. Finally, the dismissed workers returned to the farmland by working on their



farms. At that time, PT. Mahakam Sumber Jaya has already bought part of the land of farmers in the mining area to be exploited. With the open pit method, the surface of the ground is peeled off and moved to another place. The goal is that coal which is below the surface to a certain depth can be taken using heavy equipment. The use of heavy equipment resulted in the mining concessions in Block D of Kerta Buana village being less than one years old turned into large ponds, so the impression that arose was that farming activities in the large ponds were gaping as if they had never existed. The area of PT. Mining concessions Mahakam Sumber Jaya reached 20,380 hectares located in Tenggara Seberang District and Marangkayu District in Kutai Kartanegara Regency and North Samarinda District in Samarinda City.

Then in 2009, PT. Kitadin re-operated using the open pit method which had stopped in mid-2006. The return of PT. Kitadin operates meaning that at the same time, there are two open-pit mining companies that exploit coal in the Kerta Buana village and its surroundings. The presence of the two companies accelerated the destruction of the village environment and its surroundings, as well as the elimination of farmers' lands. Considering that the extraction of coal from the ground using the open pit method is relatively fast, this condition encourages the release of land owned by the farmers relatively quickly so that the availability of land to be exploited remains.

The process of land acquisition is carried out in various ways, including using third parties to negotiate with landowners. If negotiations are unsuccessful, intimidation of space - according to the term JATAM East Kalimantan, a NGO based in Samarinda East Kalimantan - to make farmers uncomfortable doing their activities, often becomes an alternative that is also mostly done by the company. Intimidation of the space was carried out by the company by dismantling the land in the upstream area which had been successfully freed with the intention that the water sources that would irrigate the rice fields were damaged so that the water flowing into the fields became dry. Anticipating the negative impact on agricultural activities if the upstream land has been exploited by the company, already carried out by the previous village head. However, when the village head has changed, the interests of each village head also change. Head of Kerta Buana village

1991-1999 period H. Abdul Wa'it<sup>3</sup> stated as follows:

*"The program that I run when I was head of the village, to free land owned by transmigrants in the village of Kerta Buana, do not free land from above (upstream), with the intention that agriculture is not damaged".*

In addition, the land adjacent to the paddy fields that have not been released is also exploited first without waiting for the land that has not been successfully acquired to be sold by the owner to the company. If the land next to it has been exploited, the surface of the paddy field is not strong enough to hold water because it seeps into the mining area that is being excavated because its position is far lower than the rice fields that are on the ground, so that the fields become dry. Rice fields that experience drought before time to dry, the growth becomes disrupted, even puso is likely to occur. Because the production costs of working on rice fields are greater than the results obtained, it is likely that the rice fields will be released for purchase by the company. The negative impact of open mining conducted by the company experienced by farmers, one of which was delivered by Kadek<sup>4</sup> as follows:

*"I often experience crop failure. Often planting rice seedlings is done twice because the first planting is submerged and buried by mud carried by water. After the flood recedes, rice fields are planted with new seeds. Therefore, the planting period in the*

<sup>3</sup> Interview with H. Abdul Wa'it at his home in Kerta Buana village on March 3, 2016.

<sup>4</sup> The interview with Kadek in the rice field hall he rented on July 15, 2015. Kadek was one of the transmigrant children who became farmers in the Kerta Buana Village. The rice fields he worked on were rented from other farmers with a profit sharing system, with a share of 1/3 for landowners and 2/3 for Kadek as cultivators. In this condition, the owners of rice fields only see the final results and do not want to know about the process and the losses experienced by farmers (tenants). Therefore, it is not uncommon for farmers in the village of Kerta Buana to work on other farmers' fields to divide their capital by 1/3 of the yield to the owners of rice fields. For example, with the planting period twice because the first planting was buried in mud, the total cost incurred from plowing to harvest was IDR 7 million. While the yield is only IDR 6 million because rice is submerged before being harvested so the yield is not optimal and the selling price of rice is low. In this case, the owner of the rice field only saw the yield of IDR 6 million, so that the part of the owner of the paddy field was 1/3 of that yield or around IDR 2 million. In fact, the yield of IDR 6 million is not enough to cover the capital that has been spent by farmers as much as IDR 7 million.

*same rice field can last two to three times. The thing that is even more detrimental, is that after the rice has issued a grain, in a few weeks it is ready to be planted. However, before the harvest day arrived it turned out that the paddy fields were flooded with water containing mud, as a result the rice plants fell down and some were buried in mud. Under these conditions, rice is harvested at a young age and the results are not optimal because the price is much cheaper if sold. "*

Moreover, the agricultural conditions experienced by Kadek, the rice fields rented by the profit sharing system, rice allocated to the owners of rice fields as a rental fee is capital, became a dilemma for landowners and tenants themselves. Such a phenomenon arises because the process of agricultural activities carried out does not run optimally. On the one hand, paddy owners are more pleased if their fields are rented by people with a profit sharing system so that the owners of the rice fields can only receive profit sharing without having to pay any fees. On the other hand, farmers are reluctant to rent other people's fields with a profit sharing system because the likelihood that is divided is the capital spent to work on the leased paddy fields due to the negative impact of mining activities that make agricultural activities not optimal, even suffer losses. With that dilemma option, many rice fields in the Kerta Buana Village are left abandoned without any planting. Following the FAO definition, land grabbing or large acquisitions of land damaged food security in the country where the acquisition took place [22] (Indonesia in general and Kutai Kartanegara District specifically) because agriculture in Tenggarong Seberang District, including in Kerta Buana village the district's rice barn has already taken place.

Environmental damage caused by open mining activities also eliminates the livelihoods of farmers who lost their land because they were released by the company. In other words, the presence of open mining has obscured their future, including the existence of the Kerta Buana village, because the village area that has been controlled by the company has been broader than the remaining ones. Acquisition of the land in Kerta Buana village is not agriculture land only because village as settlement is being exploited by company as the authors saw in the neighborhood association 16 (RT/rukun tetangga 16) on July 2019, when the authors visited this village. The remaining land is more settlements

than rice fields and gardens, whereas community activities in the Kerta Buana village still work more as farmers. Data in 2015 for example, the number of farmers with their own land is only 690 people (24.23%) of the population of the village of Kerta Buana, about 2,847 people. While farm laborers are much larger, the number reaches 1,468 people (51.56%). Thus, the village of Kerta Buana can be said to be a village of agricultural laborers even though when agricultural activities are still excellent, every household almost owns agricultural land. On the contrary, those who work in the private sector, including workers, are very small, which is 268 people (9.41%) [11]. That is, mining companies do not significantly recruit villagers as workers. Villagers with their capacity can be recruited as miners when the company uses deep mining methods. But when mining methods turn into open-pit mining with large-scale companies, as stated by Cordes, Östensson, and Toledano [23], the expertise possessed by local residents to be employed in mining is not in accordance with the needs of companies experiencing mechanization and automation. Even if there are manually operated to accommodate workers from the local population, the number is very small.

### **4.3 Role of the Government**

Land grabbing for plantation, mining and tourism interests greatly impacts communities with relatively small agricultural activities and community landowners in Southeast Asia [24], including in the Kerta Buana village, Indonesia. The impact that occurred in Kerta Buana village due to land grabbing carried out by mining companies in the village and surrounding villages was access to working on fertile land as agricultural activities became scarce. The government's involvement in land grabbing by a company is very large.

A company can operate somewhere when the owner of the company already has a permit issued by the government. This refers to the Republic of Indonesia Law No. 11 of 1967 concerning Basic Provisions for Mining, which was later amended to become Law of the Republic of Indonesia No. 4 of 2009 concerning Mineral and Coal Mining. Mining business licenses are the basis for the company to operate, even 'move' the landowners from their own land with various requirements. Allowing a mining company that already has a mining business permit on an area to carry out its work is an 'obligation' for the land rights holder. This is contained in the Republic of Indonesia's Law No.

11 of 1967 Article 26, which reads as follows: "If a mining permit has been obtained for an area, or region according to the applicable law, then those who are entitled to land are permitted to allow the work of the mining authority holder on the land concerned on consensus to him: a. before work begins, with a mining authorization or a valid copy shown, notified of the purpose and place of work to be carried out; b. be compensated or guaranteed compensation in advance ". Based on the sound of Article 26, the position of the company that holds the permit is in the upper hand when dealing with the holders of the right. Thus, there is no reason for the holder of the right to land if the mining permit holder has wanted it, plus if the presence of a mining company is also stated as a government program as stated by Yusuf above. Farmers are certainly increasingly brave, as stated by Li [25], if those who reject the 'development program' are labeled as communists or traitors of the nation.

The control of land in a certain area to be converted into a mining area concession belonging to a company is determined by the government. The political economy interests of the government are very playful in granting mining business licenses. Making Kerta Buana village a mining area, in fact is very contrary to the government's goal of placing transmigrants in the village. With a background as a farmer, the purpose of transmigrants joining the transmigration program is to farm on their own farms. Owning land itself is the motivation of transmigrants to participate in the transmigration program, because they do not have their own land to be processed in the area of origin. Through agricultural activities in their own land, transmigrants want to improve their welfare. The choice of farming is the main livelihood because the expertise they bring from their hometown is agricultural technology. The farming expertise is actually also expected by the government to be shared with local transmigrants who do not understand how to paddy.

Government involvement in land grabbing in Kerta Buana village is very reasonable. The government forced the village to be a transmigration location, even though in terms of land structure, Kerta Buana village was not suitable to be a settlement and agricultural area because the land consisted of peat swamps with a depth of more than 1.5 to 2 meters below the ground so it was categorized as peat is being The peat designation for the medium peat

category is for the development of annual crops (horticulture and plantations) [26]. This condition caused land in Kerta Buana village to be very difficult to be used as rice fields. However, not long after the transmigrants arrived in the village, mining companies were also invited to invest in the transmigration location in question. Not only that, in 2005 the government also invited other investors (PT. Mahakam Sumber Jaya) to invest waiting for PT. Kitadin, which previously operated the mine in operating again in 2009 with the method of open mining after previously the mining concession area was expanded by the government.

The presence of the two open-pit mining companies in the village of Kerta Buana and surrounding areas further accelerated the damage to agricultural land in the village. Not only that, the destruction process is getting longer. Because, along with the issuance of Law No. 4 of 2009 concerning Mineral and Coal Mining, PT Kitadin, which should have the validity period of the mining exploitation permit for only 30 years, refers to RI Law No. 11/1967 concerning the Basic Provisions of Mining in the Explanation of Article 12, by the government requesting that the company's mining business permit be adjusted to Law No. 4/2009 to become 40 years, namely 20 years plus an extension period of 10 years x 2 times the opportunity to extend. If the initial mining permit expires in 2014 based on RI Law No. 11/1967 because the exploitation permit began in 1984, so with Law No. 4/2009 the operational permit expires in 2024. In fact, if the government wants to save the Kerta Buana Village and the agricultural activities in it, the company PT. Kitadin should not be asked to adjust its licensing with new legislation which results in the company's operating period getting longer.

## **5. CONCLUSION**

Kerta Buana village is a residential and agricultural area allocated for transmigrants from Bali and Lombok. However, the village of Kerta Buana before being stable into a residential area especially agriculture, the government invited investors to invest in the village. The beginning of the presence of coal mining companies can be seen to save the transmigrants placed there because the they took a long time to make the area successful in agriculture. Because the method used by companies to exploit coal in the region is in the inner mine, the activity is relatively unobtrusive to the existing agricultural

activities, even the two activities can go hand in hand. The results were obtained by transmigrants as part of mining activities, that can support agricultural activities when they need of the other needs because agricultural products are experiencing disturbances, for example.

Mining activities become problematic for agricultural businesses when mining methods turn into open pit mining. By the open pit mining, the surface of the land being demolished is getting wider. In addition, the need for land surface to be dismantled is also extensive, including for temporary shelters to be peeled off, and the availability of land to be exploited must be as soon as possible because the process of extracting coal from the ground is so fast. Thus, the land acquisition in various ways was sought by the company, including using third parties and also in the form of space intimidation has make agricultural activity difficult to act. If farmers do agricultural activity, they will lose opportunity margin. Farmers are increasingly helpless to maintain their agricultural land because the land is increasingly unproductive due to the agricultural ecosystems have been destroyed, including water sources on it.

The negative impact on the spread of agricultural activities is the more frequent farmers fail in their agricultural activities. This resulted in the production costs incurred by farmers greater than the results obtained. Therefore, agricultural activities are increasingly not encouraging farmers to do so that the lands left abandoned without any planting are increasingly easy to find. If agricultural activities are carried out, it is probable that farmers will suffer losses due to failure, both during planting and harvesting, often occurring.

The government has a big stake in the process of taking over agricultural lands by making the transmigration location a mining area owned by companies through a mining business permit issued. The government's partiality to the transmigrants who had been placed in the village was relatively nonexistent. This was increasingly seen when companies were asked to adjust mining business licenses following the new legislation, which resulted in a longer period of validity of mining business licenses. Finally, it is important for future research to study the condition of villagers in Kerta Buana village who lost their livelihood as farmers to ask why the government does not review company

permits which operate there although the period of permit has not yet been completed. The permit review is important because the effects of company activity have made the villagers to be driven out from their village.

## **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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