1	<u>Original Research Article</u>
2 3	Techniques of Mining and Land Grabbing: Destruction of Agricultural Activities in Kerta Buana Village, East
4 5 6	Kalimantan - Indonesia
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10	Abstract
11 12 13 14 15 16 17 18 19 20 21 22 23	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 land 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 unconducive. Through this paper, we would like to explain how the land grabbing by coal mining companies work, and how method change of coal mining have accelerated the destroy of agriculture activity in Kerta Buana village.
24 25 26 27 28 29	Keywords: Land grabbing, Coal mining, Transmigration, Farmland, Open pit mining, and Underground pit mining.
30	Background
31	This paper aims to describe the process of land acquisition by coal mining companies in a
32	very large area and the negative impact caused by the existence of agricultural activities in Kerta
33 34	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
34 35	there. Such control of land by mining companies has resulted in many farmers losing their
36	agricultural land, because their ownership rights have been transferred to employers. In fact, land
37	for a farmer with agricultural activities is a very essential asset (Babalola and Olayemi 2013),
38	and is the main resource for the livelihoods of the poor (Raufu and Adetunji 2012) which usually
39	also operate in agriculture. This resulted in many farmers becoming farm laborers in their own
40	farm land or renting land owned by other farmers to work on. In addition, mining activities
41 42	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 43 44 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 (Klopp and Lumumba 2014), 45 46 Tanzania (Abdallah, Engström, Havnevik, and Salomonsson 2014), Argentina (Goldfarb and Zoomers 2014), Malawi (2013), and Cambodia (Nuijen, Prachvuthy, and Westen 2014) to 47 mention several countries. The use of land resulting from land grabbing is for the development of 48 large-scale agricultural activities such as tea plantations and also the development of plants to 49 50 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 51 agricultural sector was still around 2 billion and not agriculture as much as 1.7 billion. The 52 composition changed with a very large ratio in 2010, because the population working in the 53 agricultural sector was only 2.6 billion, while non-agricultural people reached 4.2 billion (Borras 54 and Franco 2012: 36). In other words, the agricultural sector is no longer an attractive field of 55 work so many are abandoned, even though agricultural products are very important for the 56 survival of humans who inhabit this earth. 57

58 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 59 conversion of agricultural land in Indonesia reached 3,247,737.5 hectares, equivalent to 60 141,205.98 hectares per year. Agricultural land conversion is one of the factors causing the food 61 crisis (Handoyo 2010: 118). The government tried to replace the converted land by printing new 62 paddy fields, but the effort was unsuccessful due to various factors. The results of Siburian' 63 study (2018) in Sei Kayu village, Kapuas District, for example, show that the 50 hectares of rice 64 fields printed by the government in 2017 and 200 hectares in 2016 have not produced results 65 until 2018, especially with the prohibition of land clearing with how to burn. The newly printed 66 rice fields, the cultivation is done by not burning. Land that has been opened if it is not burned, 67 local people term the land still 'crude', so it is not good/fertile if it has to be planted with rice. 68 The process so that the land is still 'crude' and newly printed that can produce optimally takes a 69 long time and must be treated specifically. 70

The method of extracting coal from the ground is divided into two, namely: underground 71 pit mine and open pit mine. The selection of mining methods carried out by a company correlates 72 with the volume of production obtained, the cost of production that must be spent by the 73 74 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 75 from the inner mine which uses mechanization and automation (open pit mine), so that the heavy 76 equipment that is operated by skilled and specialized personnel is used. Therefore, the 77 production volume produced by open pit mining is much greater than the underground pit mining 78 method. Example of coal production by PT. Kitadin from 1983 to 2003, the volume of coal 79 production from open-pit mining tended to be above the volume of mine production, and even in 80 1995, open mining production volumes continued to increase, while underground pit production 81 tended to decline (PT Kitadin 2015 quoted by Siburian 2017: 156). In fact, the explanation from 82 Bambang, the external part of PT. Kitadin, said that in those days coal production from open-pit 83 mining was not concentrated or still in certain points and the area was relatively small which was 84 termed the turtle system. If from 2001 to 2006, the production volume of open pit mining was 85 above one million metric tons per year, the volume of mining production was still below 300 86 87 noisy metric tons per year (PT. Kitadin 2013: I-2).

88 With the occurrence of land grabbing in Kerta Buana village, this paper wants to answer 89 several questions: 1). How does the land grabbing process take place in the village of Kerta 90 Buana?; 2). What is the impact of land grabbing that is happening to local communities, 91 especially farmers who are in the village?; and 3) What is the role of the government in the 92 process of transferring land functions from agricultural land, including settlements, to mining 93 areas?

#### 95 **Concepts and Methods**

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96 Land grabbing is defined as the power to control the land in a very large area by the 97 company (trans) nationally as a form of capital accumulation. This was done in response to the 98 food crisis, the impact of climate change in the short and long term, and the global financial 99 crisis. Land grabbing that leads to the purchase or acquisition of large areas of land is intended to 90 produce food, biofuels and animal feed (Batterbury and Ndi 2018: 573). Referring to Cotula, 101 Vermeulen, Leonard, and Keeley (2009: 7), the purchase transactions labeled "large scale", the 91 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 103 production. Therefore, Batterbury and Ndi (2018, quoted from Allan et al., 2013) further explain 104 that the definition of land grabbing does not include the acquisition or purchase of large areas of 105 land for mining activities or the construction of underground infrastructure, because the activity 106 often gets benefits in the form of adequate water supply. Franco et. al (2013: 5) added that land 107 grabbing as written on paper was carried out in 'empty', 'marginal', 'unemployed' or 'degraded' 108 lands, mostly uninhabited, unused, unproductive, and impossible to compete with local food 109 production. In short, land grabbing is done to increase land productivity so that it is more optimal 110 in responding to the ongoing food crisis. 111

In the context of this paper, the definition of land grabbing uses a broader understanding, 112 not just the acquisition or purchase of land which is solely aimed at producing food, biofuel, and 113 animal feed, but rather the impact caused by acquisition, both on society farmers and overall 114 food production. Therefore, land grab in this context refers to Batterbury and Ndi (2018: 574) 115 which states that in land grabbing cases, the signal at the place where land acquisition takes place 116 leads to the loss of farmers' access to their agricultural land. The loss of access to land resulted in 117 the community experiencing a process of impoverishment and marginalization. Or also the 118 definition of Twomey (2014: 4) that land grabbing is a form of transfer of use rights or control 119 over land, traditionally used by the community, to foreign investors for commercial purposes, 120 often in the agricultural sector. Entrepreneurs are often facilitated by strong domestic 121 partnerships, justified by the investments they bring, for example opening employment and 122 improving the regional economy. In other words, the investment brought by entrepreneurs can 123 convince the local government that the investments made are beneficial, at least in the interests 124 of the region. When farmers are no longer able to carry out their activities as farmers because 125 they no longer have proper agricultural land, one day they may be uprooted from the land and 126 social landscape that has made it a place to express social, cultural and religious life freely. They 127 get satisfaction from expressing that social, cultural and religious life. When the social landscape 128 is gone, the condition will make farmers suffer even more. 129

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, 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 (2016) also defines land grabbing in a broader 138 scope, namely: "selling or renting land that is used permanently, seasonally, or based on cycles 139 carried out by individuals who actually have not agreed to the transfer of land owned, regardless 140 141 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 142 143 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 144 various contexts, and results in a variety of negative results. Consequences usually include 145 displacement, loss of income and livelihoods, increasing vulnerability, occurrence of food 146 insecurity and malnutrition, loss of biodiversity, and environmental damage including air, soil 147 and water. Based on these consequences, referring to Onoja (2015: 174) farmers will be the first 148 victims of the land grabbing action. The existence of land grabbing causes farmers to lose their 149 farmland as well as their livelihoods (Brink et al 2017: 18), even his identity as a farmer is also 150 eroded. 151

The method of data collection in Kerta Buana village is a combination of various approaches, including: in-depth interviews with various informants such as farmers, landowners, government staff, 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.

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# 160 Site of Study

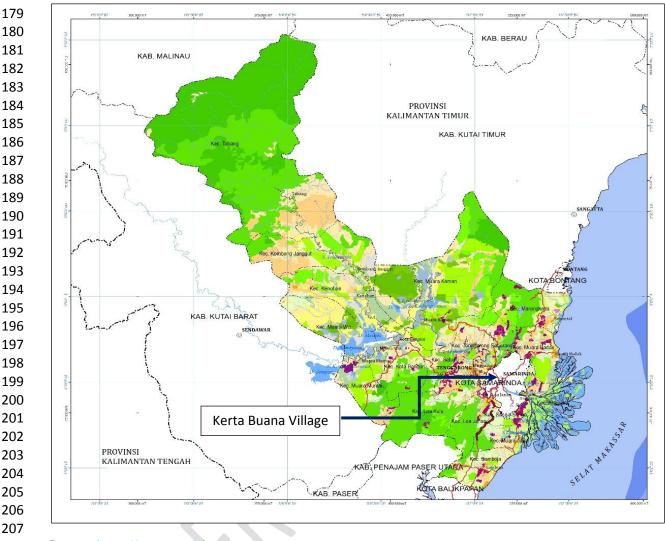
161 Kerta Buana village which is the location of this study is part of the Tenggarong 162 Seberang Sub-district, Kutai Kartanegara Regency, East Kalimantan Province (See the Map). 163 Kerta Buana village was originally the location of transmigration with three other villages known 164 as the Teluk Dalam Transmigration Settlement Unit (*Unit Permukiman Transmigrasi-UPT*) 165 which was occupied in 1980. Three other villages before was split as an autonomous village 166 were Bukit Raya (UPT Teluk Dalam I), Manunggal Jaya (UPT Teluk In II),<sup>1</sup> and Bangun Rejo 167 (Teluk Dalam III). Kerta Buana village itself is the UPT Teluk Dalam IV.

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<sup>&</sup>lt;sup>1</sup> In 2004, Karang Tunggal village as a village as a 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.

#### 178 Map of Kutai Kartanegara District



<sup>208</sup> Source: <u>https://www.google.com</u>
209 (Access on February 18<sup>th</sup>, 2019)

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211 The government sent transmigrants to Kerta Buana village in 1980. The transmigrants came from two islands, namely Bali and Lombok. Nevertheless, there were three ethnic groups 212 of the transmigrants, namely Bali, Sasak (by the people in the Kerta Buana village who know 213 him better than Lombok), and Java. The Javanese sent to Bali were those who have long lived on 214 215 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 216 217 transmigrants. Transmigrants with Balinese ethnic groups embrace Hinduism and transmigrants with Sasak and Javanese ethnic groups are Muslim. 218

In addition to bringing transmigrants from Bali and Lombok Island, the government also accommodates 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 (Siburian 2017: 280- 281).

230 The population of Kerta Buana village transmigration participants stationed in the village 231 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 232 233 54 KK or 266 peoples (Siburian 2017: 447). 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, 234 the population inhabiting the village has increased dramatically, to 5,411 people. The ethnic 235 groups that inhabit that region have also increased, namely Kutai, Dayak, Java, Sasak (Lombok), 236 Bali, Bugis, Batak, Manado, Banjar, Flores, Sunda, Sumbawa, Bali-Lombok, Madura, and 237 Chinese. The dominant population remained in the four tribes who were transmigration 238 participants in 1980, namely Bali, Sasak (Lombok), Java, and Kutai (Siburian 2017: 85). The 239 population increase of around 306% is inseparable from the presence of coal mining companies 240 in the villages of Kerta Buana and surrounding villages. 241

Kerta Buana village with an area of around 23.25 km2 borders the village of Brambai 242 (Sempaja village, North Samarinda District) in the east, Separi village in the west, Bukit 243 Pariaman village in the north, and Bangun Rejao village and Embalut village in the south. The 244 village with 26 neighborhoods (rukun tetangga-RT) is further divided into 4 hamlets, namely 245 Rapak Rejo (7 RT), Rinjani Indah (6 RT), Sida Karya (7 RT), and Budi Daya (6 RT). 246 Nevertheless, the division of village areas based on blocks which are inherited from the 247 Transmigration Settlement Unit (UPT) is better known by villagers than based on hamlets and 248 RTs. In other words, the identification of villages divided by blocks is more familiar to villagers 249 and it is easier for them to designate their existence. Kerta Buana village is divided into 5 blocks, 250 namely Block A, Block B, Block C1, Block C2, and Blok D. The villagers in Block A and Block 251 252 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 253 in Block D, the numbers are balanced between Balinese and Javanese and Lombok people. 254

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#### 256 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, 257 agriculture, and mining. The village as a settlement location began in 1980 as the location was 258 made as a transmigration settlement. The transmigrants after arriving in the village of Kerta 259 Buana received a land area of 2 hectares, divided into three fields. Land with an area of 1/4 260 hectares is residential and vard land, and on that land houses have been built to be occupied by 261 transmigrants. One hectare of land known as one business land is wet land, intended as a place to 262 plant rice. Another land area of <sup>3</sup>/<sub>4</sub> hectare is dry land in the form of a garden which is used to 263 grow palawija crops. 264

When the transmigrants arrived in Kertaa 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 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 275 patience to keep on working on it, they can 'magic' the peatland into agricultural land. Until 276 277 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 278 279 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. 280 There needs to be a hard struggle and patience, because with such land types there is no hope of 281 success in agriculture. This condition resulted in many transmigrants who then returned to their 282 283 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 284 happened was divorce due to no meeting point between husband and wife. 285

The remaining rice fields can still be found on either side of the axis road in Block D. 286 The success of the Kerta Buana village and other transmigration villages in Tenggarong 287 Seberang District built rice fields, so that the rice fields from the sub-district contribute 288 significantly to the supply of paddy for Kutai Kartanegara Regency, while making it a rice barn 289 for the district. The Mulawarman District Government appreciated the farmers in the sub-district 290 by establishing a rice processing unit (RPU) in Manunggal Jaya village in 2001. Although in its 291 later journey, the existence of the RPU was not welcomed by farmers because of the business 292 mechanism implemented by regional companies it is considered not to benefit farmers (Siburian 293 294 2017).

When rice production from paddy fields in the Kerta Buana village is at its peak, the 295 government actually presents a coal mining company with an open pit method. The Kerta Buana 296 village includes the area of rice fields inside it ikan pawned 'on mining companies by making it a 297 298 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 299 (exploration) and 1982 (exploitation), but the method of mining that is applied is better known as 300 301 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. 302

At the beginning of PT. Kitadin operates in Kertas Buana village, exploited land is land 303 that has not been certified. The position of the land is on the edge of the village, outside the yard, 304 business area one, and business land two. The area of non-certified land is wider than certified 305 land. If the area of Kerta Buana village is 23.25 Km2 or 2,325 hectares, after deducting certified 306 land as part of the 2 hectares transmigration package for 430 family heads, then the non-certified 307 land reaches 1,465 hectares. The non-certified land includes restoration land, reserve land and 308 land for public facilities such as fields, roads and village roads, village head offices, schools, 309 mosques, and public temples. Reserved land is the most extensive, and mining companies 310 initially operated in these lands. In 1994, the company began to release certified land owned by 311 transmigrants, as stated by Yusuf,<sup>2</sup> as follows: 312

<sup>&</sup>lt;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.

"In the beginning, the company still (worked on) land that had not been certified. 313 (At) in 1994, (the company) began to enter transmigration land. In the past, the 314 company compensated farmers. What is compensated by the company is the plants 315 grown on it and their management. Land area itself. However, when compared to 316 the price of land which is a compensation, the compensation value is far below. 317 The price of land per hectare is IDR 8 million. Land is valued at a low value 318 because transmigrants consider the presence of the company as a government 319 320 program ".

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322 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 323 Buana village took place in a certain way, resulting in agricultural activities continue to 324 experience disruption due to the negative impact it caused. Rice fields that have been planted 325 with rice and then submerged in mud-filled water in the rainy season, have often happened. On 326 the other hand, rice fields experience drought during the dry season because the forest in the 327 upstream part of the rice fields has been damaged so that the natural water storage area during 328 329 the rainy season is also damaged.

As more and more of the land belonging to transmigrants has been freed and has also 330 been exploited by mining companies, this has resulted in mining activities no longer far from 331 residential settlements. This condition actually violates the applicable regulations, namely the 332 Regulation of the Minister of Environment of the Republic of Indonesia Number 04 of 2012 333 concerning Environmentally Friendly Indicators for Business and / or Open Coal Mining 334 Activities, in the Attachment of the mining stage in mining material extraction and extraction 335 which states that "Distance the edge of the excavation is at least 500 (five hundred) meters from 336 the boundary of the IUP (initial hue adjacent to the settlement)". While the conditions that occur, 337 the distance between the IUP and the residential areas in the Kerta Buana village is less than 500 338 meters. Mining activities at several points are located right next to people's homes. Therefore, the 339 Kerta Buana village is now better known as coal mining than its agricultural activities, because 340 341 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 342 deep mines. In other words, farmers in Kerta Buana village are no longer able to rely solely on 343 agriculture as a livelihood. The village economy has also been very dependent on mining 344 activities, so when in 2015-2016 coal prices declined in the international market which resulted 345 in many employees being laid off, people who did not work in mining companies complained 346 about the condition. Many of the economic activities of the community were disrupted because 347 layoffs made some employees leave Kerta Buana village, even though they were consumers of 348 economic activities carried out by the village community. 349

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# 351 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 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 (2009: 7) 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 in Tenggarong Seberang District, namely Kerta Buana, Bangun Rejo, Embalut, and Separi.

When the company started operations, the well-known mining method was underground 365 pit mining, even though the actual method of open mining had been carried out in small areas 366 (only a few points). With the underground pit mining method, the company does not damage the 367 land surface. Land that is damaged is actually the interior of the land by building underground 368 tunnels as access to take and lift coal to the surface. Therefore, the land surface with the 369 underground pit mining method can still be used by farmers for agricultural activities. Mining 370 activities that take place underground do not interfere with agricultural activities on it, even 371 372 farmers themselves do not know whether the tunnels made by the company have arrived at their farm or not. 373

374 Changes in mining technology to a better direction will directly lead to a reduction in the workforce that will be recruited (Basu 2007: 12). In fact, what often happens is the dismissal of 375 special unskilled workers. Such conditions occur due to changes in mining methods from deep 376 mines which are considered simpler to be more modern open pit mines. If the mine is relying on 377 large numbers of human power, then the open-pit mining method of the company prioritizes the 378 skills of the workers themselves with a smaller amount. If human power in the inner mine is used 379 to dig the soil so that coal can be extracted from the ground, while in the open pit the skill is used 380 to operate heavy-duty vehicles that are all mechanical and automatic. 381

When mining methods are carried out with deep mining, companies with farmers need 382 each other. Farmers can work in companies as miners to get cash in the form of cash so they can 383 buy their living needs. Instead, companies need large and inexpensive transmigrants to be 384 employed in underground tunnels. The first two years after the transmigrants were placed in the 385 village of Kerta Buana, there were no expected agricultural products so that the existence of 386 387 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 388 bring it from other regions with higher costs. The working mechanism applied by the company 389 was very helpful for transmigrant farmers. When workers are needed more in agricultural 390 activities, they can easily leave the mine work temporarily and come back again after agricultural 391 activities are finished. Not only that, if there are workers who quit the company within a few 392 months, it can easily be done. If the 'rest period' has finished and wants to go back to work, the 393 worker can only communicate with the foreman to be accepted to work again. In addition, to get 394 the cash, there were also transmigrants who became wood pickers from inside the forest to the 395 shaft road. This is possible because the upstream part of the Kerta Buana Village is a forest area 396 that is the concession of a company that owns a forest concession right (HPH). 397

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) (Siburian 2017: 158). 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 (World Coal Institute 2005: 10). 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.

408 When PT. Kitadin stopped operating and stopped the miners inside, a year before that (2005) open mining companies had operated, namely PT. Mahakam Sumber Java. Because the 409 mining method between the inner mine and open pit is different, so the workers who are 410 dismissed by PT. Kitadin cannot be employed or accommodated in the company PT. Mahakam 411 412 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 413 mining area to be exploited. With the open pit method, the surface of the ground is peeled off 414 and moved to another place. The goal is that coal which is below the surface to a certain depth 415 can be taken using heavy equipment. The use of heavy equipment resulted in the mining 416 concessions in Block D of Kerta Buana village being less than one years old turned into large 417 ponds, so the impression that arose was that farming activities in the large ponds were gaping as 418 if they had never existed. The area of PT. Mining concessions Mahakam Sumber Jaya reached 419 420 20,380 hectares located in Tenggarong Seberang District and Marangkayu District in Kutai Kartanegara Regency and North Samarinda District in Samarinda City. 421

Then in 2009, PT. Kitadin re-operated using the open pit method which had stopped in 422 mid-2006. The return of PT. Kitadin operates meaning that at the same time, there are two open-423 pit mining companies that exploit coal in the Kerta Buana village and its surroundings. The 424 presence of the two companies accelerated the destruction of the village environment and its 425 surroundings, as well as the elimination of farmers' lands. Considering that the extraction of coal 426 from the ground using the open pit method is relatively fast, this condition encourages the release 427 of land owned by the farmers relatively quickly so that the availability of land to be exploited 428 429 remains.

430 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 431 to the term JATAM East Kalimantan, a NGO based in Samarinda East Kalimantan - to make 432 433 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 434 the land in the upstream area which had been successfully freed with the intention that the water 435 436 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 437 been exploited by the company, already carried out by the previous village head. However, when 438 the village head has changed, the interests of each village head also change. Head of Kerta Buana 439 village 1991-1999 period H. Abdul Wa'it<sup>3</sup> stated as follows: 440

- 441 "The program that I run when I was head of the village, to free land owned by
  442 transmigrants in the village of Kerta Buana, do not free land from above
  443 (upstream), with the intention that agriculture is not damaged".
- 444

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

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

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 455 because the first planting is submerged and buried by mud carried by water. After 456 the flood recedes, rice fields are planted with new seeds. Therefore, the planting 457 period in the same rice field can last two to three times. The thing that is even 458 more detrimental, is that after the rice has issued a grain, in a few weeks it is 459 ready to be planted. However, before the harvest day arrived it turned out that the 460 paddy fields were flooded with water containing mud, as a result the rice plants 461 fell down and some were buried in mud. Under these conditions, rice is harvested 462 at a young age and the results are not optimal because the price is much cheaper 463 if sold. " 464

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The agricultural conditions experienced by Kadek, moreover the rice fields rented by the 466 profit sharing system, rice allocated to the owners of rice fields as a rental fee is capital, became 467 a dilemma for landowners and tenants themselves. Such a phenomenon arises because the 468 process of agricultural activities carried out does not run optimally. On the one hand, paddy 469 owners are more pleased if their fields are rented by people with a profit sharing system so that 470 the owners of the rice fields can only receive profit sharing without having to pay any fees. On 471 the other hand, farmers are reluctant to rent other people's fields with a profit sharing system 472 because the likelihood that is divided is the capital spent to work on the leased paddy fields due 473 to the negative impact of mining activities that make agricultural activities not optimal, even 474 suffer losses. With that dilemma option, many rice fields in the Kerta Buana Village are left 475 476 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 477 (Samranjit, without years) (Indonesia in general and Kutai Kartanegara District specifically) 478 479 because agriculture in Tenggarong Seberang District, including in Kerta Buana village the district's rice barn has already taken place. 480

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

<sup>&</sup>lt;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 Rp. 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 Rp. 6 million, so that the part of the owner of the paddy field was 1/3 of that yield or around Rp. 2 million. In fact, the yield of Rp 6 million is not enough to cover the capital that has been spent by farmers as much as Rp 7 million.

483 presence of open mining has obscured their future, including the existence of the Kerta Buana 484 village, because the village area that has been controlled by the company has been broader than the remaining ones. The remaining land is more settlements than rice fields and gardens, whereas 485 486 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 487 population of the village of Kerta Buana, about 2,847 people. While farm laborers are much 488 489 larger, the number reaches 1,468 people (51.56%). Thus, the village of Kerta Buana can be said 490 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 491 492 sector, including workers, are very small, which is 268 people (9.41%) (Siburian 2017: 93). That is, mining companies do not significantly recruit villagers as workers. Villagers with their 493 capacity can be recruited as miners when the company uses deep mining methods. But when 494 495 mining methods turn into open-pit mining with large-scale companies, as stated by Cordes, Östensson, and Toledano (2016: 6), the expertise possessed by local residents to be employed in 496 mining is not in accordance with the needs of companies experiencing mechanization and 497 498 automation. Even if there are manually operated to accommodate workers from the local population, the number is very small. 499

#### 501 **Role of the Government**

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Land grabbing for plantation, mining and tourism interests greatly impacts communities with relatively small agricultural activities and community landowners in Southeast Asia (Hak, McAndrew, and Neef 2018), 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 508 issued by the government. This refers to the Republic of Indonesia Law No. 11 of 1967 509 concerning Basic Provisions for Mining, which was later amended to become Law of the 510 Republic of Indonesia No. 4 of 2009 concerning Mineral and Coal Mining. Mining business 511 licenses are the basis for the company to operate, even 'move' the landowners from their own 512 land with various requirements. Allowing a mining company that already has a mining business 513 permit on an area to carry out its work is an 'obligation' for the land rights holder. This is 514 contained in the Republic of Indonesia's Law No. 11 of 1967 Article 26, which reads as follows: 515 "If a mining permit has been obtained for an area, or region according to the applicable law, then 516 those who are entitled to land are permitted to allow the work of the mining authority holder on 517 the land concerned on consensus to him: a. before work begins, with a mining authorization or a 518 valid copy shown, notified of the purpose and place of work to be carried out; b. be compensated 519 or guaranteed compensation in advance ". Based on the sound of Article 26, the position of the 520 company that holds the permit is in the upper hand when dealing with the holders of the right. 521 Thus, there is no reason for the holder of the right to land if the mining permit holder has wanted 522 it, plus if the presence of a mining company is also stated as a government program as stated by 523 Yusuf above. Farmers are certainly increasingly brave, as stated by Li (2012: 109), if those who 524 reject the 'development program' are labeled as communists or traitors of the nation. 525

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

529 mining area, in fact is very contrary to the government's goal of placing transmigrants in the 530 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 531 532 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 533 want to improve their welfare. The choice of farming is the main livelihood because the expertise 534 they bring from their hometown is agricultural technology. The farming expertise is actually also 535 536 expected by the government to be shared with local transmigrants who do not understand how to 537 paddy.

538 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 539 structure, Kerta Buana village was not suitable to be a settlement and agricultural area because 540 the land consisted of peat swamps with a depth of more than 1.5 to 2 meters below the ground so 541 it was categorized as peat is being The peat designation for the medium peat category is for the 542 development of annual crops (horticulture and plantations) (Napitupulu and Mudiantoro 2015). 543 544 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 545 invited to invest in the transmigration location in question. Not only that, in 2005 the government 546 also invited other investors (PT. Mahakam Sumber Jaya) to invest waiting for PT. Kitadin, which 547 previously operated the mine in operating again in 2009 with the method of open mining after 548 previously the mining concession area was expanded by the government. 549

The presence of the two open-pit mining companies in the village of Kerta Buana and 550 surrounding areas further accelerated the damage to agricultural land in the village. Not only 551 that, the destruction process is getting longer. Because, along with the issuance of Law No. 4 of 552 2009 concerning Mineral and Coal Mining, PT Kitadin, which should have the validity period of 553 the mining exploitation permit for only 30 years, refers to RI Law No. 11/1967 concerning the 554 Basic Provisions of Mining in the Explanation of Article 12, by the government requesting that 555 the company's mining business permit be adjusted to Law No. 4/2009 to become 40 years, 556 557 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 558 permit began in 1984, so with Law No. 4/2009 the operational permit expires in 2024. In fact, if 559 the government wants to save the Kerta Buana Village and the agricultural activities in it, the 560 company PT. Kitadin should not be asked to adjust its licensing with new legislation which 561 results in the company's operating period getting longer. 562

563

# 564 Conclusion

Kerta Buana village is a residential and agricultural area allocated for transmigrants from 565 Bali and Lombok. However, the village of Kerta Buana before being stable into a residential area 566 especially agriculture, the government invited investors to invest in the village. The beginning of 567 the presence of coal mining companies, can be seen to save the transmigrants placed there 568 because the transmigrants took a long time to make the area successful in agriculture. Because 569 the method used by companies to exploit coal in the region is in the inner mine, the activity is 570 relatively unobtrusive to the existing agricultural activities, even the two activities can go hand in 571 hand. The results obtained by transmigrants as part of mining activities, can support agricultural 572 activities when they need other needs because agricultural products are experiencing 573 disturbances for example. 574

575 Mining activities become problematic for agricultural businesses when mining methods 576 turn into open pit mining. With 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 577 578 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 579 580 acquisition in various ways was sought by the company, including using third parties and also in the form of room intimidation. Farmers are increasingly helpless to maintain their agricultural 581 582 land because land is increasingly unproductive because agricultural ecosystems have been destroyed, including water sources on it. 583

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 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.

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