

A photograph of a dirt road winding through a lush green forest. The road is reddish-brown and appears to be under construction or recently cleared. The forest is dense with various green plants and trees. In the background, there are some utility poles and a cloudy sky. The overall scene is a natural, rural landscape.

# ACCESS: GRANTED

Impacts of road and joint-venture scheme in  
Kampung Keranggas

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# Abstract

In 2007, an oil palm joint-venture project was launched in the Keranggas area and with that, a road was established to connect the surrounding villages to the federal road network. Until then, transport took place exclusively by river. This study investigates how the villagers in Keranggas ensure their livelihood conditions by analysing decision-making processes in farming and for the joint-venture scheme. The study clarifies how villagers are affected by different asset-levels in relation to recent changes and daily activities. It examines how villagers are influenced by the joint-venture company and oil palm road, how land is managed politically. The study finds that the road and joint-venture scheme, though in principle available for all, will not benefit everyone equally. The stronger asset-composition a household has, the better it can and will take advantage of new opportunities. Participating villagers in the oil palm joint-venture scheme, thus sceptical in the beginning, are found to be rather positive today. They partially owe it to themselves, as they through negotiations have ensured a better deal with the joint-venture company, as well as a gravel road soon to be asphalted, thanks to their own application for it. Even with improved market access to sell villagers' own cash crops, this does not necessarily lead to a greater land area being cultivated for other crops than oil palm. An increasing average age of the villagers, caused by migration, is working against this opportunity, as the available labour input decreases.

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## List of Authors

Chapter	Main author(s)
Abstract	All
Abbreviations & Definitions	All
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Conceptual Framework	Yizuo
Research Question & Data Matrix	All
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- SSI	Lærke
- Focus Group	Lærke
- Observation	Lærke
- Participatory observation	Christian
- Informal Talk	Yizuo
- PRAs	Yizuo & Christian
- Questionnaire	Christian
- Soil & Water Sampling	Lærke & Yizuo
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Results & Discussion	
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- Sub-question 3.2	Christian
Conclusion	All
Discussion: Rise of Individualism	Christian
Further study of Keranggas	Christian
Acknowledgements	Christian

## Abbreviations

ADC	Villager Joint-Venture Shareholder Representation Committee
FFB	Fresh Fruit Bunch (from palm trees)
FG	Focus Group
HH	Household
JVC	Joint Venture Company
LCDA	Land Custody and Development Authority
OPR	Oil Palm Road, established by JVC company
SLF	Sustainable Livelihoods Framework
TR	Tuai Rumah, headman

## Introduction

This study was conducted in Kampung Keranggas, a village situated approximately 15-20 km from Pantu town in Sarawak, one of Borneo's two Malaysian states. Until the 1970s, Borneo's agricultural practice was dominated by smallholder shifting cultivation of mainly upland rice (Mertz et al., 2008: 6). Sarawak has during the past 30 years undergone the most rapid and radical transformation of its rural landscapes ever seen (Cramb, 2013: 190). Specifically, the oil palm industry has seen phenomenal growth (Mambu, 2013: 2).

“In the early 2000s, large-scale oil palm planting accelerated in Sarawak [...], much later than in many of the other Malaysian states. Large areas of land were designated for planting oil palm, as a result, Sarawak achieved the highest rate of increment in oil palm cultivated area in Malaysia since 2002” (Hon and Shibata, 2013: 22).

Kampung Keranggas, has also undergone significant changes due to large-scale oil palm plantation. According to our field study, Winsome Pelita Keranggas, a joint venture company (JVC), entered the village in 2007 after discussions with the villagers. Using the land leased by villagers for OP cultivation, they created the oil palm road (OPR) to the village in the same year, making it possible to drive vehicles to

Pantu. If a picture of the villagers' current way of life is to be drawn, the impact of this change is momentous. Firstly, this study focuses on the impact of changes of the OPR and JVC.

The initial hypotheses regarding the JVC were both positive and negative. In positive aspects, the initial hypotheses were that the JVC would enrich villagers' income composition and income. Meanwhile, the road has positive externalities, bringing potential benefits to the villagers, such as market access. What we experienced in the field was that households were not all able to benefit from these developments in the same manner. According to Cramb and McCarthy, JVCs are often depicted as institutional arrangements that may bring conflicts to the village, though generating income. What authorities tend to call "resolving", is sometimes seen by researchers as attempts to force out communities from their ancestral land, by intimidation, violence, and states police powers (2016: 200). Therefore, the second part of this study will clarify certain limited aspects of how villagers manage their NCR land politically, what the level of conflict is.

For the third part of this study, different assets of the villagers are considered in relation to how they affect the different villagers' room for maneuvering. The Sustainable Livelihood Framework (SLF) is used to illustrate how HHs asset-levels will affect the gains, income or making of other assets. In other words: Which assets are important for what and how do the assets inter-relate?

## Research question

**How do people ensure their livelihood conditions in daily activities and relevant changes, and in what degree are they impacted by their availability and restrictions of assets?**

### Sub-questions:

- 1) How do OPR and JVC establishment affect the different types of village households?
- 2) How do villagers manage their NCR land politically and what power-relations and conflict level are seen?
- 3) Which assets seem to determine HHs' room to maneuver?

### Data Matrix

Research Question	Sub-question	Activity	Data to apply
How do people	1. How do OPR and JVC establishment affect the	Mobility Maps Observations	JVC brings road and new income. Observations' change of assumptions

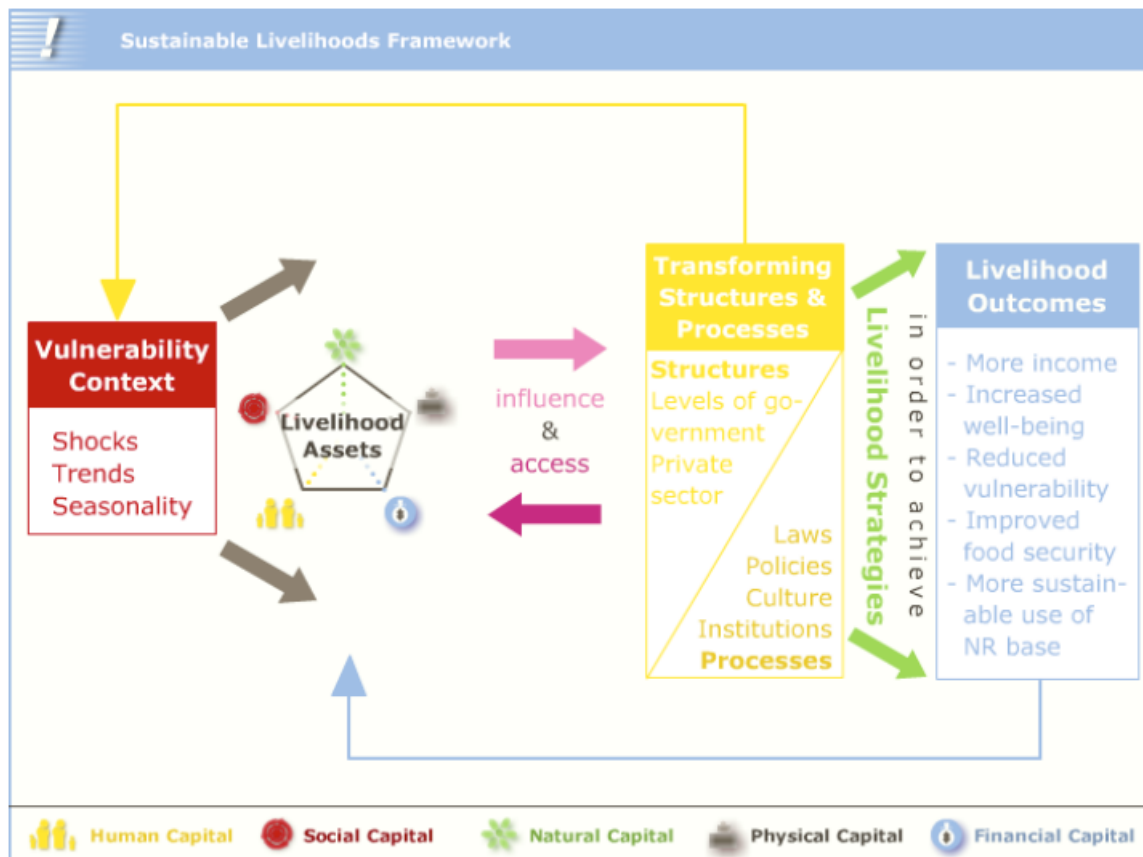


<b>ensure their livelihood conditions in daily activities and relevant changes, and in what degree are they impacted by their availability and restrictions of assets?</b>	different types of village households?	ADC leader SSI Lifestory SSI Headmen focus, SSI and Timeline Income Composition	Difference in mobility
	2. How do villagers manage their NCR land politically and what power-relations and conflict level are seen?	ADC leader SSI Private OP SSI TR SSI Informal talks Private OP FG	Low conflict level ADC - presence to villagers and power + altered agreement w. villagers' requirements + higher incentives OP SSI: Safeguarding not to loose land to JV OP FG
	3. Which assets seem to determine HHs' room to maneuver?	Lifestory SSI, Mobility Map Observations, OP FG Participatory Observation Income composition Crop Ranking + Soil Income composition Shopkeeper group unstructured interview	How capitals give more or less access to other services, needs and/or capitals

Table 1: Data Matrix

## Conceptual Framework

The sustainable livelihood framework raised by the The UK Department for International Development (DFID) divides the livelihood into five capitals: Human, natural, physical, financial and social capital. It describes how farmers improve their livelihoods in the risky environment caused by market, institutional policies and natural factors by navigating within their resources, rights and possible strategies. Reflecting the interaction between the capital structure, decision-making and objectives. This element of the framework utilizes a pentagon to describe livelihood assets, with each point assigned to a particular type of asset so that the shape of the pentagon changes as stores of certain types increase (Scoones, 1998: 72). Our research takes departure in this framework by using it to describe the livelihood strategies of two specific households to prove which assets seem to determine their room to maneuver.



Picture 1: Sustainable Livelihoods Framework (glopp.com)

“The sustainable livelihood approach empowers the poor by seeing them not as victims, but as decision-makers with their own sets of priorities. Its transcendence of a sector-by-sector view of development accommodates the variety of economic activities an individual may rely on in order to subsist. To this end, the livelihoods approach takes a more holistic view of poverty, considering multiple resources beyond income levels and productivity” (Carney et al., 1999: 3).

Figure 1: Quote on sustainable livelihood framework

Our research is guided by the ideology of this framework leading us to focus on the how the villagers in different livelihood capitals benefit differently through the recent changes, what is the interaction between the capital structure and the decision-making processes to ensure their livelihoods.

## Methods

### SSI – Semi-structured Interviews

We designed a general SSI guideline focusing on following topics: JVC, concerns, decision-making, time use, income and aspirations for the future. Besides the general guideline, four specific guidelines were designed for: Headmen, households (leasing land/not leasing land) and adolescents.

Key informants were found by the snowballing method. Initial interviews were conducted with the headman of our host longhouse, who provided us with baseline information about Keranggas. During a transect walk another key informant were coincidentally introduced, the ADC leader of Keranggas. Before interviewing the ADC leader, an interview was conducted with a private OP initiator, creating new questions on mainly the JVC, whom the ADC leader was then conveniently the one to answer.

### Transect Walks and Group Interviews

We had two transect walks around the village and some surrounding land. First time with guides and second time on our own, triangulating our results. On the second walk we were informally invited to the outside of a house which then became an unstructured group interview, raising questions to be followed up with our headman and the headman focus group. We also managed to arrange an unstructured group interview with shop-keepers following the crop ranking PRA for which both were present.

### Focus Groups (FG)

Three FG interviews were conducted. One with headmen, adolescents and private oil palm smallholders. Method-wise the FG with the headmen floated between FG, group SSI and PRA. Significant changes within the village from 1995 till present moment was discussed and a timeline was drawn as well as a resource map. Everyone participated and the discussion flow was steady. The roles were clearly divided and everyone including interpreters were briefed beforehand. If a second FG could be conducted with them, more controversial discussions would be initiated. The headmen FG gave a baseline-knowledge for further research. Our approach for FG with adolescents was different. Due to miscommunication and availability, we were just informed once the participants arrived. This forced us to start on the spot without preparations, briefing of interpreters, role divisions nor proper introduction. Prior we had a guideline for them, but it quickly showed too abstract and thus the discussions were minimal. The adolescents showed signs of shyness and were perhaps overwhelmed by the number of interviewers, thus taking characteristics of group interview, which meant discussion was too limited. If another opportunity were given, preparation, role division and themes would have been better prepared.

## Questionnaires

Questionnaires are used to obtain a baseline understanding of the activities, income composition, decision making and asset-disposal for villagers.

From the headmen FG and talks within longhouse, we added longhouse divisions, affiliations and number of HH. We were told slightly different numbers of total bileks going from 54 to 64. We decided to use a systematic random sampling, choosing every second bilek. We had to be aware that some physical longhouses consisted of two socially diverted longhouses, in order to appropriately represent all of them. After determining the final questionnaire, we conducted three pilot surveys and the questionnaire was modified according to the feedback from the respondents and translators. The questionnaires were translated into Iban for easier application.

We split into two groups and both experienced the distribution of HH's did not match the information on our resource map. Therefore, the map was modified during the survey and the sampling method was altered along the way. The Northern team tried to sample as accurate as possible according to resource map, but the Southern team had to take whoever was at home as the largest longhouse was more or less empty.

It turned out that the approaches had not been completely synchronized of the first day out of two. It was important to make sure that both interpreters would open up by clarifying the distinction between an interview and a questionnaire, because we were looking for simple answers to specific questions. This speeded up the process significantly for the next day.

We defined HH as "parents + dependents" but we regret not asking about all children's education level, occupation and the importance of remittances from the beginning. This could have helped clarify to what extent they may be able to utilise the road access differently depending on their asset level.

When asked about which ways roads improve their lives (see appendix), almost all agreed with all options given. Hence it is not possible to accurately determine which aspects of the road that have a greater impact. Instead we should have asked openly about the OPR's most significant outcomes, and then count the most often occurred answers.

All together, we got 25 responses, incl. pilots.

## Participatory Observation in Pepper Field

In order to better understand daily work activities, we asked our headman's brother if he could take us to the family's pepper field. It was quickly arranged that we would go the next morning. Surely, participatory observation was a good method for understanding HH decision making.

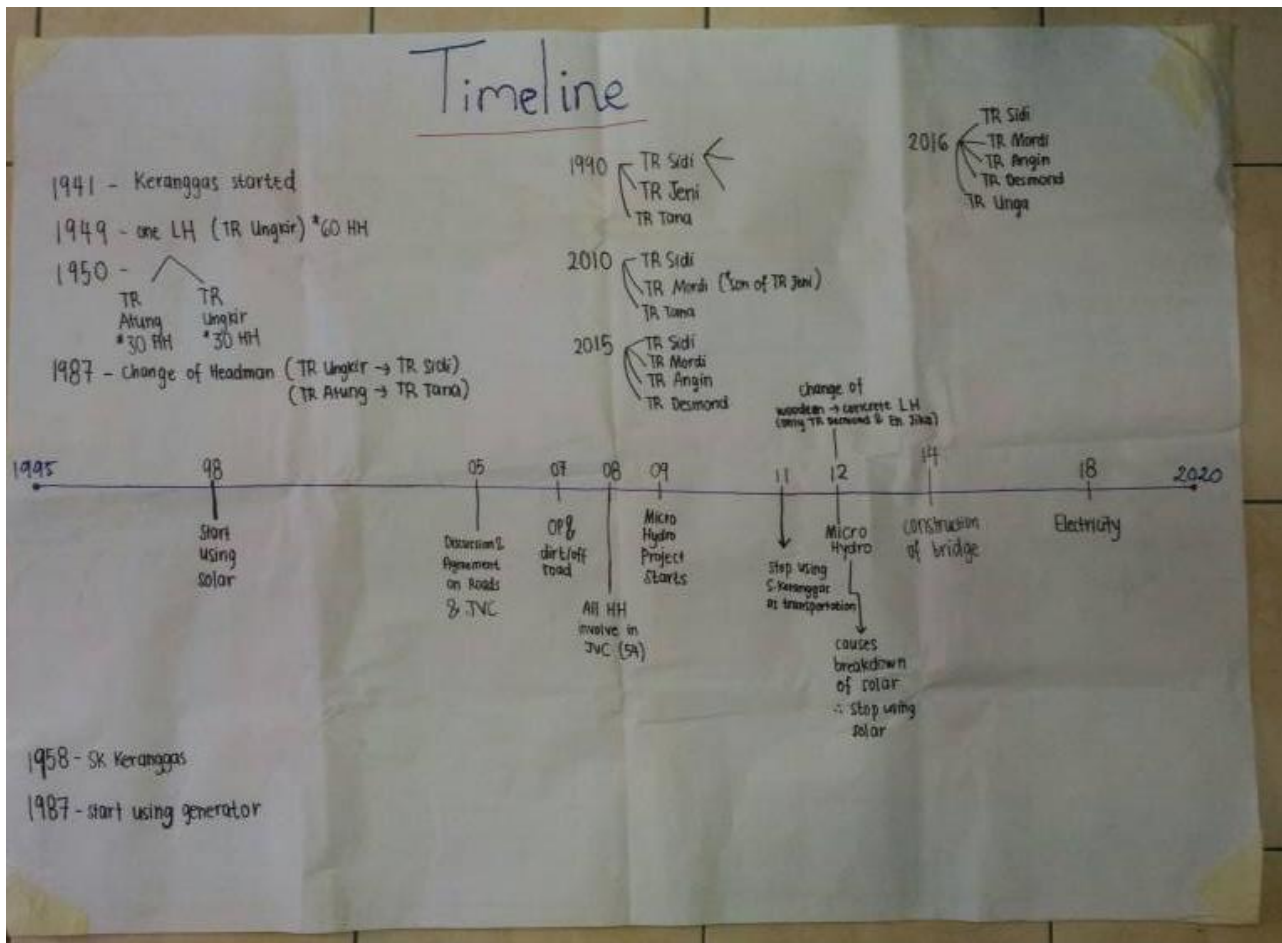
### PRA methods – Participatory Rural Appraisal

PRA, as an internationally popular evaluation range of methods, which core is to obtain knowledge by observing like the “insider” rather than the “outsider”. It is important to respect local knowledge to the greatest extent and involve them actively in the creation of the data. We had planned to use quite a few PRA tools to get the information we wanted, but eventually, due to time and participant constraints and change of study focus, we selected the five tools below to gather the needed data.

#### Timeline

Four headmen agreed to help us get the bigger picture of the village and its history and discern. In order to see how the major changes have affected the lives of local people, we chose to create a timeline with the headmen FG, to present the community-level perception of what they thought were significant changes in the village over the past 20 years. The 20 - year period was chosen because, although the major changes we expected took place since 2005, an informal group interview indicated electricity-history (solar panels and micro-hydro-dam) to be important, which happened earlier.

The three most important categories of change according to the headmens’ timeline: Participation in JVC, changes in power supply and division of longhouses. Potentially, they could have put other events such as “first car bought in the village”, “day of signing contract with JVC” or something else. Either way, it gave us great insight into the history and decision-making in the village. Worth exploring would have been to present both English and Iban on the paper so that it is easier for interviewees to read them instead of asking the coordinator several times.



Picture 2: Timeline

### Ranking of crops

We decided to use this method to understand what factors affect villagers' choice to grow different crops. We discussed a lot about whether this tool should be understood at the family level or at the community level. We decided to do it at community level, since some factors such as how much labour or land area a certain crop requires are common, and getting more people to discuss and draw results can make the results more validly applicable. Participants were told, "This ranking is not just for your family, but for the whole village, assuming that the villagers have a piece of land, how will you think about it in the following ways." Our original plan was to let the villagers write down the order with marker directly on paper. Luckily a better idea was proposed, being sticky notes numbered 1-7 making it possible to re-rank during the discussion and curious questioning to their decisions. We also prepared some blank lines in case they have some important but unconsidered categories beyond our initial plan.

The method went really well. It was well planned and discussed ahead. It was a great decision to insist that it was presented in Malay and then translated to Iban, rather than presented in English. We had both



translators present with well-defined roles. The four participants were enthusiastic and were able to reach a consensus quickly, meanwhile giving us clear reasons. They thought the size of the land area needed for the crops was also of vital importance in their decision-making so we added it to our crop ranking paper. The outcome of the crop ranking tell us about what is affecting villagers' decision-making in HH plantation.

CROP RANKING						
Category Crop	LABOUR	DEMAND OF SOIL- QUALITY	ECONOMIC SECURITY	CASH INCOME PER HA	SIZE OF LAND	CONCLUSION
PEPPER	2	1	1	1	6	1
PRIVATE OIL PALM	1	6	7	2	1	6
JVC OIL PALM	7	7	6	3	2	5
HILL RICE	4	3	3	5	4	2
SWAMP RICE	5	2	4	6	5	3
RUBBER	3	4	2	4	3	4
FRUIT TREES	6	5	5	7	7	7

**PARTICIPANTS:**

- ① TR. UNGA AK BANG
- ② TA. ANNOI AK JENI
- ③ Jiko ak Ajon
- ④ ROBERS AK PATR
- ⑤ Day Subijone Sardin

**DATE:**  
08/03/18

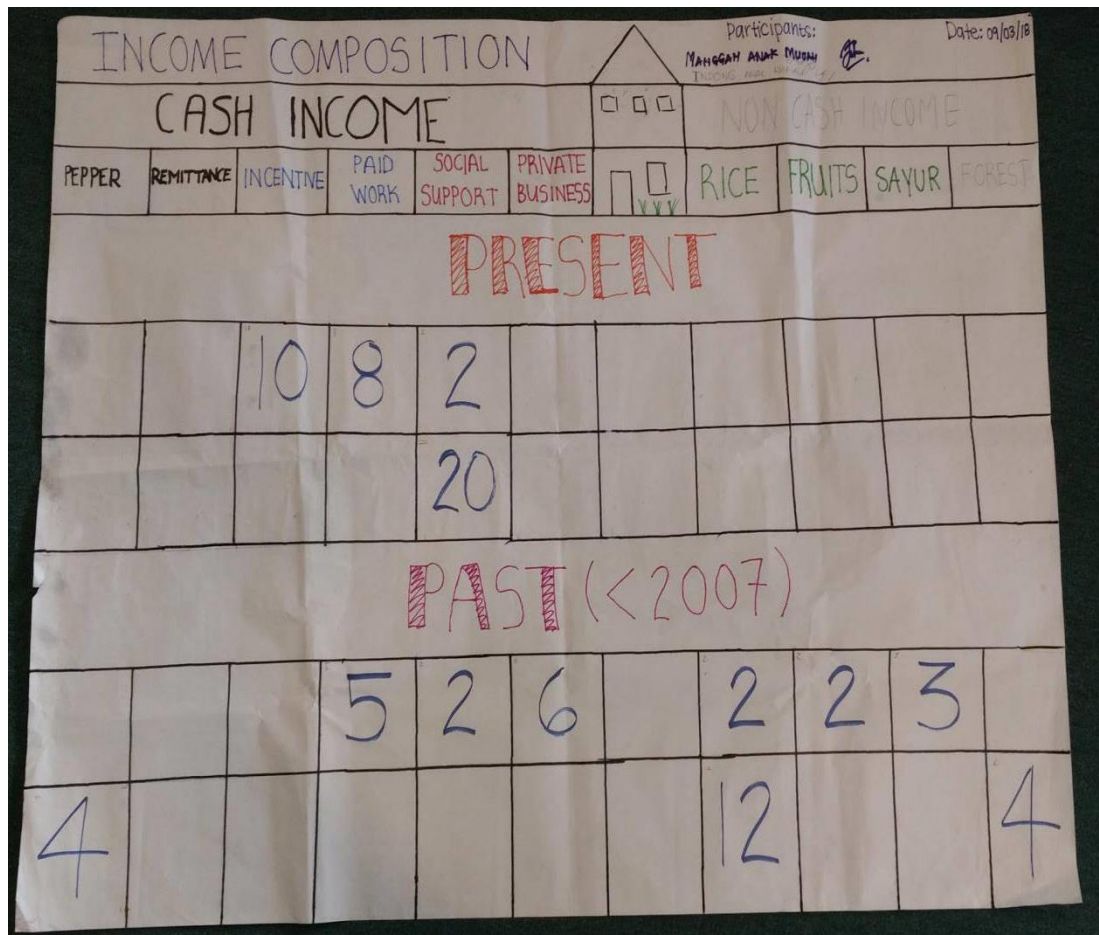
Picture 3: Crop Ranking

### Income composition

We decided to use this method to tell how the JVC and road influenced people's income. Because income varies from family to family, we collected data at household level. We have listed different sources of income and divided them into current and 10 years ago (before the road and JVC) to see whether there is a significant change. 20 stickers representing their income (5 percent each) was given and the participant was to put them in different places to represent their income composition. Because the main source of information is the household, we use the home-visit approach to complete the PRA and at the same time conduct more in-depth SSIs to help us better understand the life stories of different types of villagers. We chose one low-asset participants and a high-asset participant to complete the comparison on the same sheet of paper. The concept of non-cash income was difficult to explain, though manageable.

Our high-asset participant, showed great interest in this PRA, shouting, “we should have done this at first!” (before the SSI ) and “it's easier to talk about income with this”. Our low-asset participant said he was too old to see and seemed confused. Nevertheless, the activity gave great data, was practical and would be well worthy data-wise to be conducted with more participants.

Picture 4: Income Composition



### Mobility Maps

We decided to use this tool to understand whether the daily activities of different types of individuals have changed dramatically because of the road. As for the respondents, we chose a housewife of upper-middle asset-level, a middle-aged man with high-asset level and an elderly man with low asset-level to observe the different effects of the road on their lives. According to former experience, we know that instructions in mobility map is of vital importance. Our original plan was to take into account position and distance, but in reality we found it too difficult to get respondents to show everything on the paper. It was chosen in situ to focus more on the data we could get from them rather than how neat the map would look and how lines

would indicate distance, number of travels to the destination per month etc. It was participatory as they drew the map, so we did not want to take too much control as well.

Though respondents generally reflected that recalling the course of action ten years ago was a challenge, we can still see significant changes before and after road improvements. This tool not only gives us an overall perspective that roads improve the lives of villagers to some extent, but also provides us with more detailed and vivid household story and support our view that different types of groups are affected differently by road improvements. Still, it would have been great to have more respondents representing a greater variety of livelihoods and backgrounds.

### Informal talk

Another major method of obtaining information in the countryside is informal talk. Compared with other methods that are planned and prepared, informal conversations are going on all the time. In contrast to SSIs and FG, informal interviews allowed us to gain more knowledge than to limit ourselves to research questions. This knowledge may not seem relevant, but it can actually provide researchers with a holistic view to make sure that the direction is on the right track. More importantly, informal interviews were often guiding us in what we should follow up further on with key informants.

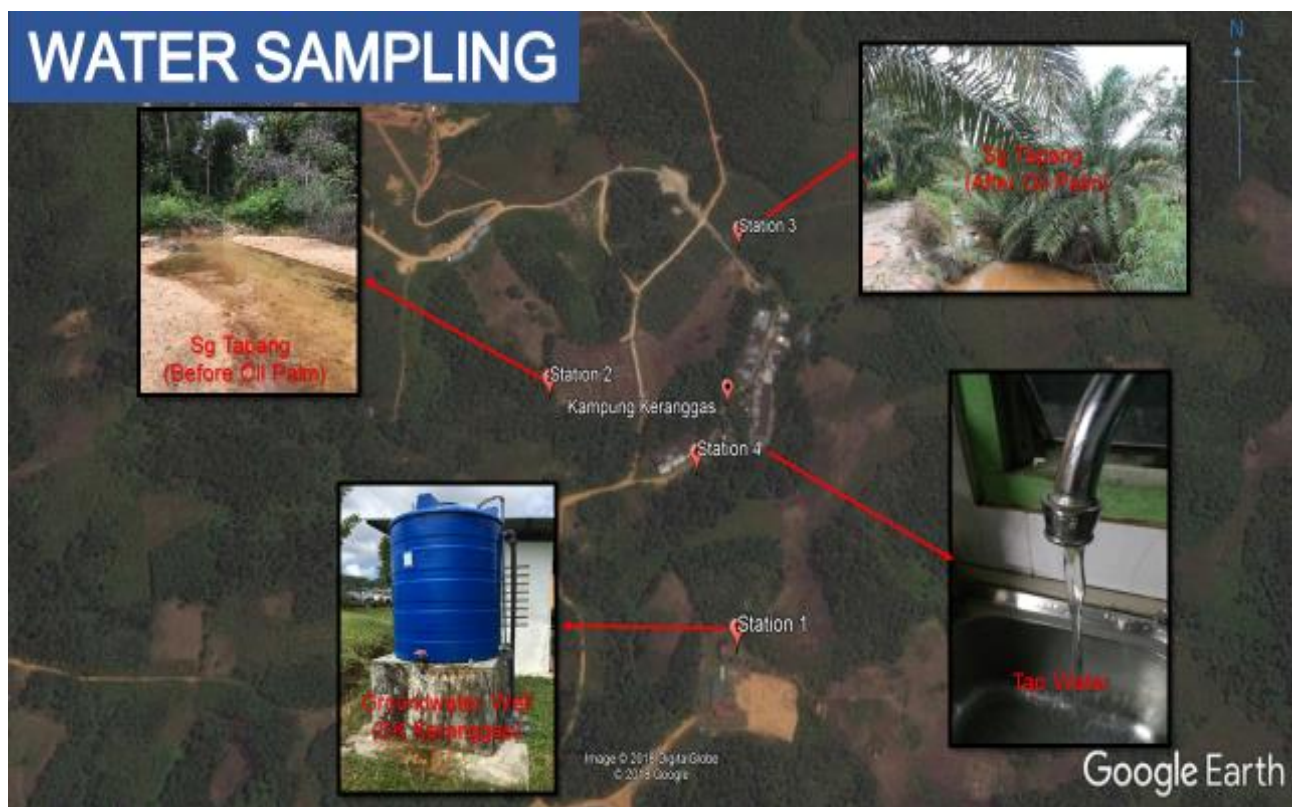
Some informal interviews had language limitations, as we had to rely on translation to complete most of them, which makes them seem more formal. Worth our attention is that informal interviews are more of a relaxed atmosphere, allowing students to naturally communicate with informants to get more unexpected information.

### Soil and water samples

A former study in Keranggas indicated that the JVC may cause land and water pollution by excessive use of fertilizer (Mambu, 2013). From our first transect walk we learned that the amount of fertilizer and soil plays a crucial role to how your crop will thrive and that this affects the rivers. Additionally, we learned about planting and fertilizer regulations and how those could be violated, especially regarding distance to the Tapang river. We compared soil from a private smallholder OP and a plot managed by JVC to derive results about the N and C content and applied fertilizer. Unfortunately, we learned that the sampling points could be biased because it potentially could be from the interrow of the OP, where debris of the OP is left to compose. Therefore, the samples may have had a higher organic content (higher carbon) than a more representative spot of the lot. We should instead have compared oil palm soil and undisturbed forest soil.

Our water samples identified four water sampling sites:

- First is the groundwater well located at the Keranggas school. This station was chosen as the villagers use it as their drinking source, therefore it is chosen to investigate its current water quality status and also to examine its level of microbials
- Station two is upstream before OP plantation, and station 3 is downstream after OP plantation. They were collected to determine the impact of OP plantation on the river quality.
- Station four is the household tap water which is a direct gravity-feed from the nearby Bukit Kulan which flows through the Tapang river via piping. Questionnaire informants told us that they rely on this water source since 30-60 years ago without any proper maintenance of this piping ever since. Therefore they will face problems with yellow muddy tap water if it rains heavily. Hence, it is crucial to determine its water quality status and also to examine its level of microbials.



Picture 5: Water sampling sites



## CHEMICAL PARAMETERS

STATION	S1	S2	S3	S4
PARAMETERS				
pH	8.35	7.38	7.43	7.61
DO (mg/L)	4.65	6.84	6.61	4.04
BOD (mg/L)	0.72	0.27	0.71	0.57
COD (mg/L)	32	30	1.5	3.5
TSS (mg/L)	7.5	1061	1479	29.5
NH <sub>3</sub> -N (mg/L)	0	0	0.04	0
WQI	82.62	76.58	79.97	85.37
CLASS	II (Clean)	II (Slightly Polluted)	II (Slightly Polluted)	II (Clean)

## BIOLOGICAL PARAMETERS

Station	TCC Value	Class	FCC Value	Class
S1	1.66	I	1.66	I
S2	558	IIA	300	IIA
S3	927.7	IIB	362.5	IIB
S4	176	IIA	111	IIA

Class I – Practically no treatment necessary  
 Class IIA – Conventional treatment required  
 Class IIB – Recreational use with body contact  
 \*NWQSM

Table 2: Water sample analysis

The analysis of water samples was conducted under the guidance of our counterparts majoring in natural science. Two conclusions can be drawn:

- As for the current drinking water source, it is safe to drink.
- And for the domestic water source which is the river and the tap water, it is still safe to use for their recreational use (bathing, washing) but if used as a drinking source, conventional treatment must be required by boiling or appropriate filtration.

### Reflections on approaches and learning experiences

1. Synchronization of notes is really important. Concretely it could have helped us on the 2nd transect walk to keep an eye on the fertilizer use and the space between oil palms.
2. We got increasingly more efficient by splitting up tasks more and more.
3. Too many interviewers can prevent people in opening up, especially seen in the adolescent FG. It was positive that FG on adolescents was arranged and taken initiative to, but everybody should have known.
4. The FG guide was not good enough. Not practical - too abstract and much too short to apply. With a question as "what is good about life" a natural follow-up could have been "is that all?" what do the rest of you think? Do you agree or disagree? Is there more?"
5. Silence in a FG is ok.
6. We certainly need to explain a FG for what reasons they are there, what we seek to know with their help. Why they are important to the research. What they are to be used for and lead them by the hand.
7. We decided not to make the PRA on time allocation as intended in the pre-field situation, since it proved quite irrelevant. This was due to an over-emphasis on the assumed economic importance of JVC and we had wrongly assumed that most land had been leased, leaving them with less time to spend on their private farming.
8. We also decided not to do the comparative ranking of "most desired problem to see solved" since it turned out that the tar road and road elevation was already funded and coming soon, the electricity was wired while we were in the field and many seemed not to care about the tap water supply in the way or to the extent we had expected. Thus, the method had been proved irrelevant.

### Limitations

Due to time limitation, some of our plan has not been implemented. We had planned to use more PRA tools. More mobility map and income composition tools should be drawn. Secondly, the findings are limited



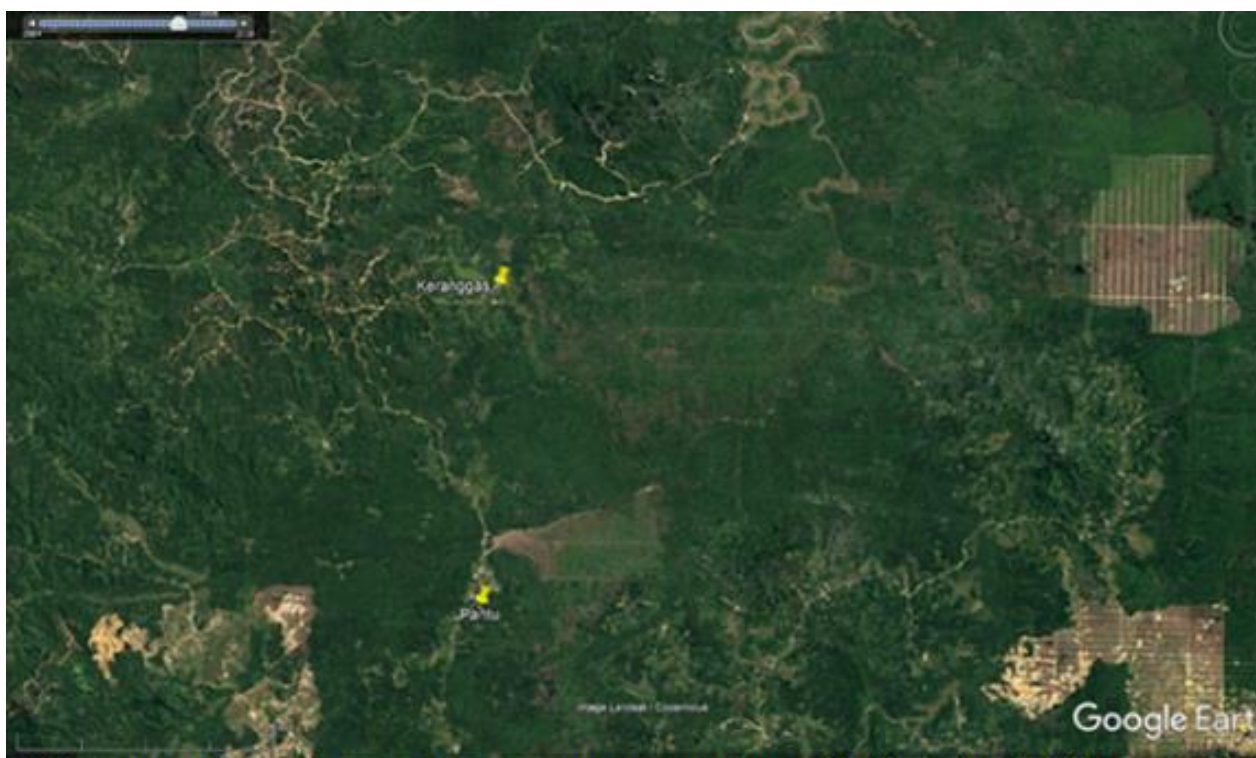
to those HHs present during fieldwork while omitting migrating villagers, who were evidently not possible to talk to. It has thus not been possible to investigate if the already migrated villagers intend to come back, what their socio-economic backgrounds are, and if the road have influence on their decision-making and why they have chosen to migrate.

Finally, talking to the high-level investors of the JVC (Kim Loong Sdn. Bhd.) was considered inaccessible, limiting us from attaining knowledge of the deeper politics and company decisions.

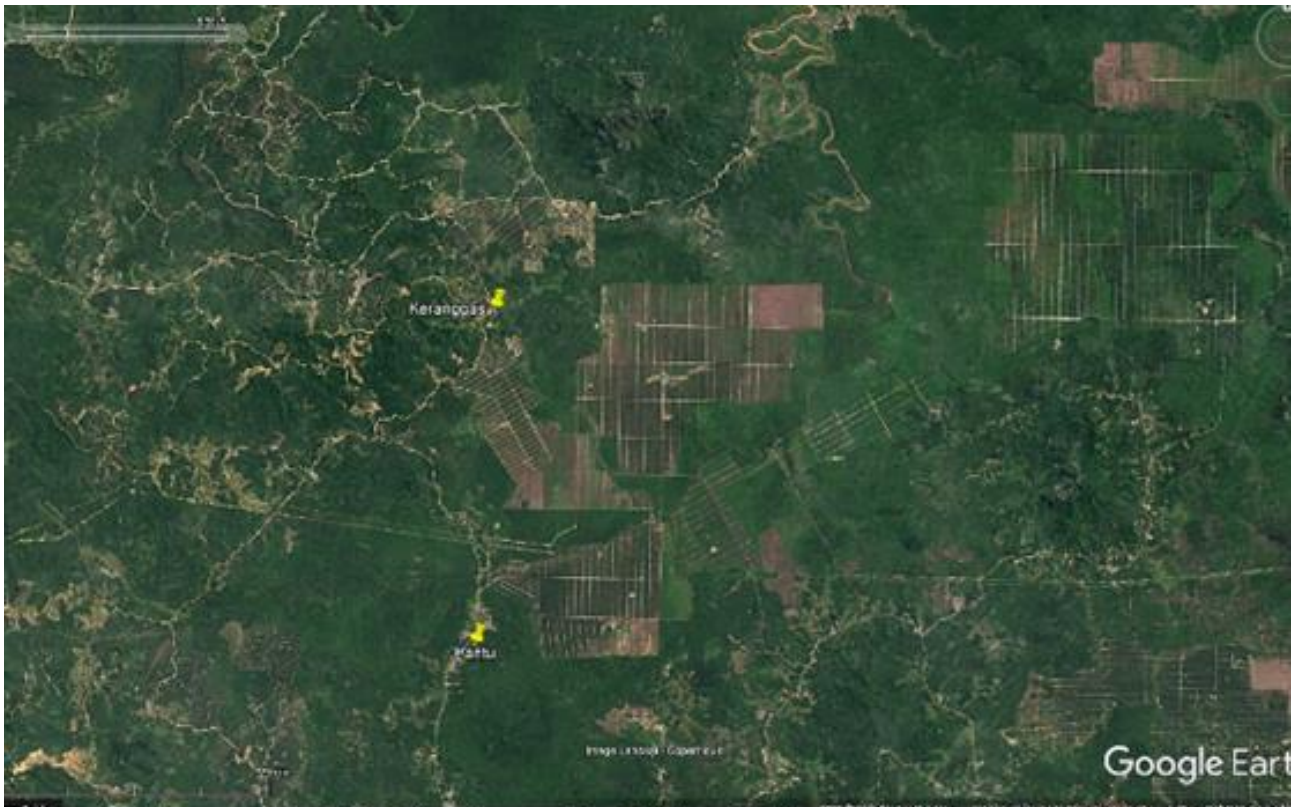
## Results

### 1: How do OPR and JVC establishment affect the different types of village households and their decision-making?

According to the timeline, two major events: Joint venture company (JVC) and oil palm road (OPR), are considered to be of vital importance by villagers. The two developments turned out to be interlinked as it was the JVC that provided the village with the road. Without JVC, the OPR would not exist, as without the road, the JVC cannot sell their fresh fruit bunch (FFB) neither in time to reach the mill nor efficiently.



Picture 6 Keranggas in 2006. Before the clearing of land for JVC OP, two large OP plots are seen at that time, but quite far away from Keranggas



Picture 7: Keranggas in 2016. The change after JVC establishment in Keranggas is very evident with the enormous land use change. All the striped land is JVC OP.

The JVC makes the villagers incomes more diverse. According to the ADC leader, the JVC brings new income in the shape of cash incentives. He clarified that most are paid 419 RM/leased ha/three months, but it depends on how long they have been part of the JVC. According to the ADC leader most villagers take part in the JVC, since a joined lot was divided equally to participating villagers. However this was a very complex, potentially biased, matter, thus data obtained were occasionally contradicting. The joined lot is secondary forest not claimed by any specific household. Title to the land will be given after a 60-year lease to JVC. While the workload is managed by JVC, villagers can participate despite their HH asset-level, but the extent to which villagers can participate with their own land are determined by their available land (natural capital). Based on the questionnaires, we saw that the land leased to JVC was far away inaccessible swampy forest (5 responses), three respondents simply answered “no cultivation” while five respondents had been cultivating rice on the land (see figure 2 below).

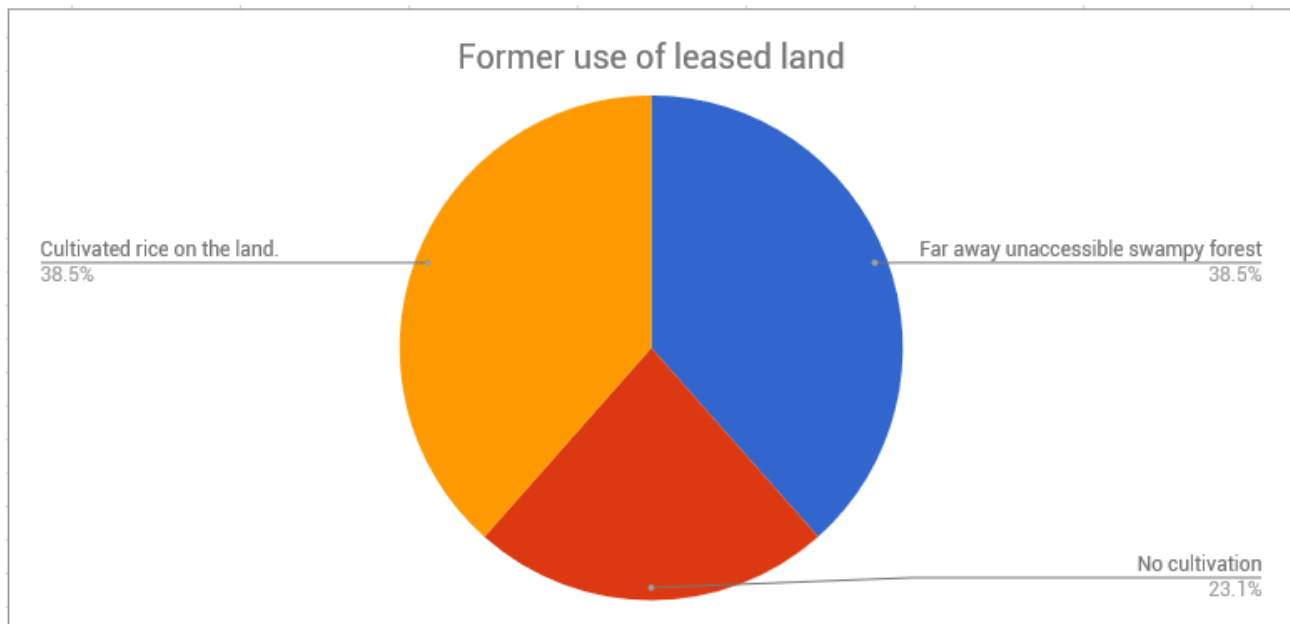


Figure 2: Former use of leased land

For those allocating land on which they have previously cultivated rice, the cash income from OP will be bigger than for rice (see "Crop Ranking"). To some extent, JVC is thus potentially diversifying and increasing villagers' incomes, making their land more profitable. Former SLUSE studies have confirmed that OP can grow on marginal soils, while pepper requires higher soil fertility (Calles et al., 2016: 27,48), hence leasing the swampy or otherwise inaccessible lands rationally makes sense, as it generates money from marginal lands, uncultivated for several years, without labour input.

The OPR also improve villagers' lives. According to the questionnaires, 88 percent of the villagers answer the OPR makes their lives better. The most often-mentioned importance of the road, especially by the elder generation, was the ability to go to the hospital more easily.

The road also provide easier access to Pantu market. According to Windle and Cramb, *"if off-farm employment opportunities became available, which was the case in the roadside villages, then wages became the prime source of cash income"* (1997: 46). From the questionnaires, this shows not to be the case for the current inhabitants of Keranggas since the majority is still highly dependent on pepper as export crop. Villages in Layar area, investigated in the Windle and Cramb study, are similar to Keranggas connected to smaller markets/towns giving them fewer opportunities for paid work, resulting in a higher produce of export crops compared to areas connected to more urban markets (ibid: 47). Windle and Cramb (1997) shows that the road does not only give opportunities to sell their produce, but also acts as determining factor for the income composition trend in the village, as we particularly see with OP cultivation in Keranggas.

It was expected in the pre-field situation, that land-lease to the JVC was of the most importance to peoples' lives and livelihoods. The high-asset interviewee confirmed, directly asked, that the incentive payments will be of increasing importance as people are getting older in the village. With an eldery population and few young people permanently available as labour force, the JVC may be said to have come at a most convenient time – and may prove more necessary for the sake of income generation in the longer run. This is nevertheless something which would have to be measured in greater detail in order to validate or falsify to what extent the cultivated area has changed, not counting OP.

### 1.1 Villagers with different natural capital receive different incomes from JVC

As mentioned above, although most villagers do benefit from JVC, it is clear to us that the gains are dependent on the amount of land, that the HH possess, since if they can lease more land they would receive higher payments from the JVC without labour inputs on marginal land without many cultivation opportunities. The high-asset informant, while conducting the income composition PRA, said that despite his generous salary, rent for the leased land (approx. 20 ha of 419 RM/ha every 3 months) still accounted for half of his total income. Those not in possession of a high asset-level can also benefit, but very limited. Village JVC shareholders of joined-lot only (approx 0.5 ha) would receive only very small cash incentives. Meanwhile some elderly were not even aware of their JVC joined-lot or simply did not have one. Another respondent was prevented from participating in the JVC since his offspring denied him doing this, as they were afraid the land would be stolen and they wanted to use the land themselves later on.

In general, the JVC with its payments, grants a new opportunity for economic security. It specifically allows for elder people to sustain themselves even when they can work only less hours than before 2007. At the same time, high-asset HHs might again be the ones to use the road access to transport FFC from their private OP plot. Thus they are the ones to make gains of this physical asset that the road is, only by having enough natural capital ("spare" land) and financial capital (risk and investment to establish OP plot) to make use of this road access.

### 1.2 The mobility abilities improved by the road of villagers are asset-dependent

Although the OPR has helped the villagers improve their lives, the benefits for different assets of people are different. HH's in possession of sufficient capitals within physical capital e.g. vehicles, and financial capital e.g. money for fuel are benefitting relatively more from the road, than those of lower possessions.

Based on our mobility maps (see table 3 and 4 below), the high-asset participant went to see his grandchildren when he misses them, while the upper-middle asset-level participant went outside Keranggas with a purpose only. The low-asset participant only goes to Pantu rarely and almost never any further.



Low asset	Upper-middle asset	High asset

Table 3: Mobility maps

Table 4: Mobility map content	
Low asset	Retired male rice farmer, widowed. The mobility map is showing his movements before approx. 20 years ago. He used to cultivate rice for subsistence and a little pepper. He would rarely leave Keranggas without a reason, but would travel to Mawang and Pantu every 3-4 weeks to sell pepper, depending on produce. He did go to Sri Aman, but since it requires an overnight stay both ways, he seldomly did. At present he never leaves Keranggas, thus it is assumed that if any health related emergencies occur, he is dependent on other people.
Upper-middle asset	Female shop-owner along with husband, brother of TR who cultivate visited pepper field and private OP together. She goes out mostly with practical purpose. "Sawit" is OP for which she travels to twice a month while 10 travels go to the pepper field "Kebun". She may walk or take motorbike. She travels to Pantu 7 times per month for regular grocery shopping, not least in bulk for their own shop. She may also visit the clinic. Sri Aman is visited twice a month for more rare items or for doctor/hospital. They go to Kuching once every one or two years. She highlighted that traveling is easier and faster and thus more often now compared with back in time when happening by boat. She is happy to spend less time on transportation.
High asset	He goes to the Estate office 28 times a month and Pantu 20 times per month, as he works there. He visits his grandchildren every three months, but also when he misses them. One of the off-spring families living in Pantu. He goes to visit his new wife when possible. He goes to Sri Aman four times monthly and to Kuching every three months.

	10 years ago (blue marker) he would go twice a week to Pantu by boat.
--	---

Table 4 : Mobility map content

The OPR also enables easier market access, however, different levels have different benefits. In the process of making mobility map, the market access for buying products applies especially to middle- and high-asset levels. E.g. the upper-middle asset-level shopkeepers, who has car, buys up fuel to sell to motorbike-owners in- or passing through the village on the OPR. Compared with low-asset levels they may have their own vehicles, more land and products needed to be transported by the road. Because of this, the high-asset level will especially be the ones prone to have, or with opportunity to invest in, a private OP plot for which access to the market (i.e. the mill) is of definitive importance.

2. How do villagers manage their NCR land politically and what power-relations and conflict level are seen?

2.1: How do villagers manage their land politically?

Before coming to the field, it was assumed that the JVC had even greater economic importance for villagers contemporarily than it turned out. It also had been pre-assumed that people had perhaps been overruled, cheated and that their land might get stolen and/or that they did not understand the contract properly. All these pre-assumptions have been proven not to be entirely true.

During interview with both high-asset interviewee as well as the ADC leader, they stressed that people were sceptical in the beginning, but then saw that the JVC would bring them income and that they did not steal their land. Ngidang (2002) describes a Sarawakian village engaged in JVC, that despite of poor information, understanding of the concept and its future consequences, participated in JVC out of fear of being ‘anti-government/development’ (Ngidang, 2002: 177), this can be seen in difference to Keranggas, whereas villagers participate only when it was illuminated as beneficial. People are certain of the 60 year lease, which can be renewed and prolonged if intended, headmen FG and the ADC leader told. We were also told that villagers promised the JVC only to agree to the original contract if a good road would come around, stressing that this was the most important among the villagers’ demands.

Further, villagers have been having meetings with the Estate three times annually about road conditions as for it to become tar road all the way. However, such upgrade of the road was outside the scope of the contract, so the Estate is not the entity to ensure that the OPR would be asphalted. Headmen from Keranggas, Menangkin, Tabong and Munggu Sawa sent a letter application to the Ministry of Transportation and Infrastructure Development. They have granted 1mio. RM to be spent on 22,5km tar road from Pantu to Enkeranji during 2018, told by the ADC leader.



Besides road, four more agreements were made before accepting the original contract, of which two were mentioned as the most important by the headmen FG. One being able to borrow construction machinery and the other being that Estate vehicles can be borrowed when in need to go to hospital. These would apply to all villagers, regardless of JVC participation. Thus it has been found that villagers make use of their position taking part in the JVC with their NCR land to get certain benefits.

The ADC leader further said it has also been possible for villagers to put demands of higher payments through ADC to the company and succeeded. That is, the more years one is part of the JVC, the higher the incentive payments. The initial agreement have been altered post the plantation-initiation with higher payments for each 'batch'. Batches refer to when the HH joined the JVC. At first, these were 150RM twice a year. This was not satisfying enough and villagers had a meeting with the Estate where higher payments were agreed upon, increasing satisfaction. After the correction, those who have been enrolled for 10 years or less receive 360 RM/ha every three months, 11-15 years of enrollment receive 420RM/ha every three months and after 16 years 480RM/ha every three months, the ADC leader informed.

There is less reason for fear, disagreement and conflict since the villagers have received what they wanted and can thus be more content with the existence of the JVC as they are rather making gains than the opposite. The relationship between the villagers and the Estate is quite a friendly one. They feel they win rather than have lost anything. We see this in the process before signing the original contract in which, summed up, it was ensured that, 1) their land is not being stolen, 2) they got access to vehicles and machinery/tools as they wanted, 3) they managed to raise incentive payments after a few years, 4) they have been promised a better road. Whereas Mertz et al. argued in the time of writing it was, "too early to fully evaluate the impact of the JVCs on livelihoods" (2008: 6), Keranggas serves as a positive example of how villagers, at least when insisting on proper terms in the initial negotiations, can benefit from the JVCs.

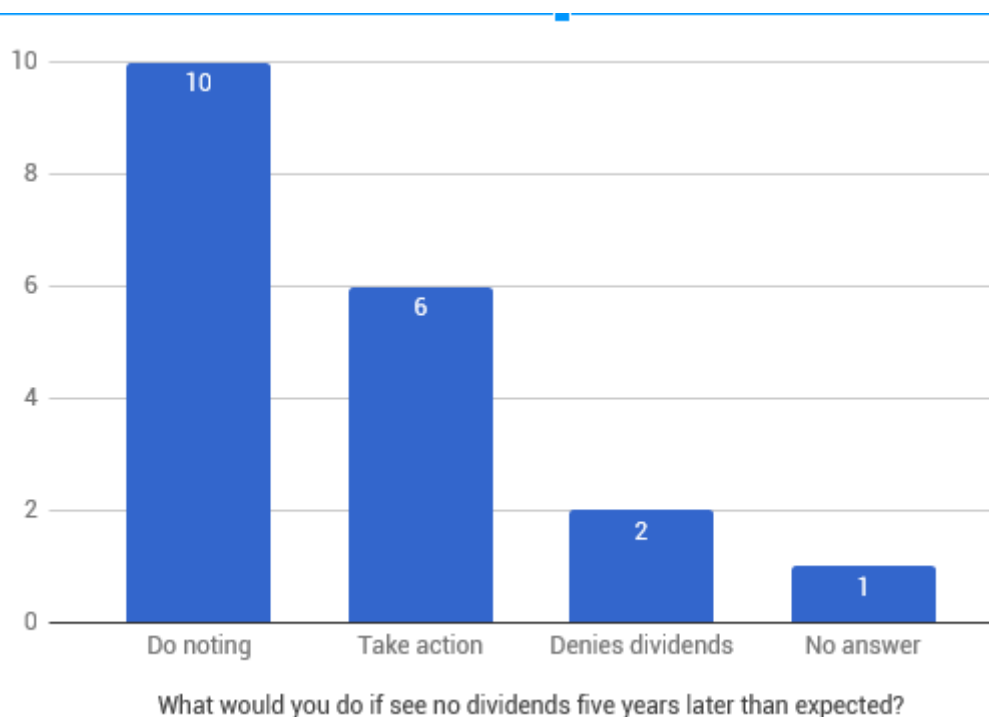
Even with all the requirements met, we still saw a bit of scepticism towards the methods of the JVC during our interview with the first private OP smallholder. According to Figure 3 below, while securing the land be kept on his HH's hands, he could further his income.

**Saving Land & Making Money:** Mr. B., a private OP smallholder chose to plant OP on a lot surrounded by JVC OP, because he was "scared that others will go to take his land" if he did not cultivate it and "would not want to leave land already considered his"..He has not been cultivating it for years, since it is swampy forest land. He wanted to make more money, besides saving his land. He chose to plant OP after being inspired by one of the headmen. He clarified that the land was swamp and had been used for paddy rice earlier on, but was unsuitable for other crops. Asked about alternative land plots for OP

he said, he then would have to cut down his rubber trees, which he did not want to do, since prices may one day go up again for rubber.

**Figure 3: Private OP SSI Excerpt**

He indicated another unsolved 'issue' with the JVC. He stated that he should receive dividend by 2017, and that an official letter is telling so, but nothing more had been heard since, later confirmed by the ADC leader. When surveying villagers, asking what they intended to do if not seeing incentives five years later than expected, 10 out of 19 in JVC would do nothing. 6 will take action. 2 denies dividends. 1 do not answer question properly (see Figure 4). This could indicate that the majority are not very prone to conflict with the JVC.



**Figure 4: What would villagers do if see no dividends five years later than expected?**

## 2.2: What power-relations and conflict level are seen?

The JVC shareholder composition in Keranggas is a common one: 60% owned by the developer, 30% by villagers and 10% by the state (Ngidang, 2005: 68; Mertz et al., 2008: 6). While it is true that the landowners is a minority shareholder group compared to the company, as criticised by Ngidang (2005), we

have not found truth in them not having a say in the management of the JVC. Opposite the claim set forth by Ngidang that no villagers will be on the JVC board (2005: 68), it was confirmed that some villagers are on the board of the JVC, in the second SSI with ADC leader, though the authors were not present.

Furthermore, Ngidang seems to criticise going from landowner to laborer on the land. In Keranggas, villagers take management jobs only. No locals are doing the hard work of harvesting and managing the single trees, which actually leads to higher satisfaction about the JVC. According to the talk with the villager JVC shareholders, they confirm that the payments become easy money from land they often times would not cultivate anyways and for which they do not need labour input themselves to see cash output. Finally, Ngidang (2005) claims that the process is not involving traditional participatory dialogue with the villagers. However, we also know that there were meetings about joining the JVC which everyone could join and this had been proved several times in other informal talks, questionnaires and FG with private OP holders.

When it comes to the cultural attachment to the land, Ngidang (2005: 68) argues the politicians and companies tend to ignore the villagers. We have not particularly heard any critical voices from people living in Keranggas currently about leasing the land, though when discussing the process back in 2005-2008, it was clear that a large part or majority were sceptical and fearing loss of their family land. Most changed their opinion when it was made clear that they would receive their title and better payments, which then disapproves of Ngidang's point.

According to Cramb and McCarthy (2016: 206) the political effort to make native customary land available to the private sector has met resistance by villagers filing police reports, appealing to political representatives, blockades, damaging equipment, harvesting FFB's themselves, demonstrations and involving NGOs to support them. This is not at all a level of conflict that has been present in Keranggas at any point, even with the sceptical majority at the very beginning. It was mentioned that the original contract, besides the promises for the villager shareholders, did also require them to stay at peace with the Estate, but this is about it. Today, contract aside, the villagers in general do not feel they have reason to rebel against the JVC. One informant's children, who were not living in the village, did not approve of their father leasing land to the JVC, since they feared the family land would be taken and which they were apparently intending to cultivate later on. 5 out of 25 surveyees, incl. our low-asset interviewee, said they were not part of the JVC. Besides from the low-asset interviewee, the reasons are unknown for why they have chosen not to take part, and if this has to do with cultural attachment to their land or not, as Ngidang (2005: 68) claims is an issue overlooked by the land developers.

While Ngidang (2002: 158) have a valid critique of villagers not being allowed to develop native customary land themselves for large plantations, it is not relevant in Keranggas. The villagers would never be able to

clear and plant the huge land areas themselves. Outside investments have definitely been needed in this case in order for new income to be possible for the villagers.

### 3. Which assets seem to determine HHs' room to maneuver?

#### 3.1: Comparison of high- and low asset level representatives

While conducting field study we were made aware of the differences in opportunities and gains of change among villagers and how these affects the villagers space for maneuvering. From our questionnaire, we selected two different types of households to analyze within the sustainable livelihood framework. Mr. E is regarded as low-asset level while Mr. M is regarded as high-asset level.

Table 5: Two different special households story to analyze within different capital

Capital	Mr. E	Mr. M
<b>Human</b>	88 years old widower, has primary education and has been a rice farmer his whole life, but briefly worked in Brunei as construction worker(SSi). He used to plant paddy rice, but cannot endure the hard labour anymore.	56 years old, has secondary education and works as field conductor at the oil palm estate in Pantu and is the Estate staff manager in Keranggas. He has been involved in ADC and has experience working for LCDA and other oil-palm companies in other towns in the past. He worked in Singapore and Brunei during his youth (SSi).
<b>Natural</b>	He has 10 ha land, but are not currently cultivating or leasing out the land. (Questionnaire, SSi). He have access to the same natural resource quality as in terms of water quality and forest produce as rest of the village.	He has the same natural resource quality accessible, but in contrast he owns 20 ha of land and are leasing all of it to JVC (questionnaire). Probably because he does not have spare time/labour capacity to invest in agricultural activities as he is employed in Pantu.
<b>Financial</b>	He is 100% reliant on governmental support (300 RM/month)(SSi;	His income is composed by 50%/40% incentives and salaried work, while 10% for

	<p>questionnaire; PRA income). Before he retired from farm activities 80% of his HH income consisted of non-cash income being rice and forest produce (60% for rice and 20% for forest produce).</p>	<p>social support, which is not further specified. He receives 2.800 RM/month (PRA income; SSI) from incentives alone. He used to cultivate rice, vegetables and fruits, though prior to 2007 farming produce only stands for 35% of the HH income, while paid work, private business and social support accounted for 65%. Crops are no longer a part of his income.</p>
<b>Physical</b>	<p>live in a wooden longhouse with basic amenities. He has no vehicles and has to rely on other people to go to hospital.(Questionnaire; SSI).</p>	<p>live in a concrete house still being finished. He has both big car and motorcycle and goes to Pantu every day. This could lead to easier access to alternative cash opportunities, various markets and thereby being able to buy from the cheapest vendor, access to hospital and opportunity to expand his social network, hence increase his social capital.</p>
<b>Social</b>	<p>He has been living alone for the past 30 years and his children and grandchildren lives in Sri Aman. He seldom leaves the village or receive remittances from his children. They prevented him from leasing any of his land to JVC in fear of losing it as their inheritance.</p>	<p>Has a wife who lives and works in Sri Aman, for what reasons she cannot live with him and he thus visits her often. Children and grandchildren, he visits, when he pleases.(questionnaire, SSI). He is involved in ADC, the one advocating JVC to the villagers and surveyed the road. Also involved in village church community (SSI). He never receives remittances from his children.</p>

### 3.1.1 Determining assets

From both questionnaire, SSI and income composition it is derived that Mr. E has been dependent on his physical labor input (cultivating rice and collecting forest produce) his whole life, thus being solely reliant on human capital, one in which is now minimal due to old age. Mr. E's age is affecting his labor input, thus the decreased human capital is directly negatively affecting his ability to make use of natural resources in certain ways, e.g. cultivating crops. Mr. E's human capital, thereby determine his financial resources and is his baseline for the current livelihood strategy. On the contrary Mr. M's higher human capital in the shape of higher education level has enabled him to be hired at the Estate and take part in ADC. Mr. M's age and occupation is less demanding on physical labor input. As Mr. M's human capital is made up of his higher education, he is less vulnerable to aging compared to Mr. E., whose human capital is based solely on his physical labour input. Furthermore Mr. M's financial capital gives him the opportunities to balance out any decrease in human capital, by e.g. hiring labor.

Impressions and data combined, the decrease of the potential labor input, as seen with Mr. E. is applicable to the rest of the village, though Mr. E's social capital might be a unique case. The village is getting older and the youth migrate for work and educational purposes. Ageing makes natural and financial capital become more important for how villagers can continue maneuver and use their resources.

### 3.2 Household farming practices

While the above two cases represent the ends on a continuum of asset-levels in the village, there are many more generally applicable decisions to be made about the farming practices on the HH level, which also relates to the SLF. Mere observation and many informal talks quickly made the authors realize, that even though the JVC plays a big part in the history and development of Keranggas, pepper is the most preferred and omnipresent crop for villager's cash income.

The PRA Crop Ranking (see Picture 3 in Methods) showed this clearly, where pepper was ranked as the generally most favoured crop as well as number one for both economic security and cash income/hectare, even though it requires more labour input. This is perfectly in line with earlier SLUSE studies in Malaysia in which it was found, "pepper is considered to be the most heavy in terms of workload, but it doesn't seem to matter as the profits derived from the crop are high" (Calles et al., 2016: 48). While creating Mobility Map with the upper-middle asset participant, she mentioned that the road access allows to carry and sell 10 bags of pepper at once rather than 3 bags via boat, which strengthened the group's hypothesis further: That the increased ability to sell this valuable cash crop would increase the land-area cultivated for pepper. Nevertheless, the aging population cannot cultivate as much land as they used to and the many young



people currently working outside Keranggas leads to less cultivation of both pepper and rice, as there is simply not enough labour, according to two key informants. That is, the increased market access, which could be a determining factor for increased pepper cultivation, seems to be overwritten by the demographic change. Meanwhile, the young people and young families settling outside Keranggas for paid work will likely send remittances back to the elder generation in the village. The extent and importance of this ought to be investigated further than the authors had resources to do in a short amount of time.

It can also be observed that the farming practices also differ in the village according to asset level. Two of the main informants, an upper-asset TR and his brother are cultivating their family land together. When going to see their pepper field, allowing for participatory observation, it turned out that they cultivate two different species of pepper. Asked why they do so, the TR said, “we have to try!”. Furthermore, the same two brothers are also among the very first to create their own private OP plot, for which the TR had also taken a diploma course on “how to cultivate OP”, as told in the OP FG. This entrepreneurial attitude could be related to their human and financial capitals, even more so for the OP plot, placing them as some of the main agenda-setters of the village along with the Estate staff manager.

The PRA Crop Ranking further showed that both hill rice and swamp rice is cultivated less, which was also told in questionnaires and informal talks. The high ranking of hill rice and swamp rice in the general ranking (“king crop”) are not aligned with the ranks given for the other categories. Practically this still has to do with its meaning and potential meaning as a food crop, but potentially it could also have to do with some sentimental value of rice (Schmidt et al., 1998).

While asking crop ranking participants why large fruit tree plantations for selling are not seen in the area, the answers were more or less that “this is just not something people do”, and “people plant only fruit trees for own consumption”, even though they confirmed that fruit can be sold in time in Pantu or further. However, as the conclusions drawn through soil sampling, by expertise of the Malaysian students, it was realised that the soil is actually not suitable for the deep roots of fruit trees, which added a natural science explanation as to why fruit trees was neither considered as cultivated crops in questionnaires or prioritised as way of income.

## Conclusions

The road and JVC have changed livelihood conditions and daily lives in Keranggas, but only insofar that the villager has the financial or natural capital available to take use of the opportunities that a road access and land-lease offers. From the low-asset informant it is seen that social capital can also be important for whether one may participate in the JVC.

We cannot critique the Estate as we hypothesised before going. Before signing the initial contract, a large part of villagers were sceptical that they would be cheated, have their land taken and not get enough money. The villagers had their requirements met both for the initial contract and for higher payments later on. None was dissatisfied anymore. A low-conflict level has thus been seen among village shareholders in Winsome Pelita Keranggas. A rather conflicted and business-elite-favouring picture is drawn in several studies (Ngidang, 2002; Ngidang, 2005; Cramb and McCarthy, 2016). Opposed to these, Keranggas serves as a positive example of how villagers, when insisting on proper terms in the initial negotiations at least, can benefit from the JVCs.

By analyzing the livelihood stories of different specific households, decreased human capital (mainly the lack of labour and education) is directly negatively affecting the ability to make use of natural resources. Furthermore, financial capital gives the opportunity to balance out decrease in human capital.

After realising that pepper was the most important crop, we assumed that the sale would have increased due to the advantageous market access compared to before OPR. That is, improved physical capital for the whole village. However, the demographic development seemingly overwrites this, as elder people are able to cultivate less due to decreasing ability to put in the work effort and young people tend to migrate. The farming practices differ by the asset level, including the ability for personal labour input. Furthermore, the ability to establish a private OP plot depend on having enough spare land (natural capital), the skills and knowledge (human capital) and the money to invest in it (financial capital).

The future of Kampung Keranggas is an odd mix of development and an aging demography. Asset expanding opportunities are taken, but while villagers grow older, the youth migrate to the cities. Many of the young people assured that they intend to come back, but not until they are old and will have terminated a paid professional work-life in the cities. At that point, they apparently intend to use their knowledge of farming that they grew up with and will cultivate the family land. This could point to a potential further decrease in cultivated land for consumption and pepper, and a further increase in the amount of land used for JVC OP. However, these future predictions of course remain a rather open question.

## Discussion: Rise of Individualism?

Apart from the data and analysis presented thus far in this study, another question slowly arose and grew bigger along the course of the field presence. The question of whether the different traits of development seen in Keranggas are not all part of individualism on the rise? During the participatory observation in the

pepper field, we were told that the brothers the study group stayed with were paying money to the villagers who worked on their pepper field. However, not every cultivator using other villagers' labour pays them wages, they said. Some are still doing reciprocal lever exchange. Following up in the life-story interview with the Estate staff manager (or high-asset informant), he underlined a clear development away from lever exchange towards having to pay. However, he stressed that in his opinion, that does not mean that their community's relations have been disrupted. It should be noted, that he generally had a very positive attitude towards the changes that were discussed. It was also seen that the development from wooden longhouses to concrete longhouses had more to it. Many individual houses have been built over the last few years, which could indicate a stronger individualism. People thus tend to split into smaller groups characterized by the greater family. Instead of subordinating to one or two headmen there are five. Instead of working together in the fields, people tend to pay each other. Finally, some have moved outside, which seems to be a growing tendency and may also indicate less of a community fellowship and tendency of rising individualism.

## Further study of Keranggas

If we were to go back to Kampung Keranggas, we would refine our data collection concerning the income and livelihoods of the middle-asset level HHs. We would also try to get a more precise measure of people's income, so that households could be compared in a more convincing manner. We would also look more into why and how much cultivated land has shrunk, to better understand how people have cultivated the area over time and for which reasons, e.g. if people have re-prioritised where to plant pepper or other crops. We should also ask how significant having a small shop is to the shopkeeper HHs. The income composition tool would serve well to obtain this information. Finally, we would re-do the questionnaires, covering all HHs, leaving out questions about the water supply among others, but making sure to ask all about social support transfers (governmental welfare programs) as well as the share of income covered by remittances. It seems to be quite a large part of the elders' income. Whether it will be of increasing importance, we cannot say. This would prove relevant for a more in-depth study for a village as Kampung Keranggas.

## Acknowledgements

The report is completely dependent on the great willingness of the headman and his family at which the authors stayed and their most generous amount of time allocated to the many questions that arose throughout the study and the many activities in which they naturally participated, being key informants on most within the scope of this research and beyond. The brother of the headman also took us to their pepper field, which added further knowledge. We are grateful for the openness we have been met with,

especially from the ADC leader and the Estate staff manager, who gave high-quality information, some of which they could easily have chosen not to answer.

A special thanks to our Malaysian Counterparts from UNIMAS who conducted the entire study with the authors and made the whole experience both possible and very memorable: Norma Liyana, Jeremiah Sia, Joanna Edell, Caroline Erifa Cewe, and Steffie Philip. Also a great thanks to our invaluable translators Rachel and Angela - without them, the study would have been impossible. Also a great thanks to the supervisors from UNIMAS, Dr. Wong in particular, and Dr. Kirstine Juul from Roskilde University and Dr. Torben Birch-Thomsen from Copenhagen University for their valuable guidance, supervision and comments throughout the process.

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## Appendices

### Appendix 1: Overview of Applied Methods

#### Overview of Applied Methods

7	Semi-structured Interviews	Bunya, Desmond, Manggah, Endong, Patrick, Ibrahim x 2
3	Focus Groups	Headmen, Adolescents, private OP
2	Group Interviews	Informally - baseline, Shopkeepers
5	Participatory Rural Appraisals	Resource Map, Timeline, 1 community level Crop Rankings, 2 HH level Income Compositions, 3 Mobility Maps
1	Participatory Observation	Pepper Field trip
1	Drive to the accessible Keranggas boundary	Guided by Ray
2	Transect Walks	
25	Answers to Questionnaires	
4	Soil Samples	
4	Water samples	
1	School Visit	
Uncounted	Informal Talks	Desmond, Ray, Bunya, Carl especially

## Appendix 2: Final Questionnaire

### A. Opening

- 1) Name \_\_\_\_\_ (HH number \_\_\_\_\_)
- 2) (Take note of gender, don't ask)
- 3) How old are you?
- 4) How many people is in the household (parents and dependents) \_\_\_\_\_

5. DESCRIPTION	i) Main Occupation	ii) Main cash income before road access (2007/8)	iii) Current main cash income (After road access)
Head			
Wife			
Children #1			
Children #2			
Children #3			
Children #4			
Children #5			
Other ( )			

6. Level of Education	i) Children #1	ii) Children #2	iii) Children #3	iv) Children #4	v) Children #5
a. Primary					
b. Lower Secondary					
c. Upper Secondary					
d. College/ Technical					
e. University					
f. No formal education					

### B. Use of land

- 1) How much land, in *hectares/football fields/number of trees*, belongs to the HH at the current moment?  
\_\_\_\_\_



2) What crops are you currently cultivating? \_\_\_\_\_

3) What is the most important crop for your own household's use? (\*\*if indicating more than one, invite for preference ranking!) \_\_\_\_\_

4) How much land are you currently leasing to oil palm JV? \_\_\_\_\_

5) Do you have your own private smallholder oil palms?      YES      NO

5.1) If yes, how did you choose that oil palm were to planted on this particular plot of land?  
(you may choose up to 2 answer options)

- i) Low soil quality
- ii) MPOB offers to clear the forest for me
- iii) Replaced rubber trees due to low prices
- iv) It is the most profitable crop I can plant on limited land
- v) Other reason: \_\_\_\_\_

6) How was the land leased for the JVC chosen?

- a) Estate chose
- b) HH chose
- c) Negotiation between Estate and HH
- d) Other reason: \_\_\_\_\_

6.2) If Estate chose, how did they choose it: \_\_\_\_\_

6.3) If HH chose, how did you choose it: \_\_\_\_\_

7) Which year do you expect to start receiving dividends from JV OP, if ever? \_\_\_\_\_

8) What would you do if you see no dividends five (5) years later than expected?

- a) Do nothing
- b) Go to ADC
- c) Go to the Estate
- d) Other: \_\_\_\_\_

9) Are you concerned with any of the following issues regarding the land leased to oil palm joint venture? You may choose from 0 to all.

- 1) Degrading soil quality
- 2) Water pollution
- 3) Security of getting back the land I leased
- 4) Other \_\_\_\_\_

- 5) None of the above

## C. Road

- 1) Has the road access improvement over recent years helped improve your HH income?
- a) Yes
  - b) No
- 2) How has the road improved your livelihood conditions? (you may choose more than one)
- a) Market access to sell our produce
  - b) Middlemen will access Kranggas to buy up produce
  - c) It is cheaper for us to buy certain products
  - d) It is easier to take work outside Kranggas
  - e) We can expand our network
  - f) For travel / leisure / sightseeing

### 3) Water

1. Where do you get your tap water from? \_\_\_\_\_
2. For how many years have you received tap water from this source? \_\_\_\_\_
3. Are you in need of a new water supply? \_\_\_\_\_

### 4) Electricity

The 10<sup>th</sup> of March Kampung Keranggas is supposed to be wired to the stable and permanent electricity supply and have meters set up. What implications do you imagine this will have for your life? (Name the first three that comes to mind)

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### 5) Income

- 1) How often do you take paid work **in** Keranggas?
- a) Every month
  - b) Every season
  - c) Every year
  - d) Less than annually
  - e) Never

2) How often do you take paid work **outside** Keranggas?

- a) Every month
- b) Every season
- c) Every year
- d) Less than annually
- e) Never

ACQUIRED VEHICLES	i) Yes / No	ii) NUMBER OF SPECIFIC VEHICLES	iii) Year of acquisition	iv) Year of acquisition
a) Motorcycle				
b) Car				
c) Lorry/Truck				
d) Boat				
e) Other				

4) What do you collect from the forest? (you may choose more than one)

- a) Medicinal Plants
- b) Firewood
- c) Timber
- d) Insects
- e) Mushrooms
- f) Hunting
- g) Roots
- h) Others
- i) NONE of the above

5) How satisfied are you with your current income?

Highly Dissatisfied    1        2        3        4        5        6        7 Highly Satisfied

6) How do you feel about your life now compared to 10 years ago?

BETTER

SAME

WORSE

9) What is your biggest wishes for change for the next 5-10 years in Keranggas?

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## Appendix 3: Final Synopsis

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21-02-2018

# Keranggas

Liu Yizuo, Lærke Sjøgren and  
Christian Winther

# Synopsis, Kampung Keranggas

## Thematic context

Sarawak is a state in the Malaysian federation located on the Northern part of Borneo.

Sarawak has during the past 30-40 years undergone the most rapid and radical transformation of its rural landscapes ever seen (Cramb, 2013). Not only does a single crop account for this immense change of rural settings, it even changed the law of land itself.

Historically the rural areas were dominated by shifting agriculture on customary land and later incorporated with cash crops, such as pepper and rubber, transforming the swidden agriculture into semi-subsistence smallholdings. The government intended to enhance this sector through research, extension, small grants and infrastructure (Cramb, 2016). Accounting for 8 percent of the total land area of Sarawak and 70 percent of the area under agricultural crops, oil palm is the biggest contributor and actor within the agricultural economy of Sarawak (Cramb, 2016).

As of 2016, 1 million ha or 91 percent of all oil palm plantations, is managed by large oil palm estates (Cramb, 2016). Oil palm has transformed the agricultural economy and is subject to conflicts surrounding Native Customary Land (NCL), policy and development incentives. Approximately 20-25 percent of Sarawakian land is NCL which means land is held and tenured as an inheritance which can be passed from one generation to another (landsurvey.sarawak.gov.my). This customary tenure, makes it difficult for outsiders to acquire land subject to Native Customary Rights(NCR).

The Land Code introduced in 1958 was the first legislative measures made for unlocking the NCL, giving limited recognition to NCR. From now on any undocumented official permissioned customary land, was held by license from the state. Customary land tenure claiming land as a community territory, was no longer recognized by the state— prioritizing individual title to land. An ethnically based system for classifying land, divided Sarawak into four different land zones<sup>1</sup>, that could all lap into NCL. The Land code was the first

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1) <sup>1</sup>Mixed zone land – no restriction on who can acquire title to land

2) Native area land – only “natives” of Sarawak (indigenous groups, malays and Dayaks, but excluding Sarawakians of Chinese descent(24p of the population, a higher percentage of the business class)

initiative to try and manage Sarawak's land through the state, undermining the traditional sector of customary land tenure (Cramb, 2016: 198).

From 1981, the state of Sarawak began its agrarian transition. The aim was to enhance economic development in the rural traditional areas by applying a large-scale, capital strong, technologically modern sector to the traditional one and thereby transform the resources, land and labour. Legislative changes were made in the favor of outside investors, giving them easier access to land within Sarawak and its NCL. By an organizational dualism approach, the government justified its intervention to bring the modern and traditional sector together. This was namely done by applying the Joint-Venture Concept(JVC) on to rural farmers. The concept was launched with Konsep Baru (New Concept) in 1995 and JVC became the cornerstone of restructuring Dayak community. (Cramb 2016:201). Bringing agrarian reform, transferring individual land rights to a corporate body, it seized to transform traditional subsistence agriculture into commercial, market-driven plantation agriculture.(Ngidang 2002:163)-

## Problem Area - Local context

According to the Intro Paper on Kampung Keranggas, the largest issue is road access for the villagers. This ought to be seen in the context of Keranggas being the closest village to Pantu out of five in the area being researched as part of SLUSE 2018. Keranggas is situated approximately 15-20km from Pantu. Part of the access road is asphalted, a result of the logging activity of rainforest, which went before the plantations of oil palms. The asphalt road is then succeeded by gravel or dirt road. It will be necessary for the group to know in which ways life and livelihoods have changed with the already improved road access, as well as what further gains they see will arise from further road improvement.

A great transition that has taken place since mid-2000's is the lease of native customary land belonging to the villagers of Keranggas to the large-scale oil palm plantation (LSOPP) beneath the village. We believe to have found that Winsome Pelita Kranggas, probably part of Winsome Pelita Pantu and located in Sri Aman, is the corporation behind the plantation. It is made up by 70% belonging to Winsome Plantations and 30% belonging to Pelita Holdings. The former is primarily (60%) part of Kim Loong Resources Berhad (KLR) and the latter belongs to the state agency LCDA (Mambu, 2013; kimloong.com, 2012: 3,9; Cramb, 2013: 88). We

- 
- 3) Reserved land or land held by government (principally as forest reserves)
  - 4) Interior area land – the rest



ought to find out how the agreement is formed contractually and not least how the decision-making process took place among participants in Kampung Keranggas. We will also investigate if the few not partaking in the scheme formerly did, and why they are not part of the scheme today.

We are probably not dealing with a situation of deliberate deagrarianization. However, some farmers have lessened their focus on paddy rice production or is not producing it anymore, as they can earn more on cash crops and buy their rice (Intro Paper). This is different from a former SLUSE study (SLUSE Lemanak, 1998), which found that even without the very need, some almost sentimental value was associated with the self-sufficiency of paddy rice production, but this seems not to be the case here.

In relation to this, we know from several other studies (see fx. SLUSE, 2016, "Among people, paddy and pepper") that oil palms do not require the same soil quality as do pepper. Replacement of pepper plants by oil palm is thus unlikely, but we do not know if we can consider this transition to be diversification, the opposite or a status quo. We assume that participating in the oil palm scheme has raised income, but how has this changed the daily livelihoods? Do they have more time to further income in other manners? And what will it imply for the future of Keranggas?

A possible problem to look for in relation to the oil palm plantation, is with regards to the water supply. That is, the introduction of herbicides, fertilizers and other chemicals for the whole oil palm scheme site, have deemed groundwater from below the plantation site undrinkable. By 2013 the villagers were seemingly waiting for a new water supply (Mambu, 2013: 3). If no new water source has found its way to Kampung Keranggas in the meantime, this situation may have gotten worse since.

The road access have granted Keranggas opportunities of migrating for temporary paid work elsewhere. This sort of income diversification could be a factor which will prove important for the future Keranggas. But how? Will young people have a further international outlook and wish to live a different live, not including farming? Or does it make Keranggas the most obvious out of the five Iban villages in SLUSE 2018 to settle and start a family? All these decisions that has been made, and will be made, is of core interest to our study in and of Kampung Keranggas.

## Research Question

**Which processes and changes have altered livelihood conditions\* and daily activities for villagers of Kampung Keranggas, and how have they affected different groups' visions/aspirations within the village?**

### Sub-question

- 1) What decision-making processes made villagers choose self-initiated large changes?**
- 2) How has recent land-use change and impacts from outside affected livelihood conditions for the villagers?**
- 3) What is the villagers perception of well-being and what are their aspirations? How does this relate to recent large changes in livelihood conditions?**

## Data Matrix

Research Question	Sub-questions	Sub-sub questions	Data (Aim)	Methods	Notes
Which processes and changes have altered livelihood conditions* and daily	1.What decision-making processes made villagers choose self-initiated large changes?		Understanding the division of land, how decisions work and what premises that served as base for the decisions.	SSI with headman Focus group / Informal talks / SSI with the villagers who rented the land	(was there agreement between longhouses/villagers)

activities for villagers of Kampung Keranggas, and how have they affected different groups' visions/aspirations within the village?	2. How has recent land-use change and impacts from outside affected livelihood conditions for the villagers?	2.1. What was villagers' leased land primarily used for before the plantation?	List of JVS participants from plantation. More important: Official contract, terms and conditions. Previous planting habits of villagers; Their previous income composition	List of JVS participants, Contract session with key informants probably headmen. Either focus group or questionnaire or PRA or combination for triangulation	PRA can also be considered. The reliability of villagers' memories of past income (accurate number) is worth considering
		2.2. How has the villagers' income composition changed?	Understanding what was before in comparison to the post-better road and post-plantation time	SSI	
		2.3 How has changes altered time use and livelihood activities in Kranggas?	Time Allocation. Propose matrix with different things they could be spending time on (paid job, chores, working in field,	PRA day-work chart (male/female; before/now; different longhouse)	Comparisons of some groups: Male/female wealthy and poor and/or

			working with oil plantation)		the different longhouses or if some lend/hold land and some do not
		2.4 How does the introduction of large-scale oil palm plantation in Keranggas affect (soil and) water quality?	Comparison of the situation before and after	Soil samples (plantation, gardens, ??), water samples  Qualitative  for before: were the soil and water different/better?	
		2.5 How do local villagers evaluate these changes	Opinions/Attitudes about the larger changes they have told us about.	Focus group	
	3. What is the villagers perception of well-being and what are their aspirations? How does this relate to recent large changes in livelihood conditions?		Adolescents' perspectives of the future.  The opinions of headmen; men and women.  Villager's plan for	SSI  Focus group	

		future.		
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## Methodology

### Social science methods

#### SSI - semi-structured interviews

We will use SSIs with headmen at first, to determine how decision-making processes of especially the lease of land for the oil palm plantation has taken place.

We will use SSIs with the villagers who decided to lease their land to know why they made the decision. We will also need to ask how the land is divided. How they receive dividends. It may be a sensitive question, but we will try to find out, how secure they are of getting back their land after the lease is terminated and if they are well-informed of the contract/agreement. Furthermore, we will ask them about their plans and expectations about the future.

#### Focus group

Will be used for questions regarding income composition what made them change their way of using the land. Measure the attitude for the future and how the changes might have affected their current and future situation in a negative or positive perspective.

We will use focus groups to determine, how things were different before the oil palm plantation. What was better, what may be worse, diversifying strategies, risk etc etc.

We will consider the composition of the focus group - gender, longhouse, wealth, etc once we are in the field. However, it may prove impossible to compose different groups according to age, gender, longhouse and wealth. In that case, we will simply need to take whoever is available - still being aware of what they may represent.

## Participatory Observation

- 1) Participating in daily activities in order to establish rapport
- 2) Observing what indicates wealth across households and longhouses and generations
- 3) Perhaps a way to conduct our SSI if they lack time or to make them open up

## Participatory rural assessment (PRA)

PRA, as a collection of participatory approaches, will be used to collect information in villages and residents' responses to changes in land use. Because of its special participation and the relative reliability of the data obtained, PRA tools will be used in the village as follows :

- 1) The village resource map will be completed in cooperation with headman and experienced villagers in order to master the status and history of the village resource distribution.
- 2) Timeline events change map will be completed by the villagers' memories in order to master the summation and recording of timeline events related to their lives.
- 3) Matrix ranking will be used with farmers in joint-ventures schemes to compare the composition of their income before and after leasing their land.
- 4) 24-hour daily work map and seasons calendar will be used with different groups of people (gender, longhouse, age) to describe their daily living and working arrangements.
- 5) Community maps will be used to describe changes in social networks

### Natural science methods

#### Soil samples

We want to do soil samples in order to investigate whether the soil fertility is changing on the land utilized by large-scale oil palm and how that influence the farmers' future agricultural activities and decisions. Ideally we want to take samples from the forest, fields of subsistence crops, other cash crops, young oil palm plots and ones of older age. In that way we will compare the results in order to know about the impact of oil palm plantation on soils and understand relations between land change, oil palm plantations and any future decision-making processes.

#### Water samples

Since water pollution may be a large issue, we will need to collect water samples from ground water, both what is used in the village and hopefully what is below the plantation. This method is combined with qualitative data on where people get and used to get their water from.



## GPS

We will use the GPS to create a more accurate map of the land area and its different types of land use and crop. Measuring and mapping the fields would give us a chance to triangulate these informations with informants. Additionally we will use it for map socio-economic patterns of interest within the village.

## To be determined upon arrival

simply household situation()

- 1) We will decide upon arrival whether to choose SSI or focus groups to find out what adolescents perspectives on the future is in relation to Kampung Keranggas.
- 2) If a lot of people are leasing their land, we may want to ask about their income in the questionnaire rather than PRA.
- 3) Forest resource assessment may be used to calculate the biomass of a selected area to observe changes in forest conditions following land-use change (diversity, forest cover etc)

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# Appendices

## Appendix 1: Time Schedule

DATE	ACTIVITIES	PARTICIPANTS	NOTES
27th feb	Calibrate time schedule and method/approaches with Malay.	Malay Counterparts Danish students	1) What we want to do, how we want to do. Interview guidelines, questionnaire. Sampling method for questionnaires. 2) We need to learn what to be aware of (cultural context, sensitivities, etc.) 3) Consider if we can meet Winsome Pelita Pantu in Sri Aman

28th feb	Preparation		
1st mar	<p>Meeting with host headman. Let him show us the village.</p> <p>Talks to available villagers: Telling us their stories. Building relations - can ask about positive/negative developments. Introduce ourselves.</p> <p>Evening: Informal talks.</p> <p>Group meeting: Sampling method for HH SSI.</p>	Host longhouse headman. Potentially other headmen.	
2nd mar	<p>Group meeting w. planning</p> <p>Village resource map: Borders, land-parts history (use, ownership) OR a GPS walk asking how the land is divided.</p> <p>Evening: Decide sampling for questionnaire (and SSI?) based on GPS. Decide what groups of PRA (gender, longhouse, age, occupation) makes best sense.</p>	<p>Headmen.</p> <p>Key informants.</p>	

3rd mar	<p>Presentation of key informants and time schedule for staff.</p> <p>(can we get into the plantation?)</p> <p>(Arranging SSI and PRA - invitations?)</p> <p>Questionnaire interviews (Split up 2-3 groups)</p>		
4th mar	<p>(Sit-down w. paper on timeline on most important changes since 2000 with headman + Request a list of farmers in joint-ventures schemes, asking the headman. **Ask for document of the lease agreement!**) </p> <p>SSI and questionnaires with farmers in their homes if possible. Daily activities.</p>		Focus on joint-venture farmers, but farmers in general as well.
5th mar	SSI and questionnaires with joint-venture farmer, in their homes if possible.		Maybe aim to interview villagers “different” from the farmers. Representative selection Fx. teenagers, genders, longhouse, age etc.
6th mar	PRA matrix ranking of former income composition.		Combine/reflect on big changes with your daily life

	<p>PRA on use of crops with seeds, stones other physical objects.</p> <p>PRA on timeline on most important changes since 2000, with villagers</p>		<p>activities (migration up/down, family planning, oil palm, road, others)</p> <p>Running more than one PRA at the same time at different locations</p> <p>Consider if we can do PRA of the 7th before and in situ. Have ready. Bring presents.</p>
7th mar	<p>PRA on daily activities, 24-hour map (draw on a timeline).</p> <p>PRA on 12 month work calendar (do people migrate for work or?)</p> <p>PRA (community map)</p>		<p>Choose different informants; gender, longhouse, age.</p> <p>Timeline for the community map can be discussed(1 y, 6 months etc). Be aware of clear guidelines.</p> <p>Do we want to make a seasonal calendar?</p>
8th mar	<p>Focus group with villagers on attitude towards the future and the changes -negative or positive? Future aspirations, decision making (why they leased</p>		<p>Group diversity. Whole day.</p>

	their land etc)		
9th mar	Try out natural science methods. Biomass, soil, gps		
10th mar	Focus group with adolescents if possible. Future aspirations, village life etc.		Because it's saturday
11th mar	Fill in the gaps		
12th mar	Fill in the gaps		(JVC/SALCRA)

## Appendix 2: Semi-structured Interview Guide

- ☐ What made you choose to lease your land?
- ☐ Can you work on the plantation land as paid job?
- ☐ If not, do you know who is working there?
- ☐ Are you satisfied with how employment is working on the plantation site?
- ☐ How did the decision-making process take place, when deciding to lease NCL belonging to Keranggas longhouses?
- ☐ Do you have more time after leasing land?
- ☐ What do you now use this time for?
- ☐ When does the lease end?
- ☐ How do you imagine your livelihood situation for the future?
- ☐ do you think the situation is better than it used to be?
- ☐ What are some new problems that have occurred in yours or the village
- ☐ What was the leased land used for before oil palm AND logging? Were there forest or cultivation?
  
- ☐ Which of the following are you concerned with, with regards to the land you have leased. You may choose from 0 to all.
  - ☐ Degrading soil quality
  - ☐ Water pollution



- ☐ Security of getting back the land I leased
- ☐ Comments for the above question \_\_\_\_\_

**For headman**

Land use in long house units ( Two modes of distribution: assigned to a longhouse, assigned to its members )

Land area and use

- Before logging
- Road and logging
- How much land per village hence longhouse
- Is all the plantation around something they are part of? How many hectares?

Income and social relations of long house members and different longhouse

The changes that have taken place in recent years have affected the lives of villagers

Whether to cooperate with oil palm company, cooperation details

The area of the leased land, lease, contract, distribution of profits, the enthusiasm of the villagers to participate in

Villagers' feedback and concerns about this cooperation

Are there any plans and expectations for future development in the longhouse

**For villager**

**simply household situations(Livelihood strategies, family composition, land situation)**

Significant changes have taken place in recent years

Whether to choose to lease land, why lease ? (why not)

Income composition and means of earn a living now

More detailed job information: In the case of farming, the way of farming and the market price; In case of outside working,work time; Location; Type and income

The distribution of land in the village

Non cash income ( agricultural products for personal use )

Has the composition of income and daily life changed recently

If changed, What caused the change

Environmental problems in the village

**Specific questions for villagers who leased their land**

why they chose to lease their land ?

How long time did it take before they started receiving dividends?

Were there investments to pay back?

How is profit distributed, compared with they planting themselves

Their concern about leasing their land: Contract lease, land degradation, water pollution

What was the leased land used for before

what is the time used on the leased land now being used?

significant changes in social activities and community

change in household daily life (different groups)

Whether to work on leased land (plantation):

if yes: wages, technology, seeds

if no: Do you know the situation of the land you rent, if they know who works on the land

Are there any other changes that affect your life (road conditions)

Evaluation of rental land and oil palm companies

Evaluation of trends in life and income development

Satisfied with the recent life or not? how to define well-being

Future life and expectation and plan

### **Villagers who did not choose to lease land**

Do you know the oil palm company and its cooperation model

why not lease your land?

Were they being forced to join by other villagers? What happened to their land (or the part they could have been using)

If it's subjective: What are your concerns? Under what conditions would you choose to rent

If it's objective: would you like to lease your land under present conditions if possible.

Are there any leaseholders around? What's their biggest change

Are there any changes in daily cultivation and life? What kind of events bring about what kind of change

Evaluation of rental land and oil palm companies

Evaluation of trends in life and income development

Satisfied with the recent life or not? how to define well-being

Future life and expectation and plan

### **For adolescents**

What is their daily occupation?

Do you know about household land use? details

Whether to participate in daily family production activities? what kind of and when

What enables them to dream the dreams they dream?

How have attending secondary school far away from home changed your view on 1) life 2) world 3) dreams? Or do they still want the same as always?

Has life changed a lot in recent years? What kind of events bring about what kind of change

Evaluation of trends in household individual income development

Satisfied with the recent life or not? how to define well-being,

Dreams? What would be a good life for them?

Do they intend or believe that they will stay in Kranggas?

Future life and expectation and plan

## Appendix 3: Questionnaire Draft

### Questions to be answered about the sampling method

- 1) How to sample
  - a) Every X bilek
  - b) GPS Gitter
  - c) Cluster sample
  - d) Random sample
- 2) Which person are we going to? Important to consider that money are probably managed by the wife and the land lease decisions and other decisions made by the husband?
- 3) What do we do, if a certain person is not there?
- 4) What do we do, if a person from the household cannot answer, but a none-present person can?
- 5) Is income individually or household based?

### Opening

- 1) Name
- 2) (Take note of gender, don't ask)
- 3) How old are you?

### Use of land (*talk w. malay students about measures*)

- ☐ How much land belongs to you all together at current moment?
- ☐ How much land are you currently leasing to oil palm?
- ☐ How much land are you planting with crops of your own?
- ☐ How much land of yours is used for:
  - ☐ Leasing
  - ☐ Crops for selling
  - ☐ Crops for own or HH use

- ☐ What crops are you currently cultivating? \_\_\_\_\_
- ☐ What is the most important crop for your own household's consumption?
- ☐ Are you leasing land to the oil palm plantation?
- ☐ Yes
- ☐ No
- ☐ To what extent are you satisfied with the dividends you receive from leasing your land to oil palm?  
1 being highly dissatisfied and 7 being highly satisfied

Highly dissatisfied      1      2      3      4      5      6      7      Highly dissatisfied

- ☐ If yes to leasing: Which of the following are you concerned with, with regards to the land that has been leased for oil palm? You may choose from 0 to all.
- ☐ Degrading soil quality
- ☐ Water pollution
- ☐ Security of getting back the land I leased
- ☐ Other \_\_\_\_\_
- ☐ None of the above
- ☐ Comments for the above question \_\_\_\_\_

### Income

- 1) In which places are you working?
  - a) Farming own land
  - b) Working in the oil palm plantation
  - c) Paid work outside Keranggas
  - d) Other work in Keranggas \_\_\_\_\_
- 2) How often do you take paid work outside Keranggas?
  - a) Every month
  - b) Every season
  - c) Every year
  - d) Less than annually
  - e) Never
- 3) Are you working on the oil palm plantation yourself?
  - a) Yes



- b) No
  - c) Not possible
- 4) What do you collect from the forest?
- a) Medicinal Plants
  - b) Firewood
  - c) Timber
  - d) Insects
  - e) Mushrooms
  - f) Hunting
  - g) Roots
  - h) NONE of the above
- 5) How big share of your land excluding leased land is used for subsistence?
- a) 0-20%
  - b) 21-40%
  - c) 41-60%
  - d) 61-80%
  - e) 81-100%
- 6) How do you consider your income within the village ?
- |      |   |   |   |   |   |   |   |         |
|------|---|---|---|---|---|---|---|---------|
| Poor | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Wealthy |
|------|---|---|---|---|---|---|---|---------|
- 7) Evt. How do you rate your future (well, not that sound stupid

## Appendix 4: Focus Group Guides

### Session 1

Participating members: Different groups of people (without head man): gender, ages, different longhouse

Topics: Introduce ourselves

Everyone is encouraged to speak positively, and there is no right or wrong answer to the question

Whether recording is permitted.

Are you satisfied with your present life?

Think about what improvements could make life better

How to define well-being life

Visions of near futures

## Session 2

Participating members: Villagers who lease their land

Topics: Introduce ourselves

Everyone is encouraged to speak positively, and there is no right or wrong answer to the question

Changes in their lives after they lease their land

Their evaluation of this way of cooperation, whether satisfied with the income, and worry about it

Is there any suggestion that would make such cooperation more satisfactory

What they mean for well-beings and their plan for their future life.

## Appendix 4: Data Document

Data divided by method

As I understood we just add sections and activities along the way. So the order in the report document is nice and clean, but I recall us deciding on a new “cleaner” document. Correct me if I’m wrong and feel free to move your part/section before or after according to the report docu.

Focus groups

Headmen 3rd March 13.55

How?

3<sup>rd</sup> of March a focus group with all the headmen of the village was arranged. The invitation was given and accepted the day before the activity took place. All 5 headmen agreed to attend though only 3(4) showed up during the time spent. Later we found that at least one of the headmen (mr. Unga) misunderstood the invitation and was waiting for us to show up at his house. The initial plan was to make them draw a timeline while explain and discuss it further with each other and eventually flux into a SSI managed by us. Adding both questions derived from already obtained knowledge as well as newly arrived follow up questions. Additional we first intended to make them draw a community/resource map afterwards, but the time spend on the latter activities made us choose to do it with fewer people at a different time.

What?

### Timeline

1958 – the school opens and by that time only one teacher teaches the whole school.

1987 – generator was supplied by the government and the first to ask was the first to get it as well.

1998 – solar, though no funding, no one to fix it. The solar is working fine, but only for small use of electric devices or alike, like cooking, cannot use freezer.

They heard about the micro-hydro and the project was begun in 2011/12. Because the solar was provided by the government, they wanted to save money and wired the hydropower to the solar and it resulted in an overload in electricity input, ruining the solar.

Benefits from getting wired to stable electricity – it will make a huge difference since it would be much easier as they don't need to turn the generator on themselves (which is apparently also quite demanding) it will be more cost efficient, since they don't have to buy fuels for the generator and pay meter instead. Supposedly Mr. Desmond used 400 RM per month for the longhouse, it being lit between 18.00-23.ish.

2005 – the villagers discuss if they want to join JVC and engage in the road. This was discussed between Menangkin, Menuang, Munggu Sawa, Tapang and KG. First KG was the target of the JVC, but needed to be discussed between the other villages because they might enter their areas.

? How many wanted to join from the village? – many people didn't want JVC to come, they were afraid they will take the land from them. But if you didn't want to join, they would just go around that part of land. All villagers formerly skeptical in the scheme would eventually be overturned when they saw incentives being paid every yrs.

Agreement – 60 years, afterwards up to the owner if they want to proceed another 60 years or get the land back. They will then cut down the OP/land is cleared by the company. The agreement was to be read carefully, but if not able to read, middlemen would explain before you sign it.

TR Sidie were the first ADC, second Tom(?) and eventually third Mr. Ibrahim.

Any disagreements, would be discussed with with the OP company (NB. Noted unclear in my notes)

Any issues/agreements associated with JVC OP:

Road – they are having meetings about the road conditions 3 times a year, want it to become asphalt all the way. Road seems to be the biggest issue and it seems that they agreed on JVC on the condition on providing a good road.

Estate transportation means – the villagers, regardless of participation in JVC can borrow car from the estate in health emergencies, being able to go to hospital.

Estate machinery – if they want to build a new resettlement or alike, they can borrow machinery from the estate for free.

6 different forms of land, being important in order to not being cheated by the company (my notes are insufficient, please triangulate with your notes).

If you joined the JVC after 2007, they would collect multiple new participants and make them sign the agreement and it being sent in. Afterwards they'll begin clearing etc.

2007 – the road came along, though the old logging road had been around for decades, it had not yet reached KG. Joint-venture OP was the reason for the newly gained road access. Prior to the road, they used to walk 2 hours to Pantu, going through swamp and forest.

2008 - 54 HH KG is in JVC and by 2008 all villagers are in JVC (this data conflicts other informations regarding late participants and the rise of the base-incentive, who gave us that info Ibrahim??). Some villagers overlap with their own OP as well.

2011 - We learnt that they stopped using river for transportation completely in 2011, before that a long wooden longhouse including a jetty was located there.

What's next to be fixed?

- Telecommunication including internet, important because they would be able to send messages, google stuff and using it for school(or educational purposes)
- The road(flood), the bridge over the river needs to be extended since every rainy season the low areas will flood and the road will be impossible to use. They either have to take a long detour or take/pay for the boat.

**Longhouse connections (see picture)**

**1941 - start develop KG (during japanese invasion of Sarawak)**

**1948 - TR Ukir**

**1950 - divided into two new longhouses**

1987 - TR Ungkir dies → TR Tana

1990 - LH Sidie starts dividing

2010 - Rumah Sidie, Mordi (son of jeni) and rumah Tana (see picture)

\*2012 - from wooden to concrete (but only Desmond and Jika)

### **Follow ups**

OP is not taking over any other crops, only planted on unused land. Rubber they will just leave.

Indonesians are very roguh and good for the heavy lifting and no locals are working at the plantations as manual workers for the reasons listed below:

heavy lifting duties

want to cultivate own crops

They are okay with indoworkers, but the drivers are local - they posses other type of jobs at the estate.

### Fertilizer

Shall only be used no closer than 4 depat from the river, that accounts for the smallholder as well as JVC.

The river condition is not good anymore and a water sample hasn't been taken since 2017 at sungai KG – not sungai Tapang. Before damming Sungai Tapang is used to be very big and twisted and used for swimming and bath. After OP they straighthned it.

Two types of OP:

- Swamp – bigger fruits, but less in weight
- Hill – less in fruit volume, but higher in density.

Grade of OP – depends of the age of the OP. If older than 5 yrs it will receive grade A.

If the fruits are bigger it will be a higher grade. Yollow and orange fruits means its ripe, black is not.

Too closely planted OP is not a lack of knowledge, but lack of land (though when Sidi was asked about the planting too close, he argued that it was his first time planting OP → lack of knowledge)

There should be 20-25 feet between the OP placed in a triangle.

JKKK – every longhouse have a JKKK

#### Pepper or OP economy-wise

OP gives more money, but requires a lot of heavy work, but less maintenance. With the JVC you don't have to do any work, they do it for you and gives you money in the pocket. Incentives are given 4 times a year. Dividends are given whenever there is profit – though still not received any yet. Incentives have been paid since 2007.

Why do people stop planting rice? Easier to buy at the shop. If you have too many plants like pepper or OP you need to prioritise your attention on the most profitable.

Do they hire ppl on the individual plots? My notes say "on his own – Sidie". I do believe we have informants having outside workers working on their smallholder, is it Desmond on the pepper?

MBPO gives subsidies for OP, they will clear and plant them for them.

#### Christian:

1. Transport used to be only by river. Stopped using river for transport by 2011
2. Only [proper, ed.] road since 2007 with the incoming of JV OP. Had to walk two hours to Pantu before then through swamp and forest.
3. Around 2005, discussions on joining JVC. These discussions included Manggah Sawa, Menangkin and Tapung. They targeted Keranggas first. The company wanted the area.
4. Quite a lot did NOT want the company by the beginning. They were scared of getting scammed.
5. Confirms that they would not plant on non-volunteers land (meaning, they are not just logging a huge plot and asking later, but actually asking first).
6. People saw that the JV was helping and so the sceptics joined.
7. It is a 60 year lease. This can be prolonged with a renewed agreement.

## Reflections

You might say method-wise that this was more of a group SSI. It worked very well since they were asked practical questions - not very deep, abstract or opinionated. We were getting factual information. The headmen know each other well and they are at the “same level” and have good knowledge since they have been involved with all the developments and decision makings in the village.

Potentially, they could have put other events such as “first car bought in the village”, “day of signing contract with JVC” or something else. Either way, it gave us great insight into the history and decision making in the village. Furthermore, it definitely lead us onwards in the research, since the discussion was flowing smoothly between the headmen and follow-up questions asked naturally by the facilitator, we had two focused translators and everybody else were making sure to take notes.

## Adolescents      Focus Group

### Participants

Deny	17	Have come back to help along (mechanic??)
Jimmy	19	Have come back to help along. Working in construction
Joen	24	Estate Mechanic
Peter	19	Waiting for result to go to college in Kuching
Genorika	20	Was working in a factory
Carl	26	Mechanic

### How?

This focus group was the least planned and least well carried out method conducted. The people were gathered by Carl upon request from Norma, who unfortunately failed to inform us of the focus group happening until the participants were already present in the longhouse.

We failed to inform the guys why they were there, what we sought to get out of their information and how it fit into our greater research and generally what we were doing in the village. They had rejected taking

part in the focus group the first time asked, so the lack of introduction, lack of proper preparation and division of roles combined with their utter shyness, led to a lack of talk in between the participants.

There was no time to settle roles, including the interpreter. She thus began to translate everything rather than summing up an ongoing discussion. With the guys' shyness the discussion seemed, from an outside perspective, to quickly come to an abrupt end and it seemed as if they were not talking much between one another. Really, they did not talk much, but Peter was trying to invite the others for their opinion it turned out afterwards. In the panic caused by the silence, new questions were asked, which stopped a potential discussion. Therefore, the focus group rather became a group interview. Had we had time to inform the translator better - and had the other one been available at the same time, we could have made it work better.

Lærke: Likewise the lack of briefing, we came to experience the importance of where to place the interpreter, whom was sitting at the end of the line next to the facilitator. She translated to the facilitator and thus struggling to reach the other participants. Ideal we would have prepared keywords, themes and roles beforehand.

What?

We understood that it is common to work outside after whichever education they seek to finalise - also outside the village. Many intended to go back later on. It was indicated that internet, telephone-line could probably further opportunities for living here and have paid work (the 2 or 3 mechanics). They would like to open their own mechanic's garage in Keranggas. Otherwise, they work outside when mechanical job is offered while also helping along with the farming, when their help is needed of any sort. Most young people agree that the main reason they go out to work is to earn more money compared relatively to enjoying urban life.

We were told that they wished better education for their younger siblings, as this leads to a better life at the end of the day, while they also stressed that it would be their own choice.

Peter initially wanted to study medicine but because of exam results, he had to change his aspiration to policeman, now awaiting his answer on whether he would be enrolled.

Reflections

Method: The focus group guideline was not enough. The group must inform one another well in advance when such event is suddenly taking place. A proper introduction is needed for all kinds of methods, so people know, why we ask them questions and take their time. Two interpreters are needed for focus



groups, so that the discussion can be summed up by one while the other can moderate and keep track of questions together with the facilitator. This facilitator, as with the third focus group, should be one who understands Iban preferably. Those who understand Malay and English only, should keep more in the background, keep track of answered/answered questions and write questions to the facilitator, who can then keep track of the order of questions.

Though lack of preparation, we still should make our focus group guideline questions less abstract or at least come up with concrete versions of the abstract questions we want to answer.

Data: Not as much pressure on education seemingly compared to countries like Vietnam and China (my own knowledge).

Line-of-triangulation: Lærke, Rachel and Christian followed up with Patrick on the last with the very last clarification/saturation interview on how to understand the moving out and coming back - whether this was a development or a cycle. He helped us understand that it was a development (directly), while we indirectly analysed (in situ) that the return has to do with both feelings (connection to ancestors) and the mere workings of heritage of ancestral land, which makes it natural to take over the land and cultivate it. Finally, it is combined with a look upon agriculture as something you can also do on a less requiring scale so that it may suit eldering villagers. It seems as if they accommodate their workload once they come back according to their ability at given age.

Yizuo

The shyness of young people themselves make FGD quite difficult, how to allow them to discuss independently and how to translate what they have discussed to the translator without interrupting them is another challenge. Although the preparation time is very short, this FGD still brings us a lot of information.

Private oil palm smallholders

How?

The focus group with household oil palm smallholders is our last focus group, our original plan was to split in to different groups, but because of the unavailability of other semi-structured interviews, we all ended

up in this focus group discussion. Learn from the experience of the first two, this FGD we are fully prepared. The interview outline was prepared before the interviewee came. This FGD is led mainly by a coordinator, while other participants are responsible for recording relevant information and asking additional questions. Two translators were invited to participate in the discussion, one to ensure communication between the coordinator and the interviewees, while the other is trying to translate the general content of the discussion to the remainder part of the study group.

The whole FGD focuses on the reasons for opting to invest in private small-scale oil palm planting, the similarities and differences between small-scale oil palm planting/**maintenance** methods and JVC planting methods, **up- and downsides when it comes to labour input vs. economic output between the two**, (and the impact of road environment improvement on it).

What?

The reasons for small-scale oil palm planting: Private oil palm plantations have emerged in recent years, with respondents choosing to grow oil palm at the household level because of MPOB subsidies. Once the applicant has passed the policy review, the government will provide free oil palm seedlings and different types of fertilizers applied at different times to support their production. The policy aims to encourage household oil palm cultivation to ensure Malaysia's oil palm production and help lift locals out of poverty.

The similarities and differences between small-scale oil palm planting methods and JVC planting methods: Planting oil palm on the same area of land can get higher benefits than joining JVC, but more labor is needed. Therefore, they will try to choose the land that is closer to home or has been reclaimed for planting, and lease the land that is far away to JVC. Compared with JVC's large-scale cultivation, private small-scale cultivation shows the following differences:

- 1) In the use of fertilizers: JVC can use a large amount of fertilizer at different times to promote its growth because of sufficient funds, While in private households, the NPOB provides fertilizer for oil palm plantations, so the amount of fertilizer available is limited. In the types of fertilizer use, the use of oil palm fertilizer needs different types of fertilization according to different growth conditions. We found that they don't deem the soil quality important for OP, since it don't require "good" soil for cultivation.
- 2) In terms of planting methods: The private planting distance is following the MPOB standards. Household oil palm trees typically take three years to gain profits, and will be cut down in 20 - 25 years, because oil

palm trees which grows too high will waste a lot of labor in picking fruit. While it only takes around 2 years for JVC to gain the profit and Oil palm trees can grow to 30 years cause the company have enough labor to harvest.

Impact of road environment improvement on it: Because oil palm fruits need to be transported to the market within 48 hours, respondents said improvements in road conditions were crucial to oil palm cultivation. According to them, one local family has been growing small-scale oil palms ( before subsidies and roads ). At that time, because the vehicle could not go directly to Pantu town, They use the back basket to ensure timely transportation. With the gradual improvement of road conditions, oil palm planting is becoming more and more convenient. Respondents gave us a consistent and definitive answer that they would not opt for small-scale oil palm cultivation if road conditions did not improve, and that they were considering private oil palm cultivation if roads improved, even without MPOB subsidies.

When asked about expectations for the future, most respondents said they hoped the road conditions would improve further. When asked about expectations for the future, most respondents said they hoped the road conditions would improve further. They also mentioned their desire for telephone signals and networks to play a role in oil palm cultivation: In the future, they hope to be able to contact transporters by telephone to facilitate their planting.

### **Christian**

*Would you have chosen to have OP even without MPOB subsidies?*

Unga: Would be willing to try it either way.

Ray + Desmond: Had their own OP before the subsidy, otherwise would invest little by little.

And if not, they would have to make their own nursery, which they then would.

The MPOB seedling subsidies are given to anyone willing to have their own oilpalm. They must apply for the seedlings, however.

Mr. Desmond has taken a course on “how to plant and maintain OP”. He received certificate for the completion.

Fertilizer: The Estate has more money to spend on fertilizer. Besides, it takes smaller amounts of fertilizer at early stages of the trees growth.

They need to hire labour - they also hire Indonesians, since they can work cheaper and more days. It is hard work! It is not worth it for Malaysians.

On the question of whether the participants with own OP are more risk-willing than others in the village, Mr. Desmond replied that other villagers were interested and asked them questions of how to do it (so yes, they do go in front and set the stage for others to follow indeed!).

After 20 years the trees are too tall to harvest and must be replaced. However, at the JVC they have a 25 year cycle. Asking why there is a difference, they added "in case of sickness (that is, not really the answer to the question, but what was given nevertheless).

Says that pepper and private OP is of SAME IMPORTANCE. There is low maintenance by themselves in OP - it is an easy income. Needs heavy work for the maintenance, but that is paid work. Need proper road access → "If no road, how would we transport it?? By plane?? [laughing]".

Desmond and Ray say that they actually planned to have their own OP before \*something\*. They planned it back in 2010.

Ray and Desmond saying: "If other people can do it, why not we?". Unga and Bunya followed after Desmond and Ray started.

"they" agreed to say yes to JV mainly for the sake of having the road. When asked whether this road would not have come about anyways, they responded "maybe not as early".

Interviewee D: If we have a signal, when the oil palm mature, we just call pantu town transporters, they will send a car to take the initiative to carry away, don't have to we shipped.

## Reflections

It was a great coincidence that we all ended up participating, even though we had planned to split in three groups, two others to conduct SSIs at the same time. As these informants were not available at the time, we all ended up back at the longhouse. As the facilitator and assistant were in need of assistance, it was great that we came back and could ask additional methods.

3 out of 4 participants were from the same longhouse, which in the beginning seemed to make the one from outside less talkative.

## SSI – Semi-structured Interviews

### Exploratory Interviews

Mr. Bunya, 4th of March, around 13.00

How?

Initial talks with TR Desmond and the group interviewed during the 1st transect walk lead us to have questions on the JV, we needed to explore. Someone (likely TR Desmond or Mr. Ray) told us, that Mr. Bunya had his own oil palm, and we quickly arranged an (almost unstructured) interview with him to get a better understanding of the decision-making processes of the leasing of land to the JV.

What?

He mentioned the cutting off of the top of trees and then waiting 3 months to cut further → As Mr. Ray also mentioned during the boundary drive. Way to work around the law.

Indicated that this is a way to convert land even though it should not be possible [as NCR is known to be land that must have been cultivated by ancestors before 1958].

Mentions that Pelita and the government has very good relationship.

He chose his land to be used for OP since all the land around his plot had been turned into JV OP plantation. He was scared that others would go and take his land, if action would not be taken by him. It is swamp land and therefore not suitable for other crops such as pepper. However, he had planted paddy rice before on the plot, he said. He wanted an income from the land and thus saw opportunity in OP now.

“He wouldn’t want to leave land already considered his” he was afraid that they would take his land if he did not cultivate it (since surrounded by JV OP).

“If using for others, he would have to cut his rubber” (don’t understand) - He does not want to cut down his rubber plots, in case the price goes up, 9 RM per kg. (*Rubber serving as economic security crop*)

Said, discussions about JV appeared (by official’s physical arrival) in 2005. Stated that nobody was forced to join the JV. His JV plot is close to his own private OP plot. But the JV part had not been cultivated by him. He has part in the joined plot. Stating that when divided it is less than 0,5 hectares. He thus receives 58,02RM every three months. He said he has received incentive since 2013. He did not need to spend investments.

**When asked, he stated that he should receive dividend by 2017, and that an official letter is telling so, but nothing more had been heard since [this was later confirmed by Mr. Ibrahim in 1st SSI].**

#### Reflections

In the later focus group of private OP smallholders, we came to the understanding, that TR Desmond and Mr. Ray had been the first-movers to have own oil palm, making Mr. Bunya and Mr. Libau follow their idea. Mr. Bunya knew less of the technicalities compared to TR Desmond. Mr. Bunya was a help in exploring and following up on the initial tails we had been told and to get closer to the next set of questions and informants.

Indicated to us, that he has only his own OP, not land in the JV. However, later on he said opposite. So, he is part of JV.

When indicating that Pelita’s “relationship” to the government is suspectively great, awhile the fact is, that Pelita is in fact a governmental entity, it slightly discredits Mr. Bunya’s credibility?

When receiving incentive from 2013, is it because he is not in batch 1 from beginning, or because it takes five years before incentives are given?

#### Key informant interviews

Mr. Ibrahim 4<sup>th</sup> of march 19.00

How?

From an earlier spontaneous group interview during second transect walk we, learned that Ibrahim was ADC of the village, the middleman between village and estate. we therefore scheduled an interview with him and brought an interview guide based on the data collected until then. we brought one interpreter only and since he was able to speak and

Ibrahim is the ADC chairman.

What?

Lingon, the first chairman in 2007. The ADC is elected every two years by all shareholders in KG. A community voice meeting is held every 3 months.

5 different positions within the ADC:

Chairman, vice-chairman, counselor, secretary, (vice secretary), treasurer, (vice-treasurer).

Headmen represent the longhouses and discuss issues of the estate regarding it's 200 participants (including Tapung, Menuang, Munggu Sawa, Menangking and KG.)

Issues regarding the estate: the road, the plantation not being taken care of in a proper way. The upfront payment - if you are joining JVC and suddenly want out of it during the time of clearing or under the cultivation. It happens seldomly and officially if they register the "form" [KKT NCR] they cannot back out. The upfront payment you receive when you register you should pay back when you back out of the JVC, but as far as we were told, they ignore it (unless it's a large plot of land and money) in order to avoid trouble.

The standard price is 1200 RM pr ha (10% of which goes to the villager, 30% are for investments and 60% goes to the company Winsome Pelita (under LCDA).

### ***Christian, road***

They have complained about the road. The road is worse now due to rainy seasons and heavy loads. It used to take less time to get from Pantu to Keranggas. The YB (political representative) approved 1MIO RM for the road construction from Pantu until Enkeranji. A 22,5km route of which 2,5km have been made into tar road so far. When the road is constructed, the swampy area, which gets flooded in December, will also be elevated. *[then mentions road from Samoua to Munggu Sawa, which seems conflicting?].*

### ***Lærke, road***

They When they complain about the road, they assumably will fix it (namely because of flood and the heavy trucks wearing the road) – \*confusing conflicting notes\* the company is in charge of the maintenance of the road but my notes also claims that there is a 1 mio RM government grant to make the road into asphalt and a contractor will be appointed to fix it, this being approved in 2017. It's been decided that the road should go from the brigde all the way to enkeranji (22,5 km) and was set to happen in 2018 – though due to the land being made of stone, the process of breaking down the stones will indeed lengthen the process. So, for the low area the road is aimed to be raised and the high land to be broken down to sandy soil.

#### The so-called "Magic land"

Land are divided into 3 zones being: state land (government), NCR and mixed land turned into NCR.

The magic/mix land/joint lot consists of cultivated stateland, which was being turned into NCR in order to avoid trouble. It being the pink land on the map attached – assumably being 3601 ha for OP. From what we are told, the pink mixed land is being cultivated by a few and since it stateland it is divided equal between all the villagers – though we're also told that you don't get the blueprint (title to the pink land) if you don't hand it over to the JVC project. Additionally, we were told earlier that the converted mix land was primary forest, which made us wonder how(magic) primary forest state land suddenly was subject to NCR on the condition of joining JVC.

We were also told that it sometimes were the company clearing for OP, that suddenly had exceeded it's approved areas and that the cleared stateland therefore was turned into a joint lot and divided to villagers (though it was not villagers that cultivated the land prior to the illegal clearing of state land as first explained.)

#### Reflections

During the interview he seemed to somehow change some statements saying that some land is a mixture of state and NCR while later claiming that no such thing exists – bribery was mentioned in the question regarding how state land can become NCR. Something also implied in our interview with mr. Bunya that made the basis of our knowledge on the mix/magic/joint lot land.

Kim Long is a part of Windsome Petila(sub company) – "Projek NCR Windsome Pelita Sdn Bhd Blok Keranggas". Feel free to elaborate this relationship.





Mr. Indong is old of age 88 years old, he has been working inside KG the most of his life besides working 1 year in Brunei as a construction worker in 1983. When asked why he came back to Keranggas he answered that he already felt old and could not work and therefore he went back to KG.

He received his primary education at the school in KG and afterwards engaged in rice cultivation, which has been his main and only income (aside from Brunei) until his aging days. The land is now empty while he also mentions that some of it is rubber. He did the PRA on income composition and it showed that even though he mentions rice as his only occupation during his life, it showed that he also used to cultivate pepper. The rice was for food/subsistence and pepper was for cash income – but it was never the biggest contributor to the HH income. He also listed forest products quite high for income and used to go quite often - at least before getting too old to collect.

He now receives 300 RM in social elder support since 2007, a support you have to apply for at maybe will get. He applied when he felt he couldn't work anymore – he can't really see anything.

When young and cultivating he would go the either Mewang or Pantu to buy nurseries and sell his pepper. Mewang being closer to the river, but Pantu being bigger. He would go every 2-4 weeks depending on the produce. He would rarely go outside KG without reason, but sometimes he would go to Sri Aman, but then he would need to spend the night at some place and then go to Sri Aman the next morning.

He confirms that there used to be more young people in KG back in the day and that they more frequently go to look for jobs in the city. (happens to later interview his grandson Patrick and son working in Sri Aman). He doesn't seem to have a problem with the youth finding outside work, but he regards it as a good thing if they want return to their birthplace.

Though he only has social support and rarely receives any remittances from his children, the children still advised him from joining the JVC – even the joint lot. They are afraid the JVC would steal the land, but on the other hand it would be an optimal income regarding his ability to work and age.

### Reflections/ Conclusions

The interview with Mr. Indong helps us prove that the gains the villagers get from road access (and in this case also JV presence) is not at all equal to all villagers. Potential gains rely heavily on both social capital (children telling him not to engage in the JV and not coming by to help nor giving much remittance to him), financial capital (only richer households can make investments in e.g. own private OP and utilise the road to send the produce to the mill).

Mr. Manggah

Life story interview of strong human capital, high income. Staff supervisor at Estate and example of modernization-pusher (as the brothers).

How:

Before selecting Mr Manggah for PRA and SSI, we conducted a questionnaire survey. In the investigation, we found that Mr Manggah is a member of ADC, at the same time he mentioned that he had led the construction and improvement of road conditions, and the attitude of the villagers from the beginning of the don't cooperate when behind to show respect for him. For a more detailed understanding of the decisions-making of the villagers, we decided to conduct more in-depth semi-structured interviews.

What:

Mr. Munggah says that he lives in the village and go to Pantu to work as one of the ADCs for the JVC. He has worked for LCDA long back in time, which he was not satisfied with. He then found work in Singapore and Brunei when he was young, but he decided to come back to the village because he has much land here and people wanted his knowledge and experience,(he thinks he can help villagers with his knowledge and experience). He used to work in town in another oil-palm company (Mr. Tan) )which will take him two hours to go there by boat.

Mr Munggah was the first to advocate JVC, he explains the benefits to villagers as :

- 1) they can easily get some land in title by leasing them to JVC(*unsure if it their "own" land or the joint-lot land given to them*)
- 2) With the road, it is easier to go out
- 3) With the road, it is easier to sell the products

At first, some villagers objected to joining JVC because they were not satisfied with the incentive and feared their land would be taken too cheaply, furthermore they remained sceptical towards the road because they feared what the JVC would bring them.(We were told that JVC brought about the road, but it would have been established anyways so to say that no road if no JVC is an exaggeration). With the passage of time and the benefits of the road, villagers are now satisfied with the incentives they have received.

If someone really wants to drop out, In theory, they should pay back a small amount of money which has been used on their land. But in practice, In order to avoid disputes and trouble, they usually let them go. When we ask deeper as why someone wants to quit, two reasons are given. First, somebody wants to drop out because of the conflicts of the household, For example, the son did not want his father to lease the

land. Second, some people want to quit because of land limitation, They have enough labor and want to be able to cultivate their own.

Mr. Munggah mentioned that in the past, during the harvest season, people in the village volunteered to help each other, but more often people need to pay each other nowadays but that does not mean that their community's relations have been disrupted, according to him. Their community is as close as ever. When we ask why the long-house was divided into five, he said they wanted to give more opportunities to young people. Young people are supportive and willing to give opportunities when they have a high level of education and the idea of becoming headman.

In the hope of young people, Mr. Munggah indicated that he encouraged young people to study abroad at a young age and then return to their villages to contribute.

Manggah's only concern for the future is the water supply. He wants treated water.

He assures us that the Bukit Butang area is protected area and thus not affected by fertilizers and pesticides, so the water supply is not in danger, it is just not clean to drink on its own, which he find the most important object to see solved.

He believe there used to be less cash crops and more subsistence. However, he later tells us that there is less pepper and less farmland today because people are getting older and cannot farm as big an area. Asked whether this leads to heavier reliance on JVC in the future, he confirmed "Yes".

## Reflections

We have not gotten a clear answer as to whether it is more or less farmland cultivated generally and for pepper. We have not reached saturation - it is not reliable enough.

## Group interviews and Transect Walks

What?

1. Individual plots on the left hand side at first. Planted crops: Pineapple, coconut, yams, pepper (mostly), banana, papaya, other.

2. Durian seems to divide oil palm and other fruit crops and again divides similar repetition of above mentioned fruit trees. Seems like a way to make two fields.
3. We find a new clearing of land and are told that it belongs to Mr. Libau and are to be used for private oil palm trees.
4. 3kg of fertilizer applied per palm tree every three months. Not able to say why it is three kilograms.
5. Sand is taken from the river and dried to mix with concrete for house construction.
6. Children are no longer swimming in Sungai Tapang due to OP derived pollution. And there are no fish anymore, we are told.
7. JV is cultivated by Indonesians
8. Estate managers are Iban, but from Sri Aman
9. Locals are only allowed to take certain roles (among these applying fertilizer told at this point)
10. Locals are not working on the JV since they have too many holiday.

During transect walk, informally invited, March 2nd

How?

Unplanned group interview. We were on our second transect walk and were invited in by some villagers. We accepted and started asking questions through both interpreters.

What?

The house belongs to Sidi. The longhouse has 17 bileks. The inviters are home as to pay respect for the person whom had passed. They moved in after the road in 2013.

5 generations (took up quite some discussion whether four or five) have been living in Keranggas approximately since 1940's [memories go back to 1942 Japanese colonization we are told days later].

By the river, there used to be a Chinese shop. TR Desman took over.

talks a lot about the Anglican Church and the 7th Day Adventists church. The church was built in 1974 by US missionaries.

Most income is from pepper. Besides capital is rubber, swamp rice and hill rice.

Talks about the micro-hydro damn power of 1999 and the solar panels before then.

The YB (District Representative) funded the micro-hydro with 300.000 RM. Big public case of bribery, money was stolen and a public official went to prison.

There were different opinions of why the micro hydro broke

1. Not enough water
2. The machinery
3. The bribery

They built the damm themselves. They lacked a transformer. Thus there was not a stable voltage supply.

They confirm the date 10th of March for wiring and metering to the electricity poles. They say they will pay 1700 RM when they come to set it up.

Shopkeeper speed interview, Jika and Ray 8th march

How?

Following the PRA of crop ranking we asked a couple of questions to the two shop owners in the village.

What?

They get their goods from Pantu and they transport it themselves. Jika have had a small shop for 40 yrs, using the river for transportation, he then had his shop by the river, which he took over from a foreign Chinese shopkeeper.

If the middlemen should bring the goods, the cost of transportation would be higher than the price of products itself. The middlemen also sell from the van, why they would be increased competition. They buy their goods from small shops, but in quantity and thus at a lower price.

If the road condition would improve, they would like to expand their shop, but as they mention – a bigger shop needs more customers. They reject the hypothesis that people would move to KG because of improved road condition, but when the national park is established, the area will experience a raise in tourism. On the other hand more people, customers and tourist would also increase the competition between the shops since middlemen sell themselves when they arrive in a village.

Reflections

Method: we wanted to make it short and consise since we already had taken a chunk of their time. The data was obtained and we got them pretty easy and quick. In retrospective because of the small amount of shops, we didn't even regard the shopkeeping as a source of income or a part of their livelihood strategy and thus still unaware of how much it contributes to the HH income and if it's yet another way to secure your HH economy and if that's part of future aspirations.

## Questionnaire

25 responses. Show the overview of the household in village and lead us to further discussions.

## How

During the survey, we first found that the distribution of households in the village did not match the information obtained on our community map. Therefore, we have updated the map according to the actual situation and kept the sampling method as accurate as possible for the team conducting questionnaires in the Northern half of the village. For the Southern half team, the largest longhouse was more or less empty. It was chosen then to take whoever was at home.

It was decided to conduct questionnaires by every second bilek as there were 64. Thus we did a systematic random sample. We had to be aware that some physical longhouses actually consists of two socially diverted longhouses. We made sure all new this before we went out, so that every longhouse would be appropriately represented.

We need to make sure that was is defined as a household if they are staying in the bilek and what that relation is. This was particularly to know if remittances and migration work is playing an important role in the family economy.

We discussed quite extensively whether to ask about education level in the questionnaire and whether to ask head of HH, but ended up deciding we could get potentially valuable information asking about the young people's education level.

After determining the final questionnaire, we tried to do three pilot surveys and The questionnaire was modified according to the feedback from the respondents and the translation. Two translators translated it into Iben to help them use it better. Finally, we decided that each group that conducted the questionnaire

consisted of three people, one to ask questions, one to translate them, one to complete the questionnaire and write down other important information.

### Reflections

Ideally, In the case of no one in the household, we decided to choose the former or the latter to replace the blank one, ignored the possibility of visit again, Thus affecting the representativeness of sampling to some extent.

During the questionnaire, although we decided to ask about the educational level of young people, that interviewer and respondent can not be able to clearly define youth, Causing a significant amount of time to be wasted on extraneous information. At the same time, when asked about the way roads improve their lives, most respondents in turn agree with the options we give, so it is not possible to accurately determine where road improvements have a greater impact on them.

After recovering all the questionnaires, how to correctly analyze the data presented by the questionnaire is also worth discussing. The questionnaire should not only serve as a guide to a deeper level, the representativeness and universality of the data presented by the questionnaire itself are ignored.

We regret that we did not ask all about all children's education and occupation as well as asking about importance of remittances from the beginning to all respondents. This could have helped see some links between social background, migration, education level, parent's income differentiation level and to which extent they may be able to utilise the road access differently depending on their economic/capitular situation. The downside to ask about all the children's education level would be the extra time consumed at some of the questionnaire interviews for data that may not have been used in the end either way.

### Participatory Observation

#### Pepper field

#### How?

We had been much encouraged that we should go participate in the daily activities. We felt the same need and quickly an agreement was set up with Mr. Ray to go the next early morning.



What?

There are two species of pepper. The size of the pepper balls are different.

1050 trees covering 0,5 hectares.

Harvest is done four times a year.

They give three handfulls of fertilizer per tree two weeks until the plant produce flowers.

They manage (or harvest) one line of trees at a time. They get help, which they pay. Some still do lever exchange. In one day, four to five lines of trees can be harvested taking five days for the 1050 trees entirely.

The plot currently gives 17.000RM per year, but we are told that a plot of similar size with the right soil and former pepper prices have been seen giving 200.000RM. Sandy soil is said to make them grow faster.

#### Reflections

The fact that the brothers are trying out two species, explaining “we have to try it?!”, very much indicates their innovative, entrepreneurial mentality, making them frontiers of the village. They are definitely the “do’ers” of the village and they make people follow their lead in livelihood strategy decision making.

#### Participatory rural appraisal

PRA, as an internationally popular evaluation method, which core is to obtain knowledge by observing like the “inner” rather than the “outsider” . This means what is important is to respect for local knowledge to the greatest extent and involve them actively in the decision-making process. We had planned to use quite a few PRA tools to get the information we wanted, but eventually, due to time and participant constraints, we selected the five tools which fit our study best to gather the information.

#### Timeline

The second day in the village, we were lucky enough to invite three headmen to understand some basic situation in the village. In order to see how some major changes affect the lives of local people, we decided to start by defining some important changes. We chose the PRA tool: timeline, to present the community level of what the villagers thought were significant changes in the villages over the past 20 years. The 20 - year period was chosen because, although the major changes we expected took place over 10 years, some information we knew from the informal interviews showed some of the major changes, such as dedication

of solar panels and micro-hydro for electricity happened in recent 20 years, so we decide to choose 20 years to cover them all. Having prepared the timeline, we invited three respondents to share with us what they thought were significant changes in a community level.

The three categorization were singled out by villagers and considered to be the most important changes from 1995-20018. They are: participation in JVC, changes in power supply and divide of long houses.

### Reflection

The application of the time line tool is considered as successful. On the one hand, we know what changes seem important to the villagers, meanwhile, we have a general overview of these important changes and how they affect people. On the other hand, the output of this tool provides us with the direction of future research.

Potentially, they could have put other events such as “first car bought in the village”, “day of signing contract with JVC” or something else. Either way, it gave us great insight into the history and decision making in the village.

The only thing worth exploring(for me) is we can present both English and Iban on the paper so that it is easier for interviewees to read them instead of asking the coordinator several times.

### Ranking of crops

We decide to use this method to to understand what factors affect villagers' choice to grow different crops. We discussed a lot about whether this tool should be understood at the family level or at the community level, and finally we decided to do this at the community level. Because some objective factors are common, and getting more people to discuss and draw results can make sequencing more objective and representative. So what we introduce to the villagers are: " This ranking is not just for your family, but for the whole village, assuming that the villagers have a piece of land, how you will think about it in the following ways." Our original plan is to let the villagers write down the order with marker directly on paper but then a better idea was raised, we wrote down the ranking on the stickers and made it easier for the villagers to complete the sorting and make it more convenient for them to communicate and change their idea. We also prepare some blank lines in case they have some, in case they have some new important point of view which are beyond our initial plan.

## Reflection

The method went really well. It was well planned and discussed ahead. It was a great decision to insist that it was presented in Malay and then translated to Iban, rather than presented in English. We had both translators present with well-defined roles. The four participants were enthusiastic and were able to reach a consensus quickly, meanwhile giving us clear reasons. They think the size of the land the crops need is also of vital importance in their decision-making so we add it on our paper. The outcome of the crop ranking tells us about what is affecting villagers' decision making in small-house plantation.

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## Income composition

We decide to use this methods to tell how the JVC and road influence people's income. Because income varies from family to family, we finish this at the household level. We have listed different sources of income and divided them into current and 10 years ago (before the road and JVC) to see whether there is a significant change. we prepare 20 pieces of stickers to stand for whole income (5 percent each) and ask the interviewees to put them in different places to represent their income composition. Because the main source of information is the household, we use the home-visit approach to complete the PRA and at the same time conduct more in-depth semi-structured interviews to help us better understand the life stories of different types of villagers. We choose one low-level income old man and a high-level income middle-aged(?) man to complete the comparison on the same sheet of paper.

In the process of operation, we find how to measure non-cash income is a very difficult thing to explain, but after we explained to the villagers , they can correctly put them into the income and measure the percentages.

## Reflection

Because this method requires household surveys, different respondents have different attitudes towards it. Our first respondent, a middle-aged man with a high income, showed great interest in it, he remarks: "we should do this first ( before a semi-structured interview ) and it's easier to talk about income with this." Our second respondent was an elderly low-income person, he said he was too old to see and seems not to be very willing to participate.

In the process of operation, we find how to measure non-cash income is a very difficult thing to explain, but after we explained to the villagers , they can correctly put them into the income and measure the percentages.

The outcome of this method bring us a lot of information that we didn't have before, we go back to the household-level from the community level to see how they are affected by JVC and road in different ways.