

The Effects of Land Transfer upon Deagrarianisation in Mae Lor Watershed, Chiang Mai Province, Thailand



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Declaration

By signing this document, we certify that all members have reviewed and are satisfied with the content of this report. Moreover, we declare the data to be our own and that all sources of information are fully acknowledged.

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Contents

i. Abstract (All)	6
ii. List of Abbreviations and Thai Terms	7
iii. List of Tables	8
iv. List of Figures	8
v. List of Appendices	8
1.0 Introduction (All Authors)	9
1.1 Problem Area	9
1.2 Problem Formulation	11
1.3 Report Structure	12
2.0 Methodology (All Authors).....	12
2.1 Overview	12
2.2 Questionnaires	13
2.3 Semi-Structured Interviews.....	14
2.4 PRAs	15
2.5 Soil Sampling	15
2.6 GIS.....	16
2.7 Water Sampling	16
3.0. Analysis of Sub-Question 1	16
3.1 Methods Applied (IC)	17
3.2 Livelihoods and Income Analysis (IC)	17
3.3 Land Use and Institutions (LH).....	24
3.4 Land Classification, Ownership and Land Transfer in BHSS (AKJ)	24
3.5 Illegal Land-Transfer (LC).....	25
3.7 Sub-Conclusion (AKJ).....	26
4.0 Analysis of Sub-Question 2	27
4.1 Methods Applied (RFL)	27
4.2 How is the Transfer of Land Taking Place? (RFL).....	27
4.3 Why are People Interested in Selling Land or Why Have They Already Sold It?	28
4.5 Sub-Conclusion (AV).....	39
5.0 Analysis of Sub-Question 3	40
5.1 Methods Applied (LC).....	40
5.2 The Young Generation (LC).....	40

5.3 Parents' Expectations for their Children (AV)	41
5.4 Title Deeds or Ideological Tools?(AKJ)	42
5.5 Which Do The Villagers Prefer and Why? (LH)	43
5.6 What Would CTD Change in BHSS? (RFL)	44
5.7 What would ITD Change in BHSS? (RFL)	44
5.8 Sub-Conclusion (LH)	46
6.0 Conclusion.....	47
7.0 List of References	49
8.0 Appendices	51

i. Abstract (All)

During the second half of the twentieth century Thailand underwent a rapid social and economic transformation from an agriculture-based economy to one based on industry and services. This transformation led to increased de-agrarianisation throughout Thailand. Traditionally, livelihoods in rural areas were closely linked to the land, but modernisation has led to rural population depending on a range of incomes other than farming, making land ownership less important. At the same time improved economy and transport facilities along with deteriorated urban environment have led the middle-class population to seek life in the countryside. Though land titling was officially meant to enable citizens to take loans, coupled with tourism and high demand for land in rural areas, it led many farmers to sell their undervalued land, pushed by debts created from children's education and agrochemicals. This process has been going on though actual title deeds have never been implemented. The study area is a village in Mae Lor Watershed near Chiang Mai.

We set out to investigate how land transfer is affecting de-agrarianisation in the village of Ban Huai Som Suk now and in the future.

We were applying a range of different methods such as questionnaires, semi-structured interviews, PRAs, soil sampling, transect walks, observations and GIS to be able to triangulate our information.

We end up by concluding that there is a strong correlation between transfer of land and de-agrarianisation. Wage labour is preferred over agriculture, which leaves parts of land unused and villagers more willing to sell their land. A clear generational shift can be seen where the older generation have no one to take over in the agriculture as children are working or studying outside. This along with debts further pushed land selling. Land transfer in turn led to intensification and increased residential areas. Thus we expect de-agrarianisation to increase in the future.

ii. List of Abbreviations and Thai Terms

ALRO – Agricultural Land Reform Office
BHSS – Ban Huai Som Suk
BMKP – Ban Mae Ka Piang
BPSR – Ban Phrabat Si Roy
CFB – Community Forestry Bill
CMU – Chiang Mai University
CTD – Community Title Deed (Chanood Choom Chon)
DL – Department of Lands
DOAE – Department of Agricultural Extension
DOA – Department of Agriculture
DPW – Department of Public Welfare
GIS – Geographic Information Systems
MJU – Maejo University
MOAC – Ministry of Agriculture and Co-operatives
MOI – Ministry of Interior
NS-4 – Chanod (Private title deed)
NFTP – Non timber forest products
Pu Yai Ban – Village Headman
Pu Chouay Pu Yai Ban – Assistant Village Headman
RFD – Royal Forest Department
SPK – Sor Por Kor land certificate
STK – Sor Tor Kor land certificate
Tambon – Sub-district
TAO – Tambon Administration Organisation
THB – Thailand Baht

iii. List of Tables

Table 1: Methods applied to each sub-question.

Table 2: Methods applied and their frequency.

Table 3 - Summary of the financial capital in BHSS.

Table 4 – Key data related to land transfers

iv. List of Figures

Figures 1 & 2 – Comparison of the age distribution in BHSS with all of Thailand.

Figure 3 – Monthly income distribution in BHSS.

Figure 4 – Sold and unsold land in BHSS

Figure 5 - The education level in BHSS

Figure 6 - Seasonal calendar produced through participation with the community

Figures 7 & 8 – A comparison of a standard BHSS home with the teacher's home

Figure 9 – Banana trees on the plot of the SSI respondent

v. List of Appendices

A. Methods Applied

B. Questionnaire

C. Interview Guides

D. Synopsis

E. Data schedule overview from the matrix

F. Appendix Graphs

G. Time schedule

H. Seasonal Calendar

I. Community History

J. GIS Maps

K. Soil Sampling Results

1.0 Introduction (All Authors)

1.1 Problem Area

During the second half of the twentieth century Thailand underwent a rapid social and economic transformation from an agriculture-based economy to one based on industry and services (Goss and Burch 2001). This shift was encouraged by strong governmental support towards industrialisation and tourism, resulting in the downgrading of the agricultural sector to secondary status (Singhanetra-Renard 1999).

This has led to a process of deagrarianisation, which means the shift from farm to non-farm activities, throughout Thailand. Referring to Bryceson, Rigg and Nattapoolwat (2001) define deagrarianisation with four parallel processes: occupational adjustment, livelihood reorientation, social re-identification and spatial relocation, and in the case of South-east they also define spatial interpenetration as a fifth feature. Traditionally in Thailand, livelihoods in rural areas were closely linked to the land, both for economic security and social identity (Rigg 2005; VanWey 2003) but globalisation and economic development have led to the reorientation of livelihoods. Thus for many rural households farming is only one of a range of income sources that may include seasonal factory work or tourism (Rigg 2005). This process means that people are prioritising their children's education and are adopting new income sources and activities, including those outside their village (Rigg 2005). Rigg also argues that there are obvious socio-economic deterrents for this shift, though it is also important to look at the changes that derive from the "psychology of modernity", which refers to the changing perceptions of being a farmer as well as the cultural importance of land ownership. But as the importance of agriculture diminishes, the role of land ownership does so as well (Rigg and Nattapoolwat 2001:952).

According to VanWey (2005) the major push/pull factors to deagrarianisation include the mechanisation of agriculture which decreases labour requirements; increased labour requirements in the manufacturing industry; urban and population expansion reducing the

availability/value of agricultural land; and the amalgamation of smaller plots into larger plots due to outmigration, further encouraging deagrarianisation.

1.1A Land Ownership and Land Use - Traditionally, agricultural land in Thailand has been divided according to tribal inheritance patterns and community norms (Ganjanapan 1994; Rigg et al. 2008:363) but as globalisation and market forces have made their way into rural societies, land tenure has become an issue. In 1984, The Thailand Land Titling Project was launched with the official aim of offering title deeds to enable citizens to receive loans but many occupied in agriculture chose to sell their land instead (Rattanabirabongse et al. 1998). Previously, not having land meant not having any income security, but with changing income opportunities reluctance towards selling diminished. Different factors have escalated this tendency including higher education and thus the opening of new income opportunities and growth of rural industries (Rigg et al. 2008:363).

Thailand's economic boom and the rapidly improving transport facilities, as well as the sense that the quality of life in urban areas has deteriorated along with the environment led many of the country's new middle classes in the 1990's to seek to live out of town (Rigg 2002). Furthermore, investment companies began investing in land development and tourist-related enterprises, especially favouring provincial areas with high tourist potential where the land was undervalued in terms of its developmental potential (Singhanetra-Renard 1999). Farmers, tempted by offers that were simply too good to turn down sold their land to property developers (Rigg 2002).

A still unsolved situation is that farmers often are having insecure land tenure since they are cultivating and living within land, which is demarcated as forest reserves (Buch-Hansen 2002). Presently forest conservation, land privatisation and rising populations have restricted land availability throughout the country, acting as a push factor towards agricultural intensification, marketisation and non-farm activities (Rigg and Nattapoolwat 2001).

1.1B Study Area - The study area is the village of Ban Huai Som Suk (BHSS), located in the Mae Lor watershed, in Mae Rim District, Chiang Mai Province. The watershed is categorised by the RFD as a conservation forest. The main river is the Huai Mae Lor but several other tributaries join it in the vicinity (Mingtipol et al. 2011:20). Surrounding the village is a combination of agricultural land and dipterocarp forest. In 1957 the first Thai households settled in the area, with ethnic Lahu and Akha households following. There are currently 54 households, with many villagers working as wage labourers and/or cultivating subsistence and cash crops. There are no legal title deeds in the village but selling of land has been practiced for two decades. Many inhabitants sold their land to outsiders such as wealthy city dwellers who are proceeding to build holiday homes and practice commercial agriculture on what was formerly subsistence agricultural land.

1.2 Problem Formulation

Within the frame of understanding the process of deagrarianisation we are interested in investigating how the changes in land ownership are affecting the villager's land use, income sources and ways of life and how they expect that the changing land ownership patterns will do so in the future. We expect that the transfer of land is a likely driving force for deagrarianisation, as well as the deagrarianisation process affects the villagers' way of life.

Thus, our problem formulation is as follows:

How is the transfer of land affecting deagrarianisation in BHSS and how will it affect it in the future?

To structure the research, this main question has been divided into three sub-questions as follows:

- 1. What typifies the livelihoods and land use in BHSS?***
- 2. What is driving the transfer of land and how is it affecting people's way of life?***

3. How do the villagers expect that their way of life will change in the future?

1.3 Report Structure

Part Two outlines the methods utilised in answering our sub-questions and parts 3, 4 and 5 consist of an analysis and discussion of the results structured around the three sub-questions. In addition to analysis and discussion we reflect significantly upon the methodological process in the field, giving critical consideration to the validity of our results. Part 6 concludes our findings and attempts to answer the problem formulation.

2.0 Methodology (All Authors)

2.1 Overview

This chapter will outline the methodologies applied to our project and why each method was chosen to answer our sub-questions. In addition we will reflect upon the difficulties faced in implementing them in the field. Further reflections will be dealt with in the analysis.

Sub-Question	Methods Applied
What typifies the livelihoods and land use in BHSS?	Questionnaires, SSIs, community timeline, joint meetings, mapping, soil sampling
What is driving the transfer of land and how is it affecting people's way of life?	Questionnaires, SSIs, community timeline, joint meetings, transect walks, mapping,
How do the villagers expect that their way of life will change in the future?	SSIs, FGD, occupational ranking, wellbeing ranking

Table 1: Methods applied to each sub-question.

Method Applied	Amount
Questionnaires	20
SSI	16
Follow Up Interviews	6
Soil Samples	5
Water Samples	3
Joint Meetings with Officials	4
Ownership Mapping	2
Land Use Mapping	2
PRAS	
- Community Timeline	1
- Occupational Ranking	1
- Seasonal Calendar	1
- Life Quality Ranking	1
- FGD	3
- Community Mapping	1
Transect Walks	3
GIS	-
Informal Talks	-
Observation	-

Table 2: All methods applied and the frequency.

A combination of qualitative and quantitative methods have been chosen for the following purposes as highlighted by Green et al (1989): Development in the research process, whereby the results of one method can aid subsequent methods and stages of research; expansion, whereby mixed methods increase the depth and breadth of the research; and triangulation, whereby the credibility and validity of data is increased due to multiple supporting sources. This is also supported by DeWalt and DeWalt (2002:102).

2.2 Questionnaires

The use of questionnaires was central in order to achieve a general overview and also in order to focus our SSIs and identify key informants.

To ensure randomisation of the households chosen for questionnaires, we selected every second house in the village as a stratification method (Oppenheim 2000:39-45). To minimise translation flaws and to increase validity, the sampling method and questions were doubly translated to our Thai counterparts and questionnaires contained both English and Thai wording. Questionnaires were conducted in person.

As we only did two pilot tests of questionnaires, the formulation was not thoroughly checked and tested, which led to some of the important questions not being completely answered according to our problem formulation. This could have been avoided by making more pilot tests and putting the data in to our data-matrix before commencing the major survey, but we overcame this mistake by going back to some of the houses to get the missing answers¹.

2.3 Semi-Structured Interviews

In order to investigate our sub-questions in depth, SSIs were chosen as the most adequate method. In addition, it gave us flexibility and scope to adapt our focus in the face of new issues.

SSIs were conducted primarily with people who sold land, who want to sell, who do not want to sell and people who bought land in order to understand why they were willing or reluctant to sell land and which possibilities and changes have emerged or is expected to emerge with the transfer. We also wished to know how the transfer of land was taking place, since there are no legal title deeds, which can be exchanged in the trade, and how the land use has changed due to the transfer. We had different strategies on finding the informants for our SSIs: some were identified while conducting the questionnaires, while others were found using the snowball effect, and asking people through informal talks (Gillham 2000). In order to understand more deeply the policy-level of the land transfer, we also interviewed a TAO official, an officer at the LD as well as representatives of the RFD.

¹ See Appendix B for questionnaire.

To understand the future expectations of the villagers in relation to adjudication, SSIs were the most effective. We incorporated questions about the future of the village and of the young generation within most of the SSIs in order to get the broadest understanding possible.

2.4 PRAs

To triangulate questionnaire data about peoples' occupations in different seasons, a seasonal calendar was conducted with a group of villagers (Selener et al. 1999).

A community timeline (Selener et al. 1999) was conducted to get historical and general background knowledge about the village, livelihood and land use in BHSS with the help of 3 elders from the village which were found by the village headman. The community timeline was also used for the second sub-question to understand changes in way of life and land use.

We used transect walks to get an overview of the land use and change in the village due to land transfer processes. We observed for example the number of newly built houses and construction sites as well as the degree of modernization on agricultural land.

A FGD with young people in the village was conducted in connection with an occupational ranking and a life quality ranking (Mikkelsen 2005). This was to understand their aspirations for the future. The village headman assistant helped us invite the young generation for this FGD.

To triangulate information, the answers from the parents on their expectations for the young generations were compared with the young generation's own plans.

2.5 Soil Sampling

To triangulate the information of land use change, we used soil sampling in cash crops and subsistence crops on sold land and unsold land to investigate the degree of soil degradation between sold and unsold land. We measured EC, pH, and the levels of N, P, K and organic matter².

² See Appendix K

2.6 GIS

A geographic information system (GIS) was employed on this project for a number of reasons. Firstly, it supplements methods such as questionnaires and soil samples by allowing us to analyse their spatial distribution and sampling scheme. Secondly, it allows us to investigate the spatial layout of BHSS and in particular the relationship between the forest and agricultural areas. Lastly, as we used aerial maps to investigate the degree of land transfer, GIS enabled us to analyse and display this in a much more reliable and secure manner than the physical map could have.

2.7 Water Sampling

Water samples from the main river were taken in order to contribute to the knowledge about water quality throughout Mae Lor watershed. The results were not used in this report but shared with the groups working in other villages.

3.0. Analysis of Sub-Question 1

- What typifies the livelihoods and land use in BHSS?

(IC)

The purpose of question one was to investigate the livelihoods with specific focus on income and land use in BHSS. Answering the question will provide a foundation for the remaining analysis. This part will consider the livelihood and income situation, and the land use with consideration for the institutions and policies affecting it.

Messer and Townsley (2003) define livelihood as the means a household uses to reach wellbeing. According to the theory there are five assets to a livelihood strategy: the financial capital (monetary stocks of regular incomes), human capital (the quantity and quality of working capacity available), natural capital (environmental resources), physical capital (infrastructures and tools) and social capital (networks, groups and other

relationships) (DFID 1999). Our research in this section is primarily focused on financial capital, and least upon social capital.

3.1 Methods Applied (IC)

We obtained data on the role of agriculture and wage labour, land-use, and land-transfer mainly from questionnaires, but also SSIs with key informants, joint meetings, a community timeline, soil sampling and observations contributed.

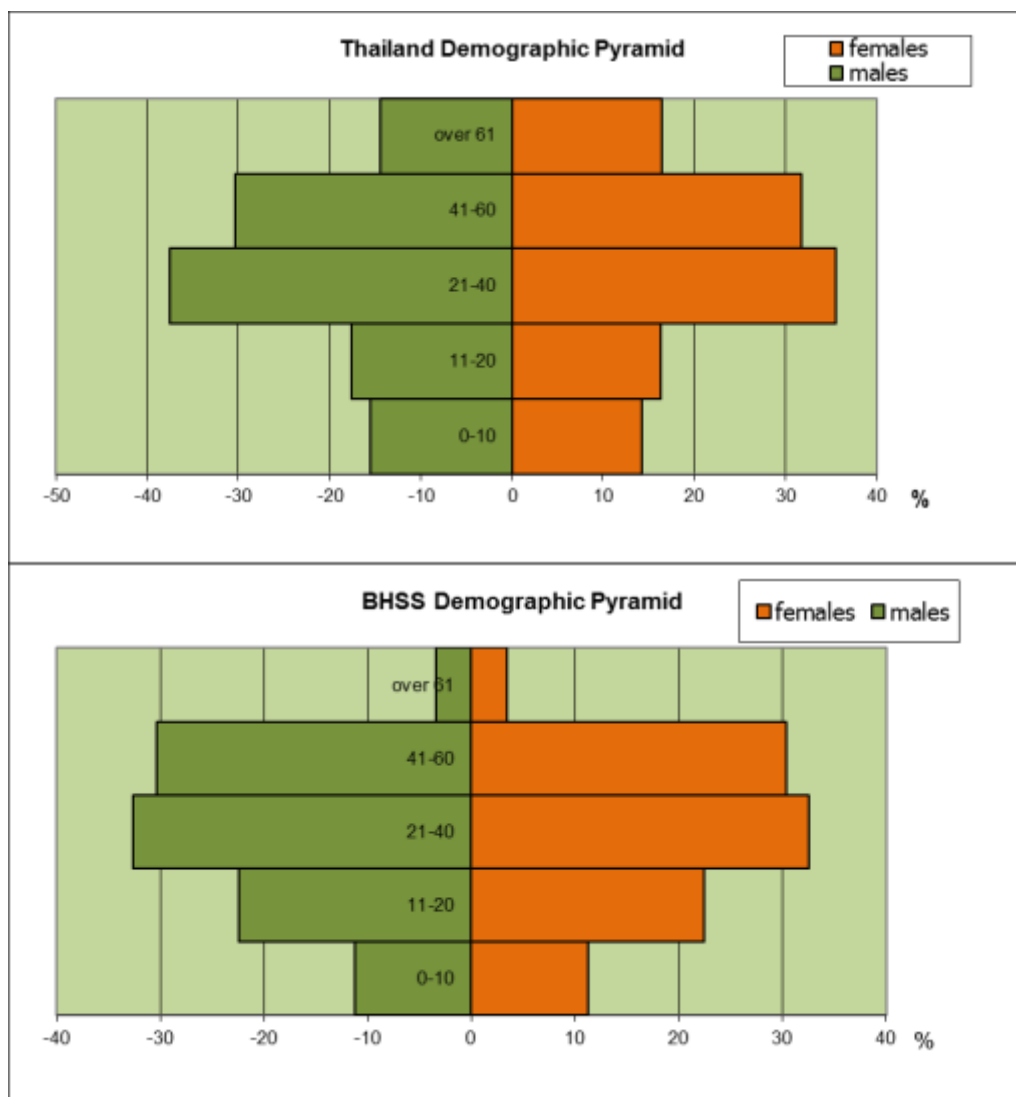
3.2 Livelihoods and Income Analysis (IC)

To get a visual image of the village, we had the headman's assistant take us on a transect walk on the first day. Despite our intentions to document village households and territory, we were instead brought to a nearby waterfall. As a result we undertook additional transect walks with our respondents from questionnaires and SSIs to get a better picture of the village.

When investigating income sources, through our questionnaires we found that 35% of the people between the ages of 20 – 40 in BHSS do live and work outside the village and are sending remittances³. By the answers the respondents were giving we also assessed that three types of migration are present: commuting (returning home on a regular basis), circular (divided between place of destination and natal community, e.g. education) and linear (total transfer) (Singhanetra-Renard, 1999). Rigg (2006) describes a similar process in South-East Asia in general of increased non-farm activities, and therefore increased mobility and remittances and the raising of the average age of farmers.

However, the migration, which would usually provoke a reduction of working population age class, does not affect the demographic distribution in BHSS (Figure 1 & 2). The only conspicuous feature detectable by comparing with Thailand demographic distribution is the recentness of the village, causing the population over 61 to be very scarce.

3 In our questionnaire "household" has been translated with a Thai word meaning "those who eat rice together". We had chosen to rely on the villagers perceptions of this concept, but found out that some respondents included people living outside the house, whilst others did not. Generally, we found that children living outside, who do not yet have families of their own are considered as members of the parents' household, whilst when having own families, it varied. This illustrates the complexity of using this term.



Figures 1 & 2 – Comparison of the age distribution in BHSS with all of Thailand.

80% of the questionnaire-respondents stated wage labour as their main income source, whilst 15% had governmental pensions and 15% had cash crops as their main income⁴.

In our wage labour definition, we are both including off-farm and non-farm income⁵.

A common feature of this wage labour is its temporary and informal nature, with most labourers working at any job available, such as construction work and farm activities. This reveals that their type of wage labour is generally an unstable income source. In addition, 35% of households claim to receive remittances from family members living outside the village. The average monthly income is 7,500 THB, and the average monthly expenditure is 5,500 THB (Figure 3). However 60% of respondents claim to have debts, with the average being 53,000 THB. This is a common feature in Thailand, as according to Samranjit (2007) 80% of farmers owe money to the agricultural bank. This data is summarised in Table 3.

Main Income Source	% of Respondents		
Wage Labour	80	Average income/month	7,500 THB
Governmental pensions	15	Average expenditure/month	5,500 THB
Agriculture	15	Respondents in debt	60%
		Average level of debt	53,000 THB

Table 3 - Summary of the financial capital in BHSS.

⁴ Some people mentioned two main income sources.

⁵ Off-farm income is relied to labour in other farms than owns, while non-farm is non-agricultural related jobs. (Ellis 2000)

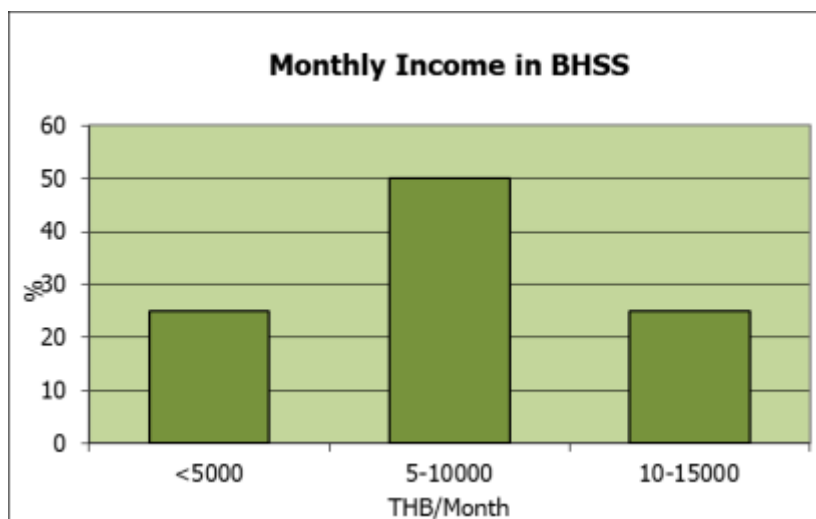


Figure 3 – Monthly income distribution in BHSS.

Through a FGD with village elders, we found that infrastructure in terms of roads and thus physical capital has improved within the last 10 years, permitting the villagers to commute to Chiang Mai or Mae Rim to work. As well, governmental electricity network was extended to the village. There have also been improvements to the water network with two canals constructed.

Initially we had planned to make the elders draw a community calendar but as one of our Thai colleagues, Pariwat started a discussion with the elders, who had a lot to say and clearly enjoyed themselves, we chose not to force it upon them. Either way we got a lot of interesting information. According to them, people started to take wage labour about ten years ago. They also stated that the selling of land to outsiders begun around 20 years ago, but has increased during the last years, which the TAO representative confirms.

Since BHSS is lacking title deeds of any kind, we have been told from various people that land prices are low. On the other hand, in our questionnaire we asked people to estimate the monetary value of their land. We got a wide range of prices varying between 20,000 – 400,000 THB/rai, prompting us to reconsider people's abilities to make correct estimations. The village headman estimated that the average is 100,000 THB/Rai.

Our information on the amount of land which has been sold is not consistent, as the elders claim two thirds have been sold, whereas the village headman claims 90%. The TAO representative drew the official governmental boundaries of BHSS on a map which totalled 980 ha according to the GIS. The headman subsequently categorised 220 ha of this land

as either sold or unsold, and of this 220 ha, 72% according to his drawings is now sold. Thus we see that 760 ha was uncategorised, and whilst the majority is forested land it is likely that some sold and unsold land has been unaccounted for. Nonetheless it is clear that a significant area of natural capital has been transferred from villagers to outsiders.

Thus whilst we will use the estimation of 72% to be the current land sold, it is important to mention that the data is based upon the interpretations of the village headman and the village TAO representative. It is possible that not all sold/unsold land is accounted for and we cannot be certain that their interpretations are true to reality. See Figure 4 for a map of this land.

Ban Huay Som Suk - Sold and Unsold Land

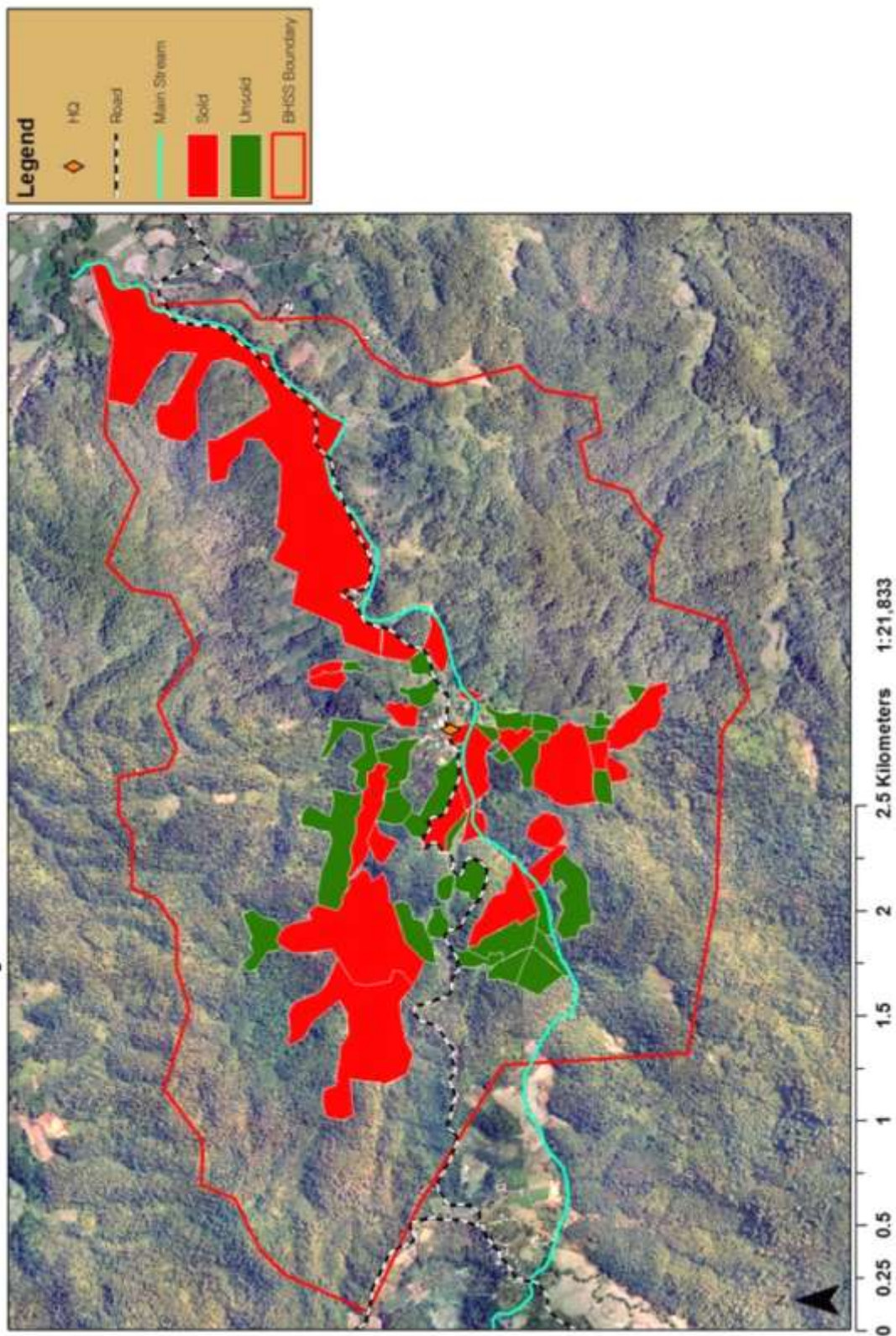


Figure 4 – Sold and unsold land in BHSS

There are two temples in BHSS. The village temple primarily serves the needs of the villagers whilst the forest temple caters to richer outsiders seeking a spiritual retreat. Interviewing a monk from the village temple we learned that the villagers rarely visit the forest temple, but also only ten people attend the weekly sermon in the village temple. The forest temple is wealthier, receiving donations of both money and land from the outsiders which they in turn allow the villagers to benefit from through scholarships, land cultivation and purchasing essentials such as mattresses. However during a participatory community mapping, the relevant features the participants chose to draw included temples, the church, holy well and waterfall and this does indicate that the people deem them to be of importance.

Despite wage labour being the primary income, agriculture is still of major importance in BHSS. Households are involved in a mixture of cash and subsistence cultivation, supplementing their wage incomes. A wide range of crops are cultivated but according to the questionnaires bananas, soy beans, rice and longan are the primary crops, and at least two farmers practice organic agriculture. Our SSIs and FGD indicate that villagers perceive soil fertility to be gradually declining but we have been unable to back this up with quantitative soil analysis. Soil samples were conducted to compare cash crop soils with subsistence crop soils, but we did not have the capability to compare these with previous soil fertility levels and can therefore not make any certain conclusions with regard to natural capital. However, the soil samples indicate that the bought land was being invested in via modern irrigation systems⁶ and fertilizers.

With the adoption of wage labour as the main income source, financial capital has largely increased because there are now regular inflows of income. Wage labour is commonly supported by agriculture and the new infrastructures which allow transportation to city markets. Nevertheless, debts exceed savings thus posing a financial vulnerability for most.

⁶ This was confirmed by observations and water content analysis on the chosen plots.

3.3 Land Use and Institutions (LH)

When describing the villagers' livelihood, income sources and land use, it is important to mention the very complex land classification systems that exist, which somewhat makes their lives less stable. One of the major difficulties encountered throughout the project was making sense of the confusing and overlapping arrangement of institutions governing land in BHSS. Throughout the research process our understanding of this situation became progressively more complicated, and at each government meeting officials would often state information that in our view directly contradicted with what other officials stated. To give some examples, from an interview with the RFD in the watershed we understood it to be under the authority of the RFD, but whilst interviewing their official on the regional level, he stated that it was the Dept. of National Parks, Wildlife and Plant Conservation holding authority.

3.4 Land Classification, Ownership and Land Transfer in BHSS (AKJ)

A watershed classification from the DL shows BHSS as partially within a 1A zone, which is "protected or conservation forest and headwater source", but converted into permanent settlement (Mingtipol 2011:11,42). However, by the RFD the whole watershed is defined as conservation forest, which is an administrative category that refers to different areas where land use is restricted (Forsyth and Walker 2008:42). Yet, we were told by a TAO-representative, that the community committee decides which parts are community forest and lets the RFD know.

Forsyth and Walker write in their book *"Forest Guardians, Forest Destroyers"* (2008), that certain narratives on environmental crisis dominate the debate in Thailand on how to manage natural resources. As a result, these narratives help governmental agencies legitimise certain restrictive land-use policies. Amongst other issues, the authors mention a narrative on the forest as an important water source (Ibid. 18,87-116), which we also encountered in our research. Villagers in BHSS and officials claim to have experienced declining water supply due to deforestation, which is exactly one of the RFD's arguments for making conservation areas (Ibid. 87-88). However, what is interesting in BHSS is the fact that declining water resources was also the argument for making community areas in the forest. An official in the TAO explains, that in 2002 the TAO decided to have a meeting

with the RFD and community committees from the watershed on the issue of declining water resources. They decided that the villages should change a piece of the conservation forest into community forest. Only to a certain extent was the RFD a part of this process, though, as the local RFD officer was bending the law according to the idea that the villagers would manage the forest and natural resources better if they were responsible for the forest themselves. Forsyth and Walker mention that community forests within conservation areas have in some cases been accepted by the RFD, mainly due to pressure from NGOs, journalists and the king (Ibid. 50-53). However, the TAO official explains, that making community areas within the conservation area is not generally accepted in the RFD, so we cannot be entirely sure of the legitimacy of the community area in BHSS. This difference between the local RFD officer and the RFD official on province level shows that their interpretations of the laws varies according to how close they are working with the people being affected by these.

3.5 Informal Land-Transfer (LC)

BHSS has never been adjudicated, as we had thought before going to the field (Mingtipol 2011:19), and the complex system of land use restrictions is playing a major role in this. In fact, no villagers had any formalised title deeds.

Nevertheless, land transfer is a very important feature of the village, and people were largely making transfer agreements with outsiders. We decided to change the words of our sub-questions and questionnaires and replace *selling* with *transfer agreement* as we found it more adequate for the actual situation in the village⁷. However, our translators claimed that it was the same word, and there was no need to change it in the questionnaires, which is quite interesting in relation to Forsyth and Walker's (2008) idea about dominating narratives. Unknowingly if the translators' opinion on the similarity of the words were due to linguistic and cultural issues rather than political ones, it is interesting to note how different discourses may have also influenced our fieldwork.

⁷ Since it is legally not possible to *sell* the land, as there are no legal title deeds, we decided that *land transfer* was a more fitting term, because this would also include promises about selling land when possible. However, as the translation did not change, it did not make a difference in our research.

Our questionnaire findings indicate that 40% of landowners have made transfer agreements for parts of their land, but none are willing to sell more. Nevertheless, we interviewed one woman who sold all of her land, and two others who were more than willing to sell it. The contradiction of having people still looking to sell more land and some respondents (including the headman) saying that 90% is sold and therefore there is no more land to sell as well as having zero questionnaire respondents wanting to sell their land shows the complexity of the issue. We should also keep into consideration that we were able to speak only with those villagers' who were present in BHSS, meaning that those who sold all their land and moved away were out of our survey.

Due to the illegitimate nature of the land transfers, several SSI respondents also informed us that when land is sold the new owners let villagers – often those who they bought it from – cultivate on the land. This is in order to make it look occupied and make sure that no one takes it, indicating that land ownership is not very secure without legal title deeds. We had this confirmed by a farmer we met, who was cultivating on someone's land. He had seen that it was not used, asked the headman's assistant for permission, which he got and was now cultivating on the plot. The DL confirms this, stating that it is a preventative measure in case they get checked by the authorities. If the old owners are still cultivating, it does not look like any illegal land-transfer has taken place. Relating this to Messer and Townsley's (2003) livelihood framework, it means that although the villagers have exchanged their natural capital to financial capital in the selling process, they still have access to the natural capital albeit on much more insecure terms.

3.7 Sub-Conclusion (AKJ)

We found that the livelihood of the villagers is largely characterised by casual and informal wage labour, though many villagers still supplement this income with agriculture.

The infrastructure has recently improved and thus permitting the villagers to commute for work in the city. 72% of the land has been sold, mainly to outsiders, in spite of no villagers having legal land titles. The lack of land titles is partially due to the Maer Lor

Watershed being classified as conservation forest, but an informal community forest area also exists.

4.0 Analysis of Sub-Question 2

- What is driving the transfer of land and how is it affecting people's way of life?

(RFL)

The purpose of sub-question two is to investigate the transfer of land in BHSS with particular focus on the driving forces behind it and the effects it has upon the village. This analysis will consider how the transfers take place in practice; why the people are selling the land; and the effects it is having upon their lives.

4.1 Methods Applied (RFL)

The analysis of this section is based on data from SSIs, a FGD with village elders, a meeting in the Tambon, mapping with a TAO representative, community mapping, questionnaires and a transect walk.

4.2 How is the Transfer of Land Taking Place? (RFL)

What is peculiar in BHSS is the fact that no one has land titles, and yet a large amount of the land has been sold. When we first inquired about this, villagers described it as "*selling with trust*". Upon further probing and two SSIs with people who bought land we realised that people were making their own transfer consent forms which the seller, buyer and headman sign. Whereas we previously had thought of the transfer as being a semi-secret business, we then realised that the headman has a central role in it.

However it still seems like people do not want to admit having initiated the transfer. Of all seven SSI respondents on the subject of buying and selling land, everyone - except for one who we did not ask - claim that it was the opposite party approaching them about the land transfer. Especially one respondent was contradicting herself, as she started by

offering to sell us her land and later claimed that it would always be the outsiders who initiated a transfer.

If it is correct that the villagers find it uncomfortable to admit their initiation of a land transfer this might be an important factor in why we only managed to find two villagers who wanted to sell. On the other hand it might also be due to time constraints and the fact that only 28% of the land remains to be sold⁸.

4.3 Why are People Interested in Selling Land or Why Have They Already Sold It?

4.3A Generational Shifts (AKJ) - The first pattern to emerge in our research was a generational shift in the villagers' way of life. Of the three generations found in the village, there was a tendency for the older generation to cultivate the land, the next generation to work in wage labour and the younger adults to study or work outside.

In three of our five SSIs about having sold or wishing to sell land, the respondents who were from the oldest generation mentioned age and hence lack of energy to cultivate the land as a primary motivation for selling. Whereas in previous times children would take over the farm work, they are now studying or working outside and therefore cannot help in the fields. Rigg and Nattapoolwat (2001:950) describe a similar process happening in Tambon Thung Sadok, not far from our study site. The authors emphasize a tendency of parents prioritising their children's education which began already in the 1970's and has created labour shortages in the agricultural sector. The process of children getting better education than their parents is occurring in many rural areas around the world (Bryceson and Jamal 1997:7-8).

What we saw in BHSS was that of the five respondents wanting to sell or having sold land, all their children were prevented from helping in the fields because of studies or working outside. A respondent who did not wish to sell land for this reason also could not get help from his children. This tendency is also evident in our questionnaires which showed that 80% of the households have wage labour as main income source.

⁸ According to our GIS calculations.

Traditionally, agricultural related skills were passed from generation to generation but with the current young generation attending school instead of working in the fields this has been largely broken. Thus the human capital in terms of children as labour force is decreasing.

To get an overview of the occupational division in the households, we used the questionnaires to compare the number of persons per household with the number of those persons working outside BHSS. The results showed that each household averaged 4.5 persons, and of these, 2.0 persons worked in wage labour, of which 1.5 were located outside BHSS. Unfortunately we did not ask which members had wage labour or worked outside, so we do not have an overview of the occupational division according to age, which would have strengthened the argument about children lacking as labour force.

Another interesting trend is the emphasis on children's education in their private economy. Regardless of income level, most of our SSI respondents had strong opinions on the importance of education and also prioritised it in their private economy.

Regarding the generational shift, it would have been interesting to also see if the older generation had lower education than their children. Unfortunately, in our questionnaires we asked for the respondents' educational background and for the age division in the family, but did not ask for the age of the respondent in particular.

Among the questionnaire respondents, 50% have primary school as highest educational level, 30% have secondary school, 5% have university degrees and 15% have no education (see Figure 5), but since we did not ask for every household member, it is not particularly valid to support the argument of a generational shift taking place with these results.

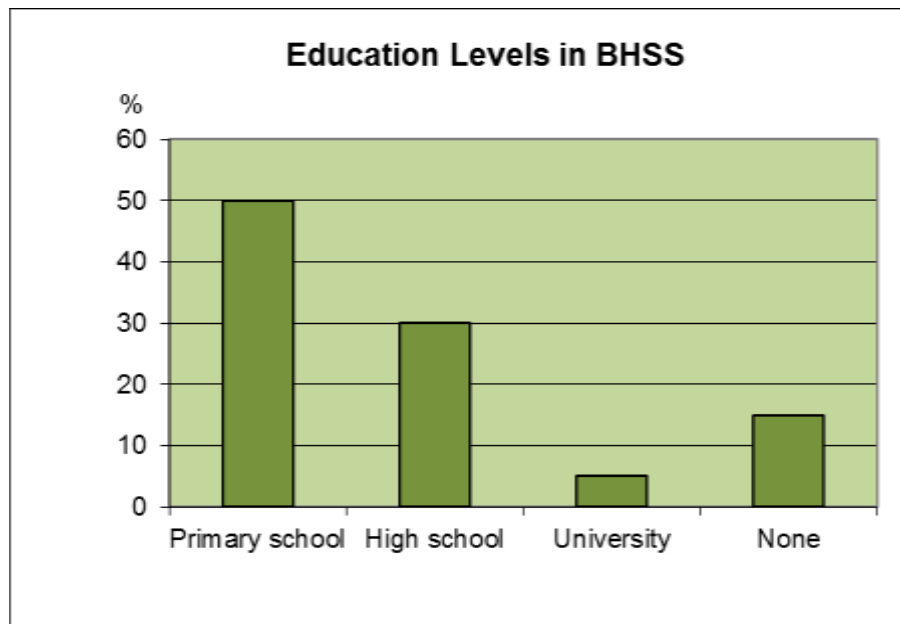


Figure 5 - The education level in BHSS

4.3B Income Reorientation (RFL) - Going back to the reasons for selling land, one respondent used to have a wage income but due to ill health cannot work anymore, prompting him to sell his land. Thus we see that even prior to his ill health he had already prioritised wage labour above agriculture. Another respondent whose father already sold land explained that the primary reason for selling was to secure a pension⁹. This is interesting because if agriculture was an important income source for them, one could argue that they would consider their land a future income security, and not the money they could get for it. This reorientation away from agriculture and towards monetary income sources is also evident in our questionnaire data, where 95% of the respondents have wage labour or government support as their primary income, and only 15% have agriculture¹⁰.

Riggs and Nattapoolwat (2001:948,950) also document this tendency in the previously mentioned Tambon Thung Sadok, where the households depend more on nonfarm pursuits than agriculture. Since we have chosen to rely on these authors' definition of

⁹ This also shows a reorientation of family patterns. As compared to earlier, they now seem to be more attentive to securing their own pensions, whereas traditionally the younger generation would take care of them. However, we have chosen not to look further into these changing family patterns, as we had to limit our focus.

¹⁰ Some people mentioned two main income sources, which is why there are 110% in total.

deagrarianisation¹¹, of which livelihood reorientation and occupational adjustment are two (Rigg and Nattapoolwat 2001:949), the above mentioned tendencies indicate that deagrarianisation is increasing in BHSS.

Studies from 1995 show that the income of the population working in agriculture was about 15 times lower than those working outside the agricultural sector (Leonard and Ayutthaya 2005), thus we are assuming that having a wage labour income is more beneficial.

This assumption is supported by a female respondent wanting to sell land, who explains that an inability to earn enough money on agriculture forced her husband to take a wage labour job instead. As well, three of the remaining four respondents on the subject all had wage labour, which underlines wage labour as preferred over agricultural income sources. This declining importance of agricultural income sources can also be seen in other societies worldwide that undergo the process of deagrarianisation (Steward 2007; Bryceson 2002).

Despite a lack of participants (only three attended) and translation difficulties we also got an interesting result from a seasonal calendar (see Figure 6). Every month involved wage labour with the greatest intensity during winter and the least during harvest, which further indicating its significance in BHSS. Since this argument is built on mixed methods including SSIs, questionnaires, PRA and secondary literature, we find our argument about income-reorientation away from agriculture as a reason for selling a strong and quite valid point (Jick, 1979).

11 Occupational adjustment, livelihood reorientation, social re-identification, spacial relocation and spatial interpenetration (Riggs and Nattapoolwat 2001:949).



Figure 6 - Seasonal calendar produced through participation with the community

4.3C Land Transfer Due to Wage Labour and Financial Pressures (LC) - The significance of wage labour jobs can also be seen with the respondent whose husband was forced to take wage labour because the agricultural earnings were too small. Time invested in wage labour is preventing them from cultivating their land thus further motivating them to sell it. A second important factor is also the need for money. Another of the SSI respondents on the subject gives payment of debt and school fees as an important reason for her selling land, and at the joint meeting in the TAO, the official explains that debt is a primary reason for selling land. An interview with a young woman who moved away from BHSS also supports this point. The latter two sources are however not speaking about themselves but about other people in the village, lowering the validity for this point as we have only spoken to two people for whom debt is an actual reason for

their selling. But since our questionnaires showed that 60% of the respondents had debt, we still find this analytical point rather likely.

SSIs revealed that agricultural debts are mostly related to the need to purchase fertilisers and pesticides (Jongudomkarn and Camfield 2006).

An interesting point occurred when conducting an interview with a teacher who had no wish to sell his land. We found that he also – due to lack of time because of wage labour – did not cultivate his agricultural land. This indicates that many villagers are in the same situation, but the coping strategies differ according to their financial status. Basically, the teacher did not want to sell his land although he was in the same situation as the other respondents who did not cultivate their land, but contrary to their situations he also had a secure government job and a secure income. To support this point, our questionnaires also showed that of the respondents who owned land, only 25% had agriculture as primary income. This data is summarised in Table 4.

Average HH size	5
Average persons per HH living outside BHSS	1
HHs owning land	65%
Average land per landholder	7 rai
Average land per HH	4 rai
HH In possession of land documents	5%
Average land value	96,000 THB per rai
Range of land values	20,000 – 400,000 THB per rai
Landowners wanting to sell land	0%
Landowners who have sold parts of their land	40%
Land sold to outsiders	72%
Land in villagers possession	28%
Landowners with agriculture as primary income	25%

Table 4 – Key data related to land transfers

Because we had not seen the similarity between the teacher's lack of land use and that of the people wanting to sell, we did not think of asking him if he had debt, which would have strengthened this argument further. However, from our observations in his brick

house that differed from the wooden houses many people lived in, the fact that he had a computer and a significantly pricier décor than the average house in the village, we allow ourselves to categorise him as financially well off and not likely to have debt (unless he has borrowed money to build the house). See Figures 7 & 8 for comparisons.



Figures 7 & 8 – A comparison of a standard BHSS home with the teacher's home

4.4 How is the Transfer of Land Affecting the Villagers' Way of Life? (IC)

We expected that the transfer of land would drastically affect the villagers' way of life, as they would go directly from agriculture to wage labour. However, as shown in the previous section, the villagers had begun this shift long ago, leaving their agricultural

activities a second priority. From the beginning we had thought of it as an either-or situation, not anticipating villagers selling only some of their land and keeping a bit for subsistence use. Amongst other things, this rigidity in our research design and hence our questionnaires forced us to go back to the respondents, correcting our question if they had sold all their land to asking if they had sold only a part of it.

4.4A No Occupational Adjustments (LH) - As mentioned earlier, most of the SSI respondents on the subject of selling land have had wage labour for a long time, which they will continue with if they sell their land. Of the three respondents who already sold land, two are still working in agriculture and the third is cultivating cash crops on rented land. In all five cases except for the man who is sick and cannot work, all respondents are not planning on making any adjustments in their vocational status after selling their land. What is significant here is thus the fact that the respondents' income sources have not changed with the transfer of land. Originally we had expected that massive changes would occur, but as we showed in an earlier section, the land which they sell is not being used anyways. They do not go from being farmers before selling to being wage labourers afterwards, but merely go from being wage labourers who own land to wage labourers who do not own land. Or from being farmers who cultivate their own land to being farmers who cultivate rented land. In this case the occupational adjustment related to deagrarianisation was happening to some degree, but not especially due to the land selling.

Apparently our SSI respondent who sold fifteen rai of land and is now renting five of these for cash cropping is not a special case. She is doing exactly the same as before, besides the fact that she has gotten older and widowed and therefore can only manage a third of the land she used to. As mentioned earlier it is a general tendency that people continue their agricultural activities on the same land after selling it.

What is important here for our second sub-question is how little peoples' way of life actually changes with the transfer of land. Thus the SSI respondent who is renting agricultural land also continues with the same occupation as before selling it. She even says that her income is the same as before selling the land, though we should mention

that she also built a house for the money from the land, so in that sense her way of life has changed a bit.

One thing that definitely changes with the selling of land is the loss of an income security. They can no longer rely on their agriculture in situations of financial crisis¹².

4.4B Financing Education (LH)- Since some respondents identified paying school fees as a reason for selling land we find it important to consider how this can affect the villagers' way of life in the long run. If the transfer of land equals an ability to educate ones children, there would be an increased chance of receiving remittances later on in life. Rigg et al. (2008) describes the dissolution process of village communities in Thailand to be a general trend resulting in better educated children and more secure livelihoods for families. The same author also states that "*remittances are playing a growing role in rural household incomes*" and livelihoods are becoming de-linked from land (Rigg 2006). However, there will also be an increased dependency on these remittances, when people's abilities to undertake wage labour come to an end and they have no agricultural land to make money from. Therefore they could consider remittances from children a better livelihood strategy than owning agricultural land. As our questionnaire data showed that seven of twenty respondents were already receiving remittances, this tendency can be said to already be evident in BHSS.

This indicates that due to remittances and young people's possibilities to get a higher education there is a livelihood re-orientation happening as well as a spatial re-location and social re-identification - where young people no longer identify themselves as farmers, nor stay in the village, which is contributing to deagrarianisation. Unfortunately, we did not ask our respondents if they considered it an investment in the future to sell their land to pay for their children's education. We did ask all our SSI respondents about their hopes for the future of their children, but it would have been beneficial to know if these hopes were connected to their own future livelihood strategies.

12 During the economic crisis in 1998-1999 many lost their work and had to return to their villages to live with their families (Rigg & Nattapoolwat 2001:956). In situations like these, having land as a security would always give them a basic source of income.

4.4C Agricultural Land Use Change (AV) - Since we only during the last days in the field chose to also focus on how the selling of land was affecting the agricultural land use, we were not able to collect sufficient data on the topic. However, an SSI with an organic papaya farmer helped us understand that agricultural land use decisions might be affected by the selling of land.

From this SSI we found out that people who are cultivating land with rental agreements might be able to cultivate only short term rotational crops due to insecurity about the length of the rental period, which is usually agreed by an oral contract. Since there are no title deeds in the village, the landlord can prohibit the tenant from cultivating long term rotational crops because a long term investment could later lead the tenant to reclaim his/her right to the land. People who have sold land are aware that the new owner can quit the rental agreement whenever he likes, which might cause a reduced incentive to invest in the land. A SSI interview with a papaya farmer revealed that people renting land will not invest, whereas the owners themselves could more safely invest in long term rotational crops and modern cultivation techniques. It is anyhow important to keep in mind that due to no legal title deeds, even those who actually bought land, might feel some degree of uncertainty in their land ownership. Some studies in Asia have concluded that people having official land title to their land are more willing to make agricultural investments (e.g. Markussen: 2008). Since the effect of the selling of land on agriculture was not our main focus in the field, we only have this one SSI with a farmer who explains us about the agricultural land use after selling. We took soil samples, but as we did not collect them in sold land which was rented to villagers and sold land which was cultivated intensively by outsiders, they cannot support this argument properly.

Regarding land use after selling, our information gathered is quite interesting in relation to deagrarianisation. A TAO-representative told us that a lot of people who buy land do not use it for agriculture, but the ones that do divide the agricultural area so that they have one part for settlement and another part for agriculture, which would reduce the agricultural land area. This was confirmed by two SSIs with people who bought land. One of the SSIs was with a couple who bought 30 rai 20 years ago and another five rai ten years ago. They had several banana trees for subsistence use scattered around the plot, but did not cultivate anything else and had never done so (See Figure 9).



Figure 9 – Banana trees on the plot of the SSI respondent

The fact that they bought 35 rai in total but refrained from putting the land to use indicates it was most likely an investment, and they explained that they were planning to sell the land when they get older and live off the money.

The other respondent who bought land also sold it again and explains that the people who bought her land do not use it for anything and neither do the others who buy land. We were shown a plot which one of our respondents' sisters had sold before she moved. Now there were no crops, but a small holiday house apparently built by Austrian owners. According to a teacher we interviewed it is a general tendency in BHSS that outsiders come to relax and not to do agriculture.

Rigg (2001) describes two partially overlapping processes taking place in northern Thailand; agricultural commercialisation followed by deagrarianisation. Our observations during the soil sampling and transect walks support this kind of development in BHSS. We saw a lime garden with drip irrigation systems constructed on land bought by rich outsiders, and we saw soybean fields with modern irrigation systems. An interview with

the headman's assistant also revealed that new land owners come there to make money and they use agro-chemicals. Intensification and commercialisation of agriculture in BHSS could lead to less demand for labour if there are investments on modern cultivation techniques and cash cropping such as fruit orchards. Less labour needed on fields could further increase the deagrarianisation process. Hunt's (2000) research on farming systems in Asia also describes a correlation between agricultural intensification, increased productivity and smaller demand for labour. Some of our respondents, including the headman also explained that the outsiders often buy several plots next to each other in order to have larger fields. It seems like some people actually do buy the land to do agriculture but do more intensive agriculture on larger plots. We can conclude that transfer of land has an effect on land use in BHSS. It is evident that deagrarianisation is increased by the selling of land due to intensification of agriculture on sold land and due to construction of houses on agricultural land.

We would have liked to map the fields which were sold and investigated the degree of intensification of agriculture on those fields and interview the owners, but due to time constraints, we could not do so. Also, we did not plan our transect walks well enough and found out quite late that it would be beneficial to walk on areas according to our GIS map of the sold land.

We should have also visited more remote areas earlier in the fieldwork, but it was only during the last days we found out about the intensification on fields which were sold.

4.5 Sub-Conclusion (AV)

We found that there are two concurrent reasons for selling land which depend on the age of the landowners. The older generation has no one to take over as their children are away, studying or working outside. The younger generation who owns land generally prefers wage labour income over agricultural income. Both respondent-types do not cultivate all their agricultural land, but for different reasons. Subsequently, their financial situations determine if they choose to sell land or not.

Villagers' income sources have not changed with the land-transfer, because both farmers and wage labourers continue with the same occupation as before the transfer. When

spending money from the land transfer on children's education, they have a possibility of receiving remittances in the future.

Related to deagrarianisation, the villagers do not have agriculture as a first priority anymore and a generational shift is occurring and showing a strong focus away from agriculture among the younger generation. As well, land-transfer affects the agricultural land use with new owners either intensifying the agriculture or constructing houses on agricultural land.

5.0 Analysis of Sub-Question 3

- How do the villagers expect their way of life to change in the future?

This section is dealing with the villager's future aspirations, and how the prospects of the different title deeds are being perceived.

5.1 Methods Applied (LC)

We conducted one SSI with a woman who had moved for work, and a FGD with youths, which included occupational and wealth ranking. In addition, the majority of SSIs conducted regarding land also touched upon future perceptions for BHSS and their children including how they expected BHSS to change with adjudication.

Due to last minute insights we did a number of short interviews and a small FGD on villagers' perceptions on the different title deeds.

5.2 The Young Generation (LC)

Interestingly, the FGD with the youth revealed they enjoyed living in BHSS and expected to do so in the future. This did not mean they want to work in agriculture however, as the occupational ranking revealed agriculture to be disfavoured, with all participants ranking it the lowest. This indicates a generational shift away from agriculture is underway, as already explained, and this tendency has also been detected in other studies within the same region (Rigg and Nattapoolwatt 2001).

Despite the headman assistant promising to gather participants for the FGD, only a few showed up necessitating us to fetch more from the street. In addition an active discussion never materialised, as the participants were rather shy due to large age differences. Thus, instead of making the occupational ranking into a joint discussion, we decided to let them individually rank the occupations.

We conducted a SSI with young a woman who had left the village to work, who also would have stayed in the village, if there had been any job opportunities. She hopes to move back in the future to take care of her family. When asked why the young people preferred village life, both she and the youth in the FGD said they liked the familiarity and the fact that everyone knew each other and helped each other.

We didn't expect the young generation would prefer village life to city life, as it is contradicting with other studies investigating generational change in rural Chiang Mai (Rigg and Nattapoolwatt 2001). In the end, we also must conclude that preference often is not what determines where to live in the end. As the young woman explained, she estimated 50% of her generation to have left to find work, although they would have preferred to stay. A study from Nong Rong district of Northeast Thailand showed that in 2000, more than 50% of young people had moved away from the rural villages (Alva and Entwisle 2002).

She also pointed out, that due to young people spending their time studying or working, the knowledge of doing agriculture is no longer being transferred to the younger generation, which is an important aspect to keep in mind when discussing deagrarianisation in BHSS, as it will hold them back from practising agriculture in the future. One final remark is to say that the SSI was conducted in her family's house, while they were around, which might have driven her to emphasize her wish to return.

5.3 Parents' Expectations for their Children (AV)

As mentioned earlier, children's education was an important issue for parents, and one they were willing to spend a lot of money on¹³. Respondents did not expect their children

¹³ As also mentioned earlier, education was one of the reasons for the parents' debts as well as the reasons for selling land.

to work primarily in agriculture, though for some it remained important to pass the land to their children. One example was an interesting observation. During the FGD with the youth, we asked what they expected to do with the land they eventually would inherit from their parents. One young man said he would build a resort on the land, as well as the others mostly would do similar things; some more marked by teenage-dreams than others. Some days later, by coincidence we interviewed the boy's mother, who told us she expected her son to continue using the land for agriculture when inheriting it, but she also admitted that she couldn't know what plans he had. This example shows how the parents and children still might have different objectives and expectations for the future. But it also shows that the mother was aware that she couldn't be sure what the younger generation would do with the land. It also shows how insecure it is to make assumptions about the future, as it is purely based on wishes and assumptions.

A general observation is the fact that both the young people as well as the parents thought that the young generation would come back and live in the village after having studied and lived in the city.

5.4 Title Deeds or Ideological Tools? (AKJ)

The individual title deed (ITD) gives the owner exclusive rights to use the land however they please (Mingtipol et al. 2011:48) as well as to sell it, whereas the community title deed (CTD) giving whole communities one document for all their land. The CTD thus also prohibits the single owner to sell their land¹⁴.

The two title deeds are connected with two contradicting ideologies: a liberalist market-oriented and a collectivist one, respectively. Preference towards either deed varies amongst the institutions and officials according to ideological orientations.

For example, at a joint meeting in the TAO, the official was strongly advocating the CTD and explaining that it would shortly be a reality. He also gave the impression that a survey had shown that the villagers wanted the CTD. However, we found that the survey was not yet conducted. What then seemed like a lie might have also been due to incorrect translation, but either way it indicates how politicised the area of land titles is.

14 Knowledge on CTD obtained mainly through conversations with our supervisor, Mogens Buch-Hansen.

As there are not really any land use restrictions on land with an ITD, but numerous restrictions in conservation forests (Forsyth & Walker 2008:42), a TAO representative from the village believes the CTD is more likely to come to BHSS first, since it is placed within a conservation area. On the other hand, a TAO official states there are no restrictions on the land use with the CTD, contradicting the other TAO representative's reasoning. The fact that there are inconsistencies even between different actors within the same organisation illustrates the complexity of the issue.

The communities have to decide in common if they want to get the CTD and ask the Prime Minister's office. It is thus a ministerial decree, not a legal act. It is therefore very difficult to implement, and so far only one community in all of Thailand has received it (Bangkok Post, 2011).

Ambiguous statements from a DL official made us question that BHSS would ever get any kind of title deed, so the villagers' land ownership situation is still quite uncertain.

5.5 Which Do The Villagers Prefer and Why? (LH)

As mentioned earlier, we had not paid attention to the CTD being a possibility before the very end of our fieldwork, so the data collected on the subject is rather superficial. However, we managed to do a small FGD on villagers' perceptions of the CTD versus the ITD, which showed that villagers who own more land were reluctant towards it, whereas villagers with very little land were more open.

The reluctance was due to a general reluctance towards the collectivist idea of sharing. They explained that if land within a community title was not used, it would be distributed to other villagers if needed. This is quite interesting, as the participants expressed no wish to sell their land, and in spite of the land maybe not even being used, they still wanted to keep it.

This might be due to them still keeping the possibility of a land transfer open in the future, as land is an economic security, although they presently had no wish for it.

Additional to the FGD we also did a number of short interviews with respondents who owned land regarding their opinion on the CTD. As their knowledge on the CTD varied

significantly, these interviews might have turned out differently if they had all the facts. We also chose not to make any explanations for the respondents since our knowledge on the CTD was and still is limited, and did not want to influence their answers.

One respondent told us about a village meeting, where they voted for the ITD over the CTD, and this preference is the same impression we got from our short interviews. A reason for this was that the ITD would allow villagers to take loans, using their land as security, whereas the CTD would make this difficult, as the whole community would have to agree on the loan-taking. As 60% of our questionnaire respondents have debt, it is likely that the possibility of taking loans is important to them and plays a role in their preference for different title deeds.

5.6 What Would CTD Change in BHSS? (RFL)

When looking for which changes the CTD would bring along, some villagers answered that they would simply choose not to be a part of the CTD if it was offered. Other villagers were reluctant but guessed that they would join if it came.

Which changes in terms of land use and hence relating to deagrarianisation the CTD would bring along is quite uncertain, but it might slow down the process as the possibility of selling land to outsiders would be gone. On the other hand, we previously showed how villagers have already reoriented themselves away from agriculture¹⁵ because of previously mentioned factors such as low crop prices, which makes it rather unlikely that they turn back to agriculture.

5.7 What would ITD Change in BHSS? (RFL)

As the lack of title deeds makes land ownership ambiguous, the new owners from outside are reluctant to construct on their land. Through SSIs with villagers and the headman, we found that the outsiders who bought land often do not construct on it, as they are waiting to get title deeds. The explanations given were rather vague, stating that because of BHSS being on “government land” it was not sure what would happen with it.

¹⁵ Which is one of Rigg and Nattapoolwat's definitions of de-agrarianisation (Rigg & Nattapoolwat 2001:949).

This uncertainty might be due to previous eviction practises in Northern Thailand where whole villages were removed from areas which had been demarcated as conservation forest. This in spite of the villagers having lived there before the land was classified as conservation area (Forsyth & Walker 2008:37-48).

Thus, if the outsiders do get ITDs, it could further increase deagrarianisation for two reasons. Firstly, the new owners would not need to have the villagers cultivate on their land anymore, as it would be theirs to manage as they wanted. Of course, we do not know if they would still allow the cultivation, but if not, this would force the farmers in question towards livelihood reorientation and possibly also towards occupational adjustment, which are the factors by which we have been measuring deagrarianisation so far (Rigg & Nattapoolwat 2001:949).

Secondly, many villagers including the headman have mentioned that outsiders have been buying small parcels of land adjacent to one another with the aim of combining them to develop large resorts, as the proximity to BPSR's temple is a potential for increased tourism in the village. And if the ITD comes, there will be nothing hindering them anymore. Generally, the rural areas around Chiang Mai have become attractive for resorts, and not far from BHSS many resorts and tourist attractions can be observed (Singhanetra-Renard 1999). Thus the land use might be changed from agricultural use by villagers to resorts for outsiders.

However, it will not necessarily be negative for the village, as attracting tourists also means attracting outside financial capital. The headman and other respondents are all concerned how the influx of tourists might influence BHSS, but still consider it a good income possibility.

Singhanetra-Renard (1999) has done an in-depth study of the Village of Mae Sa, Mae Rim district. Here she describes the process of rapid change due to the expansion of tourism and resorts in the village. Though we cannot expect that this process will happen in BHSS, this study shows how adjudication, land selling and tourism investment has happened very close by. Regarding deagrarianisation, increased tourism might also have an impact on land prices and eventually might cause more people to sell land.

Thirdly, since the land would have a secure legal status, the owners who bought it as an investment, would be able to resell it for a higher price.

As these are all speculations, the only legitimacy we can claim to the points is the fact that they are based on the villagers' speculations about future possibilities.

5.8 Sub-Conclusion (LH)

In this section we have tried to analyse the future expectations of the villagers in BHSS. A general tendency is the generational change, where the young generation is not interested in working within agriculture, but still preferred village life to city life. Most likely due to education and jobs, the younger people will have to leave the village, as the previous generations have done.

Title deeds are a hot political topic, and due to BHSS being located in a conservation forest area, the possibilities for them obtaining ITD seem difficult, though the villager's would prefer it over the collectivist CTD, even though the CTD at the moment seems more likely to become implemented. It seems difficult to conclude how the different land titles would affect the community but CTD would mean that people would not be able to keep on selling their land to outsiders and obtain cash. ITDs would most likely bring along development within tourism, as the new landowners finally could start constructing safely which would further speed up deagrarianisation. Land prices would increase and more people would most likely sell their land.

6.0 Conclusion

We set out to investigate how the transfer of land is affecting deagrarianisation in BHSS and how it will affect it in the future.

In spite of finding a strong correlation between the transfer of land and deagrarianisation, the land transfer is only one part of the entire process and no cause-and-effect relationship exists between the two. I.e. it is not the land transfer causing occupational adjustment and thus deagrarianisation, because the villagers had already chosen wage labour over agriculture long ago.

As a result of deagrarianisation and wage labour being prioritized, the villagers are less dependent on their land and thus less reluctant to sell it. The adoption of wage labour has limited the time that villagers devote to agriculture, thus leaving agricultural land unused. A clear generational shift can be observed where the older generation have no one to take over the agricultural work, as their children are working or studying elsewhere, which drives the elders to sell their land.

Pressure from accrued debt and education fees increases the need for money, and as a result is a push factor towards the selling of land, which in turn leads to further deagrarianisation.

We discovered land transfer as a push factor for deagrarianisation, because it largely caused land use changes. Thus, agricultural land is gradually transformed to intensive agricultural land as well as residential land. However, large amounts of sold land was still rented and cultivated by villagers, as the lack of legal title deeds and thus land security made the new owners reluctant to invest in construction on the purchased land.

Overall, we expect deagrarianisation to continue in the future. Most people already rely significantly on wage labour and this will only increase in the future with the generational shift.

Investigating future prospects for BHSS in relation to different possibilities of obtaining title deeds, we found that the probability of either title deed is highly insecure. The implementation of the ITD would be likely to further increase deagrarianisation because the new owners would have legal land security and thus would probably stop subletting their land to villagers and start constructing e.g. houses and resorts.

We also found that if the CTD comes, it will probably not slow the process of deagrarianisation significantly, as villagers already are relying mainly on wage incomes and are unlikely to return to agriculture. As well 72% of the land has already been sold to outsiders, who would most likely not be included in the CTD.

We have found the five parallel processes of deagrarianisation, which we have been referring to throughout the report to be present in BHSS.

Occupational adjustment is preponderant in BHSS. Most of the villagers have casual wage labour, which makes their income rather insecure. Especially when having sold their land and thus not having this livelihood security in case of crisis.

Generally, the villagers' livelihoods are less dependent on natural resources. Young people are not acquiring the skills needed for agriculture therefore this change of human capital quality will push them to have a different income strategy.

Amongst young generations social re-identification is taking place since they are affected by modern culture and they do not see themselves being a farmer.

Spatial relocation is also showing its presence through the significant mobility patterns in the village.

The spatial interpenetration is evident in the outsiders buying land and the influx of tourists coming to BHSS.

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8.0 Appendices

A. List of Methods Applied

Method Applied	Amount
Questionnaires	20
SSI	16
Follow Up Interviews	6
Soil Samples	5
Water Samples	3
Joint Meetings with Officials	4
Ownership Mapping	2
Land Use Mapping	2
PRAS	
- Community Timeline	1
- Occupational Ranking	1
- Seasonal Calendar	1
- Life Quality Ranking	1
- FGD	3
Transect Walks	3
GIS	-
Informal Talks	-
Observation	-

B. Questionnaire

A. Questionnaires: แบบสอบถาม

Questions about the livelihood in the Mae Rim watershed

คำถามเกี่ยวกับวิถีชีวิตของชาวบ้านในลุ่มน้ำแม่ริม

Respondent Number: ____

จำนวนผู้ทำแบบสอบถาม

Dear Respondent, many thanks for agreeing to participate in our questionnaire. We are students at Copenhagen University, Faculty of Life Sciences and we are carrying out research on livelihoods & natural resources in Mae Lor. Your participation is highly valued and you are assured that there are no wrong answers. All your responses will be treated confidentially and for the purpose of this study only.

Not questions:

Researcher _____

GPS code _____

Date _____

Perception of household wealth 1 2 3 4 5

Gender: เพศ Male ☐ Female ☐

Background questions on respondent and household

1. Name: _____

ชื่อ _____

2. Is the respondent head of household? Yes ☐ No ☐

คุณคือหัวหน้าครอบครัวหรือไม่ ใช่ ☐ ไม่ใช่ ☐

3. Age Group: ช่วงอายุ 18 – 30 ☐ 31 – 45 ☐ 46 – 60 ☐ 60+ ☐

4. Where were you born? Ban Huai Som Suk ☐ In Mae Lor watershed ☐ Chiang Mai city ☐

Other _____

คุณเกิดที่ไหน? ในหมู่บ้านห้วยส้มสุก ☐ กลุ่มน้ำแม่เกาะ ☐ ในเมืองเชียงใหม่ ☐

ที่อื่น (ระบุ) _____

5. How many members is there of your household? By household I mean people who contribute to and benefit from the same income in your house. _____

ในครัวเรือนของท่านมีสมาชิกกี่คน < ครัวเรือนในที่นี้หมายถึงคนที่มีส่วนร่วมในรายรับรายจ่ายของครอบครัว > -

6.

	0-10 yrs	11-20	21-40	41-60	older than 61
How many persons in your household have the following age? จำนวนสมาชิกในครอบครัวที่อยู่ในช่วงอายุต่อไปนี้					

7. How many members of the household are not living in the village? (If no, go to no. 9)

จำนวนสมาชิกของครอบครัวท่านที่ไม่ได้อาศัยอยู่ในหมู่บ้าน (ถ้าไม่มี ข้ามไปข้อ 9)

8. If any, where are they living? _____

ถ้ามี คนเหล่านั้นไปอยู่ที่ไหน _____

9. Which tribe/ethnic group do you belong to?

ท่านเป็นชนเผ่าไหน

Kohn Thai ☐ Kohn Lahu ☐ Kohn Akha ☐ Other _____

คนไทย ☐ ลาฮู ☐ อาข่า ☐ อื่นๆ _____

10. What is your educational background?

ระดับการศึกษา

Primary school ☐ high school ☐ university ☐ none ☐
ประถม ☐ มัธยม ☐ มหาวิทยาลัย ☐ ไม่ได้เรียนหนังสือ ☐

Land use

11. Does your household own agricultural land? (If no, go to no. 19)

ครอบครัวของท่านมีพื้นที่สำหรับการเกษตรเป็นของตัวเองหรือไม่ (ถ้าไม่มีข้ามไปข้อ 19)

Yes ☐ No ☐

มี ☐ ไม่มี ☐

12. If yes, how much? _____

ถ้ามี มีเท่าไร? _____

13. Do you have any kind of land document for the land? Yes ☐ No ☐

มีเอกสารสิทธิ์แสดงการครอบครองที่ดินหรือไม่? มี ☐ ไม่มี ☐

14. What do you do with the land? คุณใช้ที่ดินนั้นทำอะไร

Grow subsistence crops ☐ ทำการเกษตรเพื่อยังชีพ < ปลูกพืช ไว้กินเองในครัวเรือน > ☐

grow cash crops ☐ ปลูกพืชเชิงพาณิชย์ < ปลูกไว้ขาย > ☐

rent it out ☐ ให้เช่า ☐

fodder ☐ ใช้เลี้ยงสัตว์ ☐

nothing ☐ ไม่ได้ใช้ทำอะไร ☐ other _____ อื่นๆ _____

15. What kind of crops do you grow? _____

ปลูกพืชประเภทไหน? _____

16. How much is your land worth in Baht? _____

หากให้ประเมินราคาที่ดินที่มีอยู่ ท่านคิดว่าที่ดินของท่านมีมูลค่าเท่าไร (บาท) _____

17. Would you sell it for that price? Yes ☐ No ☐

หากมีคนต้องการซื้อที่ดิน ตามราคาที่ท่านกำหนดไว้ ท่านจะตัดสินใจขายหรือไม่? ขาย ☐ ไม่ขาย ☐ (go next to question nr 24)

18. Have you sold or promised to sell some of your land? เคยแบ่งขายที่ดิน หรือมีที่ดิน
ที่คิดว่ากำลังจะแบ่งขายหรือไม่

Yes ☐ no ☐ don't know ☐

เคย ☐ ไม่เคย ☐ ไม่รู้ ☐

19. If no land, would you like to own land?

ถ้าคุณไม่มีที่เป็นของตัวเอง คุณอยากจะมีที่เป็นของตัวเองหรือไม่

Yes ☐ no ☐ don't know ☐

อยากมี ☐ ไม่อยากมี ☐ ยังไม่แน่ใจ ☐

20. Why? Why not? _____

ทำไมถึงอยากมี/ ทำไมไม่อยากมี _____

21. If you don't own land, did your household use to own land? (If no, go to no.24.)

ครอบครัวของท่านเคยมีที่ดินเป็นของตัวเองหรือไม่ (ถ้าไม่เคยมี ข้ามไปข้อ 24)

Yes ☐ no ☐ don't know ☐

เคย ☐ ไม่เคย ☐ ไม่รู้/จำไม่ได้ ☐

22. If yes, when did you make the transfer agreement? Year: _____

ถ้าเคย, ที่ดินนั้นถูกเปลี่ยนมือไปเมื่อไร (ปีไหน)? _____

23. If you don't own land, how do you cultivate your crops?

ถ้าหากว่าคุณไม่มีที่ดินเป็นของตัวเอง แล้วคุณยังมีการทำการเกษตรอย่างไร

Borrowing the land for free ☐ from _____ renting ☐ other _____

ยืมที่ดิน ☐ ยืมจาก _____ เช่า ☐ อื่นๆ (ระบุ) _____

Income

24. Do you have a wage labour job? (If no, go to no. 26)

ท่านได้ประกอบอาชีพรับจ้างหรือใช้แรงงานหรือไม่ (ถ้ามี ข้ามไปข้อ 26)

Yes ☐ no ☐

มี ☐ ไม่มี ☐

25. Where is this job located? ถ้ามีต้องไปทำอาชีพนี้ที่ไหน

In Ban Huai Som Suk ☐ ในหมู่บ้านห้วยส้มสุข ☐

In Mae Rim ☐ ในอำเภอแมริม ☐

In the Mae Lor Watershed ☐ ในลุ่มน้ำแม่เลาะ ☐

In Chiang Mai province ☐ ในตัวเมืองเชียงใหม่ ☐

In Chiang Mai city ☐ ในที่อื่นที่อยู่ในเชียงใหม่ ☐

other _____ อื่น _____

26. Has anybody else in the family a wage labour job? Yes ☐ No ☐

มีใครในครอบครัวของท่านที่ประกอบอาชีพที่สร้างรายได้ให้ครอบครัวหรือไม่? มี ☐ ไม่มี ☐

27. How many? _____ ก็คน _____

28. Which job? _____ ทำอาชีพอะไร _____

29. Where? _____ ที่ไหน _____

30. Do you collect any NTFP from the forest? (If no, go to no. 32)

ท่านเก็บของป่าที่ไม่ใช่ไม้หรือไม่? (ถ้าไม่, ข้ามไปข้อ 32)

Yes ☐ no ☐

เก็บ ☐ ไม่เก็บ ☐

31. If yes, which kind of NTFP? _____

ถ้าเก็บ, เก็บอะไร? _____

32. Is there any of your family members living outside the village, who send money home to your household? (If no, go to no. 34)

มีสมาชิกคนใดในครอบครัวของท่านที่อาศัยอยู่นอกหมู่บ้านนี้หรือไม่
แล้วใครบ้างที่เป็นคนส่งเงินกลับมาให้กับครอบครัว คนเหล่านั้นส่งเงินกลับมาให้ครอบครัวหรือไม่ (ถ้าไม่มี,
ข้ามไปข้อ 34)

Yes ☐ no ☐

เก็บ ☐ ไม่เก็บ ☐

33. If yes, is this money an important part of your income? Yes ☐ No ☐

ถ้ามีเงินส่วนนี้ถือเป็นส่วนหนึ่งของรายได้หลักของครอบครัวหรือไม่? ใช่ ☐ ไม่ใช่ ☐

34. Where does most of your cash income come from? (For example wage labour, remittances sent from relatives, sale of cash crops) _____

รายได้หลักของครอบครัวส่วนใหญ่มาจากอะไร < การขายแรงงาน ,เงินที่ส่งมาจากลูกหลาน ญาติๆ,
การขายพืชผล> _____

35. Please indicate your household monthly monetary income level:

กรุณาระบุช่วงของรายรับในแต่ละเดือน

< 5000 B ☐ 5000-10000 B ☐ 10000-15000 B ☐ 15000-25000 B ☐ > 25000 B ☐

36. How much do your household spend monthly? กรุณาระบุช่วงรายจ่ายในแต่ละเดือน

< 1000 B ☐ 1000-5000 B ☐ 5000-10000 B ☐ 10000-15000 B ☐ > 15000 B ☐

37. Did your household borrow any money? ได้มีการกู้ยืมเงินจากที่อื่นหรือไม่?

Yes ☐ no ☐

ยืม ☐ ไม่ได้ยืม ☐

How much? _____ ประมาณเท่าไร _____

C. Interview Guides

- i. Interview guide for village chief
- ii. Interview guide with villagers who sold their land (sq. 1 + 2)
- iii. Interview guide with parents on the future of children (sq. 4)
- iv. Interview guide with village elders (sq. 1+ 2+4)
- v. Interview guide with tambon officials sq. (1+2)
- vi. Interview guide with people who left the village, visitors.
- vii. Focus group interview with youth (sq. 4)

(i) Interview with Village chief (ผู้นำหมู่บ้าน)

Objective: to understand the adjudication process and land use changes in BHSS.

- เพื่อให้เข้าใจการถือครองที่ดินและการเปลี่ยนแปลงการใช้ประโยชน์ที่ดินของบ้านห้วยส้มลูก

1. I would like to ask you about the adjudication process in BHSS, and I would like to know a bit more about how it happened. Whose decision was it to adjudicate the land, who managed the process etc.?
 - ที่ดินได้มาอย่างไร, มีเอกสารสิทธิ์หรือไม่ (ประเภท, ได้มาอย่างไร, ให้เป็นคนออกให้)
2. Why do you think that the villagers subsequently sold their land, and do you think that anything particular was characterizing them?
 - ทำไมจึงขายที่ดินหลังจากได้สิทธิ์ในการถือครอง (คิดอย่างไรจึงขายที่ดิน)
3. Who were the people who bought the land? And why?
 - ใครเป็นคนซื้อที่ดิน, เหตุผลในการซื้อที่ดิน
4. What kind of agriculture is there? (is it intensive, cash crops/food crops, etc.)
 - พื้นที่ทำการเกษตรมีขนาดเท่าไร(มากหรือน้อยกว่าในอดีต), ปลูกพืชอะไร, เพื่อกินหรือขาย,
5. How do you expect the future of the young people to be? Will they choose to work in agriculture?
 - ในอนาคตคิดว่าเยาวชนในหมู่บ้านจะทำการเกษตรในหมู่บ้านอีกหรือไม่ อย่างไร
6. What do you think of this development in BHSS where people work less in agriculture?
 - การทำการเกษตรในปัจจุบันมีเพิ่มขึ้นหรือลดลงและสถานะภาพการทำการเกษตรทุกวันนี้ดีหรือไม่
7. Has the size of the plots changed? Is the land ownership concentrated on fewer farmers?
 - สัดส่วนการถือครองที่ดินที่เปลี่ยนไปในปัจจุบันกับในอดีตต่างกันหรือไม่ อย่างไร
8. Before the land titling, how was the size of the farm plots? We have heard about inheritance systems that make plots smaller because it has to be divided between the children - was that the case in BHSS as well (Draw example for the respondent to make it clearer. Ask Anna K for details)?
 - ในหมู่บ้านห้วยส้มลูกมีที่ดินที่เป็นมรดกตกทอดไปสู่ลูกหลานหรือไม่ มากน้อยเท่าใดและมีคนที่ขายที่ดินในลักษณะดังกล่าวหรือไม่ อย่างไร
9. Do you think conserved forest areas and construction of houses is affecting the size of agricultural area?
 - ที่ผ่านมามีการเพิ่มขึ้นของที่อยู่อาศัยและการอนุรักษ์พื้นที่ป่าทำให้พื้นที่ทางการเกษตรลดลงหรือไม่
10. What do people use the forest for in their daily lives (NTFPs, fuel wood, medicinal plants, etc.) and what are the actual rules of use?
 - ชาวบ้านมีการใช้ประโยชน์จากป่าอย่างไรและมีเงื่อนไข กฎระเบียบของชุมชนที่เกี่ยวข้องกับการใช้ประโยชน์จากป่าอย่างไร

(ii) Interview with villagers who sold their land (คนขายที่ดิน)

Objective: To find out why the villagers sold their land, and how this affected their income.

- ทำไมชาวบ้านถึงขายที่ดินและการขายที่ดินนั้นส่งผลต่อความเป็นอยู่ของชาวบ้านอย่างไร

Introductory sentence: *Now I will ask you some questions about the time when you sold your land...*

1. When did you sell your land? How much land did you sell? Who did you sell it to?
 - ขายที่ดินไปเมื่อใด, ขายไปกี่ไร่, ขายให้ใคร

2. What made you decide to sell it? (if the respondent doesn't know what to answer, you can explain by asking if he was offered a good price, if he didn't want to be a farmer anymore, if it was too expensive to cultivate the land, etc.).
 - เหตุผลในการขายที่ดิน
3. Do you think that many people sold their land? Did others influence you in the village? Where you recommended to sell it?
 - คิดว่าคนที่ขายที่ดินเหมือนคุณมีมากหรือน้อย มีใครแนะนำ/ติดต่อให้ขายหรือต้องการขายเอง
4. What were your income sources before you sold the land, and how are they now?
 - ปัจจุบันรายได้ของครอบครัวมาจากไหน, ก่อนขายที่ดินทำอาชีพอะไร, หลังจากขายที่ดินแล้วทำอะไร
5. Again, if you will please think back at the reasons for selling your land. How were you expecting to make a living after selling the land, now that you did not have the income from agriculture? (maybe explain by asking if they had an income job on their hands), and what did you plan to do with the money?
 - ก่อนที่จะขายที่ดินมีการวางแผนว่าจะทำอะไรหลังจากขายที่ดินไปแล้วและคิดว่าเอาเงินที่ได้จากการขายที่ดินไปทำอะไร
6. And where and in which sector did you end up working? Did your actual possibilities match your expectations?
 - ตอนนี้อยู่ทำอะไรและตรงกับที่วางแผนไว้หรือไม่
7. Now I would like you to imagine that you still owned the land that you sold in (YEAR). You were offered a similar price (according to the inflation since, of course). Would you still sell the land?
 - ถ้าตอนนี้ยังไม่ได้ขายที่ดินแล้วมีคนให้ราคาเดียวกับตอนที่ขาย จะยังขายที่ดินอยู่หรือไม่
8. What do you use the forest for in your daily life (NTFPs, fuel wood, medicinal plants etc.)? Is it an important income source?
 - มีการใช้ประโยชน์อะไรบ้างจากป่า
 -

Thank you for your time and help

(iii) Interview with parents regarding the future of their children (ผู้ปกครองเด็ก)

Objective: To find out the parents perceptions of good job opportunities for youngsters. How is agriculture playing a role in this?

- การวางแผนอนาคตของลูก

Introductory sentence: *Now I would like to ask you some questions about your children and your hopes and wishes for their future.*

1. What are your wishes for your children's future? (This question is meant to be broad, so that the respondent is not forced to think in certain ways from the beginning. When asked if he would like his children to be highly educated, most people will probably respond positively, whereas he might emphasize something completely different when setting the criteria for a happy future himself).
 - อยากให้ลูกทำอาชีพอะไรในอนาคต
2. Where are you hoping that your children will settle down when they have families of their own?
 - เมื่อลูกมีครอบครัวเป็นของตนเองแล้วอยากให้ลูกอยู่ที่ไหน
3. What do you think would make your children happy? (Which occupation? Which place to live?)
 - คิดว่าอะไรที่จะทำให้ลูกมีความสุขได้ในอนาคต
4. Would you like your children to work in agriculture? Why? Why not? (Adapt the questions to the respondents situation; if they have land on their own, are farmers themselves or are migrant workers etc. E.g. to a farmer who owns land himself the question should be asked "Would you like your children to continue working the land", or something like that).
 - อยากให้ลูกทำการเกษตรหรือไม่ เพราะอะไร อยากให้รูปแบบเหมือนบรรพบุรุษหรือไม่

Remember to thank the respondent for his/her time.

(iv) Interview with village elders on land use change (ผู้รู้ ผู้อาวุโส)

Objective: To find out how the agricultural production systems have changed from before the adjudication process until now. And to find out internal and external factors affecting the change in agricultural production systems

- ระบบผลิตเกษตรในปัจจุบันมีการเปลี่ยนแปลงไปจากในอดีตอย่างไร มีปัจจัยภายนอกและปัจจัยภายในอะไรบ้างที่ส่งผลให้เกิดการเปลี่ยนแปลงระบบผลิตเกษตร

Note: if they sold their land as well, merge with interview guide 1. If they have children, merge with interview guide 2 as well.

1. How was the village when you were younger? How many people lived there and what were their income sources?
 - ในอดีตหมู่บ้านมีลักษณะอย่างไร จำนวนประชากรมีเท่าไร มีรายได้มาจากอะไร เท่าไร
2. Do you own more or less agricultural land than before (assuming they owned any), and has the size of agricultural farm plots changed over time? (Are they bigger or smaller than before?)
 - พื้นที่ทำการเกษตรมีจำนวนแปลงและขนาดของพื้นที่เพิ่มขึ้นหรือลดลง
3. Which crops did you cultivate before? Have you changed your crop choices over time, if yes, why and when? And which crops are you cultivating now?
 - ในอดีตจนถึงปัจจุบันปลูกพืชอะไรบ้าง มีการเปลี่ยนชนิดพืชที่ปลูกหรือไม่อย่างไร
4. Are you cultivating crops for home consumption or for selling or both? Which crops do you sell?
 - มีการปลูกพืชเพื่อใช้กินเองหรือสำหรับขายหรือไม่ พืชชนิดไหนบ้างที่ปลูกไว้สำหรับขาย
5. (If the respondent is still owning land) Are you using fertilizers and / or pesticides to improve your production?
 - มีการใช้ปัจจัยการผลิตอย่างใดบ้าง (ปุ๋ย ยาฆ่าแมลง สารเคมีทางการเกษตร หุ่น แรงงาน เครื่องจักร ฯลฯ)
6. Do you feel the soil fertility of your land changed over time? Is your soil in better/ worse condition than before?
 - ความอุดมสมบูรณ์ดินเป็นอย่างไรบ้าง (ดีขึ้นหรือแย่ลงเมื่อเทียบกับในอดีต)
7. Do you think the price you get from your products is adequate?
 - รายได้จากการเกษตรเพียงพอหรือไม่
8. When did people start working with other areas than agriculture, and when did you start changing your production (assuming it has changed)?
 - เมื่อไรที่คิดว่าคนเริ่มออกไปทำงานนอกภาคเกษตรมากกว่าทำงานในภาคการเกษตร
9. If you need people to help you on the field, are you able to get enough (or are they working with off-farm activities)?
 - ถ้ามีความต้องการใช้แรงงานเพื่อการเกษตรคุณสมารถหาแรงงานได้ตามต้องการหรือไม่
10. Do you remember how the land rights used to be (inheritance systems, communal land use)?
 - ก่อนระบบ การแสดงความเป็นเจ้าของด้วยการใช้โฉนดที่ดินจะเข้ามา เจ้าของที่มีการจัดการที่ดินแบบใด, ใช้อะไรมาแสดงความเป็นเจ้าของที่ดิน (เช่น ระบบมรดกของครอบครัว หรือ ที่ดินสาธารณะ ตัวอย่างเช่น เจ้าของที่หนึ่งแสดงสิทธิในการครอบครองที่ดิน โดยคนทั่วไปยอมรับว่า ที่ดินนี้เป็นของข้าเพราะที่ดินนี้เป็นของบรรพบุรุษของเขา)
11. How did this change with the adjudication?
 - มีความเปลี่ยนแปลงอย่างไร หลังจากมีการครอบครองที่ดิน (หลังจากได้รับเอกสารครอบครอง) หลังจากได้รับเอกสารครอบครองที่ดินแล้ว เกิดอะไรขึ้น มีการเปลี่ยนแปลงอย่างไร
12. When and why did people start selling their land?
 - เริ่มมีการขายที่ดินตั้งแต่เมื่อไหร่ เพราะอะไร
13. Who sold their land? (certain ethnic groups, how much land they owned, what they were cultivating etc.)
 - ใครเป็นคนขายที่ดิน (คนกลุ่มไหนที่ขายที่ดิน) —คนเหล่านั้นมีที่ดินอยู่เท่าไร, ตอนที่ยังมีที่อยู่เขาปลูกอะไร
14. What did people do for income after selling the land?
 - หลังจากขายที่ดินไปแล้ว ทำงานอะไรเพื่อให้ได้มาซึ่งรายได้ (แหล่งรายได้มาจากไหนหลังจากการขายที่ดิน)
15. What do you use the forest for in your daily life, and how are you dependent on it for your farming (fodder, prevention of erosion, shelter, NTFPs, etc.)

ป่าไม้มีประโยชน์ในชีวิตประจำวันอย่างไร (ใช้ประโยชน์อะไรจากป่าไม้ในแต่ละวัน) และสิ่งนั้น สำคัญต่อการเกษตรของคุณยังงัย (เลี้ยงสัตว์ หรือ ใช้เป็นอาหารสัตว์ ป้องกันการกัดเซาะ, ที่อยู่อาศัย, เพื่อเก็บของป่าที่ไม่ใช่ไม้ เป็นต้น)

- (If they have sold their land, questions from interview I can be used)

(v) Interview with Tambon officials (อบต., เจ้าหน้าที่ตำบล)

Objective: to find out about the official perceptions and explanations on the Land Titling project and the selling of land of farmers in the rural villages

เจ้าหน้าที่ตำบลรับรู้และสามารถอธิบาย การครอบครองที่ดิน และการขายที่ดิน ของเกษตรกรในหมู่บ้าน

- 1 Can you tell us about the adjudication in your Tambon? How was it implemented and administrated?
- บอกได้ไหมว่า การครอบครองที่ดินเป็นไปในลักษณะใด (ได้มาได้อย่างไร ใครเป็นคนเข้ามาจัดการ สำเร็จได้อย่างไร)
- 2 What did you hope to change by giving people land documents?
หวังว่าจะได้อะไรจากการให้เอกสารสิทธิที่ดิน แก่เจ้าของที่ดิน
- 3 Why do you believe many people ended up selling their land?
คิดว่าทำไมชาวบ้านถึงขายที่
- 4 How has the adjudication and the selling of land changed the lives of people in the villages?
การได้รับเอกสารครอบครองที่ดิน และการขายที่ดิน ส่งผลกระทบต่อการดำรงชีวิตอย่างไร
- 5 Can you explain us who was buying land and for what purposes?
บอกได้หรือไม่ ว่าคนกลุ่มไหนเป็นคนซื้อที่ดิน และซื้อไปเพื่อประโยชน์อะไร
- 6 How did the land prices develop in the smaller villages? What has had influence on the land prices over time? (explain by asking if tourism or influx of rich foreigners has increased the price)
อะไรเป็นปัจจัยที่ทำให้ที่ดินขึ้นราคา, อะไรเป็นอิทธิพลที่ทำให้ราคาที่ดินสูงขึ้น ในเชิงสัมพันธ์กับเวลา (เมื่อก่อนไร่ละ 30,000 แต่ปัจจุบันราคา 70,000 บาท เพราะอะไรถึงเพิ่มขึ้น เมื่อเวลาเปลี่ยนไป) อธิบายในทำนองว่า มีทัวร์ เข้ามาในหมู่บ้าน, มีคนต่างถิ่นที่ฐานะดีให้ราคาสูง)
- 7 Do you have any material you can share with us about the adjudication? Policies etc.
มีเอกสารการซื้อขายที่ดิน ซึ่งสามารถ เอามาให้ดูได้หรือไม่ (เขาคือการเอกสาร ที่บอกวัตถุประสงค์ของการซื้อที่ดิน ถ้าเกิดเจ้าของที่ดินมี เขาอยากจะทำอะไร)

(vi) Interview with children who left the village (for work, studies, etc.), visiting (เยาวชนที่ออกนอกหมู่บ้านเพื่อไปเรียนหนังสือ หรือทำงาน)

Objective: to find out why they left the village and how their leaving might be linked to the selling of land and deagrarianization

ทำไมพวกเขาจึงออกไปจากหมู่บ้าน เหตุผลที่เขาย้ายไปจากหมู่บ้านอาจจะเกี่ยวข้องกับการขายที่ หรือการลดหย่อนทางการเกษตร

- 1 When did you move away for the village and Why?
เริ่มย้ายออกไปเมื่อไร และทำไมถึงย้ายออกจากหมู่บ้าน
- 2 How often do you come and visit? What is your connection to the village?
กลับมาที่หมู่บ้านบ่อยไหม? ทำไมถึงกลับมา? (เช่น กลับมาเยี่ยมพ่อแม่ กลับมาเยี่ยมเพื่อน หรือญาติ กลับมาทำธุระ เป็นต้น)
- 3 Do you and your family own and cultivate agricultural land? (if they answer “no”, ask if they used to own it)
คุณหรือครอบครัวคุณมีพื้นที่ซึ่งทำการเพาะปลูกเป็นของตัวเองไหม (หมายถึงว่ามีพื้นที่และทำการเกษตรในพื้นที่นั้นด้วย: ไม่ใช่พื้นที่ว่าง หรือกร้าง)
ถ้าคำตอบคือ “ไม่” ถามว่าเคยมีที่ดินไหม แล้วที่ดินเดิมไปไหน ขาย หรือยกให้ใคร

NOTE: (If their families' sold land, similar questions as from interview guide I can be used about the selling of land)

(vii) Interview guide for focus group interview with the young generation (เยาวชน: สัมภาษณ์เป็นกลุ่ม)

Start with a brief explanation of the research objectives and the estimated duration of the interview.

Explanation of the focus group: “We are here to discuss agriculture as an occupation, so let us start broadly: What do young people think of small scale agriculture as an occupation? For themselves – could they

imagine to be occupied in subsistence cropping? Why/Why not? For others – how do they perceive others their age who are still working with subsistence agriculture?”

ถามความคิดเห็นของเยาวชน ในการทำการเกษตร, พวกเขาต้องการทำการเกษตรเป็นอาชีพไหม มีความพึงพอใจในการทำการเกษตรไหม? ทำไมไม่อยากทำ และทำไมไม่อยากทำ

พวกเขาคิดอย่างไร เมื่อคนที่อายุรุ่นราวคราวเดียวกัน ยังคงทำการเกษตรเป็นอาชีพอยู่

Note to interviewer: Please make sure that the following questions have been answered before ending the discussion.

ให้แน่ใจว่า การถามคำถามต่อไปนี้ จะต้องได้คำตอบก่อนการอภิปรายร่วมกัน

1. **What are you hoping to be occupied with when you get older/your dream occupation?**

อาชีพที่อยากทำคืออะไร (อาชีพในฝัน) ประมาณว่า โตขึ้นอยากเป็นอะไร

2. **Where would you like to work? In your village or a different place?**

อยากทำงานที่ไหน ในหมู่บ้าน หรือที่อื่น

3. **Would you like to own land here in BHSS? And would you like to work the land?**

อยากมีที่ดินในบ้านห้วยสมสุขไหม และ อยากทำงานบนที่ดินของตัวเองหรือไม่ (ไม่มั่นใจว่างานที่ว่านี้ เน้นเฉพาะการเกษตร

หรือทุกอย่างที่เป็นการให้ที่ดินในเชิงพาณิชย์)

4. **Do you think that the young generation in general in BHSS would like to do farm work or that they would prefer to work elsewhere?**

คุณคิดว่าเยาวชนรุ่นใหม่ในบ้านห้วยสมสุข อยากทำการเกษตร หรืออยากทำงานที่อื่น (อย่างอื่น)

5. **(In case they answer jobs and places away from the village and away from occupation in agriculture) ask why it is more attractive to be occupied elsewhere? (maybe ask explanatory questions about if it is the city that is attractive, the jobs, what they can buy for the money, etc.)**

(ในรายที่ตอบว่า จะทำงานนอกหมู่บ้าน และ เลือกที่จะทำอาชีพอื่นนอกเหนือจากการเกษตร) ถามว่า มีอาชีพอื่นที่สนใจไหม เพราะอะไร เช่น อยู่ในเมือง, ทันสมัย

(ปัจจัยของอาชีพนั้นที่ดึงดูดใจให้อยากทำ)

6. **How do you see your adult life being different from your parents and grandparents lives?**

หากมองชีวิตในอนาคต เมื่อโตเป็นผู้ใหญ่แล้ว คิดว่าการใช้ชีวิตของคุณ จะเหมือนหรือแตกต่างจากชีวิตพ่อแม่คุณไหม อย่างไร

Remember to thank the participants for their time (ขอบคุณค่ะ/ครับ)

D. Synopsis

Land-use and livelihood changes in Ban Huai Som Suk, Mae Lor Watershed, Chiang Mai, Thailand

Synopsis

ILUNRM SLUSE Field Course Spring 2011



Group 4

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Table of Contents

Introduction	2
Land use change and livelihoods in northern Thailand	2
Land ownership and policy	3
Land use changes.....	4
Study Area	4
Problem	4
Research questions:	5

Methodology	6
PRAs.....	8
Transect walk.....	8
Community history (timeline)	9
Calendar timeline day/year	9
Wealth/well being ranking.....	9
Preference Matrix (value ranking of occupations)	10
References	11

Introduction

During the second half of the twentieth century Thailand underwent a rapid social and economic transformation from an agriculture-based economy to one based on industry and services (Goss & Burch 2001). This shift was encouraged by strong governmental support towards industrialisation and tourism, resulting in the downgrading of the agricultural sector to secondary status (Singhanetra-Renard 1999).

This has led to a process of de-agrarianization (the shift from farm to non-farm activities) throughout Thailand, under four parallel processes: occupational adjustment, livelihood reorientation, social re-identification and spatial relocation (Bryceson 1997; Rigg 2001). Traditionally, livelihoods in rural areas were closely linked to the land, both for economic security and social identity (Rigg 2005; Vanway 2003) but globalization and economic development have led to the reorientation of livelihoods. Thus for many rural households farming is but one of a range of income sources that may include seasonal factory work or tourism (Rigg 2005).

Rigg (2005) argues that there are obvious socio-economic deterrents for this shift, though it is also important to look at the changes that derive from the “psychology of modernity”, which refers to the changing perceptions of being a farmer as well as the cultural importance of land ownership.

Land ownership and land use

Traditionally, agricultural land in Thailand has been divided according to tribal inheritance patterns and community norms (Ganjanapan 1994; Rigg et al. 2008:363) but as globalization and market forces have made their way into rural societies, land tenure has become an issue. In 1984, *The Thailand Land Titling Project* was launched with the official aim of offering title deeds to enable citizens to receive loans but many occupied in agriculture chose to sell their land instead (Rattanabirabongse et al. 1998). Previously, not having land meant not having a livelihood, but with changing income opportunities reluctance towards selling diminished. Different factors have escalated this tendency including education and growth of rural industries (Rigg et al. 2008:363).

Thailand's economic boom and the rapidly improving transport facilities, as well as the sense that the quality of life in urban areas has deteriorated along with the environment led many of the country's new middle classes in the 1990's to seek to live out of town (Rigg 2002). Furthermore, investment companies began investing in land development and tourist-related enterprises, especially favouring provincial areas with high tourist potential where the land was undervalued in terms of its developmental potential (Singhanetra-Renard 1999). Farmers, tempted by offers that were simply too good to turn down sold their land to property developers (Rigg 2002).

Traditionally, shifting cultivation has been the most common agricultural practice in Thailand, but it requires large forest areas to be sustainable. Deforestation and migration concerns have led to the Thai government preserving greater areas of forest and in 1989 shifting cultivation was outlawed (Delang, 2006). Forest conservation, land privatisation and rising populations have restricted land availability throughout the country, acting as a push factor towards agricultural intensification, marketization and non-farm activities (Rigg, 2001).

This land use change has largely had a negative effect upon natural resources. Agricultural intensification and deforestation have led to soil degradation and environmental contamination in waterways (Hugenschmidt et al. 2010). On the other hand

non-farm activities and forest conservation may reduce pressure on forests and maintain biodiversity (Tungittiaplakorn and Dearden 2002).

Study Area

The study area is the village of Ban Huai Som Suk, located in the lower zone of the Mae Lor watershed. It has 159 inhabitants and is, approximately 30 km from Chiang Mai City. Many work in agriculture either as a wage labourers or/and cultivate rice for household consumption. Villagers collect NTFPs for consumption, processing and sale. With land adjudication, many villagers sold their land to wealthy city dwellers who proceeded to build holiday homes on what was formerly agricultural land. They also undertook commercial agriculture, employing migrant workers. The main source of water for household consumption and agricultural purposes is the tributary, Huai Mae Lor (Mingtipol et al. 2011).

Problem Area

Our research will focus on the two unique factors to Ban Huai Som Suk: the *adjudication process* and its *downstream location* in the watershed.

The adjudication process will have had major impacts for the villager's livelihoods, and is a likely driving force for de-agrarianisation, as without the title to land they are forced to search for alternative incomes.

Deforestation in the uplands is having a number of consequences including soil erosion, nutrient loss and water run-off, affecting the viability of agriculture throughout the region. With the removal of trees, the soil loses its ability to retain water, thus increasing river levels and flooding risks (Young, A. 1989). Flooding, pollution and soil erosion all pose viable push factors for de-agrarianisation and it is our intention to ascertain if this is the case for Ban Huai Som Suk. Agro-chemical usage upstream also poses a health risk to the community if it is reaching the river because it is their main source of drinking water (Mingtipol O. et al, 2011).

Research questions:

Main research question:

How has the land adjudication process and the downstream location affected de-agrarianization in Ban Huay Som Suk?

Our main research question is two-folded. Firstly, to consider the role that adjudication and the selling of land played in de-agrarianisation throughout the village. Secondly, to consider how the people of Ban Huai Som Suk are affected by the river, and in particular with reference to upstream activities.

This question gives rise to the following sub-questions:

1. How did the process of adjudication take place?
2. Why was land then subsequently sold?
3. What are the villager's income sources today?
4. What are the future expectations of the younger villagers?
5. What role does the river play in local livelihoods?
6. How does upstream activity affect the river in terms of water level and quality?
7. How do these effects impact upon local livelihoods?

Methodology

To ensure a higher validity, triangulation will be applied through the following methods: questionnaires, semi-structured interviews, Participatory Rural Appraisal (PRA), and focus-group discussions (FGD) (Patton 1990; Denscombe 1998; Selener 1999; Murray 2003; Mikkelsen 2005). The sampling method for the questionnaires will be a combination of both random stratification and purposeful convenience, with the latter depending on our participants' place and availability within the community (Rea 1997). The selection of respondents for the semi structured interviews will as well be according to relevance and availability. We expect to identify the respondents within the first days in the field.

Furthermore, triangulation methods will be essential as we anticipate significant communication and translation difficulties in the field. To minimize the effect of our own bias and to avoid misunderstandings, pilot questionnaires will be conducted with locals as well as with the interpreters (Rea, 1997; Gillham, 2000; Oppenheim, 2000; Mikkelsen, 2005).

Semi structured interviews:

As a central sampling method we have chosen semi structured interviews (SSI) (Spradley 1979) to get a more in depth understanding of how the land adjudication process and the downstream location has been affecting to the de-agrarianization in Ban Huai Som Suk.

In order to fully understand the villagers' reasons for selling their land, and hence give up subsistence agriculture, and to know their expectations for their future when they made the decision, we have chosen to complement the other methods with SSIs.

As there is often a dissonance between what happens in practice and peoples' perception of this practice, semi structured interviews will help us gain an understanding of the connection between the two. For example, we will deeper understand how much people *feel* affected by the river compared to how much the river is actually affecting their livelihoods according to the natural scientific parameters we have set up.

Thus, combined with natural scientific methods, questionnaires and PRAs, the semi structured interviews will triangulate the data collected, securing a higher validity on the data and our following conclusions (DeWalt & DeWalt 2002:102).

Certain sensitive issues such as how much money the villagers were paid for their land, villagers' dreams for the future, hardship in making a living or the like can be more sensitively addressed through semi structured interviews, as there is no need for the questions and answers to be 100% comparable. This allows the interviewer to read the situation, sensing how to ask the questions differently according to each respondent (Spradley 1979:80-83).

We have proposed different key informants according to our research questions, but will not identify them accurately until we are on the field site, when we have a better understanding of the local context and the key issues (Spradley 1979:45-52). The key informants proposed, however, are the village chief, officials from the Tambon sub-district and from the Amboe Mae Rim (main district), officials from the Royal Forest Department (RFD), villagers who sold their land, upstream farmers, and villagers settled right by the river.

Interview guides for the different respondents have been developed and can be found in the appendices.

Focus group Discussions:

Semi structured interviews and focus group discussions are related in many aspects. They are both rather loose interviews, where few questions or topics guide the conversation. It differs, however, in certain aspects, for example regarding the interviewer's role. The focus group discussion is less of a conversation between interviewer and respondent, and as the name implies, more of a discussion between a group of respondents, the interviewer taking a facilitating role.

We are planning a focus group interview with young people from the village who have not yet started their adult lives with jobs and families. The central outcome we are aiming at by using this method is to get an idea of how the young generation perceive agricultural work

and in which sector and in which location they are hoping to be occupied in the future; in order to understand if de-agrarianization will be enforced by young people's reluctance to work as subsistence farmers.

To not only gain knowledge on individual opinions, but also understand the more discursive tendencies amongst the young generation, we have chosen focus group interviews as the most adequate method (Frey & Fontana 1991:178; Lloyd 2006:154).

Questionnaires:

Acknowledging the importance of quantifying certain issues, we have chosen to use questionnaires (Babbie 2000; Olsen 2006).

In order to get an overview of the field site, the households, social and economic stratification etc. we will do 10-20 questionnaires with selected respondents from the village. This questionnaire is also designed to provide us with more factual data on how the downstream location has been affecting the de-agrarianization in the village. A second and shorter questionnaire about deforestation and the use of agrochemicals is solely directed towards upland villagers living along the river.

Our insights gained from the more qualitative sampling methods (PRAs and SSIs) will also be cross checked with the information from the questionnaires, securing a higher validity in the data and in our conclusions.

Participant observation

In order to not only understand the issues relating to our research questions, but to also get a feeling with the lives of the people in the village, we will incorporate participant observation (Cohen 1984) in our field work. Participant observation means that researchers gain insight into other ways of life by taking part in the everyday life of the respondents, still observing these activities as outsiders (Lavenda & Schultz 2007:6). There are, however, some obvious limitations since we do not speak the native language of our respondents and therefore cannot fully interact in everyday situations. But none the

less, we recognize the importance of the embodied experience of life in Ban Huai Som Suk and wish to engage ourselves also in the more practical and social activities that take place.

***PRA*s**

PRA methods are used to have local people share their knowledge on certain issues and have them appraise their own situations. For triangulation purposes, this means that both the researcher and the locals are analysing the data (Chambers 1997). We hope that the villagers will enjoy themselves and also appreciate the PRAs as fruitful experiences (Selener et al. 1999).

Transect walk

We will start our fieldwork with a transect walk as due to its informal nature it is ideal for initial introductions between our team, the community and the location. It investigates the spatial dimensions of the villagers' lives: natural resources (forest, agriculture, others), infrastructure and environmental management (Selener et al. 1999). From the transect walk we aim at collecting data on the demography, on/off farm activities and income sources, natural resource endowment, social stratification, what people use the river for, who lives where, crop choices, the amount of trees, the presence and types of irrigation, dams, eventual erosion, flooding evidences from the rainy season and if their livelihoods (houses, crops etc.) got affected, as well as positive or negative sedimentation and pollution evidences. This preliminary information will be useful for both our natural- and social scientific methods.

Community history (timeline)

This is a chronological description of significant events in a community's history and reveals how they have influenced its development (e.g. infrastructure building, institution establishment, natural catastrophes etc.). Using this method we will investigate the adjudication process such as when and why people sold their land and watershed issues such as flooding or crop failures.

When developed into a historical matrix, this method can identify trends in coping strategies, e.g. a transition from subsistence cropping to urban migration and hence de-agrarianization (Selener et al. 1999; Chambers 1997). As we are unfamiliar with both the written and oral language of the participants, we will ask them to draw the events on the timeline. The respondent group will be composed of people from different backgrounds (gender, age, and ethnicity).

Calendar timeline day/year

The daily timeline can show us how the respondents time is distributed on different income activities throughout the day (Selener et al. 1999) to understand how much of their time is devoted to wage labour, to NTFP-collection, cultivating subsistence crops, etc. The yearly timeline can show us for example the occurrence of floods throughout the year.

Wealth/wellbeing ranking

Using local measures identified by respondents, households will be categorized by levels of well-being with the aim of identifying the main stratification factors in the village (e.g. land, income, power, religion, ethnic groups). This will give us an insight into local perceptions of well-being and social differences. It can be done by writing or drawing the well-being criteria on separate cards and then asking the respondents to place the cards on the name of each household which fulfil that criterion (Selener et al. 1999; Chambers 1997).

Preference Matrix (value ranking of occupations)

The matrix identifies the preferences in relation to matters of significance for the group, which in our case would be occupation choices, as we wish to understand the young generation's ambitions and expectations for their future.

The matrix will contain different alternatives to a subject (row) (e.g. agricultural labour in own land, wage labour in Chiang Mai), and evaluation criteria (column), and the participants will be asked to assign points to each alternative following each criteria (Selener et al., 1999).

Soil sample

In order to establish an understanding of the soil quality at the location and to assess whether there are significant deviations between the upper and lower farming locations, soil samples will be taken representatively on chosen plots. The horizons will be identified on location and photographed. pH- measurements and soil conductivity tests will also support this investigation. (About N, P & K we await answer from Thilde about the complexity and practicalities).

Water sample

Water samples will be taken upstream and downstream as well as on chosen farming areas to identify the level of NO_3 . This is done to evaluate whether the levels are abnormal and whether the upstream location is affecting the downstream. Also samples on temperature, amount of water O_2 , P and pH are taken. We will work together with group 3 about this. (we await answer)

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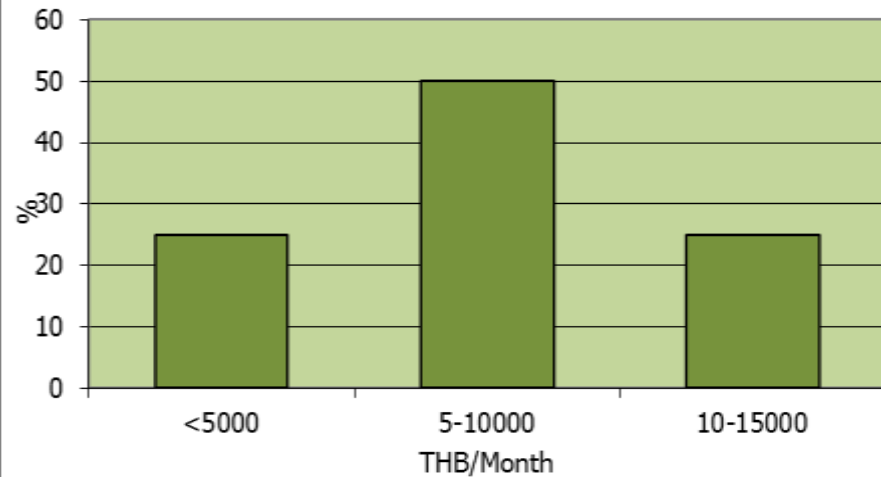
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E. Data schedule overview from the matrix

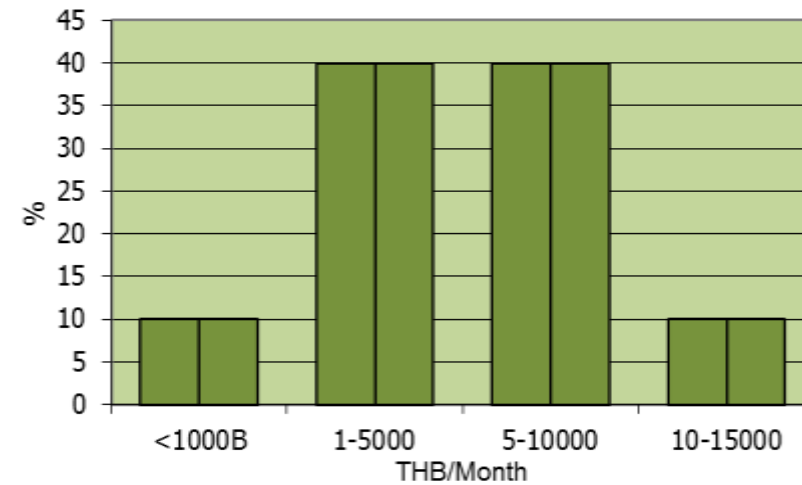
Average family size	4,3	
Family members not living in village avg	0,85	
How many households own land?	13	
Avg amount of land per landowner	≈ 7,25	
Per household (incl. those not owning land)	≈ 4,35	
Households owning land documents	5 %	
Land value avg per rai	≈ 96000 THB	
Estimated price range	≈ 20.000-400.000 THB	
How many wanted to sell land?	0 %	
How many sold parts of their land?	25 %	
How many wants to own land?	35 %	
How many used to own land?	15 %	
When was it transferred?	In 2003 & 2006	
How many is collecting NTFP?	65 %	
Family members having wage job avg	2,2	
Which jobs in the family	wage 80 %	agri- & horticulture 25 %
For how many is the remittances important?	25 %	
Major income	wage labour 80%, government money 15 %, cash crops 15 %	
Amount of loans avg	≈ 53000 THB	
Range	500-180.000THB	
Amount of people who own land and have debt?	62 %	
Amount of people who own land and have wage as major income?	62 %	
Of the people who sold parts of their land how many have debt?	80 %	

F. Appendix Graphs

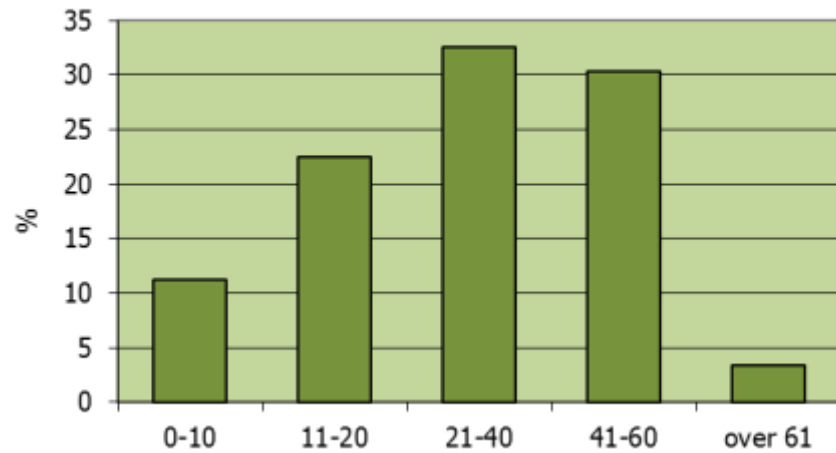
Monthly Income in BHSS



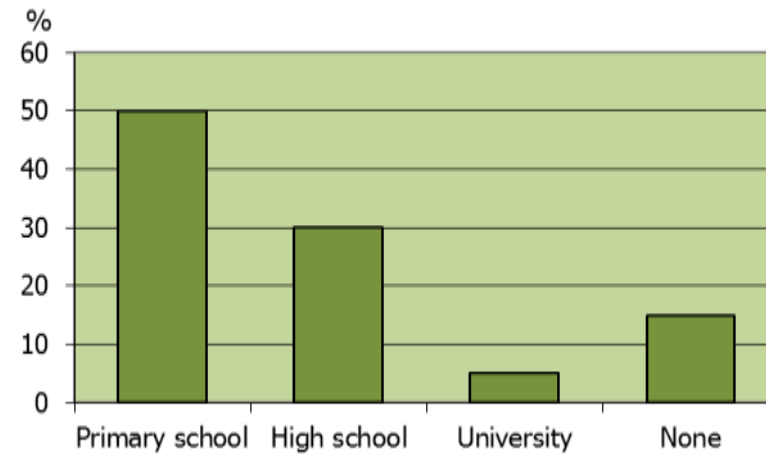
Monthly Expenditure in BHSS



Age Distribution in BHSS



Education Levels in BHSS



G. Time schedule

MON 28.02	TUE 1.3	WED 2.3	THUR 3.3	FRI 4.3
Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
Leaving from Chiang Mai at 8.30	Morning meeting	Morning meeting	Morning meeting	Morning meeting
	meeting with TAO council village representative	PRA with elderly on community timeline	Meeting with Mogens 9 am	SSI with couple who bought land
	testing of questionnaires	revision of questionnaire	questionnaires	GIS
	revision of questionnaires		interview with village chief	Soil sampling
Joint Interview with RFD representative (Luke+Richard)			revision of interview guides	
Lunch in Ban Phrabat	Lunch	Lunch	Lunch	Lunch
Arrival to BHSS at 2pm	transect/tourist walk to waterfall area	revision of schedule and reseach questions	questionnaires	Soil sampling
Settling in (ALL)	Supervision Mogens	finding out sampling method for questionnaire	GIS	transect drive to adjudicated area close to BHSS
Going for a walk	group meeting			working on matrix
Dinner	Dinner	Dinner	Dinner	Dinner
Group discussion about research questions and problem area (ALL)	SSI and questionnaire in Lahu houses	Questionnaires	SSI with woman who bought land	SSI with woman who sold land
			questionnaires	SSI with man who sold land
		Sum-up meeting	Sum-up meeting + beer	Evaluation meeting (ALL)
				Sum-up meeting

SAT 5.3 Breakfast Morning meeting	SUN 6.3 Breakfast Morning meeting	MON 7.3 Breakfast Morning meeting	TUE 8.3 Breakfast Morning meeting 7.30	WED 9.3 Breakfast
Evaluation meeting	SSI with woman who wants to sell land	SSI with farmer who wants to sell land + Village headman (Anna K + Lisa)	8-10: Community meeting and presentation of our results (ALL)	
Supervision Mogens	SSI with woman who sold land	Digitalising data from SSIs	Supervision Mogens	
Preparation of presentation for evaluation + main findings from matrix	water sampling	preparing village meeting presentation	SSI/improvised FGD with people on land rights (Anna K)	
FGD with youth + occupational ranking + life quality ranking Lunch at Basecamp	GIS mapping Lunch	Lunch	digitalising data Lunch	Lunch
Midtern evaluation (ALL)	SSI with man who don't want to sell land	Tambon official meeting	Follow up SSI on CTD on questionnaires	leaving back to Chiang Mai 15.00
Midtern evaluation (ALL)	SSI with farmer on agricultural practice	SSI with village monk (Richard + Luke)	digitalising data	
Midtern evaluation (ALL)	SSI with forrest temple monks			
Midtern evaluation (ALL) Dinner	NTPF forest walk Dinner	Dinner	Dinner	
Midtern evaluation (ALL)	Community meeting	FGD on activity calendar and community mapping with villagers	digitalising data	
Midtern evaluation (ALL)	SSI with woman who moved to Chiang Mai	Digitalising data from SSIs	Debriefing Thai students	
Midtern evaluation (ALL)	digitalising data from SSIs Sum-up meeting	Sum-up meeting	Ssi with Pujaban Assistant on agricultural Sum-up meeting	

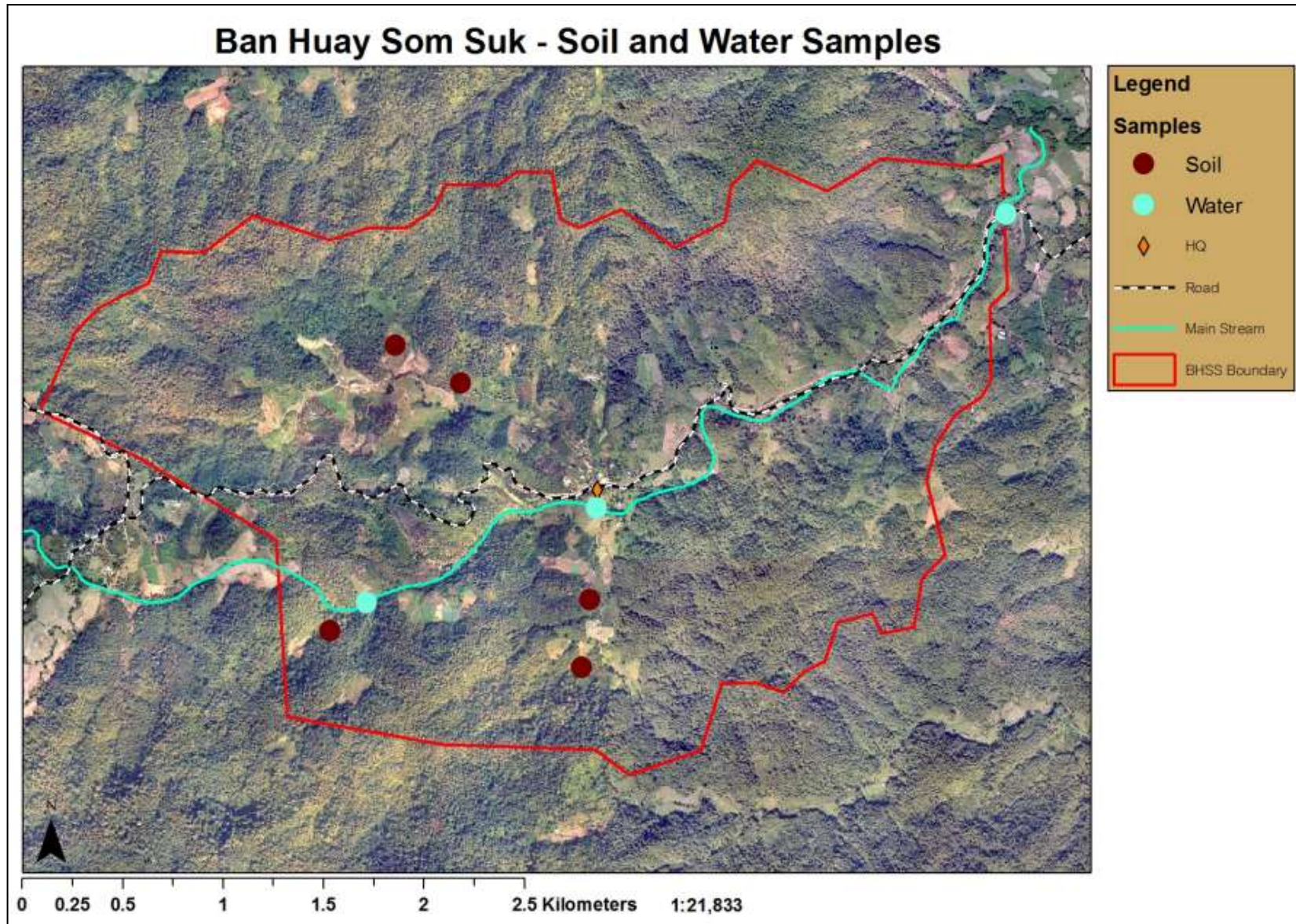
H. Seasonal Calendar



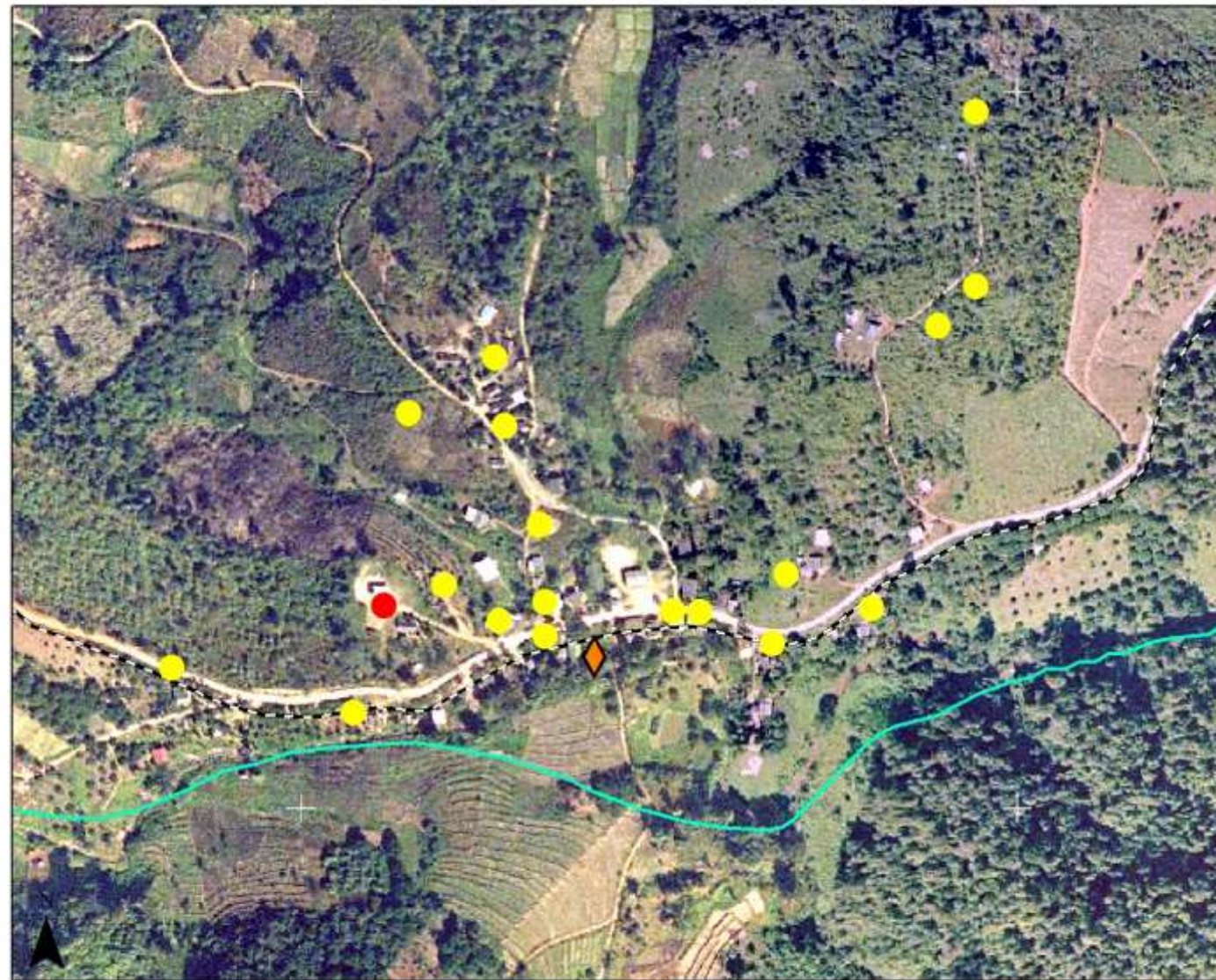
I. Community History

Thai	Europe	Evenment
2496	1953	Thai people settled in BHSS. Before it was a concession area
2505	1962	The first canal was dug
2507	1964	The Committee divided utilization and conservation area
2510	1967	The villagers payed the taxes in order to receive <i>Soh Koh 1</i> title deed, but they didn't get it so they didn't pay anymore taxes
2525	1982	The village was separated from Ban Muang Ka. The second canal was dug.
2525	1982	Ban Huai Som Suk temple was built
2525	1982	(and 2530) The government proposed the title in exchange to taxes again, but the Committee refused
2527	1984	A monk from Mae Rim set up three bank projects (rice, buffalo and soy bean) and one hydrological energy (no electricity until then)
2528	1985	Social groups were set up and the first school was built
2530	1987	The waterfall was used as main source for water (both drinking and other purposes)
2532	1989	The school was cancelled
2535	1992	Lahu households came
2535	1992	Beginning of the selling of the land (300 Baht/Rai; now is 200000 Baht/Rai)
2537	1994	Most popular year for selling the land
2542	1999	Mae Keaw canal
2542	1999	People started to go working out of Ban Huai Som Suk
2545	2002	the road was concreted
2546	2003	Governmental electricity network
2547	2004	Akha households came
2550	2007	People started to buy drinking water because there was not enough from the waterfall and it was polluted

J. GIS Maps



Ban Huay Som Suk - Questionnaires

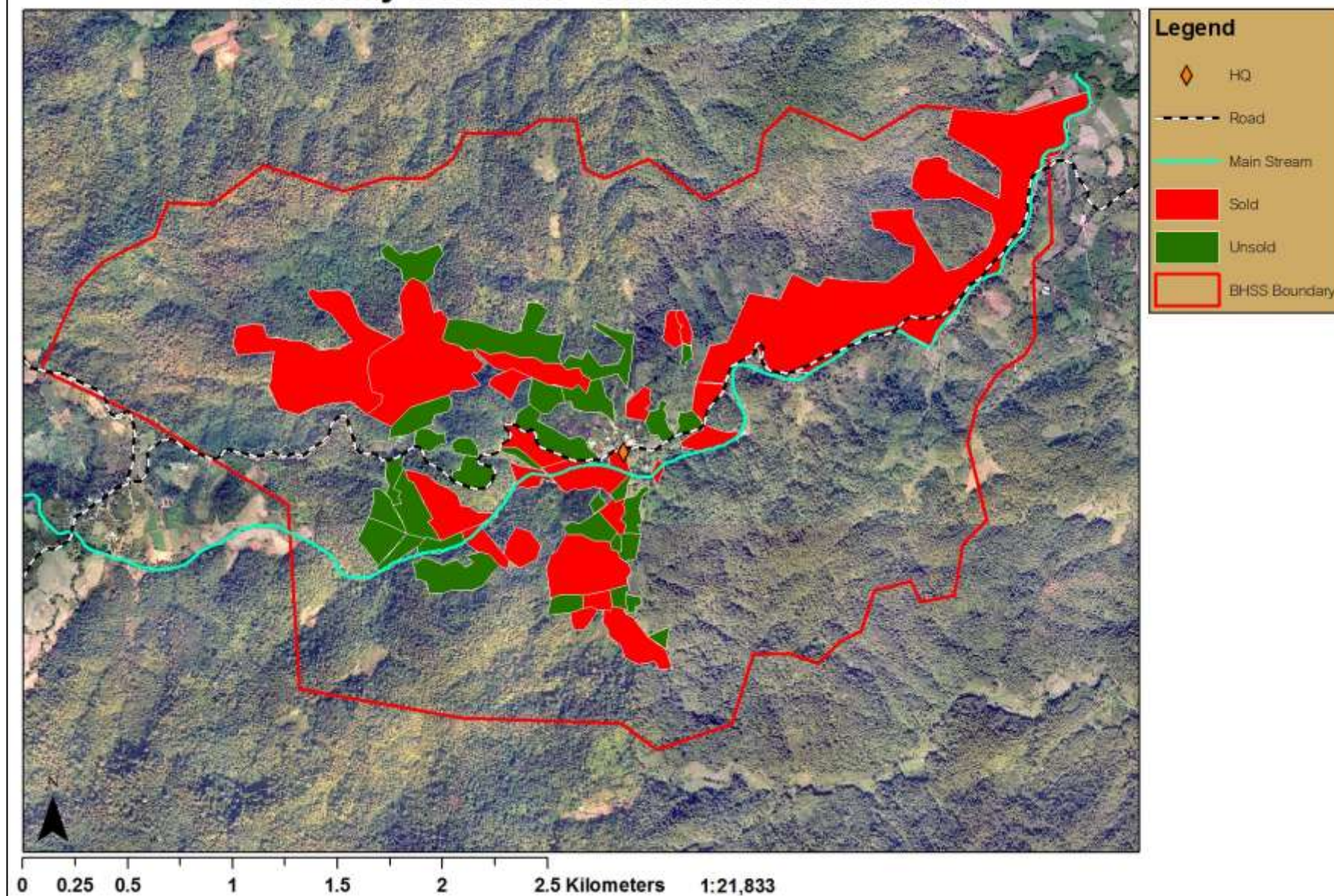


Legend

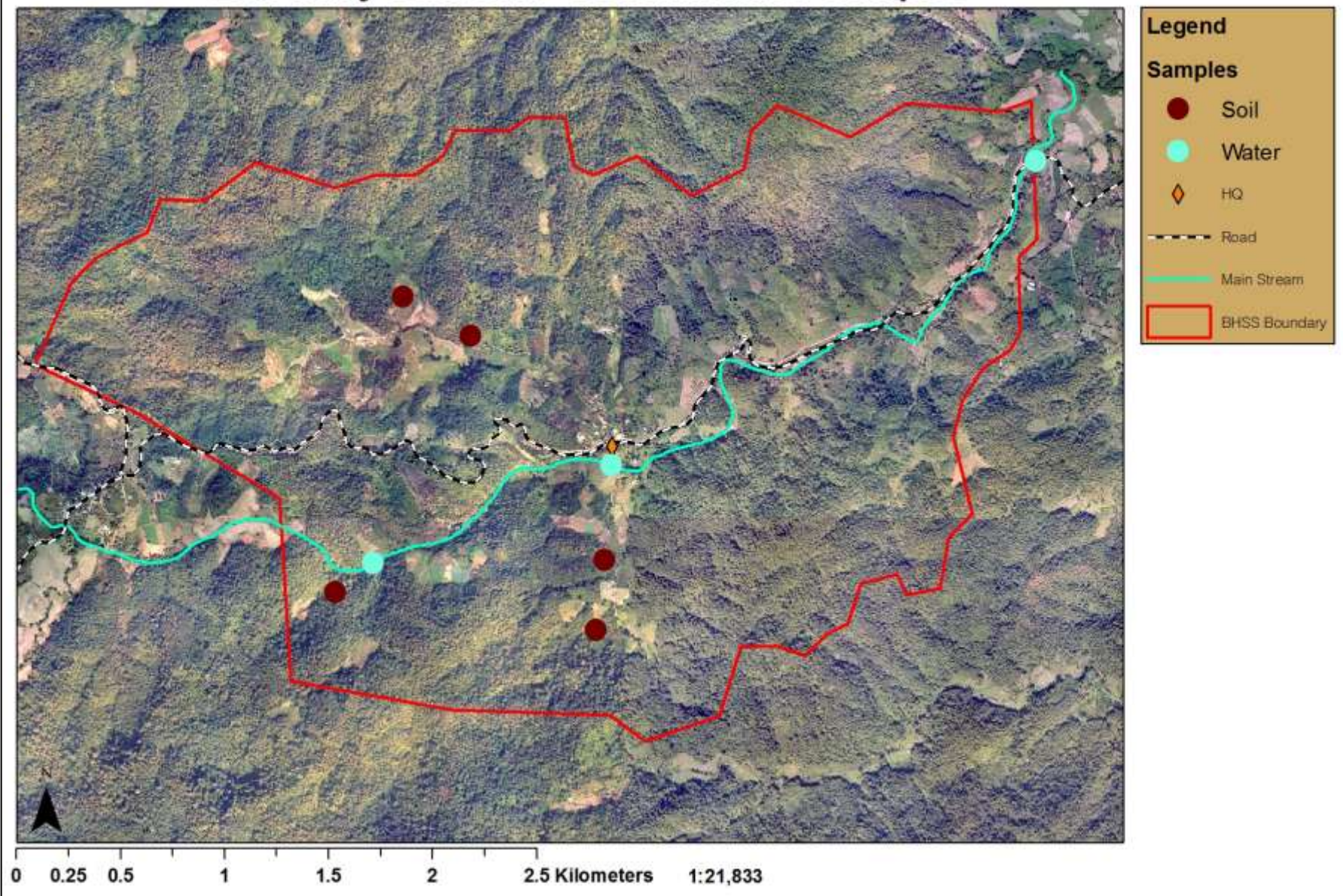
- Village Temple
- HQ
- Questionnaires
- Road
- Main Stream
- BHSS Boundary

0 50 100 200 300 400 500 Meters 1:3,708

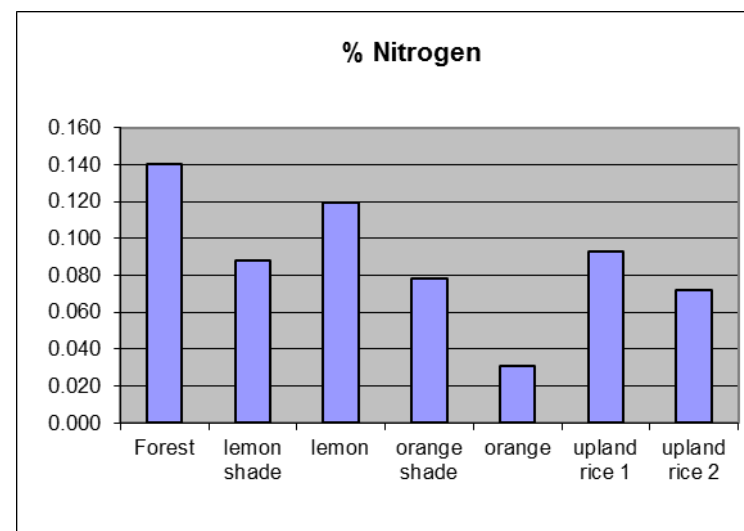
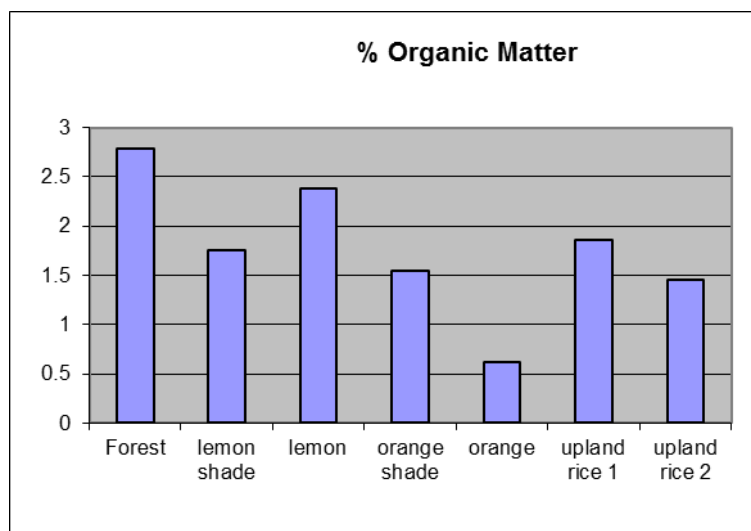
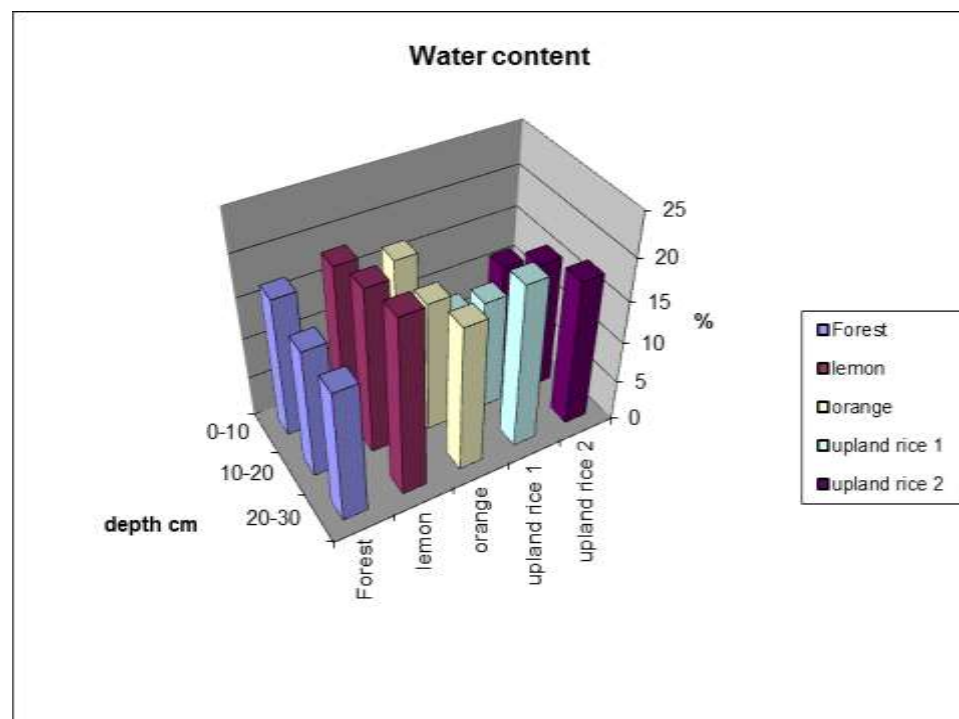
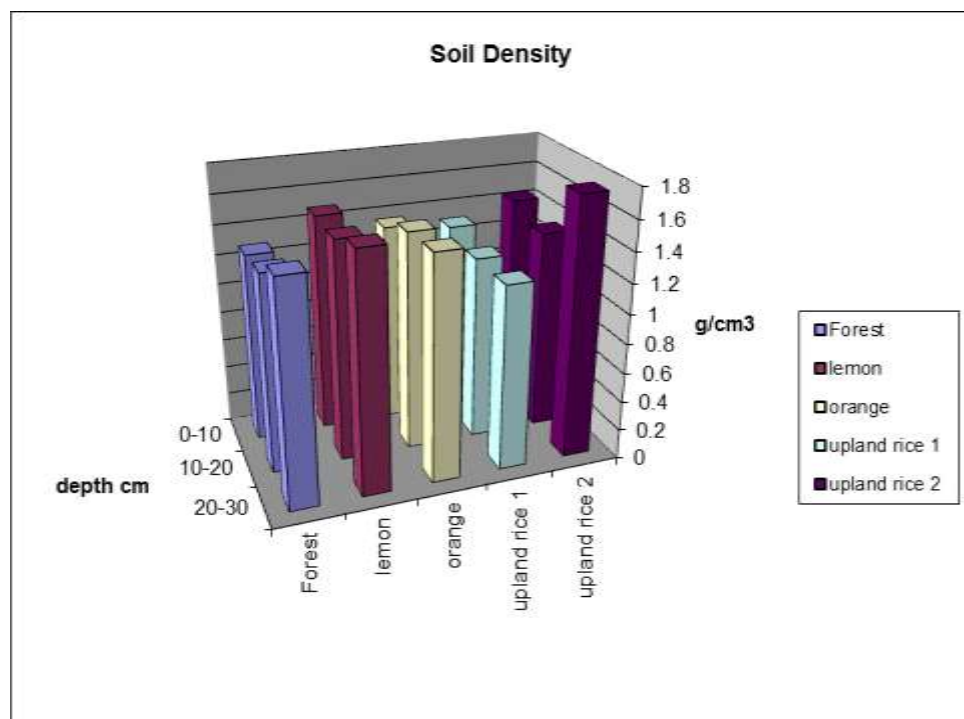
Ban Huay Som Suk - Sold and Unsold Land



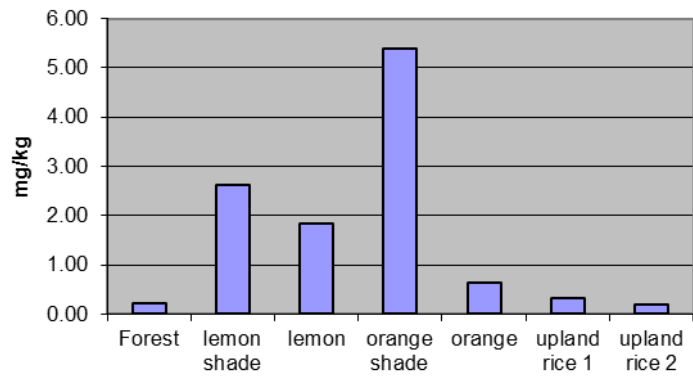
Ban Huay Som Suk - Soil and Water Samples



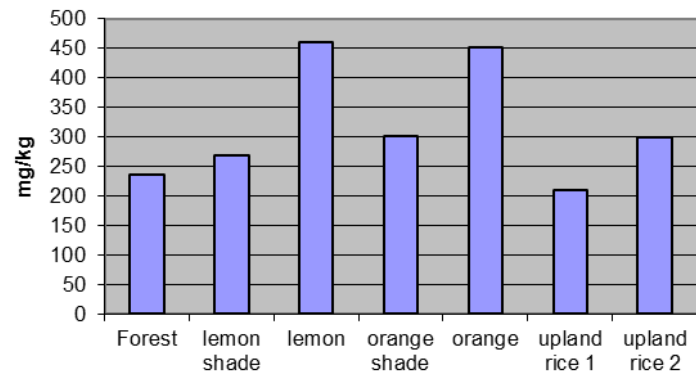
K. Soil Sample Results



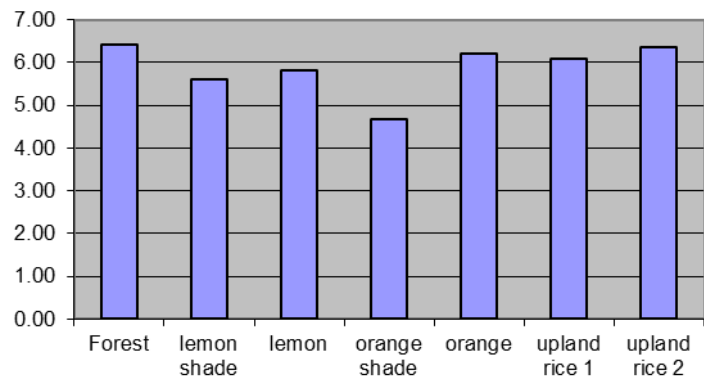
Available Phosphorus



Available K (Potassium)



pH



Electrical Conductivity

