

An Alternative to Large Scale Rubber Plantations: The Case of Smallholder Livelihoods in Ban Somsanouk, Central Laos

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Abstract

The trend of shifting end markets in global value chains is also clearly visible in the reconfiguration of rubber value chains originating in Southeast Asia. Within the Greater Mekong Subregion Laos and Cambodia are actively seeking to become major suppliers for the Chinese market. The rubber boom in Laos has been associated with two related negative phenomena: 1) vulnerable livelihoods as a result of contract farming and 2) destruction of the natural environment due to large scale plantations. Henceforth, there is a need to focus more on smallholders and emerging value chains in areas where selling latex is relatively new. This paper analyses emerging rubber smallholder activity in central Laos and investigates to what extent rural communities can benefit from the rubber boom and improve their livelihoods. This is done through a case study of Somsanouk village, located between Vientiane and the tourist spot Vang Vieng. Researchers and non-governmental organisations have focused on southern and northern parts of the country, yet the substantial increase of small and large scale plantations in central Laos warrants a comparative perspective and deeper insights into geographical differentiation of rubber value chains. A survey was conducted in July 2013 among 19 Lao Soung, mostly ethnic Hmong, 20 Lao Loum and 1 other (Tai Deng) smallholders and discussions were held with the village chief (Lao Loum) and deputy village chief (Lao Soung).

The survey was carried out with the assistance of an interpreter and the Lao Loum village chief. The latter voluntarily offered to help and did not ask for any compensation for his efforts. He was also interested in the rubber situation in his village. This chief was also able to translate answers from the ethnic Hmong community to the interpreter.

The survey revealed that Ban Somsanouk is increasingly being inserted into international rubber value chains, focusing on China. The lead firms are three domestic and one Chinese investment firms that stimulate farmers to embark upon the cultivation of rubber trees and that support them in their cultivation. In return, they expect 35% of the revenues. The most remarkable result of this upstream value chain is the village-wide selling process to the highest bidder. Smallholders are not bound to sell dried latex to their investors. This is markedly different from the more common 2+3 arrangement. Although Ban Somsanouk is much closer to Thailand than to China, this study shows that central Laos is more influenced by and connected to China in terms of rubber cultivation. The rubber smallholders of Ban Somsanouk generally have a positive attitude towards their new undertaking. Many consider the cultivation of rubber to be instrumental in expanding household income and securing a future for their children. Overall, this paper offers a cautiously positive view of changing rural livelihoods in a new rubber growing area, but it remains imperative that foreign direct investment in the rubber industry and other agribusinesses in Laos and Cambodia such as sugarcane should be carefully monitored by central governments, local and foreign NGOs. The paper ends with policy implications related to producer-buyer relationships, intercropping, micro-finance and Asian rubber chain governance.

Keywords: Natural rubber, smallholders, pluriactivity, Laos, Asian value chains, livelihood trajectory, transnational actors

Introduction

Selling (dried) latex, tapped from the rubber tree, the *Hevea brasiliensis*, is rapidly becoming a major activity among rural communities in mainland Southeast Asia, including Laos (Li and Fox, 2012). Large plantations, as well as smallholdings, are not only existent in the established rubber areas of northern and southern Laos, but also, increasingly, in the central part of the country. Since natural rubber continues to be an important commodity in the global economy, governmental authorities perceive it as a suitable long-term investment strategy to stimulate national economic development and, in the process, lift rural people out of poverty and facilitate the reduction of the shifting cultivation and slash and burn agricultural traditions. Indeed, the expansion of the middle class in emerging markets will ensure the long-term demand for car tires, which are made of natural rubber.

However, the rubber boom in Laos has been associated with two negative phenomena. First, supported by national and provincial authorities, foreign investors from China, Vietnam and Thailand have set up large-scale plantations, which has led to processes of land grabbing, landlessness and exploitation through contract farming, ironically increasing rural poverty in certain communities as well as economic and technological dependence on those foreign investors (Baird, 2010; Cohen, 2009; Friederichsen and Neef, 2010; Kenny-Lazar, 2012; Pinkaew, 2012; Shi, 2008). Global Witness even linked this to the Deutsche Bank and the International Finance Corporation, which were accused of financing Vietnamese agro-industrial firms' investments in Laos and Cambodia and the obstructing rural livelihoods (The Guardian, 2013). Second, the natural environment is destroyed when forests must make room for huge monotonous rubber plantations (Li and Fox 2012; Ziegler et al., 2009). This raises serious concerns related to the loss of biodiversity. In addition, fungi could destroy entire plantations, contributing to environmental and socio-economic stresses.

Henceforth, there is a need to focus more on smallholders in areas where the sale of latex is relatively new. Rubber smallholdings provide employment and do not lead to landlessness. Furthermore, if intercropping is practiced and household members also engage in other (non-farm) income-generating activities, becoming pluriactive villagers (Bouahom et al., 2004; Rigg, 2005), poverty could be substantially reduced and socio-economic and environmental risks could be mitigated (Simien and Penot, 2011; Fox and Castella, 2013). This paper analyses emerging rubber smallholder activity in central Laos and investigates the extent to which rural communities can benefit from the rubber boom and improve their livelihoods. This is done through a case study of Ban Somsanouk, a village located between Vientiane and the tourist spot of Vang Vieng. Researchers and non-governmental organisations have focused on southern and northern parts of the country, yet the substantial increase in small and large-scale plantations in central Laos warrants a comparative perspective and deeper insights into geographical differentiation. This paper builds on publications that have focused on smallholders in the established rubber growing area of northern Laos (Lagerqvist, 2013; Manivong and Cramb, 2008; Sturgeon, 2013; Wasana, 2012) and offers a cautiously positive view of changing rural livelihoods in a new rubber growing area. The empirical analysis is informed by three bodies of knowledge: micro-livelihoods studies, as often carried out by development specialists and development geographers, global value chains noted by economic geographers and economists, and the now substantial academic inquiry regarding the Greater Mekong Subregion (GMS) by a range of social scientists. The empirical focus is on the trajectories of dynamic livelihoods, and ultimately, the outcomes of these livelihoods: employment generation and poverty reduction (De Haan and Zoomers, 2005; Scoones, 2009). This paper is organised as follows. The next section briefly

introduces the spatial project of the GMS in order to provide the geo-economic context before introducing the current relationships between trends in the global rubber industry and rural livelihoods. This is followed by a section on the research methodology, and then, a presentation of the results of the fieldwork in Somsanouk. The paper ends with policy implications and a conclusion.

The GMS project

Laos forms a part of the now widely known spatial construct of the GMS. The GMS is one of the most important projects of the Asian Development Bank (ADB) in integrating the provinces of Guangxi and Yunnan, both in southern China, Burma (Myanmar), Thailand, Laos, Cambodia and Vietnam into one fully functioning economic area in which the mobility of people, services, goods, ideas and finance should lead to overall economic development and poverty reduction (Rigg and Chusak, 2009; Shrestha and Aekapol, 2013). As such, it is the most ambitious geographically targeted scheme within South East Asia. Although the ADB deserves credit, especially for promoting the construction of bridges and roads, several leading scholars on the GMS and international relations in South East Asia have pointed out that the predominantly neoliberal rhetoric that the ADB and its supporters have employed until recently fails to consider the reality of three crucial features of national and sub-national political economy phenomena.

First, an institutional mismatch exists. Note that institutions are considered here as the formal and informal rules of the game, not organisations (North, 1990). The ADB envisions development trajectories based on the Washington Consensus: the presumption that opening up markets and the provision of infrastructure will automatically trigger employment generation and improved standards of living for the majority of people. In contrast, the political

leaders of the GMS countries frequently do not treat their economies as havens of laissez-faire, but favour political economic strategies based on the Beijing–Seoul–Tokyo (BeST) Consensus (Lee and Mathews 2010). The GMS countries are following this Consensus to a considerable extent, especially the philosophy that a visible hand is needed to achieve export successes. Second, it is challenging for small and medium enterprises (SMEs), relatively poor people and small countries to catch up with large enterprises and multinationals, rich people and large countries, respectively (Glassman 2010). Vietnam, an emerging economic powerhouse, is catching up with Thailand, but it is difficult for Cambodia and Laos to increase living standards at the same pace (Table 1). Third, several authors have observed that the processes of integration have not been inclusive and have widened inequality (Shrestha and Aekapol, 2013: 10-11), particularly for ethnic minorities living along transportation corridors. Between 40% and 50% of the Lao population, mainly living in peripheral upland areas, have grown up using language groups other than Lao, such as Mon-Khmer, Tibeto-Burman, Miao-Yao or Viet-Muong (Rehbein, 2007: 96). For example, in northern and central Vietnam, ethnic minorities have not yet benefited sufficiently from infrastructural improvements, land reform and other GMS initiatives (Andriessse and Anouxay, 2012; Friederichsen and Neef, 2010; Rigg and Chusak 2009; Weatherbee, 2010: 239–240).

Table 1: Poverty levels

	People below the US\$2 a day, ppp poverty line, %			
Laos	79.9	(1996)	66.0	(2008)
Cambodia	75.2	(1994)	49.5	(2009)
Vietnam	85.7	(1993)	43.4	(2008)
Thailand	14.6	(1996)	4.1	(2010)

Source: ADB, 2013

Fortunately, international organisations are increasingly recognising the challenge described above and the ADB's (2012) Asian Development Outlook, subtitled "Confronting rising inequality in Asia," and the joint UNESCAP-ADB-UNDP (2013) publication, "Asia-Pacific aspirations: Perspectives for a post-2015 development agenda," have possibly marked the beginning of a more in-depth, coherent and coordinated view towards addressing socio-economic and spatial inequalities. Nevertheless, at the national and sub-national level, it is difficult to detect sufficient political will to make the GMS project an outstanding success. Agreements are never binding, progress is regularly slow and the leading countries, Thailand and Vietnam, have other geopolitical and economic geographical priorities. It is within this complex macro-context that micro-studies at the village level should be scrutinised.

Rubber and livelihoods

The economic geography of rubber

The three big global players in the upstream rubber industry are Thailand, Indonesia and Malaysia (Table 2); but, in the last decade, rubber production in the GMS has grown dramatically. Vietnam has become a serious competitor of Indonesia and Thailand. Malaysia is transforming into a processing hub. It imports enormous amounts of rubber from Southern Thailand, the dominant rubber growing area of Thailand, and is now the largest rubber importer in the world. It hosts many glove factories and has even developed into a global research and development centre (Doner, 2013). This, together with the relatively high wages in Malaysia and its current focus on oil palm plantations, will likely lead to a gradual decline of Malaysia's own rubber production. In other words, Malaysia is moving from upstream to midstream and downstream activities. A striking feature of natural rubber production is its reliance on smallholders. Fox and

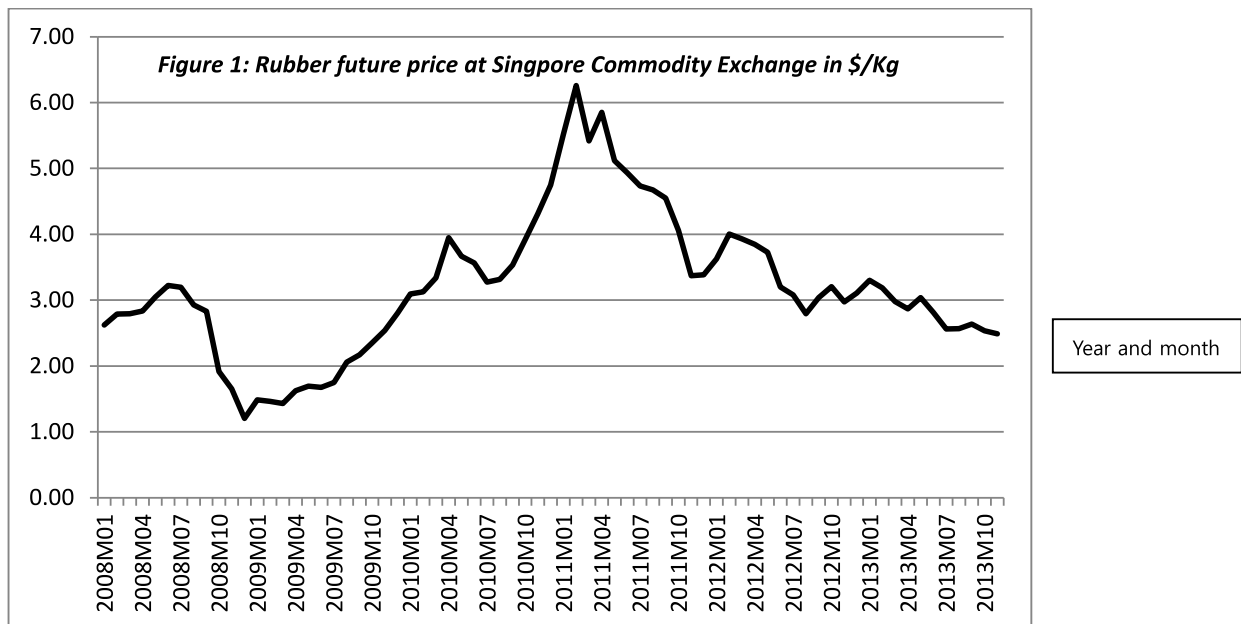
Castella (2013) argue that “in the largest rubber producing countries, the smallholder sector dominates production; smallholders produce 93 percent of rubber in Malaysia, 90 percent in Thailand, 89 percent in India and 85 percent in Indonesia. Rubber as a farm crop presents an interesting opportunity for smallholders as it can be intercropped on a short rotation making it more attractive than other plantation crops with longer gestation periods.” The prospect of intercropping is also relevant to the reduction of financial economic risks. The price of natural rubber is closely linked to the rubber futures markets of Singapore, Tokyo, and the trends at the Qingdao International Rubber Exchange Market in China (Figure 1). The Qingdao seaport is the leading logistical centre for Chinese rubber imports and many car tire factories are located in the vicinity. The importance of demand and price trends in China, currently the second largest importer of natural rubber, is one of the fundamental changes in the geography of the global rubber chain. It is a good example of shifting end markets as a result of economic uncertainty in the USA and Europe after the collapse of Lehman Brothers in 2008 and the growing influence of the BRICs and other emerging markets (Cattaneo et al., 2010; Gereffi, 2013; Kaplinsky et al., 2011). The 2008 decline shown in Figure 1 coincides with the financial problems after the collapse of Lehman Brothers; the decline that started in 2011 coincides with a slowing down of China’s growth and its demand for natural resources, as well as an increase in the supply of natural rubber. Thus, revenues from alternative crops using intercropping would reduce the risk of falling income for many rural livelihoods in Southeast Asia. The possible economic and political impact of price volatility can be clearly seen in Table 3. Rubber farmers in Southern Thailand were clearly displeased with falling prices, which even culminated in violent demonstrations in September 2013. Furthermore, the World Bank (2013) forecasts a gradual decline in the price of rubber between 2015 and

2025. This is potentially worrying for owners of plantations with young, immature trees. In sum, the promotion of rubber smallholdings, coupled with intercropping, could guarantee land ownership among rural populations, support the natural environment and contribute to meaningful employment as well as poverty reduction.

Table 2: Largest rubber producers in 2012

Rank	Countries	Production (Int \$1000)
1	Thailand	3830585
2	Indonesia	3532620
3	Malaysia	1140029
4	India	1019550
5	Viet Nam	903212
6	China	858850
7	Côte d'Ivoire	273052
8	Brazil	188158
9	Sri Lanka	180952
10	Burma	171148
11	Nigeria	164140
12	Philippines	160708
13	Guatemala	118312
14	Liberia	72061
15	Cameroon	63482
16	Cambodia	49723
?	Laos	?

Source: FAO, 2013



Source: World Bank 2013

Table 3: Headlines on rubber-related unrest in Thailand in 2013

25 August	Rubber farmers warn of mass protests
29 August	Only rubber farmers in South to rally
4 September	Premier trumpets China rubber talks
5 September	Rubber committee 'no' to B100/kg
10 September	Panel agrees to double rubber subsidy
11 September	The risks of unbalanced rubber development (Op-Ed article by Prof. Doner 2013)
15 September	Rubber protestors declare 6 demands
17 September	Government ponders tougher measures <i>2 protestors shot during clashes at rubber rally</i>
19 September	Rubber farmers warn against violence
29 September	Security remains despite end to rubber rallies
7 October	Rubber gains from two-month low
9 October	1m farmers sign up for payouts
16 October	Rubber drops from two-week high

Source: Bangkok Post 2013

National politicians in Cambodia and Laos have seen the successes of the big three natural producers and are currently keen on taking advantage of the rubber demand in China as well as economic geographical opportunities arising from integration in the GMS. Unfortunately, the political economies of both countries favour the establishment of big agro-industrial plantations rather than intercropping plantations with the support of foreign investors from GMS partners (Andriessse, 2014; Global Witness, 2007; Keating, 2012; Slocomb, 2011).

Rubber smallholders in Laos

Despite the prioritisation of large-scale plantations, more and more farmers in Laos have set up small rubber plantations and are entering upstream rubber value chains, often initiated by investors who prefer to get farmers involved as contract farmers. The most common arrangement is the so-called 2+3 model, in which farmers manage the land and perform the labour, while investors, often foreign, are responsible for capital, marketing and technology (seedlings, fertilisers, etc.). In this arrangement, farmers frequently receive 60% to 70% of rubber revenues; the investors receive the rest. Investors have been instrumental in proposing that farmers engage in planting rubber, and thus, in establishing upstream rubber chains (Wasana, 2012: 29). A simpler model is the 1+4 arrangement: Farmers only provide the land, whereas investors also “supply” labour by bringing in rubber tappers from other areas, for instance, China. This model is not inclusive, as it does not generate meaningful employment for local rural communities, yet investors sometimes prefer it, as they are reluctant to provide the owners of land with training in rubber tapping skills. The worst case, obviously, is the purchase or grabbing of land from farmers by investors in order to set up large plantations. Besides these arrangements, Fox and Castella (2013) also recognise the existence of somewhat more independent, proactive smallholding systems:

“Farmers with relevant knowledge (e.g. many villagers located close to the borders with China and Thailand have worked on rubber farms in these countries), capital (e.g. better off farmers with good relations with district authorities) and agency (e.g. belong to farmers’ groups) can negotiate advantageous arrangements that limit the role of investors as credit providers, or even resist companies’ offers if they have already secured market access on their own.”

Whereas the literature on rubber in southern Laos is predominantly focused on the disadvantages of large-scale plantations (Kenny-Lazar, 2012; Pinkaew, 2012), publications on northern Laos have also addressed smallholder and related activities and their interaction with large-scale plantations. In a spatial analysis using GIS of the Luangnamtha province, Manivong and Cramb (2008) concluded that rubber smallholdings could be profitable, especially in areas along main roads. Furthermore, in an illuminating thesis on rubber activity based on fieldwork in four villages in the Luangnamtha province, Wasana (2012: 205-227) identified significant changes in livelihood trajectories:

- The emergence of a rural entrepreneurial class consisting of local traders and local state officials who are in the business of connecting uplanders to rubber (cross border) markets using predominantly informal deals
 - process of semi-proletarianisation in cases in which farmers are forced to leave their farms as a result of rubber expansion
 - A decline in shifting cultivation, the collection of non-timber forest products and livestock raising
 - An increase in wage labour as a coping strategy
 - An increase in vulnerability and fragility among rural communities

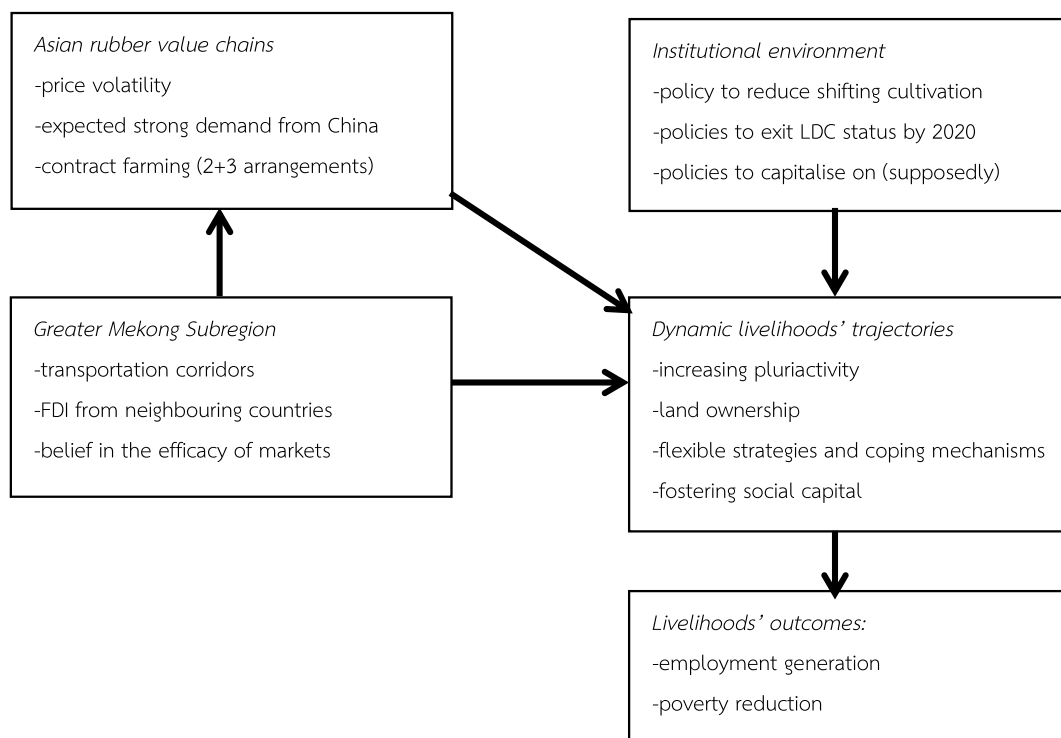
These outcomes can be clearly linked to the emergence of pluriactive farmers throughout Laos. Since the late 1990s, livelihoods have diversified

substantially and farmers could be described as “pluriactive.” Bouahom et al. (2004) employed this formulation to denote the plural farm and non-farm activities in villages in the Vientiane Province and Luangprabang. Farmers still consider farming to be their principal source of food security, but frequently leave the actual work to relatives and engage in non-farm activities in the manufacturing and services sector. As mentioned in the previous section, the drivers of change might be negative in the case of pressures from large-scale corporate plantation owners, but change in the GMS could also be positive. There is increasing evidence that rubber farmers and small-scale traders in northern Laos are also able to act relatively independently from corporate actors and governmental authorities with positive outcomes in terms of inclusive development. Middlemen from Northern Laos and China link upstream to midstream rubber chains using ethnic and kinship relations and social capital has turned out to be highly instrumental in the achievement of socioeconomic success (Lagerqvist, 2013; Sturgeon, 2013). It can be concluded that local pockets of proactiveness and entrepreneurship in Northern Laos are bringing about meaningful integration in the GMS. Notwithstanding the substantial problems and challenges, the possibility of positive patterns and trends is important since “If the Lao PDR is not part of the regional value chain, the economic benefits from enhanced regional transport connectivity may not be equally profitable for the Lao PDR, and regional road networks developed through the GMS Corridors Programme could pass through the Lao PDR without bringing any meaningful economic benefit to its people” (Oudet, 2013: 44).

The analysis in this and the previous sections culminates in an analytical framework that can be used to connect the fieldwork in rural areas with the geographies of rubber value chains in the GMS (Figure 2). Rural communities pursue a range of strategies in order to create and sustain employment and to

raise standards of living. Villagers are active agents, yet their livelihood trajectories are shaped by the institutional environment as well as the economic geography of rubber value chains. In addition, the spatial integration of the GMS has an impact on the (re)configuration of Asian rubber value chains. The next section introduces the research methodology of a case study in central Laos, a region severely under-researched in terms of both large-scale rubber plantations as well as smallholder activities. The exception is Thounthone et al. (2014); yet their focus is on the relationship between land use change, not explicitly involving rubber, and livelihoods, and the effect of relationships upstream in the value chain on livelihoods. Although the focus of this paper is on socioeconomic factors, environmental sustainability is addressed mainly by an examination of the extent of intercropping at the research site.

Figure 2: Analytical framework for investigating emerging rubber smallholders



Methodology

Ban [village] Somsanouk is located in Hinheup district, approximately 30 kilometres south of Vang Vieng, a tourist hotspot for backpackers, and 120 kilometres north of Vientiane (Figure 3). This village was chosen for the following three reasons: its location along the main road between Vientiane and Vang Vieng, to control for the adverse impact of location (Manivong and Cramb, 2008), the presence of smallholders who are already tapping and selling latex, and the easy accessibility of smallholders. They all live in Ban Somsanouk. Other locations of smallholder activity in the Vientiane Capital area and Vientiane Province were also visited, yet in many cases, the owners did not live close to their land and were hard to reach. Driving through Hinheup district, one can easily identify the young and mature rubber trees. Ban Somsanouk hosts several ethnic groups and is best known as a leper colony, established by French Catholic priests in 1964, and currently overseen by the Lao government and (international) NGOs. The village has 1051 inhabitants, including 150 leprosy patients; in 2000, approximately 1100 and 212, respectively (Pro-Natura, 2000). The village hosts 610 Lao Soung (originally highlanders), 433 Lao Loum (lowlanders) and 8 other persons. The village is split into the two main groups, with the Lao Loum houses immediately adjacent to the main road and the Lao Soung houses a little uphill. This dual composition is a legacy of the leper colony, which was ethnically neutral. This village is thus unique in its ethnic composition. In Laos, in general, it is estimated that between 50% and 60% of the population are non-Lao Loum. Admittedly, the classification of Lao Loum, Lao Soung and Lao Theung (midlanders) is controversial and is used by the political elite to uphold the ideals of unity-in-diversity, but it is still widely used among citizens (Friederichsen and Neef, 2010), including in Ban Somsanouk.

A survey was conducted in July 2013 among 19 Lao Soung, mostly ethnic Hmong, 20 Lao Loum and 1 other (Tai Deng) smallholders and discussions were held with the village chief (Lao Loum) and deputy village chief (Lao Soung). The aim was to create a balance between the two parts of the village. There are about 25 to 30 Lao Loum rubber smallholders, but the number of Lao Soung smallholders is unknown. Neither of the village chiefs had a reliable estimate. Out of 40 smallholders, 9 are female. The survey was carried out with the assistance of an interpreter and the Lao Loum village chief. The latter voluntarily offered to help and did not ask for any compensation for his efforts. He was also interested in the rubber situation in his village. This chief was also able to translate answers from the ethnic Hmong community to the interpreter. Although the presence of the village chief during the survey was potentially sensitive for the smallholders, there was no indication whatsoever of cautious or diplomatic answers, not even regarding government-related matters. The only possible influence is the 100% response rate. None of the villagers declined to be surveyed. Twenty-one smallholders are tapping latex, whereas the other 19 have invested in rubber trees and are waiting for the trees to mature and become productive, usually a period of approximately seven years. The surveys had an average length of 45 minutes and covered the following topics: basic information, land issues, the upstream value chains, information and training, possible cooperation, standard of living, and future prospects. Obviously, the upstream value chain part could not be asked of the 19 smallholders who are not yet tapping latex. The survey contained 41 questions and was a mix of questions with fixed answer categories and semi-structured questions. This study of only one village does not claim to present a comprehensive account of the emerging rubber-based livelihoods in Vientiane Province. Rather, the empirical evidence presented below should be read as a first explorative study of an upstream

rubber value chain and livelihood dynamics in central Laos, suitable for comparison with outcomes of investigations in northern Laos. As such, it provides an in-depth micro-study and contributes to geographically informed analytical and policy debates on rubber smallholdings.

Figure 3: Ban Somsanouk in central Laos



Results

Hinheup is a relatively prosperous district in Laos, mainly due to agricultural opportunities and its location along the main road between Vientiane and Vang Vieng and Luang Prabang further north. Its poverty rate is less than 20% (Epprecht et al., 2008: 28). In their study of two villages south of Ban Somsanouk in the Hinheup district, Thoumthone et al. (2014) find that villagers have been able to improve their livelihoods in the last decade. A relatively diversified agricultural mix, with sugarcane as an emerging cash crop, the availability of agricultural inputs, and non-farm employment opportunities has enabled this improvement. In other words, these outcomes are a good example of growing pluriactivity (Bouahom et al., 2004). The authors even consider the Hinheup district as a potential role model for poverty alleviation and increasing incomes for less prosperous districts in Laos. In contrast to the two villages scrutinised by Thoumthone et al. (2014), rubber is the emerging cash crop in Ban Somsanouk, replacing rice.

Basic information and land

Table 4 summarises the main results. Within the group of respondent who have received tertiary education 3 are teachers and 1 is a medical doctor. These four smallholders, together with four others, consider their agricultural activities as secondary to their main source of income. Among the wives of the 31 male respondents, five have non-farm jobs (three small grocery stores, one factory worker and one nurse); the others are farmers and housewives. Seven out of nine female respondents have a husband, five of which have non-farm jobs. There is only one smallholder with rubber as his only income generating activity, but his wife is a factory worker, so for all households, rubber is not the sole income generating activity. The main reasons for villagers to plant rubber

trees and risk a period of approximately seven years without income from a part of their land are (1) “following other villagers,” (2) “a rubber investment firm suggested it to me” and (3) “shifting cultivation will be prohibited.” Indeed, the 2003 National Poverty Eradication Programme included the aim of completely eradicating the shifting of cultivation by 2010 (Friederichsen and Neef, 2010; Figure 2), but this aim has not yet been completely reached. The Lao Soung community in Ban Somsanouk started to plant rubber trees earlier than the Lao Loum; between 5-10 years ago versus less than 5 years ago, respectively. The reason for this difference is their traditional engagement with shifting cultivation practices. Out of the 21 smallholders who are already tapping and selling latex, 15 smallholders are Lao Soung. Thus, rather counterintuitively, the Lao Soung, who are usually seen as lagging in their adaptation to “modern” economic times, made the transition towards cash crops and “the market” earlier than the Lao Loum. Investment firms are discussed below in the subsection addressing the

Table 4: main results

<i>basic information</i>	
ethnic divide	20 Lao Loum, 19 Hmong (Lao Soung) and 1 Tai Deng
gender	9 female, 31 male
education	8 no formal education, 20 elementary, 8 secondary, 4 tertiary
<i>land use</i>	
years of rubber cultivation	average 5 years
land ownership	38 out 40
land title	26 out of 38
average land holding	2 hectares

basic information

previous crop	rice
intercropping	0 out of 47
reasons for growing rubber	1. following others 2. advice from investment firm 3. prohibition of shifting cultivation
<i>upstream value chain</i>	21 tappers (19 wait for trees to mature)
contract farming	35 out of 40, but not 2+3
main buyers	Lao and Chinese middlemen
next destination	China
follow price trends	local and international
cooperation with buyers	investment firms
cooperation with smallholders	investment firms
<i>standard of living</i>	
sources of capital	own household
main supporters	28: no one, 7: investment firms, 4: others, 1: no answer
indebtedness	6 out of 40
price per kilogram	0.94 US\$
Monthly revenues	Between 0 and 1: 12, between 1 and 2: 5, between 3 and 4: 2, between 4 and 5: 1 and between 5 and 6: 1

Source: July 2013 fieldwork

upstream value chain. The average rubber holding is two hectares. The vast majority own their land. However, 12 smallholders do not have a land title (Table 4). This is a vulnerable situation because it increases the risk of land grabbing and hampers the expansion of assets and the provision of collateral. It could also create intra-village competition and inequality (Fujita and Khamla,

2008). Seventeen smallholders strongly agree with the idea of land as private property, 21 agree and two did not have any idea. Thus, this indicates a clear perception of land as an essential element in the improvement of livelihoods. Not a single smallholder is engaged in intercropping. This is especially unfortunate for those who are still waiting for their rubber trees to mature. Intercropping reduces environmental and socioeconomic risks and contributes to long-term sustainable agroforestry systems (Fox and Castella, 2013). The main reasons are a lack of information and training (see below).

The upstream value chain

As mentioned above, investment firms have contributed to the emergence of rubber smallholdings in Ban Somsanouk, suggesting the presence of 2+3 or 1+4 arrangements. Respondents identified four investment firms: two Lao Soung firms working with the Lao Soung community, one Lao Loum firm and one Chinese firm from the Yunnan province. Among the 40 smallholders, 35 work together with an investment firm. The standard contract provides that 65% of the revenue is for the smallholder and 35% is for the investment firm. This is similar to the situation in northern Laos (Wasana, 2012: 29). Just over 50% of the respondents are already tapping and selling latex. The average yield is 2860 kilogrammes of dried latex per year.

The most remarkable result of the value chain that started in Ban Somsanouk is the cooperative selling process, in which even the two ethnically different parts of the village work together and which is characterised by an absence of the common 2+3 or 1+4 arrangements. In the usual 2+3 arrangements, the investors deal with marketing, but in Ban Somsanouk, there is a bimonthly village-wide latex selling process to the highest bidder. The buyer could be one of the investors, but it is not necessary. The selling price

follows international prices. During the fieldwork, the collection of dried latex by the winning firm was witnessed twice. The first time, the price was 8000 Lao Kip per kilogramme, and two weeks later, it was 7300 Lao Kip. In general, the smallholders follow price fluctuations and are aware that prices are higher in northern Laos and Thailand. For instance, one respondent mentioned a price of 9000 Lao Kip in Luangnamtha. Thirteen respondents are unhappy with the price, seven are happy and one does not have an idea. Most of the produce is sent to Yunnan province in China, but unfortunately, none of the investment firms were willing to be interviewed. Despite the relative proximity to Thailand, there is no Thai corporate presence in the village. Instead, the Chinese are expanding their rubber activities from the northern Lao provinces to the central part. This is a good example of the effect of the GMS corridor: Bangkok-Vientiane-Yunnan. Corridor development has facilitated cross-border investment and trading. Lead firms in the rubber industry, both domestic and Chinese, realise the greater potential benefits from GMS integration and are the main drivers of intensified cross-border interaction.

The investment firms provide information and training. Eighteen smallholders have learned how to cultivate rubber from these firms. Nevertheless, few firms provide capital to the smallholders. Out of the 40 respondents, eighteen use their own capital, twelve use a Lao investment firm and ten use a Chinese firm. This further confirms the absence of a clear village-wide 2+3 arrangement. Although the value chain is buyer-driven, smallholders in Ban Somsanouk are not totally dependent on lead firms, which is a positive situation. On the other hand, not a single smallholder identified a bank or micro-finance agency as a provider of capital. The financing options are thus limited at present, possibly hampering the expansion and intensification of future agricultural and other activities. The answers to the question “Who is

supporting your rubber smallholding activity?” are also revealing. A surprising 28 respondents answered “no one” (Table 4). Neither social capital at the village level, financial agencies, nor governmental agencies are considered to be instrumental to and supportive of promoting rubber smallholdings in Ban Somsanouk.

Standard of living and the future

To what extent are the villagers of Ban Somsanouk benefiting from their emerging rubber smallholding? And what is their perception of this new livelihood strategy? Except for one smallholder among the 21 who already have productive trees and tap and sell latex, all use their smallholdings as a new additional form of income. They do not consider it as a future single income generator, yet expect a growth in revenue and an increase in the share of their income portfolio. The average estimated contribution of rubber smallholdings to overall income is 50%. The range is from 20% (a male smallholder whose main job is teaching) to 100% (a male smallholder with 10 hectares of rubber land (the largest smallholding among the 40 respondents). Out of 21 smallholders, six were not able to give an estimate. These estimates should thus be interpreted with caution. The estimate of monthly rubber revenues (before deduction of required input costs) is more reliable (Table 4). To put this in comparative perspective, the official monthly minimum wage since 1 January 2013 is 626,000 Lao Kip, but many factories are not yet in compliance with this regulation (The Nation, 2013). In Thailand, a young irregular undocumented labour migrant from Laos earns between 1 and 1.5 million Lao Kip per month. Although there are no relatives of the 40 respondents working in Thailand at present, labour migration to Thailand forms an important part of Lao livelihood strategies, with around 7% of the total labour force in Thailand and the closer to the border, the higher the

percentage (Andriesse and Anouxay, 2012). Planting rubber appears to be an adequate component of a livelihood strategy in Ban Somsanouk, but there is room for improvement in terms of socioeconomic security and environmental sustainability.

Table 5: Perception of advantages and disadvantages (frequency)

Advantages		Disadvantages	
<i>smallholders who are already tapping latex (21)</i>			
rubber suitable for my land	7	cultivating rubber trees is hard	7
higher income	6	it requires much start-up capital	4
it improves my family's life	6	storms harm my trees	3
more job opportunities	5	7 years maturity time is too long	2
poverty reduction	3	animals harm my trees	2
<i>smallholders who are not yet tapping latex (19)</i>			
expected higher income	11	animals harm my trees	9
no more shifting cultivation	7	it requires much start-up capital	5
it will improve my family's life	6	cultivating rubber trees is hard	4
poverty reduction	5	no answer	3
more job opportunities	2	people steal trees and fence	2

Source: July 2013 fieldwork

Table 5 summarises the answers to the open question: “What are the three most important advantages and disadvantages of cultivating rubber trees?” Whereas many smallholders could identify two to three advantages, they found it harder to identify three disadvantages, although several disadvantages are clearly worrying them. It is interesting to see the differences and similarities between smallholders who already have productive trees and those who are

waiting for their trees to mature. The most important set of advantages for both groups relates to socioeconomic security: higher (expected) income and an increase in living standards for the respondents' households and the wider community. The difference is that smallholders who are already selling latex mentioned the suitability of rubber trees for their land (fewer fertilisers needed, more lucrative than rice and other crops), whereas smallholders who do not sell latex cannot compare latex yields to other crops, and therefore, did not mention this advantage. Smallholders who are waiting for their trees to mature mentioned the cessation of shifting cultivation as a major advantage. In terms of disadvantages, the maturity period of seven years has a stronger impact on the respondents' answers, as those who are not yet tapping latex find it hard to take care of the young rubber trees, especially due to animals harming the trees. The major similarities are the view that cultivating rubber generally is a hard job and that there is a requirement for a large amount of start-up capital for a smallholding. As mentioned above, there is virtually no one who supports smallholders financially. The advantage of this is that there is little indebtedness (only 6 of the 40 respondents are indebted); the disadvantage is the lack of an opportunity to invest in and expand agricultural activities and to further increase living standards.

To the question "What is your expectation for the future of your rubber smallholding?" 21 respondents expected a bright future (13 of them are already tapping latex), 14 do not have an idea (eight of them are not yet tapping latex), and five responded neither good nor bad. There was no one who explicitly expected difficult times ahead. By far, the most common explanation among those who expected a bright future is the hope for a higher income. Meanwhile, the fluctuation in rubber prices, "I just followed other villagers in planting rubber" and a lack of land to expand rubber holdings were the most common

explanations among the respondents who were less positive. Surprisingly, price fluctuation and, in fact, declining prices at present, were not mentioned in the question regarding disadvantages (Table 5). Less food grown within the village territory also was not mentioned as a disadvantage.

The lack of land and capital to invest in land could become a major obstacle to securing an increase in living standards. One respondent explained: “I am tapping 440 trees. It is not enough to sustain my life. If I have 1000 trees, I will be rich.” This respondent has 2.5 hectares of rubber land and his annual latex yield is 1320 kilogrammes; he mentioned that his monthly revenue from the smallholding was between one and two million Lao Kip. Another villager, with two hectares, an annual yield of 1200 kilogrammes and monthly revenues between zero and one million Lao Kip, said: “Tapping 200 kilogrammes per month would be enough for me.” These two answers suggest that, given the current price level of around 7000 Lao Kip per kilogramme, the current average rubber land holding of two hectares in Ban Somsanouk is adequate to increase income, but is not enough for villagers to become totally dependent on rubber, in particular, as prices are expected to fall (Vientiane Times, 2013; World Bank, 2013). The average size of holdings among the 19 respondents who are not yet tapping is only 1.5 hectare, indicating that rubber should not be considered a cash crop that singlehandedly will solve all rural hardships.

Policy implications and conclusion

This paper has presented an explorative micro-study of emerging rubber smallholdings in Ban Somsanouk, a village in the Hinheup district, central Laos, in contrast to most other studies, which have focused on the northern part of the country. This micro-study is conceptually and empirically linked to the national scale and the international scale, notably, the economic geographical

trends and patterns that are transforming the GMS (Figure 2). A survey among 40 rubber smallholders revealed that Ban Somsanouk is increasingly being inserted into international rubber value chains, focusing on China. The lead firms are three domestic and one Chinese investment firms that stimulate farmers to embark upon the cultivation of rubber trees and that support them in their cultivation. In return, they expect 35% of the revenues. The most remarkable result of this upstream value chain is the village-wide selling process to the highest bidder. Smallholders are not bound to sell dried latex to their investors. This is markedly different from the more common 2+3 arrangement. Although Ban Somsanouk is much closer to Thailand than to China, this study shows that central Laos is more influenced by and connected to China in terms of rubber cultivation. The Chinese firm is not only operating in Ban Somsanouk, but also in other villages, and has set up a collection facility near Vang Vieng. Trade facilitation in the GMS, as well as the strong Chinese demand for rubber, have been the major drivers of the increasing cross-border rubber trade.

Is the transition from growing food and shifting cultivation towards the cultivation of rubber trees, which have a maturation period of around seven years, and then tapping and selling latex leading to an increase in standards of living? The rubber smallholders of Ban Somsanouk generally have a positive attitude towards their new undertaking. Many consider the cultivation of rubber to be instrumental in expanding household income and securing a future for their children. Neither was there a process of semi-proletarianisation in the village as was observed in northern Laos by Wasana (2012: 205-227), nor land grabbing and increasing landlessness which has documented for southern Laos and Cambodia (Keating 2012, Pinkaew 2012, Kenny-Lazar 2012).

Nevertheless, the fieldwork has laid bare several vulnerabilities that hamper the development of a long-term livelihood strategy and agroforestry

system having rubber cultivation as one of the components. First, there is no agricultural value chain governance by any governmental intervention or NGO that can support villagers in dealing with the lead firms and make the value chain more inclusive (Staritz, 2012). No evidence was found of any involvement of the Ministry of Agriculture and Forestry in Ban Somsanouk. The leading investment firms teach and train villagers how to cultivate rubber, but obviously do not inform them of the risks of the absence of formal land titles, the seven-year maturity period during which there is no income from rubber trees, price volatility and the possibility of intercropping. This especially could hurt uneducated smallholders, as well as those having limited education. Several villagers are “just following other villagers” in planting rubber, without seriously considering the socioeconomic risks. Furthermore, some villagers will not succeed in becoming rubber smallholders. For them, support is needed to design alternative farming strategies or to start thinking “out of the rural box, and out of the farming box” (Rigg, 2005: 189). Therefore, it is imperative that foreign direct investment in the rubber industry and other agribusinesses in Laos and Cambodia such as sugarcane should be carefully monitored by the central government, local and foreign NGOs. In this respect the UNCTAD (2013: 175-195) formulated important recommendations on the relationships between value chain promotion, international trade and the overall development strategy: 1) poverty reduction is likelier to happen if value chains are embedded in the overall development strategy 2) the more midstream operations a country hosts the better, 3) social and environmental concerns within value chains should receive greater attention in value chain governance, and 4) trade policies and investment policies should be formulated in a coherent manner. This is obviously easier said than done, especially in a political economy setting in which the elite is insufficiently concerned with the plight of smallholders (Andriessse

2014), but the experience of Vietnam shows that poverty reduction in rural areas can happen quicker than expected.

Second, the absence of intercropping is risky in terms of socioeconomic security and environmental sustainability (Fox and Castella, 2013). Intercropping could reduce rubber yields, but it also could provide higher food security, alternative sources of income in the event of very low rubber prices or the destruction of rubber trees by animals, storms or fungi, and a better preservation of biodiversity. For instance, in a village in Sri Lanka, 90% of rubber smallholders effectively intercrop rubber with cinnamon, and thereby, improve their livelihoods (Nath et al., 2013). Third, villagers face a lack of capital, yet microfinancing is not available. This reduces the likelihood that they will become successful agrarian entrepreneurs. It also increases the risk that, in bad times, the villagers will decide to sell their trees and land to outside investors. Fourth, in the absence of sufficient formal social policy, social capital is of paramount importance in Laos (Rehbein, 2007). Yet most smallholders in Ban Somsanouk specified that no one is helping them. Also, there are no joint efforts to tackle the destruction of young rubber trees by animals and no signs that villagers are pooling labour or borrowing money from other smallholders. Except for the village-wide selling process, their livelihoods appear to be independently structured, possibly due to the origin of Ban Somsanouk as a village for leprosy patients and the current physical split into a Lao Loum section and a Lao Soung section.

In conclusion, once these four issues are addressed, rubber smallholdings situated in relatively well connected areas are expected to contribute to a more substantial and longer term increase in living standards and to be a much more favourable model, compared to large-scale plantations. In their study of livelihood change, Thoumthone et al. (2014) identified the Hinheup district as a potential role model for poverty alleviation in northern

Laos. The evidence presented in this micro-study of Ban Somsanouk cautiously supports this statement, although it should be noted that connecting to markets is much more challenging in remote areas. Integration into the GMS does not a priori benefit only large corporate actors from Thailand, Vietnam and Yunnan Province (Lagerqvist, 2013; Sturgeon, 2013). Greater interdependence between rural livelihoods and trade in international economic trends does not necessarily imply that the exploitation of peasants or labour migration to more prosperous areas is the only coping mechanism. Support for smallholders and the amelioration of negative side effects (Rigg and Chusak, 2009) could turn the GMS project into a success in terms of economic integration and poverty reduction.

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