

A comparison of rubber smallholder livelihoods in Cambodia and Laos*

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Introduction

In the last two decades, both Cambodia and the Lao People's Democratic Republic (hereafter simply referred to as Laos) have tried to reap the benefits from exposure to economic globalisation. Nevertheless, rapid economic growth has not been accompanied with sufficient reductions in poverty levels. The two countries belong to the group of least developed countries (LDCs) and rising income and land inequality is alarming (So 2010; UNDP 2011; Howe and Sims 2011). Worrying is the observation by leading experts on the Greater Mekong Subregion (GMS) that the poor are ill-prepared to make ends meet, let alone improve their livelihoods. Whereas the middle class is clearly expanding in Thailand, Vietnam and China, the middle class and an active civil society is missing in Cambodia and Laos. In addition, the absence of political will to seriously address poverty reduction hampers long term inclusive development (Rehbein 2007;

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Andriessse2014; Kerbo 2011).

While most publications deal with one country, this article offers a comparative perspective of rubber smallholders. Amidst the multifaceted and complex developments in the GMS selling (dried) latex, tapped from the rubber tree, the *Hevea brasiliensis*, is becoming one of the major activities among rural communities in mainland Southeast Asia including Cambodia and Laos (Li and Fox, 2012). However, large scale rubber plantations in Cambodia and Laos have been associated with several negative phenomena: land grabbing, exploitation through contract farming ironically increasing rural poverty, economic and technological dependence on foreign investors and environmental degradation (Laungaramsri 2012 Kenny-Lazar, 2012; Li and Fox 2012; Baird, 2010; Cohen, 2009; Ziegler et al. 2009; Shi, 2008).

Henceforth, there is a need to focus more on smallholders. 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 and become pluriactive villagers (Rigg, 2005; Bouahom et al., 2004), poverty could be substantially reduced and socio-economic and environmental risks mitigated (Fox and Castella, 2013). This article compares rubber smallholder livelihoods in Cambodia and 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 smallholders in Tboung Khmum district in Cambodia and Ban Somsanouk in Laos. 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 by economic geographers and economists and the now substantial academic inquiry on the GMS by a range of social scientists. The empirical focus is on dynamic livelihoods' trajectories and ultimately livelihoods' outcomes; that is employment generation and poverty reduction (Scoones, 2009; De Haan and Zoomers, 2005). The case study strategy is instructive as it sheds light on

- Bottom-up development trajectories in the GMS in which rubber is one of the key industries
- Spatial and socio-economic relationships between the rubber industry and GMS corridor development
- Benefits of smallholdings compared to large scale plantations
- Challenges of smallholders to create long term viable and resilient rubber production
- Cambodia's and Laos's efforts to catch up with Vietnam and Thailand in the spatial institutional setting of the GMS.

The article is organized as follows. The next section introduces the spatial project of the GMS in order to provide the geo-economic context before introducing current relationships between trends in the global rubber industry and rural livelihoods. This is followed by a section on the research methodology before presenting the results of the fieldwork in both areas. The discussion preceding the conclusion connects the results to wider debates of development within the GMS.

The GMS project

Both Cambodia and Laos form part of the now widely known spatial construct of the GMS. The GMS is a 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 (Shrestha and Chongvilaivan, 2013; Rigg and Chusak, 2009). As such, it is the most ambitious geographically targeted scheme within South East Asia. In terms of concrete policies and funding, the ADB has been actively involved in supporting the deregulation of cross border flows and in funding infrastructural projects and GMS corridors. Although the ADB deserves credit, especially for promoting the construction of bridges and roads, several leading scholars on the GMS and international relations in Southeast Asia have pointed out that the predominantly neoliberal rhetoric, which the ADB and its supporters employed until recently, fails to consider three crucial features of national and sub-national political economy phenomena in reality.

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, deregulation and liberalisation, and the provision of infrastructure will automatically trigger employment generation

and, ultimately, improved standards living for the majority of people. In contrast, the political leaders of the GMS countries do frequently not treat their economies as havens of *laissez-faire*, but favour political economic strategies based on the Beijing - Seoul - Tokyo (BeST) Consensus, particularly the Chinese model (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 macro-economic and export successes. Vietnam and Laos are officially Communist countries; Prime Minister Hun Sen has actively guided and steered the Cambodian economy and even Thailand cannot be considered a true market economy.

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: 16) asserts that “the socio-spatial results of GMS development to date indicate that however willingly and aggressively smaller capitalists and traders participate in regionalization, it is in fact the most powerful and geographically mobile capitalists—including some who are Thai—that set the terms of integration while reaping disproportionate benefit”. Thailand, as an established middle-income country, massively supported by the USA during the Cold War, possessing a significant state capacity and in the geographical heart of the GMS, can easily exploit the opportunities arising from greater international integration. 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).

Table 1: Poverty levels

People below the 2 US\$ 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

Third, several authors have observed that the processes of integration have not been inclusive and widened inequality (Shrestha and Chongvilaivan, 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). According to Cornford (2006), road improvements in Savannakhet have, in fact, led to rising socio-economic inequality as relatively well-off urban based Lao Loum people (low-land people speaking the Lao language) know how to take advantage of new opportunities, whereas Lao Soung and Theung people (with a limited command of the Lao language) are prone to exploitation, increasing landlessness, worsening terms of trade for their agricultural produce and internal displacement. Lao Soung and Theung are highlanders and midlanders respectively, but many moved from war-torn areas to lowlands during the Cold War era or were convinced by governmental authorities to relocate and give up shifting cultivation practices in recent decades. Also, in Cambodia ethnic minorities have not yet benefited sufficiently from infrastructural improvements, land reform and other

(GMS) initiatives (Keating 2013, Andriessse and Phommalath, 2012; Padwe 2011Weatherbee, 2010: 239 - 240; Rigg and Chusak 2009).

Fortunately, international organisations are increasingly recognising the challenges 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 political geographical and economic geographical priorities. Upstream dam building in the Mekong River causes protests from Cambodia and Vietnam; there is still a bilateral issue between Thailand and Cambodia concerning the area around the Preah Vihear Temple and for both Thailand and Vietnam "Beijing" is more important than the capitals of Yunnan and Guangxi province (Kunming and Nanning respectively). For instance, China and Vietnam are involved in the South China Sea dispute. It is within this complex macro-context that micro-studies at village level should be scrutinised.

Rubber and livelihoods

The economic geography of rubber

The traditional three big global players in the upstream rubber industry have been Thailand, Indonesia and Malaysia, but in the last decade rubber production in the GMS has grown dramatically Table 2. In fact, together with natural gas, timber, mining, hydropower and garments, natural rubber forms one of the key products associated with economic integration in the GMS (Shrestha and Chongvilaivan 2013). Vietnam is likely to overtake Malaysia soon and Cambodia and Laos have started a process to catch up. Meanwhile, 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 center (Doner 2013). This, together with the relatively high wages in Malaysia and the 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. Singapore obviously does not grow natural rubber, but it re-exports large amounts, mostly from producing to processing countries, for instance from Vietnam to Malaysia.

Table 2: Value of Southeast Asian rubber exports in thousand US \$

	2009	2010	2011	2012
Thailand	4308003	7896026	13176350	8745795
Indonesia	3243980	7329060	11766242	7864528
Malaysia	1267076	2863578	4339680	2545628
Viet Nam	1108678	2089857	2989218	1957514*
Singapore	179102	396358	510728	315207
Myanmar/Burma	?	194936	223203*	195629*
Cambodia	48635	82696	190811	166838
Philippines	25205	55523	79920	61626
Laos	14439*	23723*	37514*	53679*

*: mirror data; sum of value reported by importing countries

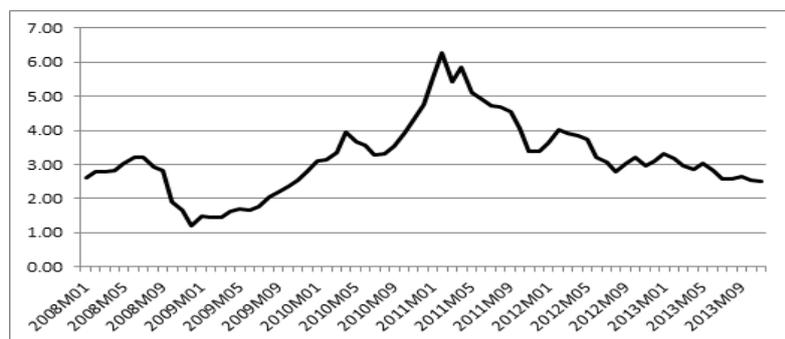
Source: ITC 2014

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 reduce financial economic risks. The price of natural rubber is closely linked to the rubber futures markets of Singapore, Tokyo, and trends at the Qingdao International Rubber Exchange Market in China (Figure 1). Qingdao seaport is the leading logistical centre for Chinese rubber imports and many care tyres 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 BRICSs and other emerging markets (Gereffi, 2013; Kaplinsky et al., 2011; Cattaneo et al., 2010). The 2008 decline in Figure 1 coincides with the financial problems after the collapse of Lehman Brothers; the decline that started in 2011 with a slowing down of China's growth and demand for natural resources as well as an increase in supply of natural rubber. Thus revenues from alternative crops using intercropping would reduce a risk of falling income for many rural livelihoods in Southeast Asia. The World Bank (2013) forecasts a gradual decline of the rubber price between 2015 and 2025. This is potentially worrying for owners of plantations with young, immature trees. In sum, promoting rubber smallholdings coupled with intercropping could guarantee landownership among rural populations, support the natural environment and contribute to meaningful employment as well as poverty reduction.

Figure 1: Rubber future price at Singapore Commodity Exchange in \$/Kg



Source: World Bank 2013

National politicians in Cambodia and Laos have seen the successes of the big three natural rubber producers and are currently keen on taking advantage of rubber demand of China as well as economic geographical opportunities arising from integrating in the GMS. Table 2 shows the rapid increase of rubber Cambodia and Lao exports. In 2012 Lao exports rose even in the face of a weak global rubber market. The precise contribution of the rubber industry for the two economies is difficult to measure given poor data availability on smallholdings, yet the following indicates its current and future significance. First, in 2012 rubber was among the top 10 goods export items of both countries (ITC 2014). Second, in 2020 Cambodia is estimated to have more than 1 million hectares of rubber land; Laos around 300 000 hectares (Cambodia Daily 2013; Vientiane Times 2013). This will likely generate a 300% increase of natural rubber production, but a lower increase in rubber export value given the expected decline in international rubber price. Cambodia's Prime Minister Hun Sen foresees more than 1 million workers in the rubber industry, which would correspond to approximately 14% of the labour force. While his forecast is probably somewhat too optimistic, there is little doubt that the rubber industry will continue to grow in both countries, especially in Cambodia. Unfortunately however, 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 (Andriess 2014, 2013, Keating 2012; Slocumb, 2011; Global Witness 2007).

Rubber smallholders in the GMS

Despite prioritizing 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 land and perform the labour while often foreign investors are responsible for capital, marketing and technology (seedlings, fertilizers, etc). In this arrangement farmers frequently receive 60% to 70% of rubber revenues; the investors the rest and investors have been instrumental in proposing farmers to engage in planting rubber and thus in establishing upstream rubber chains (La-Orngplaew, 2012: 29). A simpler model is the 1+4 arrangement: farmers only provide 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 this as they are reluctant to train owners of land rubber tapping skills. The worst case obviously is investors buying or grabbing land from farmers in order to set up large plantations. Besides these arrangements Fox and Castella (2013) also recognize 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

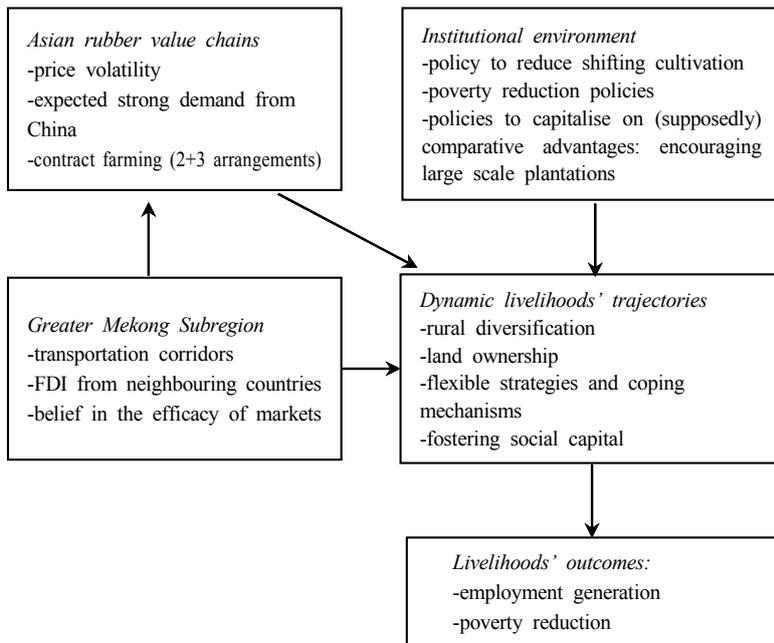
farmers' groups) can negotiate advantageous arrangements that limit the role of investors as credit providers, or even resist companies' offers if they have already secured market access on their own.

As mentioned in the previous section, 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 within the GMS (Lagerqvist, 2013; Sturgeon, 2013). 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).

Much less is written on Cambodian smallholders. Saing (2009) concluded that "overall, Cambodia's rubber export competitiveness remains weaker than in all the countries of the region, except for the Lao People's Democratic Republic". The Cambodian rubber sector should improve in terms of rubber yield per hectare as well as lowering costs of electricity and petroleum for processing and transportation. An important warning for smallholdings can be found in Scheidel et al. (2013):

While the rural labor force is growing at a rapid pace, land availability for the subsistence economy has declined drastically due to the large promotion of land concessions, leaving farmers without land. Consequently, rural-urban migration can be expected to accelerate tremendously, provoking a transition from a self-employed smallholder sector to employment-dependent laborers

Figure 2: analytical framework for investigating emerging rubber smallholders



The AFD (2009), a French development agency, implemented a programme to support Cambodian rubber smallholders and observed that a crucial element in raising living standards is finance, more precisely, access to loans and opportunities to repay them. A lack of land titles makes it even harder to convince (micro) financiers. The

AFD also pursued a strategy of promoting intercropping, but smallholders were disinterested in following the advice. Besides smallholdings another potential alternative to large scale plantations are so-called social land concessions, initiated by the Cambodian government. Nevertheless, Neef et al. (2013) concluded that “social land concessions are not intended primarily as a pro-poor development strategy by a benevolent and paternalistic Cambodian government, but rather as a means to provide reserve land for evicted and dispossessed peasants

In sum, the analysis in this and the previous sections culminates in an analytical framework that can be used for connecting fieldwork in rural areas with 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 raise standards of living. Villagers are active agents, yet their livelihoods trajectories are also shaped by the institutional environment as well as the economic geography of rubber chains. In addition, spatial integration of the GMS has an impact on the (re)configuration of Asian rubber value chains.

Methodology

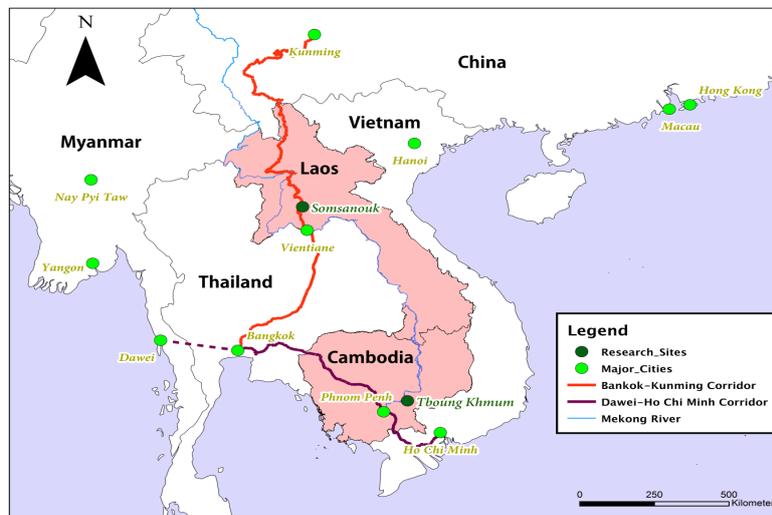
For the selection of research sites the following criteria were kept in mind: location on or nearby a GMS corridor, location with good access to the national capital, the presence of smallholders who are already tapping and selling latex and accessibility of smallholders. In Laos Ban [village] Somsanouk is located in Hinheup district, around

30 kilometres south of VangVieng, a tourist hotspot for backpackers, and 120 kilometres north of Vientiane (Figure 3). Other locations of smallholder activity in 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. The village is split into the two main groups with the Lao Loum (lowlanders) houses immediately adjacent to the main road and the Lao Soung (highlanders) houses a little uphill. In Cambodia the research site comprises of 11 small villages in Tboung Khmum district; approximately 150 kilometers from the national capital Phnom Penh. Furthermore, the district is easily accessible for people travelling on the GMS' southern corridor from Ho Chi Minh City to Bangkok and Dawei in the future. The district is part of a newly formed province in 2013, also called Tboung Khmum. It borders the Mekong river and Kampong Cham province to the west; Vietnam to the east. Doing fieldwork in only one village was impossible due to the small size of the villages.

Two surveys were conducted in July-August 2013; one in Ban Somsanouk and one in Tboung Khmum. A total of 87 rubber smallholders were surveyed; in Ban Somsanouk 19 ethnic Hmong, 20 Lao Loum and 1 other (Tai Deng) smallholders; In Tboung Khmum 47 ethnic Cambodian persons. The surveys in Tboung Khmum were carried out with the assistance of two interpreters and in Ban Somsanouk with one interpreter. The interpreters were bachelor students at the Royal University of Phnom Penh and National University of Laos respectively. In Tboung Khmum only 1 smallholder is not yet tapping latex; in Ban

Somsanouk 19 have invested in rubber trees and are waiting for the trees to mature and become productive; usually a period of approximately seven years (Table 3). They 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 to the 19 Lao and 1 Cambodian 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 towards the end.

Figure 3: The two research sites and relevant economic corridors



Results

Due to the recent formation of Tboung Khmum province, it is

difficult to obtain reliable statistics, but the area is believed to have average patterns of human development; poorer than the more developed rural regions surrounding Phnom Penh, but much better-off than the Northeastern part of the country bordering Laos (UNDP 2011: 173). 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). Table 3 summarises the major results of the empirical inquiry. The discussion below follows the sequencing in this table.

Basic information and land

An important result which is necessary to take into account in the analysis below is the relatively low educational level in both Tboung Khmum and Ban Somsanouk. In both research areas the majority of respondents received little education. In Tboung Khmum only 1 respondent received tertiary education; in Ban Somsanouk 4. Although growing rubber trees has been an older activity in Tboung Khmum not all respondents possess official land titles. This is a vulnerable situation, increases the risks of land grabbing, hampers expanding assets and providing collateral. It could also create intra-village competition and inequality (Fujita and Khamla, 2008). A major difference between the two research sites is the extent of intercropping. Many smallholders in Tboung Khmum continue to grow cassava, especially in the first seven years of growing rubber when latex cannot yet be tapped, whereas the Lao smallholders do

not intercrop rubber with any other crop. This is unfortunate for those who are still waiting for the rubber trees to mature. Intercropping reduces environmental and socioeconomic risks and contributes to long term sustainable agroforestry systems (Nath et al. 2013). The main reasons are a lack of information and training (see below). The question “Why have you started growing rubber?” raised one remarkable similarity and one difference. First, “following other villagers” is an important reason in both research areas. The Lao Soung community in Ban Somsanouk started to plant rubber trees earlier than the Lao Loum; between 5-10 years versus less than 5 years respectively. The reason 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. Second, smallholders in Ban Somsanouk were clearly lured by investment firms, both Lao and Chinese, to started growing rubber. The role of investment firms is further discussed 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 the Lao Soung community, one Lao Loum firm and one Chinese firm from Yunnan province. Among the 40 smallholders 35 work together with an investment firm. The standard contract is that 65% of revenues is for the smallholder; 35% for the

Table 3: The results compared

	Ban Somsanouk (N=40)	Tboung Khmum (N=47)
<i>basic information</i>		
Respondents	ethnic divide	Homogeneous
Gender	9 female, 31 male	23 female, 24 male
Education	20 elementary, 12 higher than elementary 8 no formal education	24 elementary, 17 higher than elementary 6 no formal education
<i>land use</i>		
years of rubber cultivation	average 5 years	average 9 years
land ownership	38 out of 40	47 out of 47
land title	26 out of 38	29 out of 47
average land holding	2 hectares	2.6 hectares
previous crops	rice	Cassava
Intercropping	0 out of 47	30 out of 47
reasons for growing rubber	1 following other villagers 2 advise from an investment firm 3 prohibition of shifting cultivation	1 expected higher income 2 followed other villagers 3 no idea
<i>upstream value chain</i>		
	N=21 (19 do not yet tap latex)	N=46 (1 does not yet tap latex)
contract farming	35 out of 40, but not 2+3 arrangement	0 out of 46
main buyers	Lao and Chinese middlemen/firms	Cambodian middlemen
next destination	China	Mixed
follow price trends	local and international	Local
sources of information	investment firms	friends and community members
cooperation with buyers	investment firms	Middlemen
cooperation with smallholders	little	moderate: sharing knowledge
<i>standard of living</i>		
sources of capital	own household	Mixed
main supporters	28 out of 40: "no one"	29 out of 47: "no one"
Indebtedness	6 out of 40	22 out of 47
price per kilogram	0.94 US\$	1.05 US\$
monthly latex revenues	average 128 US\$	average 123 US\$
monthly official minimum wage	80 US\$ (44 before 2013)	80 US\$ (100 since 1 January 2014)
advantages of planting rubber	(expected) higher income improvement of family's life poverty reduction	higher income wood for fire improvement of family's life
disadvantages of planting rubber	cultivating rubber trees is hard animals harm my trees it requires much start-up capital	cultivating rubber trees is hard Diseases it requires much start-up capital and time
Future	21 bright, 14 no idea, 5, neutral	22 bright, 24 no idea, 1 bleak

Source: Fieldwork July-August 2013

investment firm. This is similar to the situation in northern Laos (La-Orngplew, 2012: 29). Just over 50% of the respondents are already tapping and selling latex. The most remarkable result of value chain starting in Ban Somsanouk is the cooperative selling process in which even the two ethnically different parts of the village work together and the absence of common 2+3 or 1+4 arrangements.

In the usual 2+3 arrangements investors deal with marketing, but in Ban Somsanouk there is a bi-monthly village-wide latex selling process to the highest bidder. The buyer could be one of the investors, but it is not necessary. 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-Kunming (Figure 3).

In contrast, contract farming is completely absent in Tbound Khmum and the upstream value is much simpler and without a collective selling process, but more captive (Cattaneo et al. 2010). Out of 46 respondents 42 sell their liquid and dried latex individually to Cambodian middlemen. None of the respondents have signed any contract with the middlemen, making the selling process very informal. Nevertheless, the middlemen have considerable influence as 20 out of 46 respondents mentioned that the “buyer decides the price” and 24 respondents “we follow the market price”. The negotiating power of smallholders in Tbound Khmum is thus more limited than in Ban Somsanouk. The Cambodian middlemen bring the latex to

firms that transport the produce to other countries, mostly Vietnam, but also Malaysia, China and South Korea. Vietnam usually is an intermediate destination (Saing 2009). Processing takes place there, but the final goods are manufactured in other countries particularly China. This larger mix of destinations confirms the notion of Cambodia as less dependent on the economic geography of the GMS compared to Laos (Andriessse 2013). The absence of contract farming is also clearly reflected in the results pertaining to sources of information and cooperation issues. The community is relatively more important, whereas many smallholders in Ban Somsanouk look to the investment firm for their needs. Finally, local and central governmental authorities are virtual absent in promoting small scale rubber holdings and supporting smallholders. This is consistent with the current political economy trajectory which is focused on trying to middle income status by alliances between the state, domestic large business groups and foreign investors from China, Vietnam and Thailand (Andriessse 2014, 2013).

Standard of living and the future

As mentioned in the section rubber smallholders in the GMS financial issues are essential with respect to the standard of living and socioeconomic sustainability. Table 3 shows that financing options are rather limited with many smallholders fending for themselves. Smallholders in Tboung Khmum have relatively more options and easier access to loans. Consequently, there is also a higher level of indebtedness. In Ban Somsanouk not a single smallholder

identified a bank or micro-finance agency as a provider of capital. The financing options are thus marginal at present, hampering the expansion and intensification of future agricultural and other activities.

To what extent are the villagers benefiting from their emerging rubber smallholding? And what is their perception of this livelihoods strategy? Analysing the monthly latex revenues reveals a worse situation in Tboung Khmum. Although the price per kilogramme is slightly higher in Tboung Khmum the rubber production per hectare is lower than in Ban Somsanouk, possibly due to a lack of advice from experts such as the Lao smallholders receive from investment firms. It is also important to compare the monthly latex revenues to other socioeconomic alternatives. The official minimum wage provides a good indicator since factories base their salary on the minimum wage; often below the minimum wage for the youngest employees occupying the simplest jobs (The Nation, 2013). During the research period, July-August 2013, the situation in both countries was almost the same with a monthly minimum wage of 80 US\$, yet afterwards finding a job in the city has become relatively more attractive in Cambodia after huge protests from garment workers led to an increase in the minimum wage (Al Jazeera 2014 March 3rd). Another important alternative for both Cambodian and Lao people is finding a job in Thailand (see for instance Andriess and Phommalath, 2012). Laos is more dependent on migration and remittances than Cambodia, given its much smaller population. The total number of migrants in 2008, 248,000, corresponded to 3.5% of the total Cambodian labour force, compared to 208,000, around 7%

of the total labour force, in Laos (ADB 2012). The ILO (2010) estimated a total of 300,000 Lao migrants, 200,000 unregistered and 100,000 registered. That would correspond to 10% of the total labour force. Young irregular migrants in Thailand can earn between 5 and 10 US\$ a day; (below the official minimum wage); regular migrants 10 US\$ and more. Given the current downward pressure on rubber prices more rural people in the near future might decide to migrate to cities (most notably the capital cities of Phnom Penh and Vientiane) and to Thailand. An important obstacle for future growth is the small size of the landholdings. Approximately 2 hectares is too little for many smallholders to absorb price fluctuations and paying back debts. One respondent in Ban Somsanouk 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. Henceforth, most smallholders’ family members are currently engaged in other agricultural and non-agricultural activities as well to make ends meet. Intercropping in Tboundg Khmum is not a result of environmental awareness, but an economic necessity. The AFD (2009: 22) wrote that “in Cambodia, rubber planters mostly belong to the category of average-sized or large holdings, where areas planted with perennial crops exceed the areas with annual crops. Over two thirds of rubber planters have a total area of over 3 ha, while over 80% of Cambodian families have less than 2 ha of land.” This indicates that smallholders in Tboundg Khmum, with an average land holding of 2.6 hectares, are worse off compared to the average

Cambodian rubber smallholder.

Table 3 also summarizes the answers to the open question: “What are the three most important advantages and disadvantages of cultivating rubber trees?” Both advantages and disadvantages show a considerable degree of similarity. Regarding advantages socioeconomic considerations prevail. Most smallholders stated that their standards of living improved after planting rubber and in the case of Ban Somsanouk, the respondents who are not yet tapping latex expect a future rise in their standards of living. Regarding disadvantages this group of respondents worry much about animals harming their young trees, but there is no cooperative effort to mitigate this problem. There is a lack of social capital in the village, due to the ethnic divide and the orientation towards investment firms. Once again, access to capital appears to be a pressing issue. The seven years maturity period in which latex cannot yet be tapped, international price volatility and the low educational level of smallholders require the availability of fair micro finance. Local governments could support smallholders by arranging official land titles for each smallholder in order to increase socioeconomic security. Table 3 reports the findings on future expectations. In both research areas the smallholders have, either a positive attitude towards the future or “no idea”. Only 1 smallholder in Tboung Khmum explicitly expects things to deteriorate. Finally the respondents in Tboung Khmum worry about the decreasing prices and 28 out of 47 started about this topic during the last question when they could express additional comments: “We need a higher a rubber price”.

Discussion

An important similarity is the socioeconomic contribution of rubber smallholdings. In both research areas smallholders are, on average, content with their latex tapping activities and argue that growing rubber trees is a good way to increase living standards for their families and community. Nevertheless, the relatively low educational level makes the strategy rather vulnerable. In both places many respondents have just followed other villagers and are insufficiently aware of the risks: economic risks such as price volatility and the importance of land titles as well as environmental risks such as the impact of monotonous land use on the natural environment and plant diseases and fungi. A related similarity is the virtual absence of governmental authorities to support smallholders with these economic and environmental issues. Unlike the case in Thailand (Simien and Penot 2011), smallholders need to fend for themselves. Finance is one of the most pressing issues. Respondents find it hard to obtain access to (micro) finance and this hampers the emergence of socioeconomic security and stability. Whereas economic integration is an international process, protecting vulnerable people against negative side effect remains the responsibility of nation states. This is a key challenge of GMS integration; particularly since the current political economies of several GMS member states are insufficiently oriented towards protecting the vulnerable rural communities (Glassmann 2010).

The clearest differences relate to the upstream value chain, intercropping and social capital. While the Tboung Khmum

smallholders sell latex to middlemen without having signed any contracts, the Ban Somsanouk smallholders sell latex collectively to the highest bidder although the price follows the international price trend. This reconfirms the variety of ways and arrangements through which rural communities are being connected to modern economic phenomena in the GMS. Corridor development has facilitated Chinese/Yunnanese investments in central Laos (Lyttleton 2013: 237), but not by the traditional 2+3 arrangement as can be widely found in northern Laos. Meanwhile, the rubber industry in Cambodia is not directly linked to recent GMS development, but indirectly since much of the Cambodian rubber exported to Vietnam eventually ends up in China. Corridor development in Cambodia in general could see a major growth once the Neak Loeung Bridge is completed. Another remarkable difference is a complete absence of intercropping in Ban Somsanouk. Investors wish to maximize rubber yields and therefore do not advise smallholders to intercrop rubber trees with other species. In Tboung Khmum there is a mix of rubber and cassava; cassava being the old crop that was often grown as well before the conversion to rubber. Finally, smallholders in the Cambodian case work sometimes together and share information, whereas there is little cooperation in the Lao case. For instance, the smallholders who are not yet tapping latex do not work together to prevent the young trees from being harmed by animals. This is rather surprising given the presence of the collective selling process.

In sum, generating meaningful rural employment remains a complex endeavour in the GMS (Figure 2). First, oversupply of natural rubber has had a downward pressure on rubber prices since

2011 (Figure 1). Second, the promotion of monotonous rubber production does not stimulate economic complementarity within the economic geography of the GMS (Shrestha and Chongvilaivan 2013). In these respects smallholdings are favourable because of the possibility of intercropping and income generating activities of other household members. As mentioned above the percentage of smallholdings relative to large scale plantations in Indonesia, Malaysia and Thailand are very high and many smallholders nowadays belong to the middle class. Third, tensions between Vietnam and the traditional big three countries could rise since Vietnam is not a member of the International Rubber Consortium (Reuters 2014). This implies that regulating the rubber industry should be a cause for concern for the Association of Southeast Asian Nations (ASEAN) rather than the International Rubber Consortium or the GMS.

Although these three factors demonstrate the complexity of fostering productive rural employment, a strong focus on manufacturing and services is not automatically the main alternative. For instance, the growth of the garment industry in Cambodia and Laos has not led to inclusive development, but increasing socioeconomic vulnerability, gender imbalances, and recently even urban unrest (Arnold and Shih 2010; Sisaleumsak 2012; Al Jazeera 2014). Several respondents in Tboung Khmum and Ban Somsanouk recognise this and are happy not feeling the pressure to migrate to the city. Agriculture, therefore, is likely to maintain its relevance in the coming decades. The insertion of rural communities into Asian agriculture based value chains offers ways to create inclusive

development (Helmsing and Vellema 2011).

Insights obtained in Tboung Khmum and Ban Somsanouk also reveal the increasing but variegated influence of Chinese flows of capital and investments in the GMS. According to Chheang and Wong (2014) “Cambodia and Laos seem to move closer to China while Vietnam is getting closer to the US. To neutralize Cambodia and Lao, Vietnam has recently doubled its efforts in creating its own networks of influence in Cambodia and Lao. In addition to traditional and political security relations, economic cooperation and integration, cultural exchanges are being accelerated.” Indeed, in Laos Vietnamese rubber investments can be interpreted as a policy to counter the growing influence of China as well as a reaction of part of the Lao elite who is worried about the strong presence of the Chinese and as a result look again at the Vietnamese. The Vietnamese rubber assets in Cambodia have had a longer history. In Cambodia the Chinese influence extends relatively more into dams, oil fields, highways, textiles and mines rather than agri-business (Burgos and Ear 2010).

Conclusion

This study has sought to unravel the ongoing rubber boom in Cambodia and Laos from the perspective of smallholders and their changing livelihoods in the spatial-institutional setting of GMS integration. Their increasing insertion in Asian rubber value chains creates opportunities to benefit from international economic trends. Overall, rubber smallholdings appear to be promising and a much

better alternative to large scale plantations leading to processes of landlessness. The majority of villagers mentioned higher standards of living as one of the major benefits of tapping latex. Yet a number of challenges continue to make rubber a cash crop that will not singlehandedly solve all rural hardships; most notably considerable socio-economic insecurity during the period of approximately seven years in which rubber trees mature and alternative income generating activities sources are a required for resilient rural livelihoods.

Given the expected future decline in rubber prices further research should reveal more precisely the linkages between growing rubber and socioeconomic security. It should be kept in mind, however, that prices could unexpectedly rise, especially in the case of dramatically higher oil prices during geopolitical crises which would decrease the demand for synthetic rubber. For Cambodian smallholders it is also useful to find out the potential impact of a future bridge over the Mekong along the Dawei-Bangkok-Phnom Penh-Ho Chi Minh city corridor. Will it, for instance, facilitate agricultural exports to Vietnam? More policy oriented research is also welcome regarding the diversification of rural communities. The average size of rubber landholdings is rather small and thus there is a sustained need to study other socioeconomic options in order to increase living standards.

Keywords : natural rubber, Asian value chains, poverty reduction, Greater Mekong Subregion

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<국문 초록>

캄보디아와 라오스의 소규모 고무 자작농 생계에 관한 비교 연구

Edo Andriesse
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메콩 경제권(GMS)의 다양한 개발 현장 속에서 고무 나무로부터 채취하는 라텍스는 캄보디아, 라오스를 포함한 인도 차이나 반도 국가들 사이에서 주요 농업 활동으로 주목 받고 있다. 그러나 캄보디아와 라오스의 대형 플랜테이션은 여러 부정적인 결과들을 낳고 있다. 토지 점유, 계약 농업을 통한 착취 등으로 인해 역설적으로 농촌의 빈곤은 증가하고 있고 해외 투자자에 대한 재정적, 기술적 의존이 심화되고 환경 파괴가 일어나고 있다. 이러한 점들로 인해 소규모 자작농들에 주목할 필요가 있다. 고무 자작농은 고용을 창출하며 토지 점유를 방지한다. 본 연구는 캄보디아와 라오스의 소규모 고무 자작농들의 생계를 비교하며 고무 호황으로 어떠한 이득을 얻고 어떠한 형태로 생계를 개선할 수 있는지를 연구한다. 본 연구는 캄보디아의 Tboung Khmum 구역과 Somsanouk 마을의 사례 연구를 바탕으로 하였다. 실증적인 분석은 세 가지의 이론적 틀을 바탕으로 하였다. 미시-생계 연구, 글로벌 가치사슬 그리고 GMS에 대한 연구들이다. 실증 분석의 초점은 생계의 변화상과 결과(고용 창출과 빈곤 탈출)이다. 전체적으로 소규모 고무 자작농은 전망이 밝았으나 앞서

언급된 문제점들로 인해 농촌 문제를 모두 해결할 수 있는 수단은 아니다.

중요한 유사성은 소규모 고무 자작농의 사회경제적 공헌이다. 연구 지역 두 곳에서 자작농들은 고무 농사는 생계를 개선하는 데에 좋은 수단이라고 답하였다. 그럼에도 불구하고 낮은 교육 수준은 그들의 생계 전략을 불안정하게 하고 있다. 양쪽 지역에서 응답자들은 다른 주민을 따라 고무 농사를 시작했다고 대답했으며 경제, 환경적인 위험에 대해 충분히 인지하고 있지 못하였다. 이와 관련한 다른 유사점으로 소규모 자작농들을 지원할 수 있는 정부의 개입이 없었다는 것이다. 자금 조달은 고무 농사의 심각한 애로 사항 중 하나였다. 명확한 차이점으로 Tboundg Khmum의 자작농들은 중개 상인에게 계약 관계를 맺지 않고 라텍스를 판매했으며 Somsanouk의 경우에는 고무 가격이 국제 시장의 영향을 받음에도 가장 높은 가격을 제시하는 상인에게 농민 전체가 같이 판매를 하였다. 이러한 현상은 GMS 내에서 이루어지고 있는 근대적인 경제 현상에 농촌 공동체들이 다양하게 연결되고 있음을 재확인한다. 게다가 Somsanouk 마을에서는 사이짓기를 하는 경우가 없었다. 이는 투자자들이 생산량을 극대화하기 위해 자작농들에게 사이짓기를 장려하지 않았기 때문이다. Tboundg Khmum 마을의 경우 고무와 더불어 고무 이전의 주요 작물이던 카사바를 같이 재배했다. 요약하면, 자작농에 의한 소규모 고무농업은 (비록 농촌의 모든 어려움을 해결할 수는 없지만) 토지 점유 등 부정적 현상이 나타나는 대규모 플랜테이션에 비해 유의미한 일자리를 창출하는 등 미래를 위한 보다 나은 대안이 될 수 있다. 농촌 생활의 질을 개선하기 위해서는 7년 간의 고무 생육기간 동안 농가가 감수해야 하는 사회-경제적 불안정성을 해결하고 대안적 소득원을 마련할 필요가 있다.

주제어: 천연 고무, 아시아 가치 사슬, 빈곤 탈출, 메콩 경제권