Falling Rubber Prices in Northern Laos: Local Responses and Policy Options

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Executive Summary

Rubber prices in northern Laos have fallen significantly over the last few years, eroding much of the enthusiasm developed by both farmers and government officials in the 1990s and early 2000s about rubber providing a way out of poverty for poor upland farmers. The drop in prices paid to Lao rubber growers has been precipitous; from highs around RMB 14/kg of lump rubber (*yang korn*) in 2011, prices *halved, then halved again* by 2014 to a low around RMB 3.5/kg; current prices are only slightly higher.

This study examines responses to this price drop by Lao rubber growers and state institutions. It also examines the reasons that prices are what they are, given that price volatility was identified as a risk during the mid-2000s, and that in at least some cases, steps were taken to prevent contract farmers from falling rubber prices. Drawing on 20 days of fieldwork in mid-2015 in five districts and seven villages of Luang Namtha and Oudomxai provinces, this study is one of the first pieces of research to connect an earlier body of research on the rubber-planting boom of the 2000s with the more recent fall in prices. Its focus is on qualitative changes that have taken – and are currently taking – place in northern Laos; these were captured through 33 key informant interviews with 68 participants at the provincial, district and village levels, as well as a review of available scientific literature, media reports and online sources and consultation with a small group of expert researchers.

Rubber remains an important smallholder crop in the north, and the fall in prices has placed a serious strain on rubber-based livelihoods. This has prompted a range of responses by both rubber growers and state officials alike. Responses by growers include waiting (not tapping) for prices to rise, continuing to tap but relying largely or only on household labor, taking collective action to attract (slightly) higher prices, and transacting their plantations through sales or leases, either to wealthier actors who maintain plantations as rubber or investors who convert to current boom crops like bananas. The widely discussed phenomenon of land conversion to bananas is occurring in multiple districts where we conducted fieldwork, but is probably less common than many people imagine (although the criminalization of conversion to bananas probably selects for under-reporting by both growers and state officials). More important, we argue, is the fact that many rubber plantations are going un-tapped because they have been sold out of the smallholder arrangements under which they began, and are now in “large-holder” production arrangements where prevalent wage labor or share-cropping schemes make tapping economically unviable. In such a context, only smallholders who use household labor have an economic incentive to tap. Smallholders who are continuing to tap would like to see prices in the range of 50–100 above current values, and note the need to recoup their earlier investments even while markets are poor.

Responses by government institutions include forming provincial- and district-level committees on rubber; using these committees to broker rubber sales at prices (slightly) higher than those being offered by rubber-purchasing companies (in some cases using the waiving of companies’ tax requirements as an incentive); and encouraging smallholders to work hard and “stick it out” until prices rise again, both informally and via policies (e.g. a ban on conversion to bananas) aimed at preventing the switch to other land uses. Among the most important response to falling rubber prices by government officials, however, has been a decision to not enforce minimum (“floor”) prices that were, in at least three of the districts that we studied, written into company contracts. This is especially notable given the limited leverage in the brokered rubber sales mentioned above, and it highlights the fact that the extreme exposure to global price swings currently being faced by

Lao rubber growers is, at least in part, the result of a policy decision rather than due to a lack of planning.

With Chinese companies basically dictating prices to Lao growers, falling global demand has brought more localized issues of market power into view. Many of the key informants we spoke to – both rubber growers and state officials – noted the importance of control over rubber imports into China by a limited number of companies (probably just three). The prices that Lao growers receive are substantially lower than what Chinese growers receive – while good data is difficult to get, Lao prices seem to be roughly half what Chinese growers command (although with substantial variation). While some of this difference may be due to quality, monopoly control over the border trade – and in particular access to quota-based import allowances – seems to be the major factor. Growers and government staff in Laos thus note the need to have more discussions with Chinese authorities about opening the border rubber trade, as well as pursue other options for the sale of Lao rubber.

Although rubber was widely imagined as a strategic crop for northern Laos during much of the 2000s, efforts to scale up the successful experience of Ban Hat Nyao did not materialize – in part due to the difficulties of translating the public-sector-based crediting arrangement Ban Hat Nyao received into the private-sector credit model of product-split-based contract farming, and in part due to the drop in rubber prices that has occurred just as large areas of rubber plantations are coming to maturity. (Ban Hat Nyao, in contrast, had its plantations mature just at the beginning of a long price *increase*.) Rubber can still become a strategic smallholder crop in line with the vision of the agriculture sector that is often put forward by Lao ministerial officials, but the consolidation of rubber holdings that has occurred in the last few years must be recognized and possibly addressed. Moreover, if rubber is to become a strategic commodity, it needs to be actively treated as such; this means regulating the market rather than letting rubber behave like a classic "boom crop" (i.e. following globally dictated cycles of boom and bust). Experience in the region suggests the possibility of protecting smallholders from the swings of global markets and the opportunistic behavior of the private sector, for example through regulating prices via a mix of contracting and state-based price supports (see details below), and pursuing a mix of diplomatic and local efforts. Such an approach would need to recognize that current conditions are not simply the result of global market forces, but local factors as well, and address the latter through coordinated institutional and policy efforts.

Such efforts might include: (1) enforcing contracted floor prices where they already exist, requiring reasonable floor prices in new contracts, and investigating legal possibilities for renegotiating existing contracts to include reasonable floor prices and other protections; (2) creating a state price support (subsidy) mechanism that would purchase rubber from farmers at a higher and more stable guaranteed price; (3) providing other (e.g. land-based) subsidies to poorer and/or smaller-scale rubber growers, so as to target state support to growers who need it most; (4) changing government policies to further incentivize value-adding within Laos, so as to take power away from those who control the export market; and (5) undertaking diplomatic efforts to place rubber (both processed and unprocessed) on the list of freely exportable commodities. Current government efforts focus largely on getting farmers to self-organize in order to enhance their collective bargaining power, and using negative policy instruments like bans and moratoria to influence land use decisions. The tools suggested above are based on a more active approach to regulation. This is likely to be more expensive to implement – simply put, regulation costs money – but given the limits to current approaches, they are likely to be more effective at helping farmers in both the short and long term.

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Abbreviations

DAFO	District Agriculture and Forestry Office
DICO	District Industry and Commerce Office
LAK	Lao Kip
PAFO	Provincial Agricultural and Forestry Office
PDPI	Provincial Department of Planning and Investment
PICO	Provincial Industry and Commerce Office
RMB	Chinese Renminbi (Yuan)

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All people interviewed for this study; MAF; Helvetas (add people's names?); [Thoumthone's research assistant]; Weiyi Shi (who generously helped to hunt down and translate hard-to-find data about farmgate rubber prices in China); Dietrich Schmidt-Vogt, Su Yufang, and Yi Zhuangfang from the Kunming Institute of Botany.

1. Introduction

1.1. After the boom

It seems like another era. Ten years ago, passages like the following appeared regularly in Lao newspapers: "Rubber plantations in Luang Namtha province are increasing rapidly, with growers keen to get a share of the lucrative rubber export market. Growing rubber trees is seen as an excellent investment because there is a permanent market for rubber, especially in China, which shares a border with the province" (VT 2005b). This optimism was typical of the mid-2000s, when many in government and the private sector believed that China's demand for rubber would be sustained indefinitely, and that Laos's northern uplands were highly suitable – not just ecologically but also socio-economically – as the next frontier for the expansion of the Chinese rubber sector. Chinese rubber in the Lao uplands, in short, was widely seen during the boom years of the mid-2000s as investment opportunity that was too good to be missed, for both poor farmers and well-off investors alike.

In the last few years, much of this optimism has disappeared as rubber prices have fallen steeply throughout northern Laos (VT 2013, 2014a). The drop has been a big one: from highs around RMB 14/kg in 2009-2011, prices paid to Lao rubber growers *fell by half, and then half again*, to a low last year around RMB 3.5/kg; this year, prices have risen slightly to around RMB 4/kg (details below).[1] The price crash has put a serious strain on rubber-based livelihoods, prompting a range of responses by both growers and government officials alike. These responses, examined below, are consistent with rubber being a classic "boom crop" whose price rises and falls with the unpredictable whims of global markets; this contrasts significantly with the more regulated approach to markets that often accompanies commodities of "strategic" importance, and raises important policy questions. But the price crash has also highlighted an additional factor whose causes are unrelated, yet which has major implications for policy discussions about how to address the fall in rubber prices. This is the consolidation of rubber plantation holdings by wealthier growers and town-based elites, a process that began a few years before the price crash, and that has actually slowed during the price crash. But as elaborated below, the consolidation of plantations – evident in the difference in responses between household-scale and larger plantations – means that rubber is not simply a "smallholder" crop. This has important implications for policy efforts to make rubber the strategic crop, practically speaking, that it is often imagined to be.

Can the negative effects of falling prices be mitigated, and if so, how? Do all growers demand the same protection from the uncertain future of the market, or do "true" smallholders deserve priority over larger growers? Can rubber become the "strategic" crop that was envisioned during the boom decade of the 2000s – alleviating poverty, replacing opium, preserving forest – or is it destined to follow the ups and downs of the global economy? This study provides an important contribution to these and related discussions by describing responses to falling rubber prices by both growers and government officials in northern Laos (see specific research questions in Section 1.3). In doing so, this study helps to connect recent reports about land sales, land conversion (e.g. to bananas), and state efforts to manage the rubber price (VT 2014a–f) with an earlier generation of research on the *establishment* of rubber plantations (Alton et al. 2005; Diana 2006; Shi 2008; Manivong & Cramb

[1] In this study, we use the currencies reported in our interviews whenever possible. Because northern Laos's rubber market is closely linked to China's rubber sector, prices are often reported in Yuan/Renminbi (RMB).

2008; Kenney-Lazar 2009; Thongmanivong et al. 2009; Dwyer 2011). Examining multiple locations, it expands the discussion beyond the usual focus on Luang Namtha, and in doing so allows the range of experiences with both recent responses and earlier plantation establishment to be considered together. As elaborated below, this allows relationship between the *timing* of rubber's maturity and its subsequent behavior in the market to be better understood; this has special importance in the context of efforts, both past and future, to make rubber a more strategic crop through the creation of a more stable price environment.

Our report is organized as follows. The remainder of the Section 1 provides essential background on the rubber landscape in northern Laos (Section 1.2), and then introduces the research questions more precisely (Section 1.3). Section 2 provides additional details about our research methods and approach. Section 3 then presents our results, describing the changes in rubber prices in northern Laos in the last few years, and explaining how rubber producers and government institutions have been responding to the recent price drop. Section 4 discusses these results in terms of XXX key themes: [… list these here …]. Section 5 concludes by summarizing recommendations that emerge in the discussions section.

1.2. Background: trying to scale up the smallholder model

Government efforts to support the development of a rubber sector have been very different in the north of Laos than they have been in central and southern parts of the country. Unlike the south, where a concession-based model has underpinned the establishment and (substantial) growth of the rubber sector (Baird 2010, 2012; Laungaramsri 2012; Kenney-Lazar 2013), northern Laos's rubber sector has been based on a smallholder model. This is not to say that all, or even most, of the rubber that has been planted and cultivated there has been by smallholders; as described below, it has not. But the *ideal* of smallholder production has been instrumental nonetheless in shaping the way that the northern Lao rubber sector has emerged.

As others have noted (e.g. Alton et al. 2005; Shi 2008, 2015) and our interviews confirmed, this ideal is largely modeled on the success of Ban Hat Nyao. Ban Hat Nyao is a Hmong village located just north of the provincial capital of Luang Namtha (see Figure 1) that almost single-handedly put rubber on the map as a priority crop for provincial poverty alleviation and shifting cultivation stabilization efforts. The story of Ban Hat Nyao is widely known, and has become a standard part of the narrative of rubber development in northern Laos. We heard many different versions, but the "Hat Nyao story" is told so often that it has become relatively standardized, focusing on themes of poverty alleviation, opium replacement, shifting cultivation, proximity to China, and most importantly, local initiative:

> Rubber planting began in 1994 in Ban Hat Nyao. Rubber was initially planted to replace opium cultivation. As the Hmong have traditionally cultivated opium for household income, and some of the villagers in Ban Hat Nyao had migrated from China, they noticed that rubber is also cultivated for latex, which similar to opium. Since provincial and district authorities introduced the policy on elimination of opium cultivation and reducing shifting cultivation, people in Ban Hat Nyao discussed among themselves and decided that rubber would be a good potential for growth in this area, as the village is close to China and rubber grows well there. The main aims of rubber plantation are thus to implement the government policies on opium elimination, reducing shifting cultivation and poverty [alleviation].

(Government interview, Luang Namtha)

Ban Hat Nyao's expansion into a policy model was due to its location and its connections. While it was not alone in planting rubber in the mid-1990s – a number of villages in Sing District did this as well (Diana 2006; Shi 2008; Sturgeon 2010) – the village was located in the interior of the province and was close to the provincial capital. It also had an important patron in the person of Mr. Tong Li, who had been vice-governor of Luang Namtha province in the mid-1990s, and who helped the village secure an interest-free loan that helped finance the establishment of the village's rubber plantations (Alton et al. 2005). When the village began to tap their rubber trees in 2003, after a few years its success had become widely known, and it did not take long for provincial authorities to try to replicate the Had Nyao model elsewhere.

Scaling up, with a twist

The success of Ban Hat Nyao, in combination with an early negative experience with the concession model (just south of the Luang Namtha provincial capital, in Ban Sop Duut) helped establish contract farming as the preferred alternative for creating the necessary conditions for rubber development in areas with previous little experience or assets. Although the Ban Hat Nyao story tends to emphasize community cohesion and self-initiative, a key part of the village's success in establishing plantations was its ability to secure a substantial amount of credit at low interest; as Alton et al. note, "All producing households received subsidized loans from the province for the cost of seedlings and some fencing. Each producing household received between 1-3 million Kip in credit" (2005: 51). Scaling up this substantial outlay of credit is not a straightforward process, given the expenses involved, and the decision to embrace contract farming as a model through which to up-scale the smallholder rubber model meant that question of credit was pushed to the foreground.

Most contract farming projects are distinguished on the basis of the percentage split between the company and the grower – this split refers to the percentage of either raw (lump) rubber or, as elaborated below, rubber trees that companies receive in exchange for providing credit up front in the form of rubber seedlings, tools and anything else that is needed to establish a plantation. The substantial fractions allocated to companies – even at the low end, 30 percent of a rubber harvest over *two to three decades* – suggests just how much capital was required (or was at least being debated). During the 2004-2006, just after Ban Hat Nyao's first successful rubber harvest had led to bilateral (Lao-Chinese) discussions about scaling up rubber development cooperation, it is no accident that proposals focused on (and argued about) the value of various inputs into a rubber plantation (labor, seedlings, tools): these were representations of what different "sides" brought to the arrangement, and they in turn shaped the splits that companies offered to contractors (Dwyer 2011). These splits varied, and in at least some locations changed over time as companies tried to entice more farmers to participate.[2]

As Vongkhamhor et al. (2007) noted, the terms on offer by Chinese companies in the mid-2000s failed to attract the number of farmers originally intended. Many farmers were either not interested in going into the rubber business, or if they were, they preferred to organize their own credit for inputs rather than give up such a substantial percentage of their crop in perpetuity. (Companies were generally offering farmers between 50 and 70 percent of the product, meaning that farmers who joined these projects would have been trading 30 to 50 percent of their harvest for inputs.) Shi

[2] Interviews, Luang Namtha and Oudomxai provinces.

found something similar in Luang Namtha, and in doing so documented one of the most important shifts in the plantation establishment process: the change from rubber-based splits to tree-based splits (Shi 2008). One of the main reason that farmers gave for refusing to participate in the new contract farming projects was that they could not afford what scholars call "the long pay" (Mann 1980), in this case the seven-year wait between investment (of labor and capital) and harvest. Rubber companies, sometimes in collaboration with provincial officials (Dwyer 2013), thus made an adjustment: they agreed to pay villagers daily wages for planting and weeding rubber, effectively trading the contract farming relationship for a wage labor arrangement. This extra cost was reflected in the splits on offer: under these new arrangements, companies took at least 50 percent, and in some cases up to 70 percent (Shi 2008; Dwyer 2013). But they also changed the object of value: for reasons that remain unclear, rather than splitting rubber itself (in lump form) at the time of harvest, this shift also brought an agreement to split the plantation itself. Noting the "concession-like" nature of these new rubber projects, Shi (2008) implicitly questioned the extent to which they deserved the label of contract farming, since in large part they did not involve companies working with *farmers on their own land*, but rather the transformation of farmers' land into (mostly) larger plantations.

This was conducted via a policy language that, while perhaps not deliberately, hid the fundamental shift from rubber division to land (tree) division. The "2 plus 3" policy model was developed in late 2005 as a way to formalize the agreement between Luang Namtha, Oudomxai and Bokeo provinces to pursue rubber development cooperation with Chinese companies outside of a concession model (Vongkhamhor 2007). The phrase referred to five factors of production, of which farmers would provide two (land and labor) and companies three (capital, inputs and guaranteed access to markets); "2 plus 3" was thus essentially a classic contract farming model (Little and Watts 1994). When the adjustment above took place – roughly 2006-2008 by different companies in Luang Namtha and Oudomxai – the "2 plus 3" terminology was changed to "1 plus 4" (Shi 2008). This acknowledged the fact that farmers were no longer providing the labor input, since they were being paid wages. What it hid, however, was that the one thing they were "providing" – land – was being provided in a very different way.

Consolidation of plantations

Under the "1 plus 4" model, villagers were supposed to receive a fraction of the plantation holdings, usually around 30 percent, and usually a year or two after planting, when it would be clear that the trees had survived the first few growing seasons (when frost risk is highest), but when their care still demands a few years of work prior to maturity (Shi 2008, Dwyer 2011). Few researchers have studied what actually happened after the fact – most of the research on "1 plus 4" took place before plantations were actually divided (e.g. Shi 2008; Dwyer 2011). In her recent revisit, Weiyi Shi became one of the first researchers to report on what actually transpired; she found that the partitions tended to be short-lived: "After the split, it is common for villagers to sell their shares of trees … [this often] occurred *soon after the split* due to villagers not being able to care for their shares of trees. Labor input was one of the biggest problems in 2008, and the shortage is even more obvious today" (2015: 1-2, emphasis added). Our research confirmed this finding for Luang Namtha (bullet 1 below), expanded it to Oudomxai (bullets 2 and 3), and confirmed Shi's point that much of the consolidation seems to have occurred prior to the price crash (bullet 3):

- "[In Luang Namtha] we have contract farming for rubber plantations, which include "2 plus 3" and "1 plus 4" schemes. However, many households and investment companies turn the

"2 plus 3" schemes into "1 plus 4" because local people cannot afford to maintain their rubber plantations, and they often ask the rubber investor to pay the labor cost when they work on their rubber plantation." (Government interview, Luang Namtha [Interview 3])

- "Selling rubber plantation is normal in [Oudomxai] province – it depends on having buyers. The growers [who sell] are mainly poor households in villages. Buyers are mainly businessmen from the province [capital] as well as Chinese investors. Prices of rubber plantation depend on the location and age of rubber trees in the plantation. However, during the falling rubber prices, no one wants to buy rubber plantation." (Government interview, Oudomxai [Interview 14])
- "Some households sell rubber plantation, even the contract farming (change owner or contractor to join the company). There is no fixed price of rubber plantation, it depends negotiation between seller and buyer; which is about 300.000 kip/tree (again, it depends on location and age of rubber plantation). in one local close to the district city, the age of plantation is 8 years, people offer 1.000.000 kip/tree, but owner does not want to sell. Local people sell to local people when they have necessity to use money i.e. to pay for loan or credit taken from bank." (Government interview, Oudomxai [Interview 18])

The model that didn't scale – yet

Today's landscape of rubber holdings is highly uneven. Yes, there are still a lot of smallholders, but increasingly rubber is owned by larger growers as well. (This is difficult to quantify, but some proxy indicators and estimates are presented in Part 3.) Partly this is a result of how the up-scaling effort described above played out, as efforts to replicate the Hat Nyao model with using contract farming devolved into a mix of "concession-like" company holdings and (later) economically unstable village plantations. But there is also another dimension that is often left out of the standard story of what *worked* for Ban Hat Nyao. This missing piece is the (relatively) stable price environment that Ban Hat Nyao had during its key early years; understanding this issue of *timing* is essential if rubber is to become a widespread smallholder crop in the future.

Put simply, Ban Hat Nyao got lucky. Rubber prices were low when the village began tapping in 2003, but they were at the beginning of a long and steady rise that lasted until the global financial crisis of 2008 (see details in Section 3). During this period, there were certainly ups and downs – as one resident put it in our interview, "prices go up and down all the time" – but the larger trend was upward. The community cohesion, hard work tracking down buyers (sometimes even in China), and collective bargaining power that are often emphasized in the Hat Nyao success story are no doubt important as well. But the timing of its early years, when households committed to rubber in large ways and got to know the rhythms of the crop (both biologically and economically), is also a key piece of its success. In contrast, many of the rubber plantations in Luang Namtha and especially Oudomxai have come into maturity just as the rubber price has crashed. As elaborated in the next section, this cannot but have had an impact on the way new growers have responded to falling prices.

Despite the economic uncertainty, government officials continue to consider rubber to be a way out of poverty for industrious upland communities. As one local official we interviewed put it, "Rubber is [still] the first commercial crop considered for socio-economic development in [our] district. The main reasons for encouraging local people to establish rubber plantation are to replace rubber into

to former opium cultivation area, reduce shifting cultivation and encourage local people to practice permanent agriculture, and to reduce rural people's poverty." As another local official put it, "It does not matter if you are rich or poor; whoever has rubber plantations and patience in working them will get income."[3]

In statements like these, one hears strong echoes of the Ban Hat Nyao model – opium replacement, the shifting cultivation stabilization, the poverty alleviation, the focus on hard work and self-initiative as a path to a better life. But as explained above, the reality is far more complex. The Hat Nyao model has not scaled up, and instead the economic landscape of rubber holders is a heterogeneous and hard-to-quantify mix of smallholders and what might be called "larger-holders." The fact that price drop of the last few years has occurred in this context, rather than the more simplified landscape of smallholders often imagined, makes the responses more complex (as elaborated in section 3) and the policy questions harder (as discussed in section 4). In such a context, the question of local responses and policy options can be posed more specifically.

1.3. Research questions

This background leads us to add some important details to the research questions considered below:

1. We need to ask not only what are the responses to falling rubber prices, but what is the relationship between various responses (by both growers and officials) and the range of production arrangements that make the northern Lao rubber sector more complicated than merely a landscape of smallholders.
2. We need to ask what the implications are of the answers to the first question for making rubber a strategic crop for smallholders? (Quote/cite Dr. Parisak/MAF on agricultural sector as strategic: historically and politically important, and necessary for balancing out growth in other sectors in order to avoid the problems of the dual economy.)
3. And third, in order to understand the full scope of the second question, we need to understand where the prices that Lao rubber growers receive actually come from. It is now a common-sense response to say that they come from the market, and in particular that current low prices come as a result of the slowdown of global demand. But even as we heard this over and over, we also heard frustrations with this, since it is essentially a black box.

Section 3 thus examines not just the responses to falling rubber prices by growers, taking into account the increasingly important distinction between household and outside labor, as well as the responses by local officials to falling prices. It also examines where prices come from, and in doing so helps to highlight a wider range of policy options than the ones currently being pursued. These are discussed further in Section 4.

[3] Interviews 4 and 3, respectively.

2. Methodology

2.1. Approach

In order to make the best use of the resources available, we opted for a research design that would allow us to visit areas that have been discussed in recent media articles and the limited research that has been done on responses to falling prices (Vientiane Times 2015a–f; Shi 2015), but that would also allow us to look explicitly at a range of circumstances both close to and far from the Chinese border, and across a range of years of plantation establishment. We selected seven villages in five districts of Luang Namtha and Oudomxai to focus our fieldwork on (see Figure 1 and Annex I). We chose Luang Namtha and Oudomxai to cover earlier and later plantation establishment, respectively, and chose districts that (a) covered the spectrum from close to the Chinese border to far away from it; (b) that were either close to provincial capitals (Namtha, Xai) or farther afield (Sing, Vieng Phou Kha, Houn); and (c) that included a range of growing arrangements, including independent smallholding and formal contract farming.

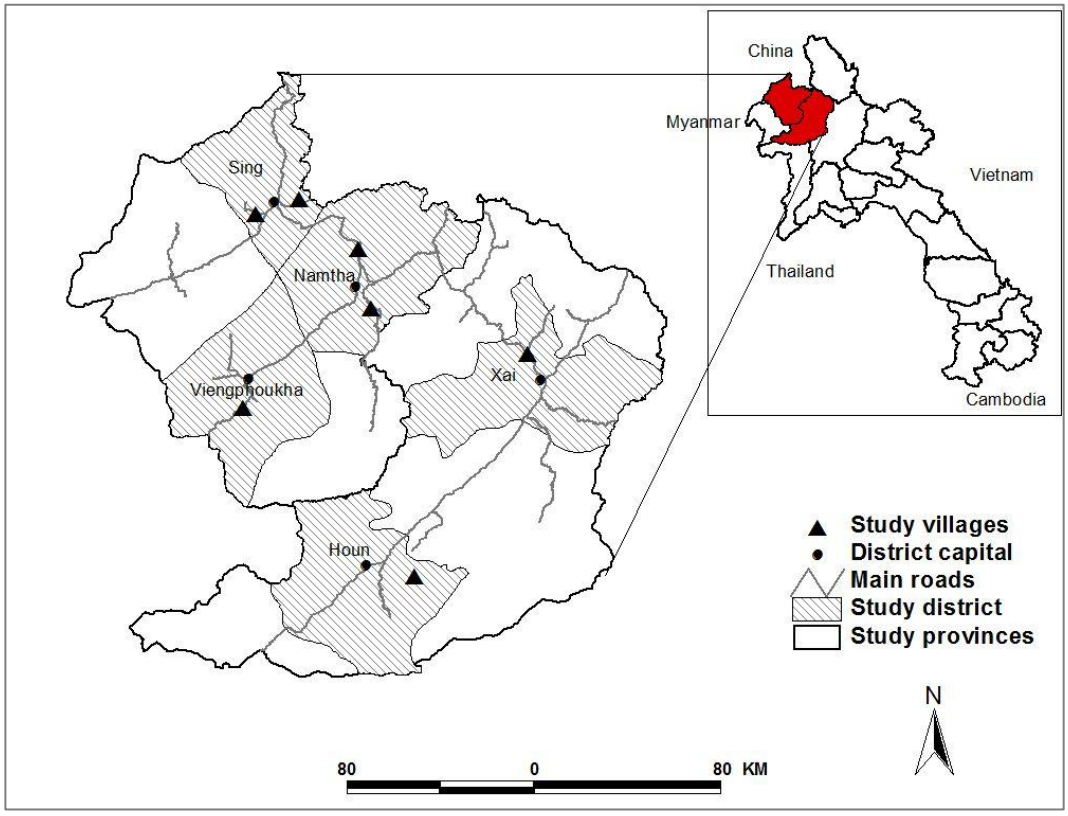

Figure 1. Study villages

Within the districts that we chose, we used a combination of prior research experience in the area (Thongmanivong et al. 2009; Dwyer 2011) and key informant interviews with government staff to select sites for our village-level research. We chose two villages in the districts closest to the Chinese border (Sing and Namtha) on the basis of their experience with rubber and to reflect a geographic balance (one village close to the border, the other farther away). In the other three districts (Xai, Houn and Vieng Phou Kha), we were only able to visit one village per district.

Our research design explicitly chose to privilege *breadth over depth*; we felt this was important, since the research topic was relatively new. This approach allowed us to hear about a range of responses and growing arrangements, but it precluded detailed surveys. Our results are thus largely qualitative, although they point to important possibilities for future, more targeted and quantitative research.

2.2. Methods (Mike will edit and add to this section still)

Literature review

Literature reviews for this study include official document, grey literature and media from domestic journalism papers. Official documents include rubber investment agreement, announcement on rubber prices, orders of the provincial and district governors, annual reports on agriculture and forestry, etc. Grey literatures include unofficial reports on land use and rubber production. Related new from domestic newspapers such as Vientiane time and others. Some documents were found from the LaoFeb, while other were collected from concerned stakeholders during the field study. The research team searched for related documents from the interviewed institutions at the provincial and district levels and asked permission to copy those document for reviewing.

Interviews

Since time for field study is limited, we spent 20 days in the fields, we could not collect information on responses on rubber trade from individual stakeholders and households within the study area. Information in this report mainly collected by discussion with representatives of the concerned offices at both provincial and district levels, representatives of visited villages and as well as representatives of private sector or companies. In total, we conducted 33 interviews with 68 participants; of which, 8 provincial offices, 15 district offices, 7 villages and 3 private companies (see Annex II for details). The representatives of the concerned offices at the province and district levels mostly are the head and/or deputy head of the offices as well as technical staffs who are working related to the issues of rubber production and rubber trade in the province and district. Also, the representatives of villages are chiefs and/or deputy chiefs and some rubber growers in the villages. We used the same set of the questions (see Annex III) for interviewing all stakeholders; this is in order to understand whether different stakeholders response to the same questions differently.

The interviewed stakeholders were selected based on their working issues with regards to rubber production and rubber traders. The main offices working on this are the agriculture and forestry offices and industry and commerce offices at the provincial and district levels; other interviewed offices were recommended by representatives these offices.

Data analysis

- Reconstruct history of events in light of what we know about the rubber price, both its value and the reasons for its value (mix of market and state/regulatory factors)
- Compare locations by looking at baseline rubber conditions, price history, description of grower and state responses
- Pull prices references – historical and normative – out of interviews
- Pull explanations for price changes

2.3. Challenges (Mike will edit and add to this section still)

In general, the field work for this research had good processed and the research team was able to interview almost all concerned stakeholders at all levels. Concerned authorities at both provincial and district levels provided good cooperation and facilitation during the field study. However, there are some concerned stakeholders at the district levels were busy during the field study and the team could not be able conduct the interview; these include the planning and investment offices in both Viengphoukha and Namtha districts.

In fact, we plan to visit Mom or Lo Mue village in Sing district as the villages are close to Chinese border and having a good relationship with network in China for agricultural investment (include rubber plantation). However, we could not access to the village as plan due to flooded during the field study. Thus, district authorities (DAFO and District Industry and Commerce Office) recommended to visit Phiyer instead.

Private sector would be able to explain what strategies should private sector use for dealing with current low prices of rubber products. However, since time for field study is short, we could not be able dig for detail information from private sectors. The data we received from visited companies are overall information which we discussed with representatives of the companies, but we could not discuss with the directors or deputy directors of the companies who would be able to explain us the strategies they are planning to deal with the low prices of rubber products. Since the directors or deputy directors of the companies are busy, time flexibility during the field study is important to allow the team to catch up with them.

Data: According to one DAFO (LNT-NT), "We do have statistic of rubber plantation in our district, but I have to ask our technical staff, who already left the office as today is Friday, please called me again next week. [when I called him, he often mentioned that he already ask his technical staff to collect statistic for us, but the staff is not appearing in the office. He asked me to search in his office on Thursday, but nobody was there in the afternoon. Thus, I give-up]"

3. Results

> *Rubber was selected as a permanent agricultural production crop for the district. The idea was to reduce local poverty and shifting cultivation. However, we did not analyze what the risks are for selling the product.*
>
> (Government interview, Oudomxai [Interview 19])

In hindsight, it is perhaps tempting to blame the current situation on a lack of foresight. Statements like the above are common. As another government worker we spoke to put it, "We went on a study tour in China and saw that people there gain a lot income from rubber plantations, so we thought that local people will gain income from rubber and [thereby] reduce shifting cultivation and local poverty. I think we follow the fashion of the investor, but we forgot to think about the market and

prices in the future."[4] These sentiments are common today, and echo warnings that were made back in the mid-2000s. Back in 2006, for instance, at the height of the rubber-planting boom, a workshop at NAFRI highlighted price volatility at the beginning of its "summary of lessons learned":

> There is a growing demand and market for natural rubber for the next ten years. However, rubber has "boom & bust" cycles, and farmers need to have coping mechanisms to deal with the inevitable price crashes. Government support is vital to support farmers during periods of rubber price declines. (NAFRI 2006: 1)

Similarly, in their follow-up to Shi's (2008) report *Rubber boom in Luang Namtha: a transnational perspective*, Hicks and co-authors (including Shi) described the price of natural rubber as "volatile and highly dependent on conditions in the global economy," and noted the potential for "rapid and significant reductions" in rubber prices to negatively impact producers' livelihoods, especially when production regimes were tightly linked to rubber exports (Hicks et al. 2009: 22). At the time they were writing, the global financial crisis was underway, and potential implications for rubber growers were an issue of growing concern. It is therefore tempting to ask the question: didn't anyone see this coming?

Our results suggest a surprising answer to this question. As elaborated below, it is not the case that no protections were taken, and that current responses to falling prices are efforts to cope with the lack of planning. Rather, *some* protections *were* in fact taken in order to protect smallholders from the risk of falling prices, but where they exist – and they are not as widespread as they might have been – these have been systematically unenforced. Moreover, and perhaps even more important in the context of future policy options, current rubber prices are not simply due to global economic conditions. As elaborated below, the prices that Lao rubber growers receive are due to a mix of global and local factors, and depend in multiple ways on public- and private-sector decisions in both China and Laos. Just as it would be wrong to think that price risk was not anticipated and planned for, to say that current prices are due simply to falling global demand misses essential pieces of the story.

This Results section attempts to tell this story more completely as a way to contribute to current policy discussions. Sections 3.1 and 3.2 first discuss responses by government institutions and rubber growers, respectively, to falling rubber prices. Sections 3.3 and 3.4 then turn to prices in more detail, looking at where rubber prices in northern Laos actually come from (Section 3.3), and what our key informants said about what rubber prices *ought* to be, and why.

3.1. State Responses

Summary of this section: State responses are concerned with addressing the fall in rubber prices, but the responses that have been pursued have very limited leverage over companies. Moreover, the one place where there *was* some leverage over rubber prices – contractually specified floor prices – has, in the areas we studied, not been enforced due to the belief that companies cannot afford it. Taken together, this means that the dependency of Lao rubber prices on the global market is at least partially the result of policy decisions, not simply market forces.

[4] Government interview, Oudomxai (Interview 16)

Formation of Provincial Rubber Committee in LNT …

Explain this…

Brokering sales

- Ban Hat Nyao March 2007, 70 tons accumulated since previous year sold at 5 Y/ton
- Province-wide, Nov. 2014: sale price raised from 3.5 to 4 Y/kg, although 5 was requested and announced in the Vientiane Times as a "solution to low rubber price".
    - Quote from VPK DICO: "Because there is no lowest prices set for rubber product in our district as well as in Luang Namtha Province, rubber traders can reduce prices of rubber in our district and province as much as they can. However, since rubber prices were highly dropped in 2014, the provincial authorities (provincial rubber trade management committee led by provincial industry and commerce) held provincial workshop to discuss on rubber prices. At this workshop, the authorities agreed with the Yunnan, Tai Chian, and Yunmong Xing Xing companies to buy rubber product in Luang Namtha Province at 4 Yuan/kg, when the provincial authorities do not collect profit tax from such rubber processing factories. However, 4 yuan/kg had set for 70 kg of rubber lump stocked in 2014. When they bought all these stocked rubber product, the prices of rubber decreased again."
- Vieng Phou Kha not successful (this is recent, after the 2014 negotiation): "We discussed with local people in many villages, they told us that rubber prices lower than 4 Yuan/kg is not profitable for local people. Local people would like to get at least 5.3 Yuan/kg. However, we proposed this price to Yunmong Xing Xing company and now the company still is taking this proposal for consideration. However, whether the company will be able to raise rubber prices to 5.3 Yuan/kg for local people in the district is also depending on prices of rubber product in the world and in China." (VPK DAFO)

Easing the tax burden on rubber buyers

Key story: LNT – After the formation of the Provincial Rubber Committee, this sub-section will tell the story of getting the three companies to raise prices in exchange for dropping the profit tax.

In 2014, the Provincial Industry and Commerce Office requested Yunnan and Tai Chia factories to buy rubber product from local people at lowest prices of 4 Yuan/kg. These prices requested for stocked rubber (about 60 tons) from 2013.

This happened in 2014. It's important to note that this was the deal reported in the Vientiane Times story that announced that an "answer to [northern Laos's] low rubber price [had been] found" (VT 2014e). This story announced that rubber trading companies had agreed to "purchase the rubber tapped in November this year at around 6,600 kip per kg (5 Yuan) up from the previous 4,100 kip (3.2 Yuan) per kg, according to the provincial Commerce and Industry Department." In fact, the purchase price ended up a full RMB 1 lower than announced, at least as reported in our interviews.

Not enforcing contracted floor price

This is one of the most important findings of the report. Often, we heard that minimum (floor) prices had not been specified, but in all three instances where they were, they were not being enforced.

Vieng Phou Kha case: In VPK, a floor price was in the contract but was not enforced because the company pleaded poverty (said they could not afford to pay). From Thoumthone:

- General notes: "The district authorities made contract with Yunmong Xinxing company about discussed prices, but the company would prefer to market price and raise a bit higher than market price in order to help local people to get income for poverty reduction."
- DAFO interview:
- Email: "They said, there is contract, but the company could not effort pay based on the contract. However, I asked if any fine, answer is no fine because everyone knows that prices of rubber are low, it does not meant that the company cheat people. I also asked for the contract (if any copy), they tried to look for it, but could not found. They meant here, even they have contract rubber prices still based on market prices. It is not different whether or not having contract."

Same thing in Xai District:

> "The gate price of one company set for 5.000k/kg, if the prices of the market increase, then the company will buyer higher price than 5.000k/kg based on market prices (Sino-Laos). I remembers that we do have this contract, but it should be kept at the district planning and investment office or district industry and commerce office. However, I do not understand why 5.000 kip/kg is set as lower price for rubber, it would be because they company foresee that the lowest prices of rubber in Laos should not be worst (lower than 5.000 kip/kg). However, this set prices have not been enforced because the prices in oudomxai province sometime lower than 5.000 kip/kg. I would like to say that rubber prices in our province and district are based on what buyer offers. We used to discuss with the companies to raise prices, but companies often prefer to based on market prices. Thus, the companies could not raise rubber prices for our smallholders." (Xai DAFO)

Same thing Houn District:

> "We have contract at least 5.000 kip/kg … There is no gate prices for rubber in our district. We used to discussed about floor price at 5.000 k/kg, but the company cannot pay on this prices due to rubber market prices in China. Please ask this contract from the Planning and investment office. We do not know the prices of rubber in China and buyers do not tell us how much they sell in China. We used to talk to the provincial industry and commerce office, but the office at the provincial level does not have prices information for us. The floor prices set in the contract is 5.000 k/kg, but the company still pay lesser than floor prices. The company is not payment based on the contract. We proposed this the provincial level many time, but we did not receive any responses from the provincial level. At the district, we also proposed the district meeting, but again no responses from the district authorities." (Houn DICO)

One reason for non-enforcement of floor prices may be that Planning officials do not know about them: "In the investment contract, we did not set the floor prices. The prices will be based on market prices. The investment contract had been signed on the former district governor." (Houn DPIO)

Banning land conversion

Discuss, give examples (need to dig out of interviews)

Continuing to support rubber

Oudomxai: As in LNT, provincial staff see rubber as a good livelihood, despite the price crash: "Although rubber prices are falling at 5.000 – 6.000 kip/kg is Ok for local people to tap rubber, they gain from rubber plantation [more] than other agricultural activities." (OUD PAFO)

Official enthusiasm: "It is not matter rich or poor; whoever have rubber plantation and patient in working in their rubber plantation will get income." (LNT-NT DAFO)

Information sharing and coordination

Xai DICO: ""Falling rubber prices start during late 2013 – 2014 based on market in China and informed by Chinese investor. There are two information systems: (1) Based on factory here at the district (Chinese factory) and information from Chinese border; and (2) Based on information from Luang Namtha. However, these information sources cannot indicate whether the traders is cheating local people. We should have official sources of information about the prices of rubber."

3.2. Rubber Growers' Responses

[Introduce this section by noting, first, that the government responses were not able to do very much, at least so far, about low prices, and that the actions discussed in this section are essentially responses to a relatively unregulated boom crop going bust. Then note that this boom crop pattern actually began prior to the price crash with the consolidation of rubber holdings discussed in Section 1.2; the essential difference between the first two responses discussed below highlights the effects of this earlier consolidation. Responses here are presented roughly in order of magnitude (based on our qualitative results).

Response 1: Waiting

This is widely reported to be the most common. Fraction of rubber growers with mature trees who are not tapping due to low prices, as estimated by key informants. The situation seems to be substantially different in Luang Namtha and Oudomxai.

- About 50% of growers whose rubber can be tapped have been tapping their rubber trees through the low prices of 2014-2015 (Namtha DAFO).
- "There are about 30% of <u>total</u> rubber growers in this district have stopped tapping their rubber since middle of 2014 due to low rubber prices. This is because they find very difficult to find rubber tappers, even the owner of rubber plantation supposed to provide 50% of income from rubber to tapper, but nobody wants to tap because they prefer other kinds of work are more profitable compared to tapping rubber." (DICO)
- Oudomxai: "During the falling rubber prices, there are about 90% of growers do not tap their rubber because it is difficult to find tappers during the low prices of rubber plantation. For those who do not tap their rubber are businessman and government staff." (OUD PAFO)
- Houn:

    - "There are about 70% of growers stopped tapping their rubber during the low prices (4.000 k/kg)." (Houn DICO)
    - "Rubber has not been really contributed to improve local people's livelihoods, because we just started tapping. We started tapping rubber in 2013, it is still new for our district and about 70% of growers did not tap their rubber in 2014 due to low prices of rubber." (***This quote shows the timing issue nicely: efforts to scale up the Hat Nyao model coincided with the price crash***.) (Houn DICO)
    - "During the low rubber prices, there are about 70% of total growers do not tap their rubber and about 30% continue tapping their rubber tree and sell based on the prices offered by the company and individual buyers." (Houn DPIO)
- Oudomxai: Our research identified two converging processes here: on the one hand, there has been significant consolidation of rubber holdings in the years prior to the price crash which has left elites in control of much of the rubber; on the other hand, where rubber has stayed in the hands of poorer farmers, they have been reluctant to sink much effort into it, due to the temporal overlap between the price crash and the maturing of their trees. According to OUD PAFO, "There is no tangible case if local people receive income from rubber plantation for improvement their livelihoods. At the present only businessman and government staff working in the city and having rubber plantation in rural areas. Rubber belong to local people have not yet widely tapped. … Tapping began in 2012, [but] The most difficulty in rubber plantation is local people do not want to learn how to tap rubber and they do not know how to tap it. … It is not easy to change the notion of local people from subsistence agriculture to commercial agriculture, but local people still like doing shifting cultivation as their traditional practice.
- Oudomxai, Houn, Mokpalai: Out of 20 households with rubber to tap, "there are only two households continue tapping, the rest are not tapping because the low rubber prices and no labor for tapping. Because we divide the benefit for 50% each between tapper and owner of rubber plantation, but no one want to tap rubber. However, if the owner of plantation pay for meals (three meals per day), the tapper get 40% of the total benefits from rubber."
- Anonymous government official (example of large rubber holdings – should we be talking about largeholders as well as smallholders?!): "My father-in-law also established rubber plantation for about 30 ha in Baeng district, the rubber is ready for tapping (8-9 years), but we have lack of tappers. What I informed my father-in-law is that rubber prices is temporarily dropped, it will increase in next few years. The prices dropped because traders would like to gain more profits from rubber."
- Oudomxai, Xai, Ko Noi village: example of how the Ban Hat Nyao model (same rhetoric) has not panned out due to price crash: "In the beginning, [the] Sino-Lao [company] came to consult with the province and district level and announced that if local people cultivate rubber, local people will be able graduate from poverty. Local people just follow the advised from the government staff at the province and district. In the beginning (2004 – 2005) planted as testing plantation (pilot) in Ko Noi 100 ha. It is common land of the village. Land was still available in the village, the provincial and district staff advised that this pilot plantation will allow local people to learn how to plant and manage plantation. But we have not learned anything from that pilot plantation. To establish rubber plantation is to replace opium production and to reduce upland shifting cultivation. So that rubber plantation had been replace to upland rice cultivation areas … to reduce local poverty from rubber

plantation. … We knew the prices of rubber dropped in June 2014, then the factory do not buy rubber and local people do not tap their rubber because low rubber prices." (Ko Noi village interview)

INSERT FIGURE HERE (pair with ANNEX?)

Figure 2. Statements about the relationship between rubber price and livelihood

Waiting for prices to rise is widely seen as the only alternative:

- "Buyers often mention that they would like to buy high prices from local people, but it is because the world market prices of rubber is dropped, we cannot buy rubber than world market prices. I think the only way in dealing with rubber prices is to assist local people to process their rubber, which local people do not have to sell raw rubber, but they should process at least semi-processed before export it to China." (Namtha DAFO: 7)
- "There are about 50% of total rubber growers in Namtha district (whose rubber can be tapped) do not tap their rubber tree during the low prices; they will wait until the prices go up to at least 4 Yuan/kg. There is no other option except to wait for the price of rubber to go up" (LNT-NT DAFO: 2)
- "What we can do now is only negotiate with buyers, and discuss amongst concerned authorities at both district and provincial levels to facilitate buyers to buyer higher prices than what it is now. We do not have other ways to deal with rubber prices. This also confirmed by Mr. Vilaivanh Phomkhe (the former minister of MAF) came here in this province and gave the speech on 17 December 2014 that the problem of rubber prices is not only the issue in Laos, but it is the problem in the world. It is because global financial crisis at these years." (Namtha DAFO)

Response 2: Tapping with household labor

Quotes from provincial LNT: "B. Had Nyao rubber association rep points out that if the price goes to 3.2 Yuan/kg, people can still tap using HH labor; it's only when hired labor is involved that it's not worth it to tap when the price drops below 4 Yuan/kg" (LNT PAFO interview)

Ban Hat Nyao echoes this:

> "In the case of rubber prices at 4 Yuan/kg, local people still gain benefit from the plantation. However, we do not have enough money for hiring labor for tapping our rubber. With 4 Yuan/kg, we have to tap our rubber by ourselves. *In the case of households that have large area of rubber plantation, they tap only little part of their rubber plantation based on their household labor forces*. Mr. ___ is the person who hold the largest rubber plantation in this village, he has about more than 20.000 rubber trees (about 40 ha) and about 10 households in the village have rubber plantation about 10.000 trees per households."
>
> (Village interview, Ban Hat Nyao, emphasis added)

The case of Ban Nam Ngeun in VPK emphasizes that while rubber is not fully an elite crop, it's also not really filling the planned role of shifting cultivation stabilization and poverty alleviation:

> "There are about 10 households within this village started planting rubber in 2000; these households are middle household statuses (not rich households). Since they learned about rubber planting from China and other villages in Luang Namtha province, they invested themselves for rubber plantation (there is no rubber investors come and invest for rubber plantation in this village). … All rubber plantation in our village is self-investment by local villagers. At the present, there are about few households have rubber 3.900 rubber trees/households. The households that have smallest rubber plantation only is about 150 rubber trees/household. … 'When we started planting rubber, we did not have any contract with any market for our rubber product; however, since people in other villages in Namtha and Sing districts established rubber plantation before us and if they can sell rubber, we will also be able to sell our rubber product too.' Rubber can a bit help our livelihoods, although we sell large amount of rubber product, but since rubber prices dropped, we gain less benefit from the product for improving our livelihoods. In July this years, we could get about 30 tons of rubber product and we received about 130.000.000 kip (selling price is 4 Yuan/kg). ***In fact, rubber plantation is only addition job for people in our village, we mainly cultivating paddy rice for both household consumption and sale***. [This is despite rubber having the largest area:] Rubber plantation in our village is about 2 times larger than paddy rice area. Total rubber plantation in our village is about 150 ha, while total paddy area is 58 ha and total biofuel fruit plantation in the village is 5 ha. Thus, rubber plantation covers the largest land use in this village.

In Oudomxai, we heard that some households are tapping – presumably at a loss – in order to keep their trees productive for when prices rebound; we also found one instance of a floor price there:

> "Local people who tap their rubber is contract farming with companies because the company request local people to tap in order to get higher latex product in the nest year. Those who tap their rubber also based on rubber market in global; one company (China-Laos) set the floor price, which is 5.000 k/kg." (Xai DAFO)

Response 3. Land sales, rentals and conversions

Among the most widely debated response to falling rubber prices has been the conversion of rubber plantations to other crops like banana plantations, often in combination with leasing land to Chinese investors.

- LNT PDPI gave four reasons why local people were converting their land to bananas: (i) because they had land close to streams and rivers that were suitable for growing bananas; (ii) easier than keeping a their rubber plantation; (iii) local people with ***large*** rubber plantations cannot afford to maintain them (emphasis added); (iv) Chinese investors paid not just for leasing land, but also for clearing rubber trees (RMB 100 per tree).
- Conversion to maize and conversion and leasing for banana was also reported in Oudomxai's Xai district, but not substantial:
    - "Some [households] turn rubber plantation to maize and lease for banana plantation, but not many households do these. There are about few households turned rubber to maize in Ko Noi village, but the district has not yet collect detail

data. Cultivate maize, local people can earn about 7-8 million kip/year per ha. This is because falling rubber prices and local people need money." (OUD-Xai_DAFO)
    - "Lease land for banana plantation is about 20.000.000 kip/ha/year. There are about 4-5 households lease land banana plantation, this about 2-3 rubber plantation." (OUD-Xai_DAFO)
    - Conflicting opinion from Xai DICO: "No one [in this district] cut rubber trees and turning land into other land uses." (Xai DICO)
- Also reported in Houn and Beng by someone in a different district who said it wasn't happening there: "Houn and Baeng, local people clear rubber plantation and replace with maize and banana in order to follow the policy on turning land into capital. But no body clear rubber tree [here]." (Xai DPIO)
    - Houn: "Some rubber growers clear their rubber tree for leasing land to Chinese investor for banana plantation. These households established rubber plantation in the contract farming with company. The company fined 50.000/tree/year (clearing by purpose). This money has to pay to investment company. In case, the fire burn by accident, local people do not have to be fined. Few households in Phouphon and phonxai villages clear rubber trees by purpose and the company will fine them according to principle 50.000 Kip/tree/year. Some households will be fined for about billion kip per households. These local people cleared rubber during Feb. – Mar. this year. However, last year, some households' plantation were on fired from outside the plantation such they burned area for shifting cultivation. Those who cleared rubber plant maize. The reasons that they clear is that local people do not have any benefit from rubber plantation, even the rubber reach 8 years, but the company do not tap due to low rubber prices." (Houn DICO)
    - Houn: "Local people in this district clear rubber plantation because low rubber prices and the Chianfong company does not pay for weeding and taking care of rubber plantation (copy of clear plantation is available in copies)." (Houn DPIO)

Land sales: Mention this, but note the timing difficulties – this happened quite a bit, but it's not clear that it was a response; many informants actually said that sales had *decreased* as the price had fallen and that nobody wanted to buy rubber now.

- Provincial officials interviewed in Luang Namtha noted that in fact many smallholders would currently like to sell their rubber trees due to low prices, but that there are no buyers – for the same reason: prices are too low. This suggests low confidence that the rubber price is going to pick up. [BUT SEE WEIYI SHI 2015: SHE FOUND THAT COMPANIES ARE BUYING UP PLANTATIONS CHEAP, NO?]
- In Oudomxai, it's pretty clear that a significant consolidation of plantation holdings occurred in the years prior to 2012, possibly due to the prevalence of "2 + 3" schemes (really 1 + 4, see Thongmanivong et al. n.d.) and the shift in terms over time: "Selling rubber plantation is normal in this province, it depends on having buyers. These growers are mainly poor households in villages. Buyers are mainly businessman from the province as well as Chinese investors. Prices of rubber plantation is depending on location and age of rubber tree in the plantation. However, during the falling rubber prices, no one want to buy rubber plantation." (OUD PAFO)

- Also: “Some households sell rubber plantation, even the contract farming (change owner or contractor to join the company). There is no fixed price of rubber plantation, it depends negotiation between seller and buyer; which is about 300.000 kip/tree (again, it depends on location and age of rubber plantation). in one local close to the district city, the age of plantation is 8 years, people offer 1.000.000 kip/tree, but owner does not want to sell. Local people sell to local people when they have necessity to use money i.e. to pay for loan or credit taken from bank.” (Houn DICO)
- Also see DPIO quote, used in section 1.

- Xai DPIO: “Many people would like to sell their rubber plantation, but no one want to buy.”
- That said, in the same province we did hear of more recent land sales as well: According to one government staff, “I unofficially heard that some villagers sold their rubber plantation to rich people in the city, but I do not have detail information about this. They sold in 2014.”
- “**2+3 contract farming scheme have been broken** because local people do not have money for necessary livelihoods and local people borrow money from the investment companies and do not have money to pay back to the company, then they sell rubber plantation to investor. … We need to check how many companies still keep 2+3 scheme and request advise from district and provincial authorities to dealt with the situation.” (Xai DPIO)

Response 4: Collective action

“At the present the cooperative is only formally established in HardNyao village, while people in other villages around the district still sell their rubber to the buyers in individually. In some village, people also group together and sell their rubber in groups, but these groups are still not the cooperative like the case in HarNyao village. The benefit of creation of rubber cooperative or rubber group is that local people will have more power to negotiate with market or buyers in order to buy their rubber lumps in a higher prices than what they sell in individual households, which about 0.5 yuan/kg-1Yuan/kg higher than selling in individually.” (Namtha DICO)

It is worth pointing out that the collective in Hat Nyao was not formed specifically to deal with low prices, but rather from the beginning to deal with technical issues related to planting. The advantages of selling collectively became apparent immediately when the village started rubber in 2002.

Hat Nyao:

“We do not have any contract with buyers of market for rubber production; we have to find buyers every year and we discuss amongst villagers who should be our buyers (who give us the highest prices can be our buyers). This is easier than having contract with a certain company, which we won’t have much option to negotiate rubber prices (if we have contract with certain buyers). … This rubber cooperatives still working during the period of time of selling rubber product. In order to sell our rubber in each year, we have to hold village meeting in order to discuss with all villagers and agree on prices. … At the present, in total, we have 15 units belong to our rubber cooperative; of which, 6 units come from other villages who are our neighbors. These include units of rubber cooperatives from Bouamphieng, Viengthong, Viengkham, Phoxai, Nam Houay, and the rest unit is combined of individual smallholders from different villages around our village.” (Ban Hat Nyao)

Cooperative fees depend on rubber prices (dropping with low prices), and support both the cooperatives members and the village as a whole: "We, the rubber cooperative, collect fee from member about 0.2 Yuan/kg (lump); we sometime collect only 0.005 Yuan/kg or if the prices are dropped lower than 4 Yuan/kg, we do not collect the fee from our rubber cooperative members. This collected money from our rubber cooperative, we divided 40% to village development fund in our village and we keep 60% as fund for our rubber cooperative. At the present, we have more than 100 million kip in our cooperative's bank account."

Mokpalai (many relatives in Hat Nyao and they rely on them for price information, so not surprising the similarities here as well): "We have rubber buying group in this village, which we have more than 100 households are the members of this group. There are 12 households in this village be members of this group, from Nathong 15 households, Nongdin 25 households, NongBuadaeng 10 households, Nafang 2 village is 9 households, Mai village 10 households, Nam Oun 20 households, Vanglam 1 household, and Na Ngeun 1 household, Langching 7 households, Phonsavan 2 households."

Response 5: Transporting rubber independently to Luang Namtha

This overaps to some degree with the previous response, but is also more specific and deserves its own sub-section.

- From Oudomxai to sell to Chinese companies in LNT b/c of higher prices there:
    - "There is not standard prices for rubber in Oudomxai province. Many growers sell their rubber in Luang Namtha and some traders come to the province for collecting rubber from local people." (OUD PAFO)
    - "We know the rubber prices fall from the traders and we also know from Hmong in HardNyao village, who is also Hmong and relatives of many households in this village. We some time travel to Luang Namtha and Natheuay (in the border) for selling our rubber. We some time sold our rubber to Tai Chian factory in Na Teuay, which is 500 kip/kg higher than prices of rubber in this village. We some time also sold our rubber in Yunnan factory in Namtha, which 500 kip/kg higher than rubber prices in Tai Chian factory and 1000 kip/kg higher prices than people buy in this village" (Ban Mokpalai, Houn District)
- From VPK to B. Hat Nyao?
- Hmong company from Luang Prabang that purchases at the posted price, then aggregates and (presumably) sells higher in the same way as the Hat Nyao collective (Figure 3)

INSERT PHOTO HERE

Figure 3. Rubber sale to intermediary company, Luang Prabang Province. Rubber arrives by truck, bicycle and foot (A, B), is weighed and marked (C) and then loaded into company's truck (D) for transportation to Yunnan Rubber Co. factory in Luang Namtha

3.3. The Price of Rubber

> *All rubber growers know that rubber prices is based on global rubber market.*
>
> (Government interview, Oudomxai [Interview 14])

One of the most consistent findings from our fieldwork is the belief that the drop in rubber prices is caused by changes in the global economy. We heard this repeatedly in all of the places we visited. "There are some village came to the office to raise the issue of rubber prices dropped, and the office recommended them to talk to the investment companies directly. However, issue of falling rubber prices is not easy to deal because it is the issue of global rubber market." (Xai DAFO). [Provide some more examples …] Yet there is a puzzling fact in all of this: global rubber prices began to drop more than a year before Lao (and thus Chinese) rubber prices did.

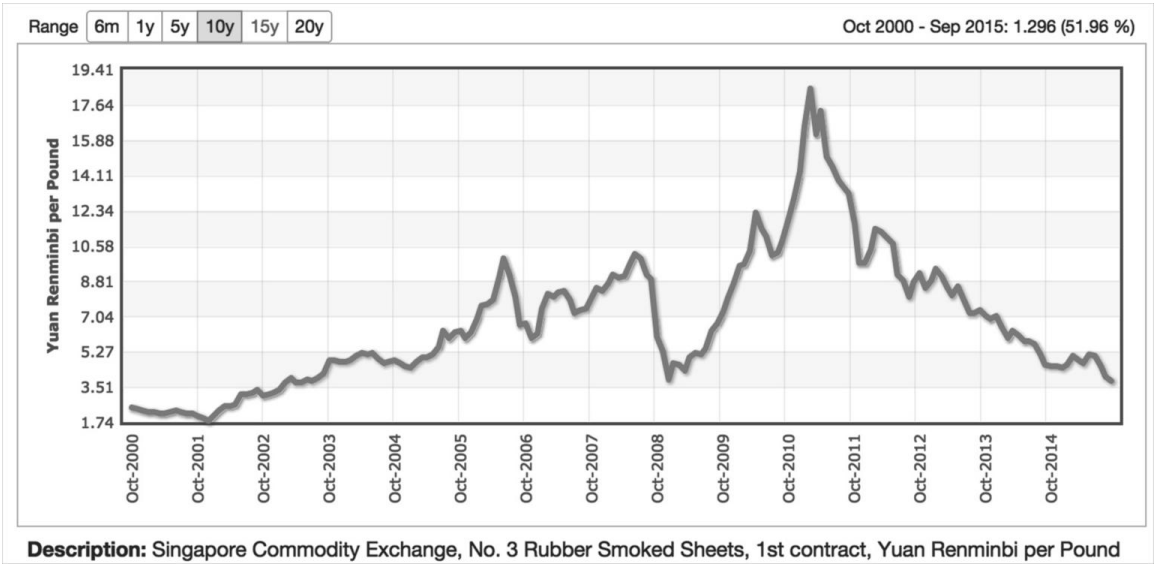

Figure 4. Global prices for rubber (top) and oil (bottom), 2000–2015. Source: IndexMundi.com

We heard repeatedly in our interviews that rubber prices began to fall in 2012. We heard this in Vieng Phou Kha ("Prices of rubber products have reduced since 2012"), as well as in Ban Oudomsin ("Prices of rubber products started falling since 2012"). The most detailed data we got was from Ban Hat Nyao, which has been well attuned to price changes over the last decade. They told us, "In 2012, we got about 15 Yuan/kg on average. However, prices started to drop again in late 2012." Global prices, however, began to drop in early 2011, roughly in line with the global economy (Figure 4). This highlights the importance of understanding how prices are created.

Figure 5 shows a different sort of rubber price data over the last fifteen years. The data shown here comes from our interviews, and although not as precise as Figure 4 in showing week-to-week or month-to-month change in prices, it shows prices at the amounts that they have actually been paid to rubber producers in Laos (rather than the much higher prices paid to commodity traders in Singapore, as in Figure 4). Figure 5 thus shows prices rising from a few Chinese Yuan (RMB) in the early 2000s to a high around RMB 12–15 in 2010–2011 and then falling precipitously over the last five years to a current low around RMB 3–5. Figure 5 also highlights the fact that despite this overall trend, individual key informants' memories of rubber prices is highly variable, and is likely to be imprecise. This emphasizes the need for accurate record-keeping in order to distinguish actual variability from poor memory. While we do not test this quantitatively, it appears that provincial statistics and village-level accounts seem to agree with one another relatively closely; we take these as more authoritative than the outlier data, which tends to be from key informants at the district level.

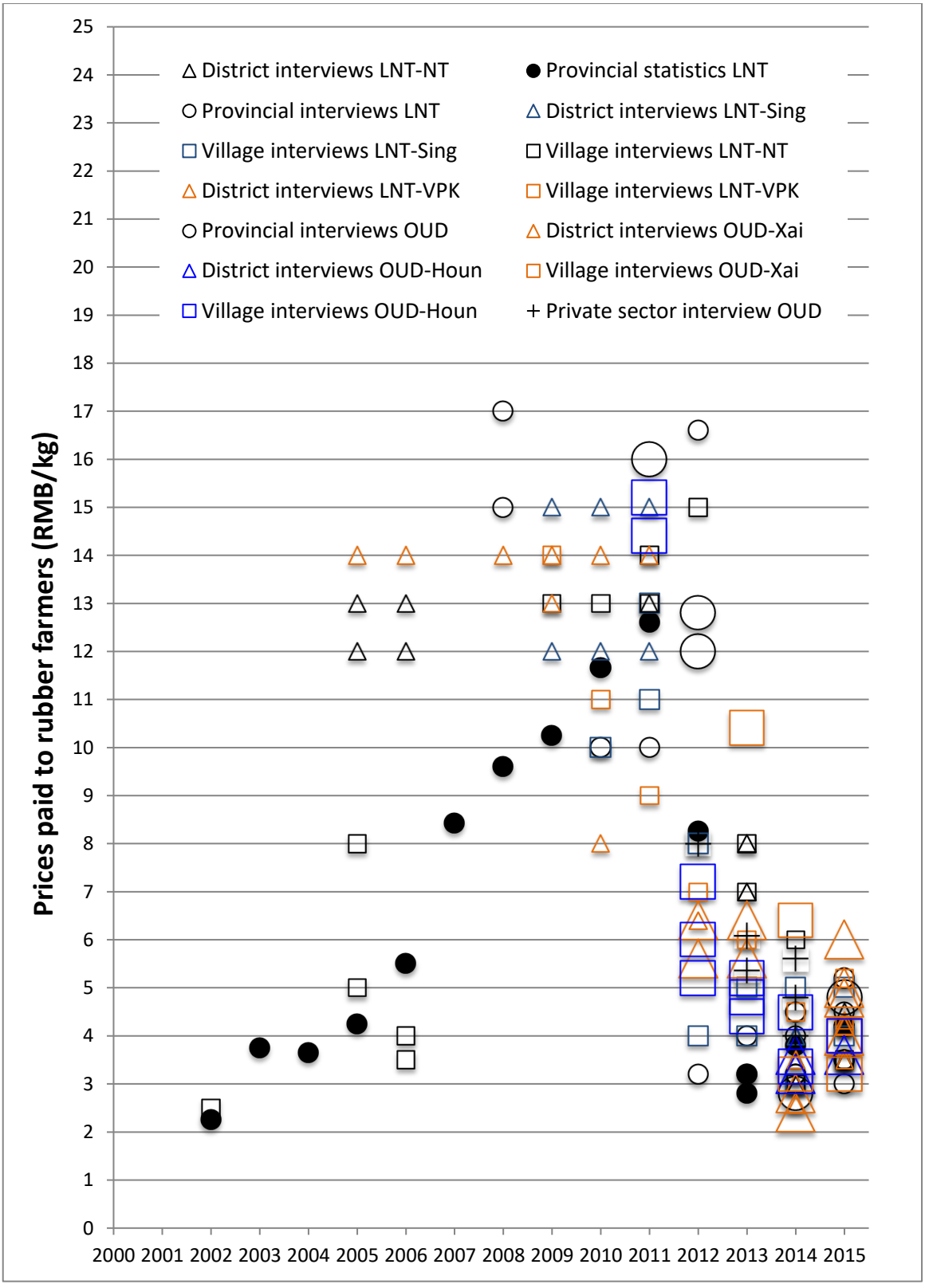

Figure 5. Rubber prices in northern Laos, 2000–2015, reported by source. Circles, triangles and squares show provincial, district and village-level sources (small for Luang Namtha, large for Oudomxai), respectively. Source: interviews

Where do local prices actually come from? [Still need to write this, based on the following – this is still raw data – much of this will be cut and consolidated.]

- Prices are set by companies. Contracted floor prices were, as a rule, reported to not be in the contracts in both LNT and OUD, although we found three exceptions in two provinces, discussed above.
- Rather, prices come basically from companies, with limited competition since there are so few of them. The standard price comes from the listing at the 2-3 factories in Luang Namtha; collective action can increase the purchase prices "a bit" (there's one quantitative explanation of this, discussed above in the section on collective action): "For those who are tapping their rubber, they sell based on the prices posted at the rubber processing factories in Namtha district (Yunnan and Tai China factories). The prices posted in both factories today is 3.5 Yuan/kg. However, in the case of HardNyao village, they get a bit higher prices because they sell rubber in association, which the companies pay a bit higher than selling in individual households. This is because the association can sell in larger amount of rubber lump than individual households; also, rubber association in HardNyao have more negotiation power to negotiate with various buyers than those who sell rubber lump in individual households. There is no any contract with markets, the prices of rubber are mainly based on market prices in China, which the Provincial Industry and Commerce checks the prices of rubber from Chinese website every month. The district level cannot set the certain (suitable) prices of rubber in the district, it depends on the capacity of buyers." (LNT-NT DAFO: 2).
- "Rubber prices here in Namtha district based on two sources of prices, which include the announcement from Provincial Industry and Commerce and compared with the said prices by buyers (companies). In fact, the prices are posted in the board in each rubber processing factory in Namtha district. Thus, when people access to the factory, they will see the prices posted in the board." (LNT-NT DAFO: 3)
- "We know the prices of rubber mainly from the companies or rubber processing factories in Luang Namtha; at the same time, we also received announcement about rubber prices from the Provincial Industry and Commerce Office." (LNT-NT DAFO: 6)
- "There is no gate prices for rubber trade in Oudomxai province, the prices are based on what investment companies (buyers) propose. We also ask rubber prices from travelers who travel to China and come to our province. We also get prices information from our friends and relatives who have chances to travel to China and other provinces like Luang Namtha. The Provincial Industry and Commerce Office has not talked/negotiated with buyers. Rubber is not very priority issue for the industry and commerce office. Prices are mainly based on what buyers propose. No websites have been observed by the Industry and Commerce Office. Prices of rubber is no the role of PAFO. We only work on planting of rubber, the selling process should be the tasks of industry and commerce office." (OUD PAFO)
- "The lowest prices is 10.000 k/kg. However, rubber prices are only based on the world market prices. But we do not have any set floor price for rubber. Prices mainly based on what investors said." (OUD PAFO)
- "Falling rubber prices start during late 2013 – 2014 based on market in China and informed by Chinese investor. There are two information systems: (1) Based on factory here at the district (Chinese factory) and information from Chinese border; and (2) Based on information from Luang Namtha … The prices has been discussed between growers and factory without consultation to this office. The office has not control anything for rubber trading. " (Xai DICO)
- "However, these information sources cannot indicate whether the traders is cheating local people. We should have official sources of information about the prices of rubber." (OUD-Xai DICO)

- Houn: “We know the prices from the company (prices at the district yesterday was 4.500 k/kg). We only hear the prices of rubber from this investment company. However, the company does not inform our office. We know rubber prices dropped in 2013, we learned from Thai television. Last year, the company bought 4.000 – 4.500 k/kg and the company stop buying the rubber because the prices of rubber were dropped. … The investment company (Chianfong) stop tapping their rubber tree [as well]. This company invests in 2+3 scheme, this is based on the government policy on reducing shifting cultivation and rural poverty reduction. The company may received fund from Chinese government to focus on replace rubber to former opium production area.” (Houn DPIO)

INSERT PHOTO HERE

Figure 6. Posted price at the Yunnan Rubber Co. factory in Luang Namtha, August 2015

Then talk about different explanations of <u>why</u> prices are low.

- Lots of explanations that this is due to global demand.
- “As I understand prices of rubber is based on market in China. When we went to local area, we also heard from local people propose [to address] the drop of rubber prices. We suggest them that we should wait for rubber prices go up.” (Xai DPIO)
- Use the example of LNT PICO trying to pursue diplomatic solution through a Lao government representative in Kunming. (He was told that they needed to just be patient and wait for global prices to rise.) There are suspicions, and it’s clear that there is *some* negative impact on prices due to the market power of a limited number of buyers (who also happen to own the processing factories), but it’s very difficult to quantify the size of this effect without more detailed data than we have at our disposal.[5]

But in the material above we can see another cause of low prices begin to emerge: market power due to consolidated control over the border trade.

- “We sometime went to find rubber buyers in China (located close to our border); if we found the buyers that gave us the higher prices than other, we ask them to come and buy our rubber within the village and rubber has to be measured in the village (before export to China). We the cooperative group in this village try to find the ways to get higher rubber prices as we can. ***However, the problem is Chinese middlemen do have to quota to import rubber from Laos to China. In fact there are many people in China would like to buy our rubber product, but they cannot import rubber product to China without received provided quota from Chinese government.***”
- “We sometime went to China for finding buyers who may have offered higher prices than what factories in Luang Namtha offer. However, in order to export rubber to China, we need to have someone in China to prove that our exported rubber to China is under the provide quota by Chinese government, otherwise, we cannot export our rubber to China without anyone prove the quotation. In this case, we would like to request the government of Laos to negotiate with Chinese government in order to freely export of rubber product from Laos to China. ***If we can freely export our rubber product to China, we will have more options and more buyers and we will get higher prices than what we have sold at the present***.”

[5] This kind of investigation would require, for example, comparing market prices in Xishaugbanna with purchase prices in Laos on a sufficiently fine time scale to be able to control for temporal fluctuations; this could presumably be done by comparing the prices posted at the factory with online price data.

Then present the numbers.

- Start with this: “We feel that rubber prices in Laos still low compared to the prices sold in China, which they get 7.5 Yuan/kg, while we only get 4.2 Yuan/kg.” (village interview, VPK). That’s almost 80 percent higher in China. From same interview: “We talked to our relatives and friends in China, we know that rubber prices in Laos is not fair for us because prices of rubber in China much higher than in our village (and in Laos), which is not really fair for farmers such as us.”
- Then give the figure, which suggests that prices are significantly higher – roughly twice as high if the data are comparable and the provincial statistics are right, less if the data are not comparable (due to, for example, differing moisture contents).

Reconstructing rubber prices is easier said than done, but one pattern is clear: prices in China seem to be substantially higher than prices in Laos. Writing in 2009, Moinuddin and Xi (2009: 50) quote RMB 10/kg as the 2009 price, which they use as their lower limit in their model, and RMB 25/kg as the 2007 price, which they use as their upper limit. The price they used for their reference case was RMB 20/kg. Even with all the variability, Lao prices are substantially lower.

Comparing Chinese sources with the prices we heard in the field, Chinese farmgate prices appear to be in the range of 2-3 times higher than Lao prices (CHECK TO SEE IF THIS IS ROBUST AFTER ALL DATA KEYED IN). The black data points are from Laos, red and orange are from China. The two big red circles are high and low values used to calibrate a model, but represent historical values. The range of values within a given year is not surprising, as prices changed a lot within some years and were often reported (both to us and in the literature) as ranges between high and low values.

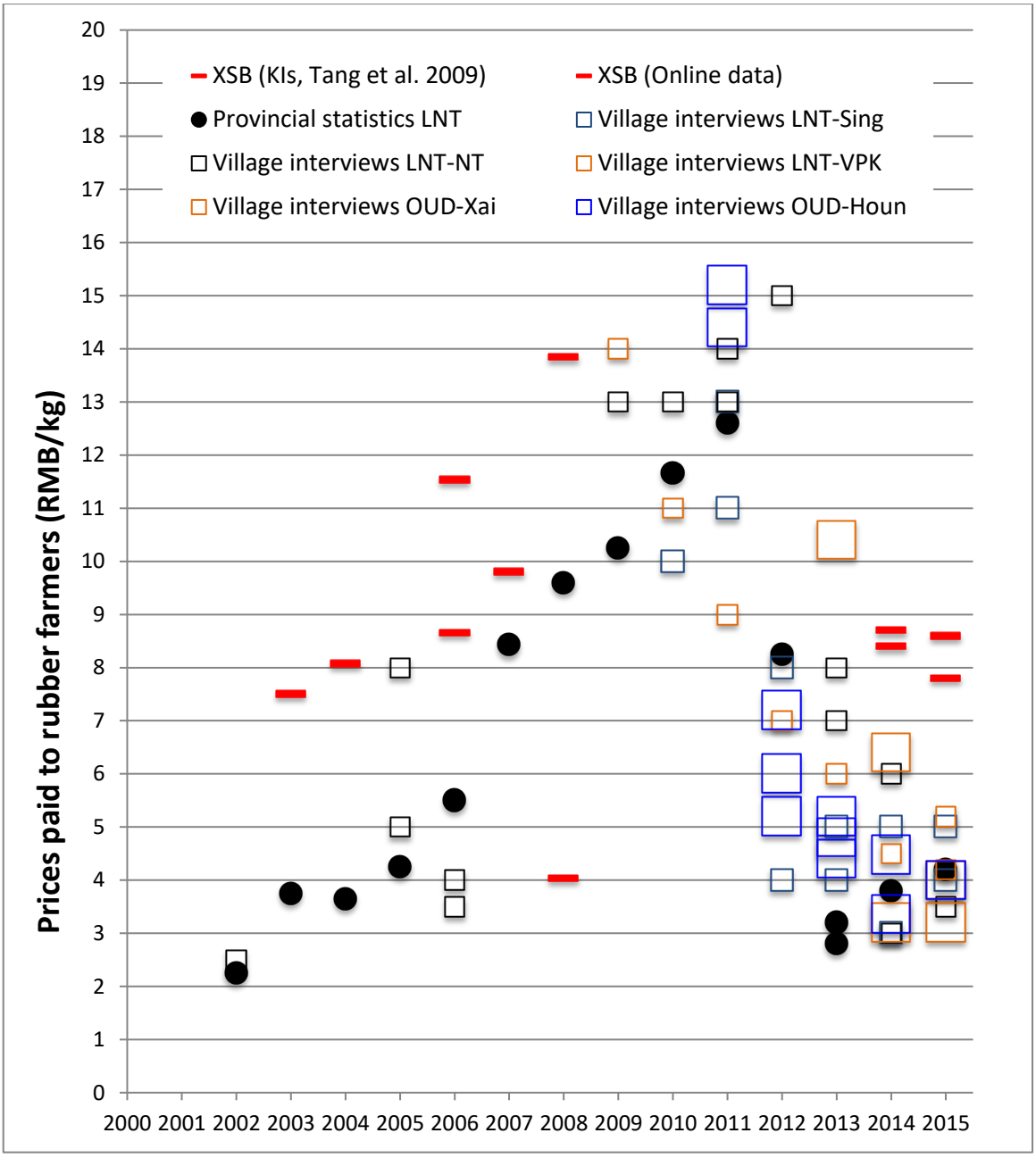

Figure 7. Farm-gate prices in northern Laos versus Xishuangbanna, Yunnan. Source: interviews (Laos data) and secondary and online sources (China data).[6]

Support for the high Chinese figures from an interview with Sing DAFO: "In the beginning, we not encouraged local people to plant rubber and rubber was not our agricultural cultivation priority. … However, since Tai Leu people in China established rubber plantation and they gain high income from the plantation, their relatives (the same ethnic) in our district visited Thai Leu in China and learned that rubber plantation provided income for local people in China. This is because the prices of rubber in the last 10 years were about 15 – 20 Yuan/kg of lump rubber."

[6] China data comes from Tang et al. (2009); http://laoban.xianhuo186.com/dongtai/nonglin/59308.html and http://www.agri.cn/V20/SC/scjghq/xjhq/sczw/201511/P020151104340014178220.pdf (accessed Nov. 2015 with translation assistance from Weiyi Shi).

So end this section with the mismatch between the official narrative – that prices are low because of low global demand – and the data about market and price differences on both sides of the border.

- Global demand causes significant fluctuation, yes.
- But various forms of policy and market power are also extremely important in shaping the prices that Lao farmers get:
    - Export taxes from Laos are a relatively minor factor: Ban Hat Nyao reported that they had to pay between 5 and 10 percent during the three times they exported their rubber to sell it directly into China.
    - Import quotas into China are the big one: this seems to raise the price by more than 100% and perhaps up to 200%, based on the available data.
- So current low prices are a function of both: market power creates the overall price conditions, while global demand creates the volatility within that; the current price levels are a function of both together.
- Some in government hint at the dissatisfaction with "the market" as the answer to why prices are what they are: "I think the most effective strategy for rubber prices is that the government of Laos should have contract with Chinese government to set rubber prices together, please do not state that rubber prices are based on prices in the market because we do not know the certain prices of rubber market, where are the markets that prices have been based on, in China?"

3.4. What *should* the rubber price be?

In addition to asking what prices were, we also asked people what they ought to be. This is what they said.

Also see Annex IV.

INSERT FIGURE HERE (FROM EXCEL, DATA IN ANNEX IV)

Figure 8. Opinions about adequate rubber prices

(We use LAK 1,250 = 1 RMB, the exchange rate noted in the statistics provided by the Luang Namtha Provincial Industry and Commerce Office.)

4. Discussion

[STILL WORKING ON ORGANIZATION OF THIS SECTION]

Intro

4.1. Global versus Local Causes of Rubber Prices: Market Demand vs. Market Power

VT 2005a: "Rubber is emerging as a very important commodity in the region due to the strong growth of the Chinese economy. Traditional rubber producers, like Thailand and Indonesia, are expanding cultivation to meet this increased demand. Projections suggest *strong prices for another 12-15 years* before typical price fluctuations resume" (emphasis added).

4.2. The Response Spectrum: From Coping to Regulation to Opportunistic Behavior

Land rentals

Compare the emerging land rental market for bananas to that for sugar in Savannakhet described by Phoumanivong et al. (2015: 25):

> The rent money, received for their land, was used to cut household debt from the previous season (fertilizer, sugarcane stalk, herbicide, land preparation). Some land had to be rented to the sugar company for 10 years or more, in order to compensate for their debt. Previously the rental price was US$10 per hectare per year, at present, the rental rate has been raised to US$312 /rai/year (1 hectare (ha) = 6.25 rai). [THAT'S USD 1950/ha]

These prices are almost identical. What is shows is (1) the high value that private developers are prepared to pay; (2) the fact that they're prepared to recognize private land entitlements (not just state); and (3) how much is at stake in current legal discussions about the ownership and management of untitled land. (On the latter, it seems unlikely that locals will simply give up their claims to land they have been using, so the current efforts to create greater formal or de facto state ownership – presumably to capture more of the rents that companies are currently paying to private individuals – seem destined to renew contestation over these lands and, in so doing, continue fo frustrate investors.

4.3. Plantation Size and the Importance of Household versus Hired Labor

DOES THIS BELONG IN SECTION 4.2?

4.3. A Strategic Commodity: Learning from Over-Optimism, the Need for Floor Prices

Contract farming is a mixed bag, but one of its advantages is the investor's obligation to purchase the product. Boom and bust is a classic problem in agricultural production, and contract farming is one of the ways that farmers can be protected from its extremes. In order for this to happen, however, optimism about market stability and growth needs to be tempered with detailed planning in case unanticipated scenarios actually come to pass. Although a detailed investigation of why floor prices were not included in contracts was beyond the scope of this study, it is likely that optimism about sustained demand for rubber made it seem like this was not an issue of importance at the time that contracts were being negotiated.

Another likely factor is the fact that state officials negotiated many contracts on farmers' behalf; hedging against price uncertainty may have undercut the message that rubber was a safe bet. Yet as discussed above, many smallholders either rejected rubber contract farming up front due to the mix of perceived risks or unfavorable production terms, or found ways to get rid of their rubber holdings either before or during the drop in prices. An alternative approach that might have kept poor smallholders in the rubber sector and helped operationalize the government's vision of a landscape of rubber smallholders – the replication of the Ban Hat Nyao model – would have been to tell farmers that the global market might be volatile, but that state institutions such as price supports or other mechanisms would help insulate them from this volatility by creating a *local* market that was far more stable and predictable.

Protecting rubber growers would help alleviate falling expectations (as in Thailand since 2014): "In the beginning, we thought that we will gain household income from rubber plantation for improving our livelihoods; unfortunately, prices of rubber are now dropped, and we loss our expectation from rubber plantation for improving our livelihoods." (village interview VPK)

It would also help alleviate growing questions on the part of smallholders, some of whom seem to wonder if government tax policy is behind the fall in prices: "We would like to request to the concerned authorities at both provincial and district level to check why prices of rubber is highly dropped at these days; is it because the concerned authorities collect high tax from rubber traders/buyers or is it because the world market for rubber product?" (village interview)

Talk about Sam Sang? "It spells out how provinces are to be built up as strategic units, districts as comprehensively strengthened units, and villages as development units." (from VT 2015-08-22)

4.4. Moving Beyond the "On-Off Switch": The Need for Leveraged Regulation and Support

Intro paragraph …

The "on-off switch" approach to regulation

Moratoria don't work very well … need more active forms of regulation than just banning things.

Leverage

One area where the government has tried to actively engage is on "negotiating" with companies. The problem here, however, is that state institutions like the Provincial Rubber Committee formed in Luang Namtha have fairly low leverage. They were capable of raising prices moderately (by about RMB 1 per kg), but this was fairly small (and was less than announced in the "solution" article) and it came at the price of not collecting profit taxes. In effect, state officials traded state revenue for smallholder revenue, but it is difficult to know if companies actually gained or lost money as a result of the "negotiation." Regulatory possibilities with more leverage would be desirable.

- Law enforcement – contract renegotiation?
- Law enforcement – other types? Law enforcement was mentioned in a few interviews as being needed – **Thoumthone, what did people mean?**
- Domestic policy to incentivize processing and value-adding in-country
- Diplomatic efforts: while possibly low-leverage, Laos does have some increased leverage vis-à-vis China given the widespread inter-linkage of economies (so discussions about rubber could be linked to other topics – e.g. drug policy, since the inability to make money from rubber makes it more likely that poor upland farmers will return to opium); and Laos's role as the upcoming ASEAN chair.

Village interview: "we need the government of Laos to negotiate with Chinese government in order to freely allow local people in Laos (rubber smallholders) export rubber product to China; otherwise, the Chinese traders will have chance to control rubber price in Laos. Thus, the central government is now important for rubber trade in Laos. Without any action from the central government, rubber prices will not be much increased compared to what it is at the present."

PAFO OUD: "The provincial authorities proposed to the Lao government to negotiate with Chinese government, but Chinese government has not considered if rubber is added to import list of goods from Laos."

Financial support – plantation development

Rubber plantation development is often described as an autonomous undertaking, especially when independent farmers do it themselves. In our interviews, the case of Ban Had Nyao was generally described in terms of a community of smallholders who had "done it themselves," "used their own budget," and so on. But a key missing piece of this is the fact that the community got state support in the form of a subsidized loan facilitated by the vice-governor of the province, to help finance the establishment of the plantation (Alton et al. 2005: 49). As Alton et al. (2005: 51) report, "All

producing households [in Ban Hat Nyao] received subsidized loans from the province for the cost of seedlings and some fencing. Each producing household received between 1-3 million Kip in credit to plant rubber trees." Ban Hat Nyao interview: total loan = 19 million Kip

One essential point that is often lost is that efforts to "scale up" the Hat Nyao model relied largely on private sector credit in the form of percentage points in contract farming deals; the fact that many smallholders moved away from these (often after being coerced into them) says a lot.

State financial support – rubber price

Alton et al. (2005: 75): "At some point in the not too distant future, the typical price fluctuation cycle of a global commodity crop will resume leaving the ecologically marginal Lao rubber production subject to downward price movement and decreasing returns to labour. It must be noted that the success of Chinese rubber is based on state subsidies and state farms. Although private rubber farmers now are significantly involved in rubber production in China, several sources state that national price supports continue at attractive levels."

State support for smallholder farmers is not necessarily for redistributive purposes, but also to increase overall productivity. In Thailand, the Pheu Thai party defended its rice policy on the grounds that state-supported prices for farmers stimulated the economy and allowed additional taxes to be collected that were far in excess of the subsidies given to farmers. (According to Pheu Thai, "The government … implemented the Rice Pledge Policy by subsidizing the rice price and transferring … 870,018 Million Baht directly to the farmers. This in turn increased farmers' purchasing power [and] thus stimulated the economy. As a result, the government was able to collect additional tax for more than 1 trillion Baht per year" (PTP 2015).)

"Industry and Commerce Office and Ministry should set the floor price for rubber. It should not heavily rely on investor." (OUD PAFO)

"The best dealt to the low of falling rubber prices is the government, it can be the central government or provincial governor encourages the company to set the floor rubber prices, for example, set at least 5.000 kip/kg (lump rubber) as floor price, if the market prices are lower than this set floor price, the contracted companies should purchase rubber at the set floor prices. However, in the case of rubber prices in the global market are increased, companies should buy rubber from local people in the district and province based on market prices of rubber." (Xai DAFO)

4.5. Additional Research Needs

- Where is the rubber and under which production and ownership arrangements? This remains widely acknowledged as a gap; as this study suggests, it is a major one.
- More quantitatively detailed study of market power in the north (compare purchase/posted prices with actual prices in China?)
- Compare northern and southern Laos: Does the former distinction still hold between concession and smallholder dominated, or are both now dominated by large private owners dependent on wage labor, the differences being (i) how they got that way (by concession-making in the south versus market dynamics/consolidation in the north) and (ii) the options of local wage labor to do other, better-paid work (higher in the north?)

5. Summary of Recommendations

[This section will list as bullet points the recommendations that emerged in section 4.]

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Annex I. Villages Studied

Province	District	Village	Details
Luang Namtha	Namtha	HardYao	• Hmong ethnic. • The first successful village in rubber plantation village in Luang Namtha (and in the northern Laos). • Located close to capital of Luang Namtha province. • First rubber cooperative village in Laos.
		Sobsim	• Khmu ethnic. • Located in Namtha district, but distance from Chinese border and it is about 24 km from provincial capital of Luang Namtha. • New rubber plantation village, compared to HardYao and other villages in the same district. • Informal urban network-based investment due to its location.
	Sing	Oudomsin	• Mien ethnic or Hmong Mien. • First rubber plantation village in Sing district. • Located close to local Lao-Chinese border check-point, where only is 3 km to the border check-point. • All rubber plantation are self-investment by local people.
		Phiyer	• Akha (ekor)ethnic. • Located about 9 km from capital of Sing district, but still having good connection to the Lao-Chinese border. • First Akha village that have succeed in cash crop production (initiated by sugarcane). • Rubber plantation is mainly invested by villagers.
	Vieng phoukha	Nam Nguen	• Lue ethnic. • First rubber plantation village in Viengphoukha district. • Located along the main road (R3) connection between China and Thailand. • Rubber plantation in this village is combination of self-investment by local people and contract farming.
Oudomxai	Xai	Kor Noi	• Lue Ethnic • Located along the main road from Oudomxai to Boten International Border Check-point. • Rubber plantation is combination of self-investment by local people, co-investment between local people and relatives from the provincial capital of Oudomxai and contract farming with Chinese investors.
	Houn	Mok Phalai	• Mixed of Hmong and Khmu • Located away from Chinese border • Rubber plantation in this village is still young, people in this village started tapping rubber trees in 2014 • Rubber plantation is combination of self-investment by local people and contract farming with Chinese investment company

Annex II. Stakeholders Interviewed

Institutions interviewed		Participants of the discussion
Provincial Offices of Luang Namtha Province		
	Provincial Agriculture and Forestry Office	2
	Provincial Industry and Commerce Office	1
	Provincial Planning and Investment Office	3
	Provincial Tax Office	1
District Offices of Namtha District		
	District Agriculture and Forestry Office	1
	District Industry and Commerce Office	1
District Offices of Sing District		
	District Agriculture and Forestry Office	2
	District Industry and Commerce Office	3
	District Planning and Investment Office	1
	District Finance Office	2
District Offices of Viengphoukha District		
	District Agriculture and Forestry Office	2
	District Industry and Commerce Office	1
	District Finance Office	1
Provincial Offices of Oudomxai Province		
	Provincial Agriculture and Forestry Office	2
	Provincial Industry and Commerce Office	1
	Provincial Planning and Investment Office	2
	Provincial Tax Office	1
District Offices of Xai District		
	District Agriculture and Forestry Office	1
	District Industry and Commerce Office	1
	District Planning and Investment Office	1
District Offices of Houn District		
	District Agriculture and Forestry Office	1
	District Industry and Commerce Office	2
	District Planning and Investment Office	3
Study Villages Luang Namtha Province		
	HarYao Villages in Namtha districts	3
	Sobsim Village in Namtha District	11
	Oudomsin Vilalge in Sing District	2
	Phiyer Village in Sing District	2
	Nam Nguen Village in Viengphoukha District	3
Study Villages Oudomxai Province		
	Kor Noi Village in Xai District	2
	Mok Palai Village in Houn District	2
Private sector		
	Yunnan Rubber Processing Factory	3

	Sino - Lao rubber processing facotory	2
	A Rubber Trade Unit in Luang Prabang	2
Total participants to the discussion		**68**

Annex III. Discussion Questions for Key Informant Groups

1. Can you start by explaining how rubber fits into the range of local livelihoods in this [province or district] area?
2. When did the fall in rubber prices begin to become an issue of concern? (When was this in relation to the beginning of tapping?) Where (from who or what source) did you start hearing about falling prices? How do you understand the reason for the drop in the rubber price?
3. How have rubber holders responded to the fall in rubber prices?

    The following the Vientiane Times; following questions will also be addressed (if needed):

    a. Are some rubber holders clearing their land and planting other crops? If so, please provide details (what, when, whether or not the new crops are producing returns yet and, if so, how they compare to rubber).
    b. Are some people selling their land, and if so, what types of growers are selling? Who are they selling to? (Who is buying rubber right now? Companies? Wealthier farmers? People from urban centers? Etc.)
    c. Are people responding in other ways? Please provide details.

4. Are some rubber holders continuing to tap their trees? If so, what kinds of prices are they getting? Is there a range between different buyers, or does everyone pay the same? How many buyers are there in your area [province, district, village]?

    Follow-up questions:

    a. Are any of the prices offered <u>above</u> the standard market price? If so, is this because of recent agreements (e.g. between companies and local authorities) or because of agreements made at the time contracts were signed (e.g. listed in the contract)?

5. How are purchase prices from farmers ("farm-gate" prices) determined?

    Follow-up questions (if needed):

    a. Are farm-gate prices set in relation to world market prices? Are they based on prices in China? In somewhere else? Are they set by traders? If so, do you know how? (It's possible that respondents won't know.)
    b. In any of the contract-based production arrangements in this area, are prices discussed in the contracts? If so, how? In any cases are minimum ("floor") prices guaranteed?
        i. If so, are these being paid now? Are they adequate to farmers' livelihood needs?
        ii. If not, was there any discussion about minimum pricing guarantees back in when projects were starting up?

6. When and how did rubber planting start in this area?

    Follow-up questions:

a. Was rubber planting started initially by smallholders or by companies? When did companies come in, and what types of arrangements did they offer? What were the key policy issues back then? Was rubber price/demand an issue of concern then? Why or why not?

7. What is the range of rubber-growing arrangements now?

   Follow-up questions:
   a. Are there independent smallholders?
   b. Are there informal share-cropping agreements? If so, between whom? (One common arrangement is between relatives in different places, but sometimes this also occurs with wealthy "elites" from urban centers.)
   c. Are there formal contract farming schemes?
   d. Are there concession schemes?
   e. Do you have statistics or maps on any of these? Can you share these?

8. [FOR GOVERNMENT STAFF ONLY, INCLUDING AT VILLAGE LEVEL] Do you have a role in managing relations between growers and buyers? If so, please discuss this in general and whether it differs for the different arrangements listed in question 7.

9. [FOR GOVERNMENT STAFF ONLY, INCLUDING AT VILLAGE LEVEL] Are you involved in helping to manage the selling process? If so, how? If not, have there been any requests (e.g. by rubber growers or by companies or traders) for state involvement?

10. Do people talk about appropriate prices for rubber? Is fairness an issue of concern? How should prices be determined?

11. Is sale price an issue/problem for any other crops? If so, how does rubber compare to these?

12. Of the responses that are currently occurring (see question 3), do you consider any of these to be effective strategies for dealing with the problem? (Or are these just coping mechanisms?)

13. What types of action do you believe are needed, and from whom?

14. Do you have any ideas about anything that authorities or experts in Vientiane do to help?

15. What do you foresee rubber prices doing in the next 5 or 10 years? Increase? Decrease? Why?

16. This has been very helpful – thank you very much for your time. We are almost finished. we have a few questions about the wider context related to other crops. This will help us understand the significance of our findings. How does rubber compare with other crops in this area in terms of:
    a. importance to local livelihoods? importance to the livelihoods of any particular sub-group (e.g. poor people versus wealthier farmers? people in a certain part of the district/province? people who have lived here longer versus people who have come more recently?)

b. area planted? How does rubber compare to other crops in terms of average holding size? Total area of rubber plantation (if available)
c. length of time it has been contributing to livelihoods in the area?
d. challenges (e.g. to community land relations)?[7]

ADDITIONAL QUESTIONS FOR GOVERNMENT STAFF AT DISTRICT AND PROVINCIAL LEVEL ONLY:

17. Lastly, I have a few questions about possible solution to address current situation:
    a. Have local people raised falling prices as an issue of concern with your office or other relevant government offices? Have they made any specific suggestions about how to address the issue of falling prices? If so, do you think these are realistic?
    b. Have you consulted with national stakeholders (who or which organizations at the national level) with regards to the fall of rubber price? If so, what recommendation did you receive from national level? What is required in order for this to be realistic?

THANK YOU SO MUCH FOR YOUR TIME.

PLEASE PROVIDE CONTACT INFORMATION IF YOU ARE INTERESTED IN RECEIVING A COPY OF OUR FINDINGS EARLY NEXT YEAR.

[7] These may be useful as follow-up questions: When did rubber plantation start, how and why? Is rubber the only industrial tree plantation in this area? Why not other species or commercial crops? How did rubber expand in the area? How were company terms set, and did this change over time? Were local farmers interested in cooperating with companies, and if not at first, what was done to make them participate more? (Better terms? more involvement of local authorities in land management/ zoning? Etc.)

Annex IV. Normative rubber price

Statements about (a) what rubber prices *should* be or (b) price thresholds where behavior changes ("marginal" prices).

Price/kg			
RMB	**LAK**	**Details**	**Source**
10		"As we discussed among rubber grower in our village, we should have at least 10 Yuan/kg (lump of rubber), or if we sell 1 kg of rubber lump, we should be able to buy 1 kg or milled rice"	Ban Sopsim
8	**10000**	There is not set price between grower and buyer. However, local people often mentioned that the lowest prices for rubber lump should not lower than 10,000 kip/kg. If local people can get this prices, rubber plantation will be able to feed their livelihoods.	LNT-NT DAFO
7-8		"Local smallholders would like to propose that rubber prices should not be less than 7-8 Yuan/kg of rubber lumps. However, it also depends on the capacity of the buyers."	LNT PDPI
7-8		"the most appropriate prices of rubber should not be lower than 7- 8 Yuan/kg (lump); if local people could sell their lump rubber in these prices, only base on rubber production, local people will be able graduate from their poverty."	Ban Hat Nyao
7		"It hard to say how much should be appropriate price for rubber, but when I talked to local people, they will be happy if they can get at least 7 Yuan/kg of lump"	LNT-NT DAFO
6		"We [Namtha DAFO] discussed with the buyers including Yunnan and Tai Chian to buy rubber lump from local people at least should not lesser than 6 Yuan/kg. However, …"	LNT-NT DAFO
5.6-8	**7000-10000**	"I think, at least should not lower than 7,000 k/kg. However, in the contract farming scheme (2+3) the prices should be at least 1,000 kip/kg because local people will gain only 40% of the benefit, while the investor gain 60%."	Houn DICO
5.6-6.4	**7000-8000**	"In 2012 – 2013, local people received about 7.000 – 8.000 k/kg. this price should be suitable lowest price for local people. If they get this price, they will focus on only rubber plantation and the plantation will be sure contributed to their livelihood improvement."	Xai DAFO
5.6	**7000**	"According to local people, if they can get at least LAK 7,000/kg, rubber could provide [sufficient] benefit and people would not have to work for other jobs -- they could survive just based on rubber tapping."	LNT PICO
5.6	**7000**	"the lowest price should not lower than 7000 Kip/kg"	OUD-PAFO
4-5.3		"We discussed with local people in many villages, they told us that rubber prices lower than 4 Yuan/kg is not profitable for local people. Local people would like to get at least 5.3 Yuan/kg."	VPK DAFO
5-6		"In the case of rubber prices go up to at least 5 – 6 Yuan/kg, smallholder will be widely tapping their rubber and it will be easy for us to support local people in organizing rubber cooperatives in villages in Luang Namtha district. "	LNT-NT DICO

5		"We discuss with many people within our village, the lowest prices for rubber products in our village should not lower than 5 Yuan/kg; if prices of rubber lower than this, we cannot rely on rubber plantation for improving our livelihoods. "	Ban Nam Ngeun
5		"According our discussion with local people, smallholders will be widely tapping their rubber if it prices raised at least 5 Yuan/kg."	LNT-NT DICO
4.4	**5000-6000**	“Although rubber prices are falling at 5.000 – 6.000 kip/kg is Ok for local people to tap rubber, they gain from rubber plantation more than other agricultural activities.” (OUD PAFO)"	OUD-PAFO
4		"We discussed among villagers here in our village, we should not sell our rubber product in prices lower than 4 Yuan/kg (lump)."	Ban Hat Nyao
4	**5000**	"I discussed with local people, they would prefer to tap their rubber if they can get at least 5000 k/kg at least. Otherwise, it is not profitable compared to their labor spend for rubber plantation. "	OUD-PAFO
4		"There are about 50% of total rubber growers in Namtha district (whose rubber can be tapped) do not tap their rubber tree during the low prices; they will wait until the prices go up to at least 4 Yuan/kg. There is no any other options except for waiting the prices of rubber go up."	LNT-NT DAFO
4		B. Had Nyao rubber association rep points out that if the price goes to 3.2 Yuan/kg, people can still tap using HH labor; it's only when hired labor is involved that it's not worth it to tap when the price drops below 4 Yuan/kg	LNT PAFO
3.5		This is the price at which the PAFO representative says people will stop tapping if it goes lower ("it should not be lower than 3.5 Yuan/kg or growers will not tap")	LNT PAFO
<3.2		B. Had Nyao rubber association rep points out that if the price goes to 3.2 Yuan/kg, people can still tap using HH labor; it's only when hired labor is involved that it's not worth it to tap when the price drops below 4 Yuan/kg	LNT PAFO