Rubber Plantation Value Chains in Laos: Opportunities and Constraints in Policy, Legality and Wood Processing

Authors: Hilary Smith, Juliet Lu, Phuc Xuan To, Soytavanh Mienmany, Khonethong Soukphaxay

30 June 2020

ACIAR project: Advancing enhanced wood manufacturing industries in Laos and Australia

Contents

List of Figures

List of Tables

Acknowledgements

The authors would like to thank the members of the VALTIP3 project team that supported the fieldwork for this study - Mr Bounchanh Lattanavongkot (Deputy Head of Luang Prabang Provincial Forestry Section and head of the Luang Prabang Teak Project) and Mr Bounthan Souksavath (Luang Prabang Teak Project). The team would also like to thank the many people who participated in the interviews and who shared their knowledge and experiences with us as, well as those who reviewed and commented on drafts of this report, particularly Stuart Ling, Stephen Midgley and Naomi Basik Treanor.

Notes

This report was prepared as a research output from the Project "*Advancing enhanced wood manufacturing industries in Laos and Australia*" knowns as 'VALTIP3' (project number FST/2016/151). Research was funded by Australian Aid through the Australian Centre for International Agricultural Research (ACIAR) and by Forest Trends through Norad.

This report refers to the following currencies:

- LAK: Laotian Kip; Lao Kip, National currency of Lao PDR
- VND: Vietnamese Dong, National currency of Viet Nam
- Yuan (¥): the unit of account of China's economic and financial system
- USD ($): United States Dollar, National currency of the United States of America

We have retained original references to currencies provided to us in interviews and in literature cited.

Unless otherwise stated all photos are by H. Smith.

Citation: H. Smith, J. Lu, P. X. To, S. Mienmany and K. Soukphaxay (2020) *Rubber Plantation Value Chains in Laos: Opportunities and Constraints in Policy, Legality and Wood Processing*, report produced for ACIAR project FST/2016/151 - Advancing enhanced wood manufacturing industries in Laos and Australia and Forest Trends.

Executive Summary

Studies on rubber (*Hevea brasiliensis*) in the Lao People's Democratic Republic (Lao PDR, Laos) have largely focussed on land allocation and relations between the Lao State, investors, and Lao rubber farmers. The history and international context, and some environmental and social impacts have been investigated to a lesser extent, and there are no comprehensive studies that consider entire rubber value chains in Laos.

Concerns for the sustainability of natural rubber and rubberwood are rising among manufacturers and consumers, spurring interest in tracing these social and environmental impacts along the commodity chain, as well as product legality. However, there are gaps in knowledge, particularly with respect to rubberwood. This study starts to address these gaps by exploring the four themes of land, labour, latex, and wood. It traces interactions along the rubber value chain, including the role of foreign investors specifically from China and Viet Nam, the top foreign investors in rubber in Laos, the primary market destinations for Lao produced rubber and the likely destinations for rubberwood.

Key observations:

1. The policy position with respect to the rubber sector in Laos is unclear, due to an extended moratorium on rubber concessions.
2. Administrative complexities within and between government ministries and agencies confuses decision making and creates uncertainties for investors.
3. Rubber plantations are by far the largest plantation type by area covering approximately 275,000 ha, or 58% of the total area of planted forest.
4. Rubber has been planted by farmers, through contracts between farmers and companies and under concessions from the government. Concessions have been granted for over 210,700 ha of which 128,800 ha have been planted, 120,000 ha of contract farms have been approved with 68,000 ha planted and there are 78,000 ha in rubber smallholdings. Detailed information about these investments is limited, hindering long term and strategic planning for the sector.
5. Rubber has been planted though-out Laos. In Northern Laos, smallholder and contract farming are common, while in the centre and south investments are dominantly concession-based. The main foreign investors are from China and Vietnam.
6. Approximately 44% of rubber plantations are mature enough to be harvested for latex. Natural rubber latex is a significant and established industry with important socio-economic contributions, nationally and in the local areas where the sector operates.
7. Rubber latex markets are volatile.
8. There is considerable, and likely growing market demand for rubberwood products. Rubberwood could provide significant income for Lao rubber growers and an opportunity for domestic wood processors to value add to this resource.
9. The potential contribution of rubberwood to producers and nationally, has not been quantified, and its value is not widely understood by key stakeholders in Laos. Rubberwood represents a potentially significant sector on its own and an important source of income to growers and for state revenue.
10. Some of the earliest rubber plantations are already being harvested, and this will increase as trees mature, with rubberwood becoming available to industry at scale in around 2030-2035. Without incentive to replant, the area of rubber plantations could start to decline quickly in around 2040.
11. Investment in research into the quality, quantity, and long-term supply of rubberwood, processing technology and market development are needed now so that the opportunity to value-add is not missed.
12. The diverse ownership arrangements for rubber plantations will pose challenges for demonstrating legality and sustainability of both timber and latex. It is difficult to differentiate between owning trees for the purpose of tapping latex and outright ownership giving rights to harvest and sell trees for wood.

13. Lack of regulatory clarity, including on land and production agreements, and tree ownership could result in conflicts over benefit sharing when the opportunity for harvesting rubberwood arises.
14. There are several international organisations involved in setting standards, advocacy, and research in the rubber sector. However, Laos is not a member of any of these organisations.

Recommendations

A. The Government, together with the private sector should decide quickly if they wish to have a high-performing, sustainable, long-term, and locally beneficial rubber sector, and develop the right policies to support this. To enable this, a review of rubber concessions and contracts should be expedited, producing clear actions for investors and government authorities to resolve outstanding issues, followed by a resolution of the moratorium.

B. There is a need to develop a consolidated spatial database of information about rubber plantations in Laos including on concessions, leases, contract-farms, and farmer-owned plantations. A strategic field inventory of existing rubber plantations should be undertaken by the Department of Forestry with partners, for the purpose of estimating wood volume, and long-term rubber latex and rubberwood supply. This could inform strategic planning for the sector.

C. To capture the value of rubberwood within Laos, geographically strategic primary processing, with targeted investment by the industry within rubber-growing provinces is needed, and this represents a good opportunity to value add to the tree crop within Laos. There are good opportunities for participation by small and medium enterprises.

D. Rubberwood processing infrastructure and skills are needed in Laos. Skills and technology are already available in the National University of Laos and industry training centres and these could be expanded. This could be aided by a targeted study tour of rubberwood processing in China/Viet Nam/Thailand for Lao Government agencies, research and industry representatives with subsequent information dissemination to smallholders.

E. Further research is needed to better understand the properties and quality of Lao rubberwood and to establish niche products that are regionally competitive. This could be catalysed through partnerships between wood processors, the National University of Laos Faculty of Forestry, The Ministry of Industry and Commerce, NAFRI's Rubber Research Institute and donors.

F. Market research in demand for rubberwood, particularly for niche products, in neighbouring countries, should occur.

G. Communication materials are needed to inform rubber growers, wood processors, manufacturers, and the government of the potential value of rubber plantations for rubberwood.

H. Rubber plantations and rubberwood must be adequately addressed in the Lao-European Union (EU) Voluntary Partnership Agreement (VPA) and Laos' Timber Legality Assurance System (TLAS).

I. An integrated rubber sector plan including latex and rubberwood industry development should be developed– targeting existing rubber growing provinces, strategically engaging with the private sector and strengthening the role of the newly established Lao Rubber Association as a focal point for connecting growers, industry and the government.

Introduction

The global rubber (*Hevea brasiliensis*) plantation estate totals about 13 million (M) hectares (ha) in the humid tropics (Fern 2018). The main product, natural rubber latex, is used widely in many sectors, but predominantly by the automotive, aviation and healthcare industries. In addition to latex, harvesting and replanting old plantations produces rubberwood which is, arguably the world's most widely traded tropical hardwood used for sawn wood, furniture, and veneer products. About 90% of the world's natural rubber is produced in Asia[1]; an estimated 11 million hectares of the global estate are managed by several million smallholders whose production comprises about 80% of the global supply of natural rubber. The remainder is under the ownership or control of companies.

Studies on rubber in Laos have largely focussed on the processes and consequences of land allocation and the impacts of the different relationships between the State, investors, and local people. To a lesser extent the history and international context, and some environmental and social impacts have also been investigated. While the question of the sustainability of natural rubber latex production is gaining attention from the perspective of market drivers and consumer consciousness,[2] the role and contribution of rubberwood as a final commodity has been largely unresearched in the country, and this has a range of implications including understanding the full value of the tree crop and with respect to timber legality. Policies have been based on incomplete evidence. This study starts to address this deficit by examining on interactions along the entire rubber value chain focussing the four themes of land, labour, latex, and wood. We consider the role of smallholders, contract farmers and foreign investors in the sector, most of whom come from China and Viet Nam.

This research was initiated by the ACIAR project *Advancing enhanced wood manufacturing industries in Laos and Australia* ("VALTIP3"), which is being undertaken jointly by Melbourne University, the National University of Laos (NUoL) Faculty of Forestry, and Australian National University (ANU) in collaboration with Lao partner organisations such as the Department of Forestry (DOF) and Ministry of Industry and Commerce (MOIC).

This study was conducted in collaboration with Forest Trends, with support from Norad.

The VALTIP3 project supports the development of innovative wood processing industries to enhance markets for planted timber resources within Lao PDR and Australia. Opportunities from the three main plantations types in Laos – teak, eucalypt and rubber - are being explored through the following questions:

- What are the principal value chains for Laos' plantation resources?
- What are the key elements of the policy, governance and administrative environments that constrain the development of plantation forests and value-adding to their products, and what are the most important and promising pathways for policy change to address these?
- What are the barriers that prevent small and medium plantation-based enterprises in Laos from investing and developing new technologies, and how can they be rectified?
- What are the major impediments to resource availability for domestic processing, and how might they be addressed?

To answer these questions, we addressed the following:

- What is area of rubber is planted in Laos?
- Who owns rubber trees and plantations?
- Who will have the right to harvest and sell rubber trees for wood?
- How much rubberwood will there be?
- What are the markets for rubberwood and latex?
- What policies and regulations exist for rubber plantations and products?
- How has the legality of rubberwood been considered by Laos and consumer countries?

[1] International Rubber Study Group, http://www.rubberstudy.com/welcome

[2] See, for example Mighty Earth http://www.mightyearth.org/, The Global Platform for Sustainable Natural Rubber (GPSNR - https://www.gpsnr.org/) and the International Rubber Study Group's Sustainable Natural Rubber Initiative (SNR –i) http://snr-i.org/

Research Methods

Literature review and legal/policy analysis

A review of literature, policies and regulations was undertaken. Our analysis of policies and regulations draws extensively on outputs and observations from this project (Smith et al. 2018) and from two other ACIAR projects undertaken on Laos on plantations and plantation policy (Smith 2014, Smith 2016, Smith, Ling and Boer 2017, Smith et al. 2017a; Smith et al. 2017b, Ling et al. 2018). Other sources included Lu's work on rubber in Laos (Lu 2017, Lu and Schönweger 2019) and the Forestry Legality Compendium (Smith and Alounsavath 2015 compiled for Pro-FLEGT).

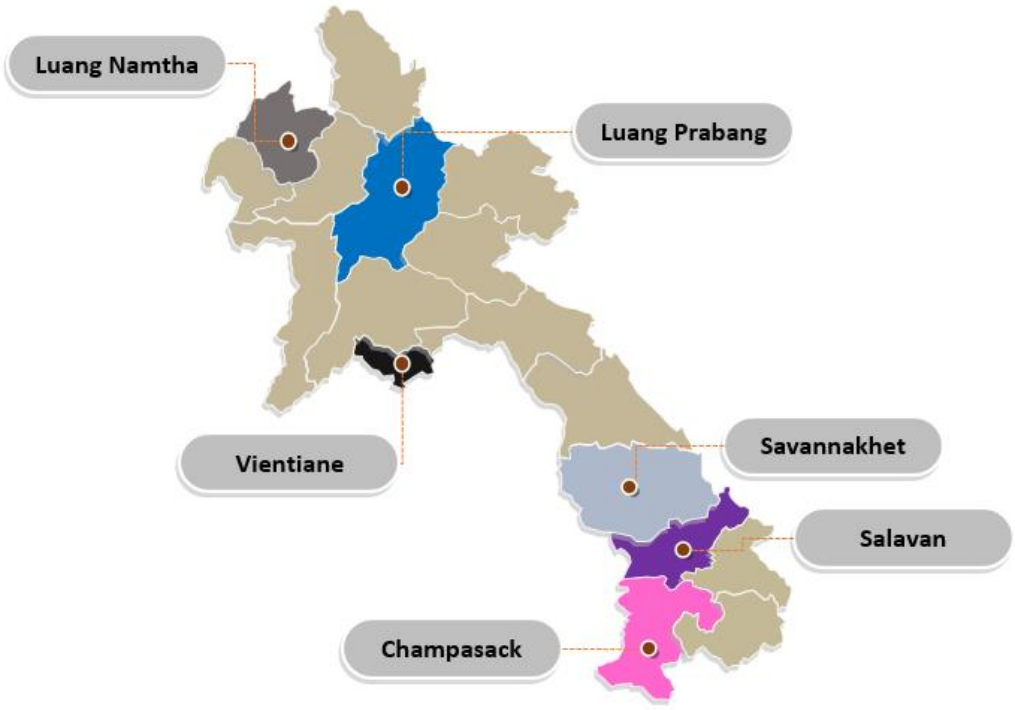
Further policy and regulatory analysis followed the identification of specific sources relevant to the rubber sector, and land and agriculture policy in Laos. These were accessed through the Lao Gazette, the Lao Trade Portal, and other online portals, as well as directly through government offices, other projects, and companies (e.g. with respect to contracts). A broader review of literature relevant to this research utilised significant repositories of reports and information held in LaoFAB which holds over 1000 documents referring to 'rubber', as well peer reviewed journal articles.

Key informant interviews

In June-December 2019 Interviews were undertaken with stakeholders from Government organisations at national, provincial, district and village levels, other institutions, rubber growing and latex and wood processing companies, non-government organisations (NGOs) and rubber farmers. The names of individuals and companies interviewed have been kept confidential through generic titles (Company A, Company B, Village A etc).

Study areas in Laos were Vientiane Capital City, Luang Prabang Province (Xieng Ngern and Nambak Districts), Luang Namtha Province (Namtha and Sing Districts), Champasack Province (Pakse, Bachiang and Sanasomboun Districts), Savannakhet Province (Phin, Nong and Sepon Districts) and Salavan Province (Figure 1). A visit was also made to the Xishuangbanna Region in China. Field research was planned for case study areas in Viet Nam, however due to travel restrictions imposed in early 2020 (due to COIVID19) this was not possible. A list of interviewees is provided in Appendix 1.

Figure 1: Research Locations



Value Chain Analysis

Value chain assessment methods were adopted for this study. Snowball sampling, which is a non-probability sampling technique, was initially proposed to identify influential actors from growers to processors and to end market consumers (where possible). This approach was utilised in similar studies undertaken by this project for teak (Smith et al. 2018) and *Eucalyptus* (Ling et al. 2020, forthcoming). However, due to the nascent and limited rubberwood value chains in Laos, snowball sampling was found to be ineffective and instead strategic geographic areas with well-established rubber plantations, and actors operating in those areas were identified through key informants. Rubber companies were identified through investigation of national databases and past research connections established by Lu and To. Within villages, interviewees were identified by village authorities based on information we provided about desired traits, for example, we explained that we wanted to interview rubber growers both with and with-out contracts with companies. Semi-structured interviews and field observations were used to gather the data for analysis. We interviewed rubber plantation growers, rubber latex traders and processors, and wood processors. For interviews with households, responses were recorded by handwritten notes utilising an open format – on large paper, visible to all participants – sometimes written in Laos and sometimes in English (Figure 2, photo: Lu).

Interviews were undertaken in Lao and translated into English.

Figure 2: Village interviews in Luang Prabang Province

Research Findings

We present our research findings and recommendations generally, and with an emphasis on four key themes: land, labour, latex, and wood.

Key observations

1. The policy position with respect to the rubber sector is unclear, due mainly to an extended moratorium on rubber concessions.
2. Administrative complexities within and between government ministries and agencies confuses decision making and creates uncertainties for investors.
3. Rubber plantations are by far the largest plantation type, by area, in Laos, covering approximately 275,000 ha, or 58% of the total area of planted forest. Rubber has been planted by farmers, through contracts between farmers and companies and under concessions from the government. Concessions have been granted on over 210,700 ha of which only 128,800 ha have been planted, 120,000 ha of contract farms have been approved with 68,000 ha planted and there are 78,000 ha in rubber smallholdings. Detailed information about these investments is limited, hindering long term and strategic planning for the sector.
4. Rubber has been planted though-out Laos, with concentrations in the north, the centre, and the south. In Northern Laos, smallholder and contract farming are common, while in the centre and south investments are dominantly concession-based. The main foreign investors are from China and Vietnam.
5. Approximately 44% of rubber plantations mature enough to be harvested for latex. Natural rubber latex is a significant and established industry sector with important socio-economic contributions, nationally and in the local areas where the sector operates.
6. Rubber latex markets are volatile but there is some resilience within the production system.
7. There is considerable, and likely growing market demand for rubberwood products. At the prices currently being paid in China and Viet Nam, rubberwood could provide considerable income for Lao rubber growers and an opportunity for domestic wood processors.
8. The potential contribution of rubberwood has not been quantified, and its value is not widely understood by key stakeholders in Laos. Rubberwood represents a potentially significant sector on its own and an important source of income to growers and for state revenue.
9. Some of the earliest rubber plantations are already being harvested, and this will increase as trees mature, with rubberwood becoming available to industry at scale in around 2030-2035. Without incentive to replant, the area of rubber plantations could start to decline quickly in around 2040.
10. Investment in research into the quality, quantity, and long-term supply of rubberwood, technology and market development are needed now so that the opportunity to value -add is not missed.
11. The diverse ownership arrangements for rubber plantations will pose challenges for demonstrating legality and sustainability of both timber and latex. It is difficult to differentiate between owning trees for the purpose of tapping latex and outright ownership giving rights to harvest and sell trees.
12. Lack of regulatory clarity, including in land and production agreements, and tree ownership could impact benefit sharing when the opportunity for harvesting rubberwood arises.
13. There are several international organisations involved in advocacy and research in the rubber sector. However, Laos is not a member of these.

General Findings

1. There is a significant body of research on rubber in Laos, but this has neglected rubberwood. As such, there is limited country specific information on which to base policies or investment decisions.
2. Early Laos policies focussed on promoting sedentary agriculture and planting trees, developing land markets, and enabling concessions and land rental arrangements. There has been little