



Rubber Expansion and Forest Protection in Vietnam

To Xuan Phuc & Tran Huu Nghi







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June, 2014

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Publisher:	Tropenbos International Viet Nam			
Copyright:	©2014 Tropenbos International Viet Nam and Forest Trends			
Citation:	To Xuan Phuc and Tran Huu Nghi. 2014. Rubber Expansion and Forest Protection in Vietnam. Hue, Viet Nam.			
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Acknowledgements

Forest conversion to rubber plantation, along with its implications for REDD + implementation in Vietnam, was the theme that the "Private participation in REDD+ processes" sub-working group of the Vietnam REDD network introduced at the network's annual meeting in 2012. The author group highly appreciates and wishes to express their gratitude for the valuable contributions and technical assistance of: Professor, Dr. Nguyen Ngoc Lung; Dr. Pham Xuan Phuong; Dr. Pham Minh Thoa; Mr. Tran Le Huy; Mr. Phan Dinh Nha; and other specialists. Our special thanks are also extended to: many of the Eahleo district officials of Dak Lak province; Eahleo Rubber Company; and the households and workers of the Company for providing essential information for the report. The authors would also like to express their sincere gratitude to Dr. Roderick Zagt (Tropenbos International), for his valuable support in revising the report.

The report was made possible with the financial assistance of the UK Department for International Development (DFID), the Norwegian Agency for Development Cooperation (NORAD), and Tropenbos International . This financial assistance was utilized by Forest Trends (USA) and Tropenbos International (Netherlands) in Vietnam.

The viewpoints expressed in the report are those of the authors only and do not necessarily reflect the positions of the various organizations where the authors work or those of the organizations which have provided financial assistance for the report.

List of acronyms

ASEAN	Association of Southeast Asian Nations
CODE	Consultancy on Development Institute
DARD	Department of Agriculture and Rural Development
DFID	Department of Agriculture and Rural Development
UK	Department for International Development
DGIS	International Cooperation Department of the Dutch Ministry of Foreign Affairs
DPC	District People's Committee
FLEGT	Forest Law Enforcement, Governance, and Trade
FPIC	Free, Prior, and Informed Consent
FSSP	Forest Sector Support Partnership
GDLA	General Department of Land Administration
Laos PDR	Laos People's Democratic Republic
MARD	Ministry of Agriculture and Rural Development
MOF	Ministry of Finance
MONRE	Ministry of Natural Resources and Environment
MPI	Ministry of Planning and Investment
NORAD	Norwegian Agency for Development Cooperation
PPC	Provincial People's Committee
REDD	Reduced Emissions from Deforestation and forest Degradation
SFE	State Forest Enterprise
VNFOREST	Vietnam Administration of Forestry
VND	Vietnamese Dong
VPA	Voluntary Partnership Agreement

Executive Summary

"Rubber Plantation Development and Natural Forest Protection in Vietnam" provides an in-depth analysis of the impacts of the expansion of rubber plantation in Vietnam during recent years. The report targets the two major cultivation regions of the Central Highlands and the Northwest which have experienced the most rapid expansion of rubber plantation area. The report also highlights the impact of rubber development on forest resources, household livelihoods, and communities as a whole, noting the socio-economic and cultural impacts in areas where rubber plantations have expanded. The rubber sector development strategy to 2015 and vision to 2050, approved by the Prime Minister in 2009, seeks to increase Vietnam's rubber plantation area to 800,000 ha by 2020, producing a total volume of 1.2 million tons of latex and earning approximately 2 billion USD in export revenue. Presently, statistical data on area, output volume, and total export value have significantly exceeded projected figures. There are a number of reasons for this failure, in particular the fact that potential economic benefits from future latex exports need to be taken into greater account.

The report highlights the fact that expansion of the rubber plantation area has had substantial impacts on forest resources. In the Central Highlands, as much as 79% of the new rubber plantations were established on natural forestland not necessarily classified as poor forests; the conversion of natural forest to rubber plantation was perpetrated not only by rubber companies but also with the favor of certain local government bodies. The estimated 397,879 m3 of timber that was savagely harvested during this conversion process by more than 200 projects in the Central Highlands could only partially reflect the true volume of harvested timber. In Vietnam's Northwest, the expansion of rubber plantations has and continues to encroach on forests which are directly managed by communities.

Expansion of rubber plantations in regions with suitable climatic and site conditions could bring great benefit to rubber companies, while local populations typically do not share in the benefits that current rubber development models provide. Economic benefits are less secure in regions without suitable conditions: local populations have invested their land and labor to rubber plantation development at the expense of valuable livelihood and food security contributions from agriculture. Households and communities face great economic risk under current development models, not to mention facing social conflict between households within communities, between neighboring communities, or between local populations and rubber companies. The conversion of community forests to rubber plantations does not only narrow traditional community space but also deprives household rights to forest resources.

The Government of Vietnam has identified the conversion of forests to plantations of industrial crops such as rubber as one of the five drivers of deforestation and degradation in the country. Presently, Vietnam is actively participating in various international initiatives such as the Reducing Emissions from Deforestation and Forest Degradation (REDD+) and Forest Law Enforcement, Governance, and Trade (FLEGT) programmes. The implementation of these commitments requires Vietnam to establish and effectively operate mechanisms that address drivers of deforestation and degradation, including the drivers of natural forest conversion for rubber plantation. To achieve this objective, the government must strengthen the inspection and supervision of the appraisal, approval, and implementation processes for forest conversion projects. Companies with a license to convert forestland to rubber plantations must be obliged not only to comply with basic regulations on environmental impact assessment but must also conduct wider consultation processes with local communities. In other words, the government is advised to consider and apply FPIC (Free, Prior, and Informed Consent) to all projects which convert forestland to rubber plantations. In this way, all communities will be thoroughly consulted before firms are licensed for forest conversion. Forest governance should be intensified through close and effective collaboration between the forestry and rubber sectors as well as between the various vertical levels of each sector.



Introduction

1

Vietnam has become the world's leading exporter of natural rubber latex. By the end of 2012, the country's rubber plantation area accounted for 910,500 ha. This total continues to expand, not only domestically but also due to expansion of Vietnamese rubber companies in neighboring countries such as the Laos PDR and Cambodia. The current area exceeds the target of 800,000 ha clearly stated in the country's rubber development strategy to2020, approved by the Government of Vietnam in 2009. Presently, more than 80% of the latex produced is processed for export. China is the largest market and annually consumes more than 40% of the latex exported from Vietnam. In 2012 alone, Vietnam exported more than 1 million tons – more than 2 billion USD in export value (Ngo Kinh Luan, 2013). Exportoriented natural latex processing has become a key industry, contributing substantially to national revenue in recent years.

Revenues from latex export are driving fundamental changes in forest and forestland resources and affect the livelihoods of thousands of forest dependent households. This report aims to analyze the impacts of the expansion of rubber plantation area in recent years with an emphasis on, firstly, impacts on forest resources – What are the impacts of the expansion of rubber plantation area in recent years on forest resources? Secondly, economic impacts – What are the economic benefits of the expansion of rubber plantation area provided to different stakeholders, in particular for households that contributed their land to rubber companies for expansion of rubber plantation expansion on the socio-cultural impacts – What are the impacts of rubber plantation expansion on the socio-cultural conditions of affected households and communities?

The Central Highlands and the Northwest have faced the most rapid expansion of rubber plantation area in recent years. By the end of 2012, the total rubber plantation area in the Central Highlands had increased to 234,602 ha (Ministry of Agriculture and Rural Development). In 2007, the total rubber plantation area in the 3 Northwestern provinces of Son La, Dien Bien, and Lai Chau accounted for only 70 ha; by 2012, the rubber plantation area of these 3 provinces increased to 19,118 ha (MARD, 2013). The rubber plantation area

1

in these regions is expected to continue to increase.

This report notes that rubber plantation expansion has had substantial impacts on forest resources and the economic, social, and cultural conditions in the a fore mentioned two regions. The Government of Vietnam encourages the development of rubber plantations on degraded forest lands, non-forested land, and low-productivity agricultural areas, but this policy has not been seriously enforced in some areas. Data from the five Central Highlands provinces shows that about 79% of the expanded rubber plantation area was converted from natural forest and that this area was not necessarily classified as degraded forest. The following figure of timber harvested proved that the converted forestland was not always degraded forest (see more detailed in series of investigation newspapers in footnote¹) Some 400,000 m3 of timber were harvested from almost 700,000 ha of natural forest allocated by local governments in the Central Highlands to more than 200 rubber plantation development projects in the period 2007-2012(MARD, 2012). The timber volume actually harvested during the conversion process significantly exceeds this statistical figure. In the Northwest – where the Government does not prioritize rubber expansion – plantations that were developed were not well-planned and came at the cost of existing community forests (Nguyen Cong Thao et al., 2013).

There is some doubt over the economic benefits that rubber trees can realistically provide to the growers especially in regions where soil and climatic conditions are not exactly suitable for rubber development such as the Northwest. The rubber trees planted in recent years have not yet reached their harvesting age so their economic value is not ensured. Additionally, in some locations in the Northwest, rubber plantations established on the agricultural production land of farming households have eliminated a source of livelihood and food security. The decline in agricultural production land due to the expansion of rubber plantations has intensified and will continue to intensify pressure on forest resources as households may encroach on forestland for their cultivation needs.

Mass development of rubber plantations could potentially result in market risks. Export prices for rubber latex in 2013 dropped 50% below those of 2012. Some rubber producing

¹ A number of recent news articles have discussed the deforestation problems accompanying rubber expansion, such as <u>this one</u> in Tuổi Trẻ news. Sai Gon Liberation (Sài gòn Giải phóng) also published a series of reports (<u>Part 1</u>, <u>Part 2</u>).

households suffered as product prices could not compensate for production costs². Currently, global rubber latex supply exceeds demand (Ngo Kinh Luan, 2013). Rubber plantation expansion could provide employment opportunities to local populations in certain locations, but its economic benefits are not ensured.

The reduction of natural forest area due to the expansion of rubber plantations has brought social and cultural impacts to local populations whose livelihoods largely depend on forest resources. In some locations, conflicts have emerged among household members, between different communities, and between households that have contributed land to rubber companies (Nguyen Cong Thao et al., 2013). Expansion of rubber plantations into community forests does not only threaten an important livelihood source for local households but also negatively impacts a community's local traditions and culture.

Currently, Vietnam is actively participating in the implementation of REDD+ and FLEGT initiatives. One of the fundamental purposes of these initiatives is to introduce workable mechanisms that effectively manage and protect the residual forest resources of the country. The Government has noted that the conversion of forests to plantations of industrial crops such as rubber is one of the five main drivers of deforestation and degradation in Vietnam (MARD, 2010; UNREDD, 2011). This report contributes essential information regarding the effects of rubber plantation expansion on the implementation of REDD+ and FLEGT initiatives in the future.

The report has utilized various sources of primary and secondary data. Secondary data includes data on forest and forestland resources from the Vietnam Administration of Forestry (VNFOREST) and the General Department of Land Administration (GDLA) as well as technical reports from consulting organizations operating in areas of rubber production, processing, and export. The report also references articles from relevant press publications. Additionally, the authors have collected and analyzed Government policies related to development of rubber plantations in various provinces. Primary data was collected by the authors through field surveys in Gia Lai and Dak Lak provinces in late April 2013. During field

² For more detailed information on this issue, please visit Caosu.net articles <u>here</u> and <u>here</u>. In Thailand, decreasing prices for rubber latex and resulting economic losses provoked recent demonstrations by rubber plantation owners, as described by <u>Fox News</u> and <u>The Bangkok Post</u>.

visits, the authors held a number of meetings and exchanges in order to have crosscheck collected information with forestry and land administration agencies at provincial, district, and commune levels and with some state-owned and private rubber companies, including meetings with managers and employees who were working in these companies. Additionally, the author group also conducted interviews with some households in the locations where new rubber plantations recently expanded, including self-invested rubber planting households and households that did not own rubber plantations. The objectives of the interviews are collect more insight information from different actors involved in rubber expansion in the region.

This report is divided into seven sections. The introduction is followed by a second section that describes global expansion of the natural latex market and the impacts of market expansion on latex production and export in Vietnam. Section 3 provides analysis of some Government policies which directly impact rubber plantation expansion in Vietnam. Section 4 presents the current situation of rubber plantation expansion in the Central Highlands and the Northwest where rubber plantation area is expanding most rapidly. Section 5 provides an analysis of some existing rubber development models with a strong emphasis on the strengths and constraints of each model. Section 6 discusses the impacts of rubber plantation expansion and targets three major aspects including impacts on forest resources and economic, social, and cultural dynamics. Section 7 offers conclusions and summarizes key contents highlighted in the report; it also discusses the implications of rubber expansion on the REDD+ and FLEGT processes in Vietnam.

2 Rubber latex export markets and Vietnam's position

Ngo Kinh Luan's "Natural Rubber Industry in 2013" report offers an overall picture of the world rubber latex market and Vietnam's specific position. According to the author, total global natural rubber volume in 2012 increased almost 4% compared to that of 2011, with an output of 11.4 million tons and consumption of 10.9 million tons leaving a surplus of almost 0.5 million tons. Latex supplied by four Southeast Asian nations accounted for 87% of total global export volume: Thailand led with 2.8 million tons followed by Indonesia (2.45 million tons), Malaysia (1.31 million tons), and Vietnam (1.02 million tons).

In 2012, Vietnam produced a total volume of 863,600 tons of rubber latex and was ranked as the fifth among rubber-producing countries in terms of output volume. The same year, Vietnam exported 1.02 million tons,336,000 tons more than the total domestic production volume, 25% more than the export volume in 2011. The total export value was 2.85 billion USD, 11.7% more than that in 2011. Latex export volume exceeds domestic production volume due to the fact that Vietnam imports latex from more than 40 countries: major import partners include Cambodia, Thailand, Myanmar, South Korea, and the Laos PDR. The total value of the latex imported to Vietnam in 2012 was 803 million USD.

China, the USA, and India are the three largest rubber latex consumption markets in the world, consuming almost 60% of the world's total latex production volume annually. China alone consumes about a third of the rubber latex produced annually, accounting for 25% of the value of global imports.

The world's rubber plantation area increases at rate of 3% per year. In 2012, rubber plantations covered 9.56 million ha with an average productivity of 1.14 ton/ha. By the end of 2012, Vietnam's plantations accounted for 910,500 ha of this total. Vietnam became the world's fifth-greatest rubber producer in terms of plantation area in 2011, behind Indonesia (3.46 million ha), Thailand (2.76 million ha), China (1.07 million ha), and Malaysia (1.05 million ha).

Currently, almost 56% of Vietnam's rubber plantations are in production. Unlike Indonesia

and Malaysia where most rubber is grown in small scale plantations (93% of total rubber area in Malaysia and 85% in Indonesia), the ratio of small and large scale rubber plantations in Vietnam is relatively balanced (49.3% are small scale and 44.3% are large scale plantations). ³ In the future, the expansion of rubber areas will mainly focus on development of large scale rubber plantations.

In Vietnam, regions with the largest rubber plantation area include the Southeast which accounts for 46.5% of the total rubber plantation area of the country, followed by the Central Highlands (27.7%). Provinces with the largest rubber plantation area include Binh Phuoc (22%), Tay Ninh (10%), and Binh Duong (18%). The Central Highlands, however, are experiencing the most rapid growth. This results from the enforcement of Decision 750/QD-TTg by the Prime Minister which approved the Rubber Plantation Development Strategy to 2020. Today, Gia Lai has become the key location for rubber plantation expansion with total area accounting for 12% of the total rubber plantation area of the country. Dak Lak has also emerged as a province of considerable rubber plantation area with 4% of the total rubber plantation area of the country in 2012.

Although the Government approved the National Rubber Plantation Development Strategy to 2020 with the goal of stabilizing rubber plantation area at 800,000 ha, current plantation area exceeds this target and continues to increase. Before analyzing the reasons for this overshoot, the following section provides an analysis of some major government policies and regulations concerning the expansion of rubber plantations.

³ The remaining rubber plantation area is privately invested. The information provided in the report does not indicate that this area is categorized as small or large scale plantations.

3 Relevant major policies

One of the major policies related to rubber plantation expansion is Decision 750/QD-TTg, issued by the Prime Minister on June 3, 2009 to approve the rubber development master plan to 2015 with vision to 2020. The primary goal of the Strategy is to "exploit and intensify the efficiency and advantages of land resources and natural conditions in some locations for sustainable development, "the Strategy makes it legal to "establish new rubber plantations on unproductive agricultural land and degraded natural forestlands which are suitable to rubber trees." Some key targets of the Strategy include:

- By 2010: Continue to establish 70,000 ha of new rubber plantations to increase the country's total rubber plantation area to 650,000 ha.
- By 2015: Continue to establish 150,000 ha of new rubber plantations to increase the country's total rubber plantation area to 800,000 ha.
- By 2020: Maintain the country's total rubber plantations at a stable area of 800,000 ha.

Table1. Some fundamental orientations for future rubber plantation development

Year	Total area (ha)	Total volume (mill. ton)	Total export value (bill. USD)
2010	650,000	10.8	1.6
2015	800,000	1.1	1.8
2020	800,000	1.2	2.0

Source: Decision 750/QĐ-TTg

According to the Strategy, ideal land resources for the development of rubber plantations include unproductive agricultural land, unused land, and land converted from degraded natural forestland suitable for the ecological demands of rubber trees. Table 2 provides a summary of the orientations for rubber plantation development by ecological regions to 2020 as stated in the Strategy from the Prime Minister Decision 750/QĐ-TTg.

Region	Newly established plantation area (ha)	Stabilized area (ha)	Major land resources
Southeast	25,000	390,000	Unproductive agricultural land, degraded natural production forests
Central Highlands	95,000-100,000	280,000	Unproductive agricultural land, degraded natural production forests
South Central Coastal	10,000-15,000	40,000	Unproductive agricultural land, degraded natural production forests
North Central	20,000	80,000	Unproductive agricultural land
Northwest	Determined by local governments	50,000	No specific regulations; spontaneous and unplanned rubber plantation expansion is not encouraged

Table2. Orientations for rubber plantation development by ecological regions to 2020

Source: Decision 750/QĐ-TTg

To translate these orientations on specific actions on the ground, Decision 750/TTg specifies that: "Provincial people's committees, etc. develop the rubber plantation development master plans at the provincial level and submit to competent authorities for approval; allocate or lease land and grant land user rights certificates to organizations, households and individuals to establish rubber plantations in accordance with land specific legislations and regulations." For forestland resources planned to be converted to rubber plantations, the Decision emphasizes: "Provincial people's committees, etc. provide directions to implement the conversion process in accordance with legislations and regulations on forest protection and development and other relevant laws." Regarding conversion of agricultural land for rubber expansion, the Decision clearly states: "For production lands which are being cultivated by farmer households: households within the project sites are encouraged to lease their lands or contribute capital through the values of their land user rights to rubber companies and laborers of working age employed to work for these companies." Regarding consumption markets, the Decision stipulates: "Rubber companies shall sign farming contracts with organizations and rubber producers and ensure to purchase all products at mutually beneficial prices."

The approval of the Strategy has opened opportunities for many provinces, in particular provinces located in the Central Highlands region to expand their rubber plantations.

Within one to two years of the Strategy's approval, plantation area in provinces such as Gia Lai, Dak Lak, and Kon Tum had rapidly increased. Although not prioritized as key areas for rubber development, Northwestern provinces such as Son La, Dien Bien, and Lai Chau rapidly expanded rubber stocks. With the expectation that rubber trees could provide considerable benefits, provinces without explicit planning such as Lao Cai and Yen Bai allowed some forestland to be converted to rubber plantation. ⁴ The majority of these newly-established plantations are large-scale, developed by state-owned or private rubber companies.

According to the Strategy, land for rubber expansion is to be mobilized from two major sources: unproductive agricultural lands and degraded natural production forests. Prior to promulgation of the Strategy, the Government issued important policies which enabled the execution of the Strategy. Specifically, MARD issued Decision 2855/BNN-KHCN dated 17 September, 2008 that declared rubber a multiple-use tree. The Decision enables provinces to remove bottlenecks in administrative procedures for developing land for rubber plantation for example it was not allowed to convert natural forest to other crop without decision from central government approval, or the rubber plantation project must be based on the master plan of the regional land use planning, etc... Circular 127/2008/TT-BNN dated 31 December 2008 provided guidance on how to plant rubber trees on forestland, with the following conditions:

- Rubber plantations established on forestland must follow the rubber development master plans as approved by Provincial People's Committees.
- Forestland planned for conversion to rubber plantations must be ensured to meet certain standards and be suitable for the ecological and growth characteristics of rubber trees and must achieve high efficiency.
- Environmental impact assessments must be conducted as specified in Decree 21/2008/ NÐ-CP

The standards specified by Circular 127 required that rubber trees shall only be planted

⁴ Information regarding rubber plantation development in the Laos PDR may be referenced <u>here</u>. For detailed information on the rubber plantation development in Yen Bai province, please access <u>Agricultural News (Nông nghiệp)</u>.

in locations below 700m above sea level, and in the northern uplands, below 600m. Regarding conversion from forestland, Circular 127requires selection of:

- Bare land slated for planting of production forest
- Unproductive plantation production forest
- Degraded natural production forest, with the following stipulations:

- For provinces in the Central Highlands: evergreen broad leaved and semi-deciduous forest with average stand density below 110m3/ha; mixed timber bamboo forest with average stand density below65m3 /ha; deciduous forest with average stand density below 50m3/ha

- For provinces in the Northern Uplands: evergreen broad leaved forest with average stand density below 75m3/ha; mixed timber bamboo forest with average stand density below 40m3/ha

Circular 127 specifies a conversion process of forestland to rubber plantation: based on the rubber plantation development master plan, investment owners select professional consulting organizations to carry out surveys on land availability, site conditions, and forest stock; rubber plantation projects are elaborated and dossiers prepared for harvest design and salvage of forest products; and the Department of Agriculture and Rural development (DARD) submits these relevant documentations to the Provincial People's Committee (PPC) for approval. After the projects have been approved, DARD will issue a harvesting license for forest products to forest owners (there can be different ones, Forest companies, Rubber investors, etc.).

In some regions, the Central Highlands in particular, the conversion of forestland to rubber plantation has caused problems. According to news agencies and various studies, the conversion process taking place at local levels has not complied with Government regulations and there are signs of policy abuse by timber harvesters. ⁵ Additionally, it is generally assumed that there are loop-holes in policies regarding forest conversion for

⁵ Discussion of major problems that emerged from conversion of forestland to rubber plantations can be accessed via <u>The Pioneer (Tiền Phong)</u>, Saigon Liberation (Sài gòn Giải phóng) (<u>Part 1</u>, <u>Part 2</u>), <u>Lam Sinh Rubber Company</u>, and the <u>Communist Journal</u>.

⁶ Viewpoints of scientists on policy abuse during the conversion process can be referenced here.

plantations that enable policy abuse during the enforcement process. ⁶ For example, the criteria to classify poor forest is merely based on volume of trees (with diameter >8cm) less than 100m3/ha not pay any attention to the biodiversity, protection functions, etc. The decision of converting natural forest less than 200 ha is authorized to the provincial level instead of central level approval like in the past. This authority was leading to a lot of mistake in implementation at the local level without proper monitoring from central level. During the period 2008-2009, MARD issued some new circulars seeking to tighten control of this forestland conversion process, especially in the Central Highlands. These included Circular 58/2009/TT-BNNPTNT, issued by MARD on 9 September, 2009 to replace Circular 127. This Circular provided guidance on rubber planting on agricultural land. Circular 58 specifies that forestland slated for conversion to rubber plantation must meet be one of the following:

- Non-forested land slated for planting of production forest
- Forested land consisting of plantation production forests
- Forested land consisting of natural production bamboo forest

• Forested land consisting of natural timber production forest, including poor timber forest, un-stocked forest, or poor mixed-timber bamboo forest, with specific criteria as follow:

- Poor timber forests with average stand density of 10-100 m3/ha

- Un-stocked timber forest with average diameter below 8cm and with average stand density below10 m3/ha

- Poor mixed timber and bamboo forest with average stand density below65 m3/ha

Compared to Circular 127, Circular 58 provides stricter regulations on forestland subject to conversion for rubber plantations. It also does not distinguish between land in the Central Highlands and Northern Uplands. However, these regulations based on timber density run the risk of allowing regenerating forests to be converted to rubber plantations as recovering forests will have a lower density. Additionally, the two circulars provide only technical guidance without taking into account the socio-cultural concerns of local communities. In the case of Son La province for example, a number of community forests were converted

to rubber plantations (see Nguyen Cong Thao et al., 2013). These problems will be analyzed in the subsequent sections of the report.

The rapid expansion of rubber plantations has ignored the government-approved master plan set forth in the Rubber Development Strategy to 2015 and the vision to 2020. While the economic benefits of these plantations are unclear and not yet available, their rapid expansion has put great pressure on forest resources. Because the suitable land for rubber is not available anymore in the region. Thus, if provinces want to have new rubber plantation, they definitely have to convert natural forestland to rubber plantation. These impacts have been noted by a number of press agencies.⁷ According to a report by the Central Inspection Committee covering 2011-2012, there were 7,432 violation cases of forest law in the Central Highlands and contiguous locations. 1,527 cases of illegal logging resulted in 1,015 ha of forest cleared – 54% of the total illegal logging violations nationwide. A total of 81 organizations and 165 individuals committed infringement violations. The mass conversion of forest to rubber plantations has resulted in serious deforestation in some provinces. In response, the Prime Minister issued Instruction 1685/CT-TTg dated 27 September, 2011 with the primary goal to "strengthen the directions for implementing forest protection measures, preventing deforestation and resistance against law enforcement." Box 1 outlines basic issues related to the conversion of forestland to rubber plantations that Instruction 1685 regulates.

Box 1. Some basic contents of Instruction 1685/CT-TTg

Conducts reviews and assessments on the implementation outcomes of forest conversion projects and land use changes approved by competent government authorities since 2006. Reclaims forest and forestland from projects that violate legislation or projects that fail to comply with approved planning measures, especially the objective of engaging local populations in implementation of project activities, etc. Strictly and legally sanctions organizations and individuals

⁷ Major newspapers such as <u>The Pioneer (Tiền Phong)</u>, <u>The Youth (Thanh Niên)</u>, <u>Saigon Liberation (Sài gòn Giải phóng</u>), and <u>CAND online</u> assessed the negative impacts of rubber plantation expansion on forests.

who abuse the policy on restoration and conversion of degraded forests for individual benefits. Temporarily suspends permit surveys or approval of new investment projects involving agro-forestry production development on natural forestland until reviews and assessments on implementation outcomes are completed, submitted to MARD for synthesis, and forwarded to the Prime Minister for consideration.

Reviews forest and forestland areas managed and utilized by state forest enterprises and forest companies to develop specific plans and solutions to improve structure, management, utilization, business, and production by recommending better management policies and mechanisms.

Quickly reviews forest and forestland areas managed by Commune People's Committees (CPC) to allocate land for lease to organizations, households, individuals, and communities in accordance with prevailing legislations and regulations.

Source: Instruction 1685/CT-TTg

In implementing the measures of Instruction 1685, some provinces – in particular those in the Central Highlands – have decided to cease licensing new projects related to forest conversion. MARD established fact-finding missions to assess the conversion process of forest to rubber plantations in some provinces, including those in the Central Highlands and Northwest. Based on the survey findings, MARD compiled 2 evaluation reports, including Report 1374/BC-BNN-TT dated 24 April, 2013 on the "Current situation of rubber plantation expansion in Northwestern provinces." The report also highlighted the current state of rubber plantation expansion in provinces of the Central Highlands ⁸.

One noteworthy recommendation in both MARD reports is to increase future rubber plantation area in the Northwest to 100,000 ha rather than the 50,000 ha called for in the original Strategy. The reasons for this recommendation was based on suggestions from the

⁸ The authors of this report can only reference the draft report from the fact finding mission under Decision 2216 by MARD. This report was prepared in 2012.

provinces, and central government not on the scientific research/survey. Additionally, line ministries also proposed that the Government allow continued forest conversion to rubber plantations in the Central Highlands, albeit with stricter control mechanisms. In report No. 1374, MARD proposed that the Prime Minister adjust the master plan to increase the current rubber plantation target for the Northwest of 50,000 ha to a new one of 100,000 ha. This overlapped with the proposal of the Vietnam Rubber Corporation that the Government increase rubber plantation area nationwide to 1 million ha in the future (according to Ngo Kim Luan, 2013).

Though Instruction 1685/CT-TTg restricted the substantial conversion of forestland to rubber plantations in the Central Highlands, other provinces that were not selected for rubber expansion continue to allow forest conversion. This has been reflected in a series of articles in the Vietnam's Agricultural News (Nông nghiệp) from 13-15 February, 2012. In order to address the problem of massive and unplanned rubber plantation expansion, the Government Office sent Document No 1039/VPCP-TH dated 22 February, 2012 to MARD. The Document stated that:" some provinces such as Thanh Hoa, Hoa Binh, and Ha Giang, which were not chosen for the rubber plantation development master plan in the Northern Uplands region, have executed trial and mass planting of rubber trees on a vast area in the past few years. Unsuitable site and climatic conditions have resulted in a low survival rate for the rubber trees; even if they survive, they do not produce sap or even if they do produce, they offer only low sap productivity. This has resulted in the wastefulness of natural resources, labor, and financial resources of enterprises, local populations, etc." In this regard, the Document conveys directions of Deputy Prime Minister Hoang Trung Hai to request that" MARD inspect the situation and, if occurring as suggested, measures shall be undertaken to tackle the problem and report to the Prime Minister." Forest conversion, however, continues to take place in some provinces.⁹ Section 4 will analyze the current situation of rubber expansion in the two key regions of the Central Highlands and the Northwest.

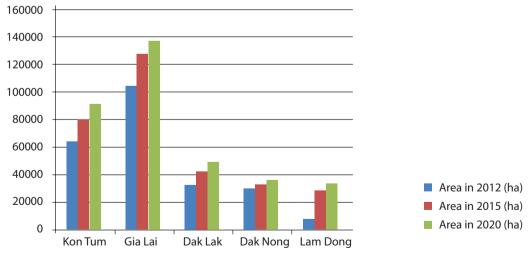
⁹ The situation was noted in some news sources: <u>Saigon Liberation (Sài gòn Giải phóng)</u>, Yen Bai <u>(One, Two)</u>, and <u>The</u> <u>Pioneer (Tiền Phong)</u>.

4

Forest conversion to rubber plantations in the Central Highlands and Northwest

4.1 Forest conversion to rubber plantations in the Central Highlands ¹⁰

According to the rubber development strategy to 2015 and the vision to 2020, approved by Decision 750/QD-TTg of the Prime Minister, as many as 90,000-100,000 ha of rubber plantations were to be established in the Central Highlands – bringing the total rubber plantation area of the region to 280,000 ha. During implementation of the Strategy, some problems emerged. In early October 2012, MARD sent a fact-finding mission to inspect and review the forestland area of provinces in the Central Highlands. The results showed that the actual rubber plantation area far exceeded the planned coverage. Additionally, according to the master plans of several provinces, rubber plantation area in the region was to continue increasing into the future. By 2015, the total rubber plantation area in the Central Highlands will increase to 305,416 ha; by 2020 this figure will reach 343,893 ha. This amount significantly exceeds the target of 280,000 ha that was set forth in the original development Strategy. The rubber expansion trends of the same Central Highlands provinces are compared in Figure 1.

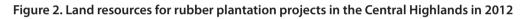


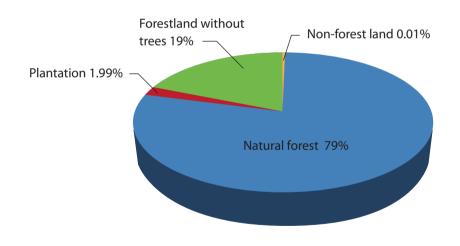
Source:MARD fact-finding mission report, 2012

¹⁰ This section derives data from report No 1374/BC-BNN-TT dated 24th April, 2013 of MARD on rubber plantation in North-West provinces.

Compared to the area indicated in the national Strategy, the actual rubber plantation area in the Central Highlands in 2012 reached 83.8% of the planned area for 2020. The estimated rubber area in 2015 is expected to exceed by 9% and 22.8% respectively the targets set forth in the master plan for 2015 and 2020.

Rubber plantations in the Central Highland provinces are almost all developed on a large scale. In other words, rubber plantations have mainly been developed by rubber companies (both state-owned and private) ¹¹ that apply for land allocation and invest in large plantations. According to the fact-finding mission report, Central Highland provinces approved a total of 227 projects by the end of 2012 with a total area of 116,136 ha. About 79% of this area – equivalent to around 92,000 ha – is natural forestland classified as poor forest. The residual area is degraded forest(19%) and plantation forest (1.99%). Non-forest land used for rubber plantations is insignificant (0.01%). Figure 2 presents land resources recently used for rubber plantations in Central Highland provinces.





Source: MARD fact-finding mission report, 2012

¹¹ This report does not have exact data on the number of state-owned and private projects that were approved.

Region	Number of projects	Total allocated land (ha), including (1-2-3)	(1) Natural forestland area (ha)	(2) Degraded forest- land (ha)	(3) Other land (ha)
Kon Tum	56	39,133	29,405	9,605	122
Gia Lai	52	35,462	28,831	3,746	221
Dak Lak	30	19,227	14,975	4,252	0
Dak Nong	36	9,748	5,695	4,053	0
Lam Dong	53	12,566	12,483	83	0
Total	227	116,136	91,389	21,739	344

Table 3. Rubber development projects in Central Highland provinces to 2020

Source: MARD fact-finding mission report, 2012

On average, each rubber plantation project is allocated 511 ha of land, of which natural forest accounts for 402 ha with the residual area being degraded forestland. According to the MARD fact-finding mission, 205 projects had been implemented, accounting for 90% of the projects already licensed. 86,098 ha of rubber plantations were planted, accounting for 74.1% of the total land area which was allocated to rubber plantation projects. A total of 66,838 ha of natural forest were converted, equivalent to 73.1% of the total natural forest area approved for allocation. All of the approved projects have established new rubber plantations (72,480 ha). A total of 397,879 m3 of timber was harvested due to conversion of extant forest to rubber plantations.

In summary, the rubber expansion in the Central Highland provinces has mostly been undertaken by enterprises under the framework of investment projects approved by local governments – these authorities also allocate land and facilitate investment for implementation. Land for rubber expansion is mostly converted from natural forests classified as poor by the government. The argument here is that the total value of so called "poor forest" has not been properly calculated. Only timber was taken into account rather than carbon stock, protection function, erosion prevention, biodiversity value, as well as culture of indigenous people. In the Central Highlands, these areas are mainly managed by state forest enterprises (SFE; officially known as forest companies). To secure these areas,

PPCs reclaimed a portion of these lands from state forest enterprises (SFE) and leased them to rubber companies. This process is different from that of the Northwest which will be described in the following section.

4.2 Rubber plantation development in the Northwest ¹²

Decision 750/QD-TTg of the Prime Minister to approve the national rubber development strategy to 2015 and the vision to 2020 notes that:" it is not recommended to develop spontaneous rubber plantations; appropriate measures should be taken. Based on the efficiency assessment of existing rubber plantations, provinces shall make decisions to develop rubber plantations where there are suitable conditions so that the targeted increase of rubber plantation in the region to 50,000 ha by 2020 may be achieved."

According to reports by the provinces of Son La, Dien Bien, Lai Chau, the total of realized and planned rubber plantations in the three provinces reached 19,707ha by 2012. Most of this is accounted for by large-scale plantations (97%), developed by state-owned rubber companies of the Vietnam Rubber Corporation. Between 2008 and 2012, rubber plantation area in the Northwestern provinces increased by approximately 3,000 ha annually on average. According to the integrated master plan of the three provinces, rubber area is expected to increase to 57,000 ha by 2015, more than 7,500 ha more than the target set by the master plan in Decision 750/QD-TTg.Son La has plans to reach 20,000 ha, Lai Chau 20,000 ha, and Dien Bien 17,500 ha. They are illustrated in the figure 3.

Rubber plantations in the three Northwestern provinces expanded dramatically since 2008. Though the total plantation area of these provinces only covered 70 ha in late 2007(i.e., there was no rubber plantations predating 2007), coverage soared to nearly 3,600 ha in just one year. Son La saw the most rapid increase (more than 2,000 ha 2007-2008) and accounted for 60% of the region's total rubber area. Following Son La, Lai Chau also experienced a

¹² Data in this section was derived from the "Current Situation of Rubber Plantation Development in Provinces of the Northwestern Region" report prepared and submitted by MARD to the Prime Minister in 2013. The report was finalized based on the outcomes of the fact-finding mission led by MARD in collaboration with the Northwestern Steering Committee, Ministry of Planning and Investment (MPI), Ministry of Finance (MOF), Ministry of Natural Resources and Environment (MONRE), and other relevant agencies. The assessment was carried out in the three provinces of Son La, Dien Bien, and Lai Chau in March, 2013.

rapid expansion of rubber plantation area. The growth rate has slowed down in Son La since 2008, whereas Lai Chau and Dien Bien each expanded rapidly until 2010, though slowing since 2011. The reduced rate of rubber expansion reflects the impact of Instruction 1685/CT-TTg by the Prime Minister on strengthening implementation of forest protection measures, prevention of deforestation, and better law enforcement. Figure 3 shows the recent trend of rubber expansion in the three provinces.

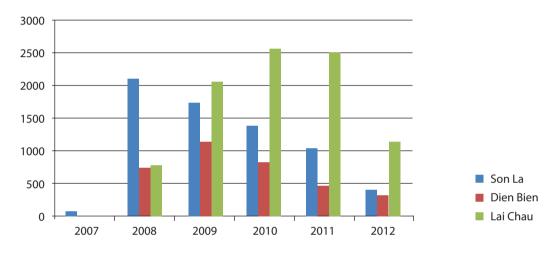


Figure 3. Rate of rubber plantation expansion in three Northwestern provinces

Unlike the Central Highland provinces where most plantations are managed by forest companies, the majority of forestland in the Northwest has been allocated to households under the framework of the forestland allocation (FLA) program. Statistical data released by MARD shows that by the end of 2011, a total of 3.34 million ha of forestland had been allocated to 1.2 million households including households in the Northern Uplands and the Northwest (FSSP, 2010). Land for rubber plantation in the Northwest in recent years was primarily converted from terrace cultivation land, low-productivity land with perennial trees, production forestland, and forestland previously allocated to communities. Collaborative models have been established between rubber companies and the local population in which rubber companies provide all investment capital, seedlings, input materials, and training and commit to purchasing all output products; local populations contribute their

Source: PPCs of Northwestern provinces and the Vietnam Rubber Corporation, based on report No. 1374/BC-BNN-TT by MARD, 2013

land and are employed as workers by the companies. At the end of December 2012, more than 18,000 households in Son La, Dien Bien, and Lai Chau provinces had contributed about 23,000 ha of terrace cultivation land to this cooperative business model. By contributing land to rubber companies, households are prioritized for employment by the companies and are offered a salary and insurance like other official workers. The average labor demand is one worker per 2 ha planted so approximately 36.5% of the households that have contributed lands have a family member employed by the companies. Detailed information on this collaborative model of household land contribution and rubber company support is provided in the report of Nguyen Cong Thao et al. (2013). Table 6describes the current situation of land contribution by the local population for rubber plantation development in the Northwest.

Province	Land area contributed by households (ha)	Number of households contributing land	Local people employed by rubber companies
Son La	6,177	6,786	4,685
Dien Bien	3,474	3,000	266
Lai Chau	13,379	8,379	1,678
Total	23,030	18,165	6,627

Table 4. Current situation	of local population	contributing land	use rights, end of 2012
Tuble In current Situation	or local population	contributing land	ase rights, cha of zorz

Source: Report No 1374/BC-BNN-TT by MARD, 2013

The fact-finding mission that assessed the current situation in the Northwestern provinces recognized good potential for future rubber expansion. In report No. 1374, MARD proposed that the Prime Minister adjust the master plan to increase the current rubber plantation target for the Northwest of 50,000ha to a new one of 100,000 ha. This overlapped with the proposal of the Vietnam Rubber Corporation that the Government increase rubber plantation area nationwide to 1 million ha in the future ¹³.

¹³The Corporation's proposal to increase rubber plantation area nationwide was presented in Ngo Kinh Luan's report (2013).

The assessment results demonstrate that there are several different rubber development models. Section 5 synthesizes major models, provides basic information about related land and labor issues, and analyzes the strengths and weaknesses of each model. Information provided in this section was derived from secondary data sources, expert consultations, and meetings with stakeholders, especially in Eahleo district of Dak Lak province (the Ehleo district is representative for Central Highlands in forest conversion to rubber plantation recently). It should be noted that there are other extant models not presented in Section

5

Some current rubber plantation development models

Rubber plantation development models have been established through different ownership schemes, including: state-owned enterprises; private companies; collaboration between rubber companies (state-owned or private) and land-contributing households; collaboration between state-owned forest companies (aka state forest enterprises) and private companies; and households. These models share a similar feature: the use of forestland or a household's agricultural cultivation land. However, each model has its unique characteristics.

5.1 State-owned company model

Currently, this is practically the only model in the Northwest provinces and is also quite popular in the Central, Southeast and Central Highlands regions. The expansion of rubber plantations in the Northern Uplands comes primarily from investment by Vietnam Rubber Corporation subsidiaries ¹⁴. In Central Vietnam, the Corporation has 20 subsidiaries – of which 17 specialize in latex processing ¹⁵.

In the Central Highlands, there has been fierce competition between state-owned rubber companies and private companies over land resources for rubber plantations. Eahleo Company of Vietnam Rubber Corporation, located in Eahleo district of Dak Lak province, is managing about 6,000 ha of rubber plantations in the district. Most of these plantations were established before 2005 and are now producing raw latex. In recent years, the Company has sought to expand its plantation area. However, implementation has been difficult as the Company is unable to compete for land resources with private companies from outside the district due to higher transaction cost, bureaucratic, and lobby mechanism. In the district where the Company's headquarters are located, 15 companies have been

¹⁴The Vietnam Rubber Corporation has established 5 companies in 3 Northwestern provinces with the task of developing rubber plantations in the region; three companies are located in Lai Chau, one in Dien Bien, and one in Son La province.

¹⁵Among the 20 subsidiaries of the Corporation, three have functions of commerce and timber processing. For further information about Corporation subsidiaries, please visit the Corporation's <u>website</u>.

allocated land for rubber plantations, almost all of them private companies established since 2008. As a result, Eahleo Rubber Company has had to move into other provinces, or even to other countries such as the Laos PDR and Cambodia in search of land resources for rubber plantations.

The district and communal governments consider state-owned rubber companies to be superior to private companies. First, state-owned rubber companies take serious account of government regulations related to land use, taxes, fees, and charges. Additionally, stateowned rubber companies generate far more employment opportunities for the local population than private companies do. State-owned rubber companies also maintain close relationship with local governments. District and communal officers consider stateowned companies to be "local companies". These officers also see state-owned companies as fulfilling corporate social responsibilities better than private companies (for example, providing support for construction of schools, roads, housing for the poor, etc.). An officer of the district agricultural division said that: "Eahleo Rubber Company [a state-owned company] has provided substantial support to the district... about 30% of the Company's workers are locals... private companies did not do this... during the project development phase, they [private companies] committed to employing local laborers, however, during the implementation phase, they considered the local population's poor skills as a reason for not employing the local population." Currently, almost all state-owned rubber companies belong to the Vietnam Rubber Corporation. With about 300,000 ha of rubber plantations nationwide and a plan to increase to 500,000 ha in the future – of which 100,000 ha will be planted in Laos PDR and another 100,000 ha in Cambodia¹⁶ – the Corporation is generating employment for hundreds of thousands of workers.

According to information from some district and communal officers in Eahleo district, the district and communal governments played almost no role in decisions to allocate land to rubber companies. The vice chairman of Eahleo district, who is in charge of agriculture, said that: "local governments [districts and communes] did not know the approach [conversion procedure of forestland to rubber plantations]... the conversion planning for

¹⁶ See detailed information about the Corporation on its <u>webpage</u>.

forestland to rubber plantations was led completely by the provincial government... district and communal governments sometimes were invited to meetings for information and implementation, but they did not have any roles to play in the decision making process..."

Eahleo Rubber Company is located in Eahleo district and has a plan to increase its plantations to 12,000 ha in the future. Although the District People's Committee (DPC) was entirely supportive to the Company's plan to apply for land allocation in the district, the plan appeared unfeasible because the district and communal governments did not have a decisive voice in the conversion of forestland to rubber plantations. The final decision is made at provincial level with consultation from central government in a large scale of forest land conversion. Unable to access land resources in the district, the Company is instead developing rubber plantations in neighboring countries.

According to the reflections of some management officers at the district and communal level, the expansion of rubber plantation which was decided by the PPC without adequate consultation with local governments, has completely disrupted land use planning at the district and communal levels. According to the land use plan of the EahleoDistrict People's Committee (DPC), some of the land located within the district's management boundaries along transport roads and in relatively flat terrain will be used to expand the district's administrative zone and reserve land resources for future expansion of residential area. When making the decision to allocate land to a private rubber company, the PPC delineated and incorporated this entire area into the company concession. The previously-approved district-level land use plan was completely ignored.

Some Eahleo officers assumed that state-owned enterprises are obliged to observe the government's management regulations, fully following all steps in the investment and disbursement procedures, whereas private companies are more self-determined in decisions regarding expenditures. They therefore can more quickly develop their businesses and their decision-making processes are typically faster and more effective than those of state-owned enterprises. This means that private companies often have a competitive advantage over state-owned enterprises in accessing land resources for rubber plantation development.

Unlike the Central Highlands where state-owned enterprises have to compete with private

companies, in the Northwest rubber development is completely undertaken by stateowned enterprises. Private investment has not yet developed in this region. The absence of competition has resulted in a monopoly of state-owned enterprises in accessing land resources.

5.2 Private rubber company model

This model widely exists in the Central Highlands but has not yet been developed in the Northwest. MARD's report noted that by the end of 2012, 227 rubber plantation projects had been approved with a total area of more than 116,000 ha (Table 4). The report, however, did not indicate how many projects were privately invested. According to the information from the Vietnam Rubber Corporation, the total rubber plantation are developed by its subsidiaries (10 companies) in the Central Highlands was about 53,800 ha in 2011¹⁷. The majority of this rubber area was developed before 2008. In other words, land allocated by local governments in the Central Highlands for rubber plantation expansion was mainly allocated to private companies, not state-owned enterprises. This situation was clearly reflected in Eahleo district. Presently, there is only one state-owned rubber enterprise (Eahleo Enterprise) while there are 15 private rubber companies recently allocated land in the district. In Loc Bac district, Lam Dong province, 5,000 ha of land managed by Loc Bac Forestry Company was allocated to 19 private rubber companies (To Xuan Phuc et al., 2013).

In the Central Highlands, land that was allocated to private rubber companies was primarily converted from forestland previously managed by state forest companies. As mentioned in Section 2 of this report, Circular 58 issued by MARD in 2009 specifies conditions and criteria for conversion of forestland to rubber plantations: land must be classified as poor production forest with the average stand density of 10-100 m3/ha, or depleted timber or mixed forest with stand density below 65 m3/ha. In the Northwest provinces, almost all forestland has been allocated to various forest owner groups – households especially. While almost all forestland in the Central Highlands, including production forest, is managed by state forest companies. Land availability for rubber plantation development in the Central

¹⁷See this Vietnam Rubber Group <u>document</u>.

Highlands primarily derives from this source, with 79% of rubber plantation area converted from natural forest. This has resulted in a substantial reduction of the natural forest area managed by forest companies. In Eahleo district, expansion of rubber plantations and residential areas has continually decreased the forestland area managed by Eahleo state forest enterprises, from 27,000 ha in the 1980s to just 8,000 ha in 2012. An extremely rapid decline took place between 2007 and 2012 ¹⁸.

Forestland areas managed by state forest companies have become a priority target for rubber companies seeking to acquire land for rubber plantation due to certain advantages. Firstly, land managed by state forest companies is typically organized into intensive large plots that do not spatially or topographically overlap. This allows rubber developers to reduce costs for land preparations, tending, and latex harvest. Secondly, tenure on land managed by state forest companies is legally clear, as many companies were granted land use rights certificates for their management areas ¹⁹. Additionally, the allocation of land converted from forest managed by forest companies helps private rubber companies significantly reduce time and effort during transactions with local governments at district and communal levels as these local governments not directly manage forest companies. Another important advantage for private rubber companies in receiving land from forest time and effort during transactions with local governments at district and communal levels as these local governments not directly manage forest companies. Another important advantage for private rubber companies in receiving land from forest to obtain land use rights certificates.

While state-owned rubber enterprises in some provinces of the Central Highlands are welcomed by the local populations and district and communal governments, they are not welcomed by private rubber companies. Some officers and local residents assume that private companies can more easily access land than state-owned enterprises thanks to "flexible mechanisms, good relationships with important people, and strong economic potential," as a result, "quick decisions are easily made when needed." ²⁰ These attributes

¹⁸ From an exchange with the state forest enterprise director in April, 2013.

¹⁹ With some forest companies, despite being granted land use rights certificates, land conflicts are still occurring. For further information regarding this particular issue, please see the Land Conflicts between Forest Companies and Local Populations report, published in 2013 by To Xuan Phuc et al.

²⁰These attributes were noted by some local officers during meetings with the authors during field surveys.

are seen as important elements that state-owned enterprises normally lack, making them unable to compete with private companies. This explains why almost all land resources for rubber plantation development in recent years have been allocated to private companies. Private companies do not normally pay attention to local welfare issues such as employment for the local population or contributions to local socio-economic development. The vice chairman of Eahleo DPC reflected that:" During the project development phase [a private rubber company] committed to employing 30% of the local population... when it came to the implementation phase, the company rejected employing local laborers on the pretext that they were unable to meet the company's skill requirements... this ended up with the company employing only a few local workers..."

The priorities offered to private companies by local governments in accessing forestland for rubber plantations have been widely noted by news agencies and government bodies have even been questioned by National Assembly deputies on this issue at public hearings ²¹. In a conference session of the National Assembly, a deputy provided evidence regarding the complaint that provincial governments are preferentially allocating land to private companies: "there are companies established for merely 4 days that were allocated more than 10,000 ha of land." Not all companies that were allocated land invested in rubber plantations: after receiving land, some companies transferred the land to other companies, some even transferring it to state-owned rubber companies ²². The land speculation took place and created a lot of problems on the ground last decade.

5.3 Collaboration between companies and local populations

A collaborative model involving companies and local populations is the most popular model in the Northwest. As mentioned in Section 4.2, in this model the local population offers their land use rights to agricultural cultivation land to state-owned rubber companies, becoming "farmer shareholders."²³ Key features of this collaborative model include:

²¹ Information about queries of National Assembly delegates can be found <u>here</u>.

²² This information was provided by some local officers with whom the authors met during field surveys. It was verified with some forestry sector experts and officers of the Vietnam Rubber Association.

²³ Detailed information on this model is described in the section on land contribution modes (<u>Son La Rubber Company report</u>) and in the aforementioned report by Nguyen Cong Thao et al. (2013).

Contributions by local populations

Contribute user rights to their terrace cultivation land to establish rubber plantations

• Each household typically contributes 0.6-2 ha of their terrace cultivation land

• Value of the contributed land is quantified in cash, with households paid around 10 million VND/ha or business shares equivalent to 8.7% of the total initial investment value of 1 ha of rubber plantation

• Land-contributing households have opportunities for long-term employment by the rubber company

• Households are allowed to inter crop agricultural crops before the rubber canopy closes and/or are supported in cash by rubber companies during the initial planting phase

• When raw latex is harvested, households are distributed profits proportional to any business shares held

Contributions by rubber companies

• Legally allowed to receive the land contributed by households for long-term utilization (50 years) with guaranteed user rights

• In collaboration with local governments, support the completion of the land use rights certificate granting procedure for land plots contributed by households

• Responsible for providing rubber seedlings, planting techniques, input materials, fertilizers, etc. to implement investment activities

• Entitled to enjoy almost all benefits from harvested rubber

Unlike land managed by forest companies, land contributed by local populations is typically fragmented. The data in Table 4 shows that each household in Son La province contributed on average a plot of less than 0.9 ha to rubber companies; in Dien Bien province this figure is 1.13 ha, in Lai Chau 1.6 ha. The average area that each household contributed to rubber companies in these three provinces was 1.3 ha. This area may seem small but is usually the entire cultivation plot a household will own. This directly increases pressure on forest resources as households must acquire new cultivation area while rubber plantations mature to harvesting age (at least 8 years). Even while rubber plantations are producing latex,

households still require some land for agricultural production to ensure their subsistence. Moreover, local populations assume that income from rubber may not be sufficient cover family expenditures. Issues of food security can also arise when rubber latex prices drop or other livelihood disruptions occur.

In order to acquire about 23,000 ha of land for rubber plantations, companies must collaborate with around 18,000 households (See Table 4). Fragmented land holdings increase the transaction costs for the companies. To minimize transaction costs, companies rely on substantial assistance from the local government from provincial down to communal and village levels. This support comes in the form of resolutions issued by the provincial People's Committee or the provincial People's Council ²⁴. Conclusion 139/ KL –TU of the Son La party provincial committee stated that:" [We] agree with the policy of support from the state budget for those who contribute... land use rights to convert other crops to rubber plantations." Local governments can be keen to support rubber expansion as many management officers consider that rubber has considerable potentials for poverty reduction among the local population. Additionally, some are confident that the collaborative model in which local households contribute their plots of land for rubber plantations can potentially address a prevailing "paradox," namely that: "Those who are capable of doing business do not have land; those who have land are not capable of doing business. Farmer households who own small and fragmented plots of land apparently cannot produce a large volume of commodities. Only through land consolidation or land concentration can one produce commercial commodities and meet conditions to merchandise production so as to increase labor productivity and reduce product prices."

²⁴ In Son La province, some important documents include: Resolution No 03-NQ/TU dated 2 November 2010 by the Provincial People's Committee (PPC) on the rubber plantation development program to 2015 (the Resolution clearly states: "strive to plant 10,000 ha by the end of 2012, from 2013-2015 plant 10,000 ha, orientations to 2020, 40,000 ha of rubber plantations will be established in the province"); Resolution No 270/2009-HĐND dated 17 April, 2009 by the PPC on the rubber plantation development policy in the province states some support policies for households that contributed their land rights to Son La Joint Stock Rubber Company; and Decision 2499/QĐ-UBND dated 5 November, 2009 by the PPC on the approval of rubber plantation development master plan in the province for the period 2007-2010 and the vision to 2020.

²⁵ Detailed information about the development view points of the company and relevant policies and mechanisms related to rubber plantation development in Son La province can be found on the company <u>website</u>.

Furthermore," [an approach in which local populations contribute their plots of land] is a truly advanced production collaborative mode... this mode will help promote agricultural production in Son La province to commercial production."²⁵

The problem of redundant labor due to the conversion of cultivation land to rubber plantations has however remained unsolved. Among 18,000 households who contributed their lands to rubber companies, only 6,600 laborers are employed by their partner rubber companies. On average, out of every 2-3 households that contributed land, only one laborer is employed to work for the companies. Since the companies hire just one laborer to tend to each 2 ha of plantation, there is a substantial redundant labor force in the province. Although some companies employ seasonal workers, this employment remains impermanent. This situation continues to cause difficulties for land-contributing households. The unemployment of local people is leading to poverty, social crimes in one hand, and the other hand have pressure on the remaining natural forest protection. The local people often go to forest when they have time, especially lack of agricultural land for cultivation.

5.4 Collaboration between private rubber companies and state forest companies

In some provinces in the Central Highlands, a collaborative model has been established between private rubber companies and state forest companies to develop rubber plantations. In this collaborative model, forest companies contribute land, much like the contribution of capital in the form of shares to joint venture companies. Private companies contribute investment capital, provide techniques, and input materials to implement the projects. In this model, both sides have basic responsibilities and rights as follow:

For forest companies

• Upon approval of the PPC (executive agency), contribute their land to private companies to jointly establish rubber plantations

• Contribute labor to the joint venture, partially addressing the redundant labor problem of forest companies

• When rubber latex is harvested, forest companies are distributed benefits proportional

to their capital contribution in land and labor

For private rubber companies

• Collaborate with forest companies in applying for approval for plantation projects and the conversion of forestland managed by the partner forest company

Contribute capital, material, and techniques for implementation

• Hold the majority of investment capital, thus in charge of management and direction in the joint venture

• When rubber latex is harvested, private companies are entitled to benefits proportional to their capital contribution to the joint venture

Although there are certain advantages in applying for conversion of forestland to rubber plantations, this collaborative model presents certain risks to both sides. For forest companies, risk is likely to arise if the private company increases investment capital in the joint venture while the forest company is not capable of contributing capital ²⁶. This may end up with a forest company losing its right to make decision in the joint venture due to reduced capital contribution. Besides this, forest companies must answer to the laborers – part of their contribution to the joint venture – who require reimbursement for their labor contribution; this can result in a situation where private rubber companies instead begin paying the joint venture workers, turning forest company laborers into their own workers. This directly reduces the capital contribution ratio of forest companies in the joint venture.

For private rubber companies, risks are likely to arise in the future when the Government implements a restructuring of the forest company system nationwide. To date, different options for the restructuring are still being discussed. In other words, the roles and functions of forest companies in the future are still unclear. Entering joint ventures or collaborative models with forest companies in the present context exposes private companies to

²⁶ The current situation of many forest companies, in particular companies that are managing poor forests, is quite gloomy. Many companies, such as the Eahleo Rubber Company, have not had sufficient revenue to pay workers for a long period of time. Most forest companies do not have assets to mortgage; as a result they are unable to access bank loans. For further information, please see "Land conflicts between forest companies and local population," To Xuan Phuc et al.(2013).

potential risks.

Expansion of rubber plantation area is a major policy of the State. Section 6 below presents some impacts of the expansion of rubber plantations on forest resources and other economic, social, and cultural impacts nearby.

6 Impacts of rubber plantation expansion

6.1 Impacts on forest resources

According to the national rubber development strategy to 2020, the expansion of rubber plantations will largely rely on degraded forestland and household cultivation land. The Strategy states that 56% of the land used for rubber expansion will derive from degraded forest; the residual 44% will derive from agricultural land owned by households.

The Government of Vietnam has implicated conversion of forest to industrial crops such as rubber trees as a primary driver of deforestation and forest degradation in Vietnam (MARD 2011, MARD and UNREDD 2010). Rubber plantation expansion in recent years demonstrates that 79% of new rubber plantations in the Central Highlands have been established in former natural forest (see Figure 2 and Table 4). The development of rubber plantations, especially in the Central Highlands, has directly damaged forest resources. It is widely considered that the primary drivers of deforestation are not policies but rather differences in policy enforcement at local levels. Local governments appear overly compliant when licensing rubber plantation projects; the relaxation of land and forestland management by competent authorities and lack of effective inspection and monitoring have enabled some rubber companies to take advantage of loopholes in the forest conversion management - sometimes exploiting forest that was not gualified for conversion at all. In some provinces, the conversion of forest to rubber plantations takes place on a massive scale with little control or even without control at all. This situation has regularly been reflected by domestic news agencies in recent years ²⁷. Instruction No 1685/CT-TTg was issued by the Government in 2011 for strengthening guidelines on forest protection measures and preventing deforestation and resistance against law enforcement officers in some of the most affected provinces. Some of the more destructive forest conversion situations have

²⁷ Major newspapers such as Saigon Liberation (Sài gòn Giải phóng), Agricultural News (Nông nghiệp), and The Youth (Thanh Niên) have published detailed reports reflecting the situation of deforestation for rubber plantations during the period 2009-2011.

been curbed, though in some provinces not originally chosen for plantation expansion, conversion of forest to plantation continues apace ²⁸. In some provinces, upon learning that local governments would allocate land to rubber plantation companies, local populations have themselves encroached on forest to harvest timber and secure land for cultivation ²⁹. This does not only damage forest resources but also provokes land conflicts.

In the Northwest, some forest areas allocated to communities have been converted to rubber plantations and the remaining forest not yet allocated to communities has been degraded, directly affecting local communities' access to valuable forest resources. The conversion of forests to rubber plantations does not only result in deforestation but also directly affects biodiversity (Hoang Minh Ha et al., 2011; MARD and UNREDD, 2020). During a Government public hearing, a National Assembly delegate frankly shared: "We are now establishing 100,000 ha of rubber plantations in the Central Highlands. 60,000 ha of existing forest is to be cleared. Forests preserve biodiversity and they provide tree cover several times better than that of rubber plantations which contain nothing." ³⁰ Additionally, with regard to the capacity of carbon sequestration and storage, Cotter et al. assumed that regenerated forests in Yunnan, China have much greater potential than do rubber plantations.

6.2 Impacts on economic efficiency

With regard to economics, with the current average productivity of 1.8-2.4 ton of raw latex/ha/year and a mean price of 60 million VND/ton, each ha of rubber plantation after deducting production costs can offer a profit of 24 million VND/ha/year. Is this economic efficiency guaranteed, in particular for rubber plantations in locations where climatic and topographic conditions are not favorable for the growth and development of rubber trees?

²⁸ Agricultural News (Nông nghiệp) published a series of articles from 13-15 February, 2012 on the situation of massive conversion of forest to rubber plantations in provinces not chosen for rubber development such as Thanh Hoa, Hoa Binh, and Ha Giang. With regard to this issue, the Government submitted Document No. 1039/VPCP-TH dated 22 February, 2012 to MARD; The Laborer (Người Lao động) published <u>articles</u> on forest depletion in the Central Highlands due to rubber plantations and hydro power. The Pioneer (Tiền Phong) also wrote an <u>article</u> on the rubber deforestation problem.

²⁹ Natural Resources and Environment news (Báo Tài nguyên & Môi trường) published a series of articles reflecting on this issue. Detailed information can be seen <u>here</u>.

³⁰ National Assembly delegate Nguyen Dinh Xuan (Tay Ninh province) <u>questioned</u> the Prime Minister on the conversion of forest to rubber plantations in the Central Highlands.

This question remains unanswered. Some scientific studies show that rubber trees grow well in conditions as follow's (Table 7).

	Minimum	Optical	Maximum
Average temperature (°C)	<20	25-28	34
Precipitation level/ mean evaporation (cm)	150	200-250	400
Cold weather duration (months)	-	-	>3
Light intensity (hour d-1)	3	6	>7
Flooding (days)	-	0	3
Root depth (cm)	>50	>150	-
рН	< 3.5	4-5	>6
Soil carbon concentration (%)	>0.5	>2.5	-
Soil fertility	Low	Very high	-

Table5. Optimal conditions for rubber tree growth

Source: Cotteret al., 2009.

Circular127/2008/TT-BNN providing guidance on planting rubber trees on forestland was issued by MARD on 31 December, 2008. It specifies technical standards for planting rubber trees on forestland, with criteria on land and climate suitable for rubber development including:

• Annual mean temperature from 25-30 °C; no frost in winter; annual mean precipitation above 1,500 mm; few typhoons above Category 8

- Elevation below 700m above sea level (600m for Northern Uplands)
- Surface slope of less than 30°

- Minimum soil layer depth of 0.7m
- Water table deeper than 1.2m and freedom from flooding when raining
- Mechanical composition: from light to heavy clay with good drainage
- Curdling level: rocks mixed within cultivation soil layer< 50%
- Chemical characteristics: humus content of surface soil layer>1.0 %; pHkcl: 4.5-5.5

It is widely understood that some rubber plantations in Vietnam have been developed in locations without suitable climatic and soil conditions and this has likely resulted in risk of plantations producing no latex or at least below expected volume upon reaching harvesting age; economic efficiency is therefore not guaranteed. The problem of high rubber seedling mortality due to unsuitable condition of pedology and hydrology in the Northwest and Northeast from 1998-2009 has increased suspicion regarding the economic benefits rubber can realistically bring in the future. This concern was raised by the Government in the national rubber plantation development strategy – especially for the Northwest: "provinces in the Northwest: it is not advisable to develop rubber plantations in a spontaneous manner." Document No 1039/VPCP-TH dated 22 February, 2012 by the Government was sent to MARD to address the massive development of rubber plantations in provinces that were not chosen for rubber development: "pedologically and climatically unsuitable conditions have resulted in high rubber tree mortality, or even if they survive, they are not likely to produce latex, or if producing latex, the productivity is likely to be low... these end up as a waste of land resources, labor efforts, and financial resources for enterprises and local populations."

For regions where rubber plantations can potentially offer economic returns, an important question is how economic benefits from rubber plantations and have been distributed among relevant stakeholders – in particular the local population and communities where rubber plantations have expanded. Rubber plantation development models as established by state-owned or private rubber companies in the Central Highlands could potentially provide economic benefits to the companies in fulfilling their tax obligations as well as contribution to the local government development. Yet apart from those households with family members employed as workers by the rubber companies, most households are not engaged in this model. In other words, rubber plantation expansion in these provinces is

likely to provide economic benefits only to companies, while the local population does not benefit. Unless the rubber economy derives remarkably general economic growth of which people benefit (directly by employment, and directly by any social welfare). This can only happen when local people have enough agricultural land, and their labors entirely engage to the rubber plantation as well as the rubber's products market is stable. This condition is really challenges for rubber production without long term plan and the sufficient scientific experimentation beforehand.

Collaborative models between companies and local population in the Northwest also provide economic risks to participating households. Foremost, contributing land to company operations reduces cultivation land available to the households and thus an important daily livelihood source. Additionally, redundant labor is a frequent consequence when cultivation land is contributed to rubber development and households often lack an alternative to turn to. This also puts pressure on existing natural forest resources. Rubber companies sometimes employ workers from other provinces, which initiates competition in the local labor market and increases social conflicts or encounter new social evils that have never existed before in this region. Local governments at communal and village levels have found it challenging to prevent and tackle these issues.

The conversion of forest for rubber plantations without proper scientific advice and topdown decision – especially in community forests previously allocated to communities for management such as those in the Northwest – has deprived households of opportunities to access nearby forest resources. Many previous studies have shown that although local communities are not directly involved in forestland management, forest resources play a critical role in household livelihoods. The conversion of forest – in particular forest directly managed by communities – to rubber plantations has changed the pattern of land accessibility from "public ownership to private ownership" as Mr. Nguyen Dinh Xuan, a National Assembly delegate, argues. He feels that the conversion has completely deprived households of the rights of access to community forests. Because, the information of rubber production and its market, benefit, cultivation technique, etc. was not sufficiently provided to the local community. The planning period and implementation process of rubber plantation did not get completely participation and consensus of local community.

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It therefore, lead to over expectation from rubber plantation while challenges and risks have not been seriously analyzed and discussed with local community (Nguyen Cong Thao, et al, 2013).

When households collaborate with companies, they face certain disadvantages; a major problem is accessibility of information, including data related to product consumption markets. This can put household at future risk because they don't have insurant of the crop, secondly almost property was contributed to the rubber plantation. The collaborative relationship is considered to be an economic collaboration, with the companies taking the dominant position, yet households are continually exposed to greater risk associated with prices. The prevailing paradox in the rubber industry is that companies earn giant profits whereas local populations tend to suffer substantial loss. This issue was recently reported on by Great Solidarity (Đại Đoàn Kết) newspaper, suggesting the risk of companies abusing market mechanisms and transferring loss to local populations in order to maximize their own profits.³¹

6.3 Social and cultural impacts of rubber expansion

The conversion of forest to rubber plantations continues to cause social disorder in some regions. In certain provinces, local governments have allocated forestland previously managed by forest companies to private rubber companies, prompting the local population to encroach on forest, illegally harvest timber, and occupy land for cultivation. Land conflicts and degraded forest resources have resulted. This issue has recently been reflected by news agencies (see footnote 30 for a series of articles published in the Natural Resources and Environment newspaper). In Bao Loc district, Lam Dong province, the local government allocated land to rubber companies even though local populations lacked cultivation land; this has not only heightened land conflicts between local communities and rubber companies, but also intensified tension in the relationship between communities and local governments. This problem was discussed in the "Land conflicts between forest companies and local population" report by To Xuan Phuc et al.(2013).

³¹ For detailed information, please visit <u>CafeF</u> business news.

In Son La province, the expansion of rubber plantation into former household cultivation land has delivered negative social impacts. Conflicts have occurred among family members due to the loss of cultivation land to a joint venture; inequity in access to employment with rubber companies also arises ³². The lack of cultivation land has resulted in some households reclaiming the land they had contributed to companies, touching off conflicts between local populations and companies (Nguyen Cong Thao et al., 2013). Lack of cultivation land has also driven some households to encroach on forestland being managed by various actors, including other communities. In short, the consequences are conflicts between local populations and local governments, between neighboring communities, and within communities themselves due to land scarcity and the changes of land use in the region.

The model of land contribution to rubber companies for developing rubber plantations is considered by companies as mechanism of considerable potential benefits for communities and society as a whole: ³³

• Contributing to poverty reduction in remote areas; improving rural infrastructure with new roads and other projects; general community welfare is clearly improved

• Establishing an industrial farmer workforce in rural areas with certain knowledge and skills; contributing to stabilizing social order, national defense, and security – especially rural security

• Contributing to increasing forest cover, ensuring water provision sources, erosion control, flash flood prevention, soil restoration, and environmental improvement

With the existing models, the development of rubber plantations can not only help bring expected benefits but can also expose many potential risks to communities, including cultural, social, and rural security disorders.

³² Nguyen Cong Thao et al. (2013) reflected on this issue in detail.

³³ Detailed information about land contribution options of Son La Rubber Joint Stock Company can be found on the company <u>website</u>.

Conclusion: Rubber development andimplications for REDD+ and FLEGT processes

The National Rubber Plantation Development Strategy to 2015 and the vision to 2020 set the target of stabilizing a rubber plantation area at 800,000 ha and attaining total export value of 2 billion USD/year. These targets have already been overtaken. Rubber plantation area has rapidly increased since 2008, particularly in the Central Highlands and Northwest where the Government explicitly approved expansion. The master plan has been overtaken by reality not just because of massive expansion in various provinces but also due to the development of rubber plantations in provinces not originally slated for rubber development. Over recent years, the growth of plantation area has slowed mainly because the Government has taken steps to enforce compliance of local governments with regulations on allocation of forestland to rubber companies. The conversion of forestland to rubber plantations, however, still takes place in some provinces.

In the period 20027 – 2012, 79% of the new rubber plantations in the central Highlands were converted from natural forestland. This figure should catch the attention of those who are concerned about sustainable management of forest resources. This 79% does not simply reflect the loss of a vast forest area but also points to poor enforcement of policies at local levels. The Strategy requires that local governments: "Establish 150,000 ha of new rubber plantations on unproductive agricultural and unused land, or convert degraded, poor natural forests which are suitable for growth requirements of rubber trees." The 79% figure reflects that the Strategy was not seriously respected or enforced at local levels. The Strategy is was not effective, as hundreds of hectares of natural forest have been converted and monitoring and inspection of the conversion process has not been strictly executed at both national and local levels. This also reflects the generally poor efficacy of forest governance in Vietnam.

Vietnam is actively participating in the REDD+ programme, with the Government committing to introducing effective mechanisms to address drivers of deforestation and forest degradation. The Government's REDD+ readiness report in 2011 noted that forest

conversion for plantations of industrial trees such as rubber was one of the major drivers of deforestation and degradation in Vietnam. For the purpose of effective implementation of REDD+, new and effective mechanisms must improve forest governance. Some potentially workable mechanisms include strengthening monitoring and inspection of the appraisal process and implementation phase of forest conversion projects. Companies which are licensed to convert forestland to rubber plantations should not only be obliged to comply with regulations on environmental impact assessment but must also conduct wider consultation processes with local communities. In other words, the Government should consider the application of Free, Prior, and Informed Consent (FPIC) procedures to all projects which convert forestland to rubber plantations through which local communities may be adequately and widely consulted before companies are licensed to implement forest conversion. On the other word, the FPIC must be conducted properly before projects implementation taking place. Forest governance needs to be strengthened through close and effective vertical and horizontal collaboration. The forestry and agriculture sector needs to collaborate with the rubber industry to ensure harmonization of interests among different sectors. Additionally, collaboration among different agencies at different levels in the same sector also needs to be intensified to avoid a situation where decisions made at higher levels compromise locally-approved plans, as in the case of Eahleo district mentioned in this report.

397,879 m³ is the official estimate for timber volume harvested from 66,838 ha of natural forest during the conversion process by more than 200 rubber plantation projects implemented in the Central Highlands. This figure has many implications, especially to the on-going negotiation process of a Volunteer Partnership Agreement (VPA) under the framework of the EU-FLEGT initiative in Vietnam. The primary goal of FLEGT is to eliminate illegally harvested timbers from the supply chain to European traders and consumers. Under the framework of the FLEGT program, legal timber is defined as that which is produced in compliance with all conditions regarding land use, harvest, transport, processing, and other environmental conditions ³⁴. Timber harvested from natural forest to clear land for rubber plantations is

³⁴ Detailed information about how timber is defined as legal can be referenced in the draft timber legality <u>definition</u>, developed by the FLEGT working group.

known as conversion timber. According to the prevailing regulations of the Government of Vietnam, if operators are involved in harvest, transport, and processing in full compliance with conditions as specified in prevailing legislations, conversion timber may be considered legal timber ³⁵. Whether timber from converted forests is acceptable or not for circulation in the FLEGT supply chain is still being discussed between the Government of Vietnam and the European Union (EU). Moreover, some suggest that the actual timber volume harvested from converted forests has been much greater than the officially published statistics since some rubber plantation projects have abused timber harvested timber along the supply chain, making it quite difficult to control timber legality. This issue also directly undermines the image of Vietnam's export-oriented timber processing and furniture industry – one of its key export industries – in international markets. After all, the question emerges as to whether it's worth sacrificing natural forests for rubber plantations while the benefits and also all the other consequences of rubber plantation expansion for the rural poor – whose daily subsistence largely depends on forest resources – are still far away?

³⁵ Under the framework of FLEGT VPA, the Government is in the consultation process with relevant stakeholders on the timber legality definition (currently draft six). Prevailing regulations associated with the definitions of timber legality can be found <u>here</u>.

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