

A photograph of a large tree trunk in a forest. The tree trunk is the central focus, showing its rough, textured bark. In the bottom right corner, a person's head and shoulders are visible, looking up towards the top of the tree. The background is filled with green foliage and other trees, suggesting a dense forest environment.

LOSS OF RAINFORESTS & LIVELIHOODS IN THE ANNAMITE MOUNTAIN RANGE

**WEAK GOVERNANCE & THE DELIBERATE
EXCLUSION OF LOCAL FOREST PEOPLE LEAVES
CRITICALLY IMPORTANT FOREST UNPROTECTED**

Abstract

The study area, Huong Son, is located in the eastern end of the Annamite Mountains in central Vietnam, between Pu Mat and Vu Quang nature reserves. Huong Son forests were once considered to have high bio-diversity, but collectivization of forest land in the 1960s and resultant over-exploitation by the state forest enterprise (SFE) led to severe damage. At the end of the 1990s various efforts were made to elevate Huong Son's forests' protection status, and reports as late as 1999 showed forests at higher elevations in good condition with signs of regeneration at lower levels. Nevertheless, just over a decade later only a few traces of what was once rich and diverse forest remain. What's left is mainly poor forest, bare land, roads and plantations.

This study asks how this devastating loss occurred, seeking in particular to identify the causes of deforestation since 2005. It also asks how the legal framework, designed to protect important forest, proved ineffective.

The specific objective of this study is to understand the actors and mechanisms in forest governance, planning, protection and management, to understand the gaps in local regulations, their implementation and how different actors can make use of these gaps to by-pass regulations. Based on findings we draw conclusions and make specific recommendations to strengthen the governance of natural resources and particularly forest lands.

The geographical focus in this study is on four upland communes in Huong Son district, Ha Tinh province. We interviewed formally and informally local communities, staff of the SFE and commune and district officials. We made field visits to observe and map forest condition. We have collected and reviewed a wide variety of data from different sources, both official and unofficial. Many documents were simply unavailable, or hidden, and there were many contradictions in data and mapping. We attempted to counter these factors by triangulation. At times, contradictions in maps and figures offered clues or were a source of information in itself and brought us to raise questions we did not foresee, but which were certainly helpful to bring us a step further in understanding local relations and planning and classification mechanisms. The conclusions we have drawn are ones in which we have confidence.

Since collectivization the SFE has had the sole authority to exploit and control almost all natural forests in the district and four studied communes. We found that despite reforms and policies since 1993 to reallocate forests, the enterprise continues to control almost all forests. The logging ban of 1992 appeared to make little difference to the SFE which closed only a 1/3 of forest whilst continuing to exploit the rest. After reopening forests in 2005 SFE had a yearly target to exploit between 3,000 and 7,000m³ in production forests. Our findings suggest that actual logging far exceeded set limits and happened indiscriminately in both production and protection forests.

The SFE has not been acting in the environment or local people's best interests, as it has only allocated bare and exhausted forests to local households, not natural forest they could utilize sustainably for non timber forest products (NTFPs) and protect. The enterprise also refused for long time to return over 9,000ha in Vu Quang Nature Reserve area to the local authorities for allocation to a Protection Management Board. It is reported that during the years of conflict and unclear protection responsibilities, these forests suffered from a lot of illegal logging. The Ngan Pho Forest Management Board (FMB) recently formed by a merger of two smaller Management Boards, also seems unable to prevent illegal exploitation of its forest.

Our exploration of the causes of the inability of these bodies to properly carry out their duties to sustainably harvest timber whilst protecting forest threw up many inter-connecting reasons. Respondents repeatedly mentioned the lack of resources, with these bodies being starved of central funding since the reforms of the 1980s and privatization of the SFE in 1998. It seems that a small number of poorly paid de-motivated staff is unable or unwilling to monitor forests and prevent their illegal exploitation.

Another reason underlying to impoverishing of forests is the centralized nature of the system and flaws in forest inventory mechanisms, resulting in unrealistic targets for exploitation from above.

Targets are unrealistic because they are based on false data, on a picture of rich forest that has not existed for years. Forests are now poor, but are not reported as such. Consequently, if SFE tries to meet production targets, it will enter the last few remaining areas of rich forest. Grand initiatives to involve locals in forest protection fail as they are not accompanied by the necessary resources to carry them out.

Agencies are commonly hired to map and evaluate forests, yet a common criticism is that they paint an unrealistic picture of the forest situation. Huong Son forests have continuously been subject to over-exploitation for several decades, with a particular visibility and speed after 2005, yet officially approved inventories show virtually no change at all. Two reasons are suggested. First, mapping agencies spend a very limited time in the field, with a tiny sample and do not involve locals in the inventory. In addition they use unreliable old maps and general poor detail satellite images. The second suggestion is that the SFE is in fact the problem – that mapping is based on requests of forest owners such as SFE, rather than reality – that they lobby mapping agencies to deliberately over report so they are awarded higher exploitation targets. Likewise negotiation takes place with mapping agencies so that reports allow re-classification of areas for desired land use change or exploitation.

For example, our study found that large areas of natural forests (both production and protection areas) were planned for rubber plantations by the SFE and the Huong Khe Rubber Company. Yet, it is clear that these plans bypass legal provisions, as natural forests can only be converted into other purposes if they are bare land or in a very poor condition. It must be proven that there is no potential to regenerate, clearly not the case in these areas.

All the time, local people and commune authorities are kept in the dark, given no information about classification of forests or intended exploitation plans. Our study looks in some detail at the Nuoc Sot hydro-power scheme and shows how a large area of primary forest was destroyed and feeder roads constructed without proper assessments, and in contradiction to central government planning requirements. An environmental impact assessment (EIA) report was approved by the province in 2007, three years after construction started, and without the knowledge of local authorities. In fact communal authorities were officially informed about plans and reports much later after decisions were already taken and construction had already started. When officially informed local authorities and people reacted strongly and sent rejection letters to the province. Most interestingly it is apparent that the dam does not serve its stated purpose. Local officials pointed out that the rivers supplying the dam's reservoir don't have enough water. This was confirmed by our visit to the hydro-dam site as we observed that both the reservoir and river downstream were nearly dry, despite it being the rainy season. A local informant suggested that the only possible reason for the dam was forest exploitation.

We conclude that the collectivization of forest away from its household owners to poorly managed state bodies is a driving force for deforestation. Forest living people were deprived of their land and livelihoods, and little land has been returned to them for their survival. Without ownership they have no control over or benefit of their forests. This makes people spectators and participants to legal and illegal destruction. At the same time decisions that change forests and landscape irreversibly are taken behind closed doors without considering people's needs and the impacts of these decisions. Yet forest people are dependent on the forest and need to find ways to derive benefits from it. Decisions taken at high level without local participation and approval will inevitably cause conflict. We touch on a couple examples of sustainable management of forests by local people that prove that with local ownership comes responsibility and sustainable planning.

Many questions remain for us at the end of our research. In our study areas illegal logging is ongoing, largely facilitated by several newly constructed roads. One can ask why, how and who took the decision to build a road that cuts right through these strictly protected areas? Or why was it decided to turn Son Hong natural forests into rubber plantations? Who was involved in this decision, which has far reaching consequences for people's present and future? How could the Nuoc Sot hydro-power scheme be approved and construction start, without any local involvement and despite local protests? How come there is such a gap between the proposed project and the actual operations of the hydropower?

It is striking that since 2006 over 20,000ha of forests have changed function from protection into production forests, a relatively significant amount. The findings show that reclassification takes place regularly and without a clear set of objective criteria and guidelines. This is worrying, because it

leads to arbitrary changes in the functions of forests and makes the division between classifications confusing.

The study recommends the allocation of production forest lands to households and ongoing support to them in viable land use techniques. A moratorium on mono-plantations in these areas should be declared until their effectiveness and environmental suitability is properly assessed. Allocation of natural forests to households for protection should be recognized as part of their livelihood strategy and as an effective solution both for forest protection and regeneration. To regenerate important forests all watershed protection areas need to be closed for all kind of activity immediately.

We also recommend an overhaul of current mechanisms for land inventory, forest classification and development and socio economic planning at local level. Mapping, land inventories and assessments need to be performed by properly funded independent agencies. To ensure this independence, they need to be carried out in a participatory way with local communities and officials. Local committees could oversee and approve the exercises. Specific attention should go out to coordination and exchange information around mapping, land inventories and forest classification. Different departments should use the same information and maps as baseline for their planning. Once formulated and officially approved, development plans and forest classification should be taken as the starting point to assess whether investments and other interventions are in line with plans (rather than the present habit of continuously changing plans and forest classification to make them fit proposed investments).

Investments like hydro-dam or rubber plans should be subject to thorough environmental, social and economic impact assessments and to meaningful local consultations before approval. These assessments should be conducted by independent agencies through clear and transparent mechanisms.

Forest classification needs to be based on natural functions and watershed vulnerability rather than a status which changes over time, particularly by human activity. This also means that classification should be fixed and only change under exceptional circumstances. Secondly, there is need for better monitoring so that decisions comply with legal provisions and safeguards for people and nature.



Figure 1: Status of 'natural' forests in Huong Son district, Ha Tinh province.

Table of Contents

PART I: BACKGROUND.....	7
1. Introduction to the Study Area	7
2. Forests, State Enterprises and Settlements from 1955 to 2005.....	7
3. Research Questions and Objectives.....	9
PART II: CHANGES IN CRITICAL WATERSHED FORESTS: LAW VERSUS REALITY	13
1. Son Tay commune in Rao Qua valley	16
2. Son Hong commune in Con River valley	16
3. Son Kim 1 commune in Nuoc Sot valley.....	17
4. Son Kim 2 commune in Rao An valley	18
PART III: FACTORS BEHIND FOREST LOSS.....	20
1. State Forest Enterprises (SFE)	20
2. Unequal Forest Land Allocation.....	22
3. Weak Forest Land Governance	24
4. Powerful Interests.....	28
PART IV: CONCLUSIONS - FACTORS BEHIND FOREST LOSS IN HUONG SON	32
1. State Enterprises and Mismanagement.....	32
2. Weak Forestland Governance.....	32
PART V: RECOMMENDATIONS.....	36
1. Securing livelihoods through allocation of natural forests to local people.....	36
2. Actors and mechanisms for forest planning, development and monitoring.....	36
3. Clarify between production and protection forests and close watershed forest areas exclusively for protection	36
4. Forest-related decisions must be based on clear criteria & guidelines and impacts & feasibility studies	37
References.....	38
ANNEXES	40

List of Tables

Table 1: Compiled overview of critical watershed forests (meant for protection) and the plots that were reclassified into production forests.	12
Table 2: Forest situation in Huong Son district in 2009.....	13
Table 3: Changes of forestland areas through forest reclassification since 1999.....	15
Table 4: Status 2010 of (very) critical watershed areas (details see Annex 4).....	15
Table 5: Forest allocation in Huong Son district.....	23
Table 6: Official reported changes of forestland areas by types of forest in Huong Son 1999-2005 (a contrasting picture with study findings).....	25
Table 7: Summary of environmental impact assessments for Nuoc Sot hydro-power scheme.....	29

List of Figures

Figure 1: Status of 'natural' forests in Huong Son district, Ha Tinh province.....	4
Figure 2: Administrative map of Ha Tinh province.....	7
Figure 3: Forest loss, images showing changes in the (very) critical watershed areas that must be protected for climate and ecological regulation.....	13
Figure 4: Bare hills in Huong Son district.....	14
Figure 5: Song Con area extracted from Timmins et al. 1999.....	17
Figure 6: Rao An area extracted from Timmins et al. 1999.....	18
Figure 7: Illegally operating local wood processor & logs.....	22
Figure 8: Steps and actors involved in forest classification and planning.....	24
Figure 9: Local indigenous species are growing rapidly after secondary forests despite the areas were cleared for rubber in Son Hong commune.....	28
Figure 10: Road cutting through protection forests and facilitate better access.....	28
Figure 11: Huong Son hydropower dam devastating areas of forest.....	30

List of Acronyms

DARD	Provincial Department of Agriculture and Rural Development
HEPA	Human Ecology Practice Area
FIPI	Forest Inventory and Planning Institute
FMB	Forest Management Board
Ha	Hectare
NTFP	Non Forest Timber Products
MARD	Ministry of Agriculture and Rural Development
PC	People's Committee
SFE	State (owned) Forest Enterprise

PART I: BACKGROUND

1. Introduction to the Study Area

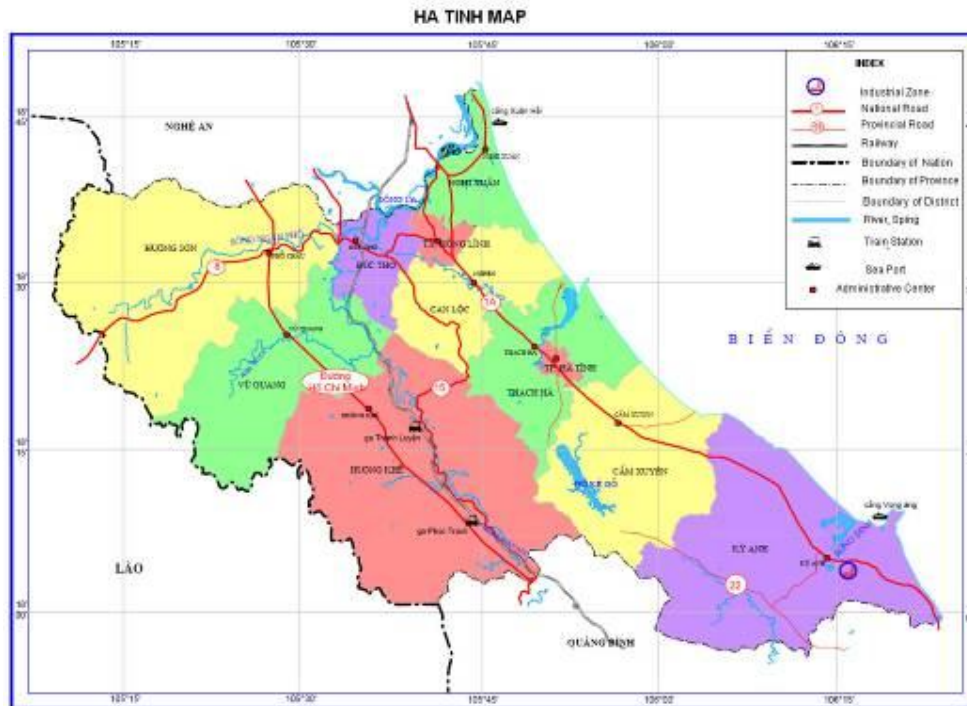


Figure 2: Administrative map of Ha Tinh province.

Huong Son is a district in the north-west of Ha Tinh province bordering Nam Dan district of Nghe An province to its north, Duc Tho district to its east and Vu Quang district to its south-east. It also shares a 57.8km national border with Laos to its west¹. With an area of 110,315ha, Huong Son accounts for 18.3 percent of the total natural area of Ha Tinh province and can be divided into two different areas. First is the western upland area with high steep mountains along the Laos border sloping down to lower mountains and hills of between 500-700m. These hills run further east into the second area being a flat lowland valley of 15m above sea level². This topography and climate has created a rich eco-system characterized by evergreen broad-leafed sub-tropical forests. This area has a dense system of rivers and streams that are relatively short and have small volumes, though they do regularly flood during the rainy season.

Huong Son forests are mostly located in the western part of the district and provide catchment protection for a relatively large area, containing most of the upper catchment of the Ngan Pho River and headwaters of four main rivers, which all run into the Ngan Pho River. Therefore these forests play an important role in the protection and livelihoods of downstream communes.

2. Forests, State Enterprises and Settlements from 1955 to 2005

In the past the western uplands in Huong Son were covered with rich and pristine forests and were thinly populated. From 1955 onwards people from the eastern lowlands started to settle in the uplands and this population movement accelerated in the 1970s from the pressures of war, famine and

¹ Geographically situated 105° 06' 08" to 105° 33' 08" Longitude East / North Longitude 18° 16' 07" to 18° 37' 28"

² In this study we only focus on the western upland communes: Son Kim 1, Son Kim 2, Son Hong and Son Tay where over 80 percent of Huong Son forests are located.

later population growth and land scarcity. In 2012 Huong Son had a population of 130,250 people and 30,135 households spread over thirty communes and two towns.

After regaining its freedom from French colonization, the Vietnam government collectivized all forests under a system of State Forest Enterprises (SFE), giving these entities the sole authority to manage and exploit forests. The Huong Son SFE was established and given authority over around 85,000ha of forests.

Initially the forests were exploited with rudimentary methods like manual labor and buffalo transport, though this has now been supplanted with more advanced technology and equipment. During the early years the exploitation was between 2,000-3,000m³ per annum with the timber mainly used for the building of the railway system from Hanoi to the Northern provinces. With the war against the US and the mobilization of the labor force for combat, between 1965 and 1975 the SFE scaled down its operations. However, after the end of the war Vietnam fell into a deep economic crisis.

This was a period of intense logging by SFEs aiming to assist economic growth, and this went along with necessary road construction to transport the logs. This is one reason why Huong Son is now endowed with a good system of roads that interconnects villages, communes and other districts which has played a significant role in the district's development.

Under this pressure, forests in Huong Son degraded and decreased rapidly. According to official SFE reports between 1985 and 1995 the enterprise exploited between 15,000 and 30,000m³ per year. By 1989 almost all areas along the roads, lower areas and accessible slopes under 800m were heavily degraded or turned into agricultural land, though the forests in higher altitudes were still in a good condition (Timmins et al. 1999). By that time the economy had stabilized and the government called for a national logging ban by Prime Minister Directive 90-CT/03.19.1992. At the same time forest land reforms were launched with the intention of reallocating forests to private actors like households. Shortly afterwards reforestation programs were also launched.

Notwithstanding the logging ban, deforestation continued whilst Huong Son SFE kept control over most natural forests until very recently (elaborated upon in section 3.2.3). Also, despite the national logging ban, only around 1/3 of Huong Son Forests received protection status (17,000ha in Son Hong and 10,000ha already exhausted forests in Son Linh commune), whilst Ha Tinh province authorities granted permission to Huong Son SFE to continue exploitation. Paradoxically, in this period that forests were nationally closed, Huong Son SFE logged the PoMu mountain until it was exhausted, one of the few areas where the valuable '*Fokenia Hodginsi*' was still left.

However the logging ban gave protected forests the chance to recover and several studies in the early 2000s drew positive conclusions about regeneration and the potential of returning Huong Son forests to their original state. In particular, the forests along the border and at higher altitudes were reported to have good heterogeneity, structure, large diameter trees and forest volumes of 250m³ per hectare. Nevertheless these studies also warned that without protection and if the pace of exploitation at that time continued, the long term integrity of the forests was threatened.

Box 1:

Despite the logging that has taken place the Huong Son Forest is still in a reasonable condition over large areas. If left as it is, it would retain considerable importance to wildlife and natural regeneration would undoubtedly restore much of what has been lost. At present the direct effects of logging on forest communities of Huong Son are probably minimal [.....]. But if forests were to deteriorate further the effects on forest communities would become far more substantial. Unfortunately given current trends a steady deterioration is inevitable (Timmins et al 1999:41).

As we show later in this report, what this study predicted became reality. From 2005 onwards forests were re-opened and the deterioration and loss of Huong Son forests continued. Today, the disturbed ecology poses a threat to the surrounding nature reserves and thousands of people living in Huong Son and bordering districts.

3. Research Questions and Objectives

Central questions of this study are:

1. *What are the causes of the severe depletion of Huong Son forests?*
2. *Why is the legal framework which is meant to protect such important ecological forests not effective in Huong Son?*

The specific objective of this study is to understand the actors and mechanisms in forest governance, planning, protection and management, to understand the gaps in local regulations, their implementation and how possibly different actors make use of these gaps to bypass regulations. Based on findings we aim to formulate recommendations to strengthen the governance of natural resources and particularly forest lands.

3.1 Specific Study Questions

1. What was the condition of Huong Son watershed forests before and after 2005?
2. How did forests change and what factors behind these changes?
 - a. How did re-classification of forests in Huong Son take place after 2005?
 - b. Who controls forest lands and what are their roles and responsibilities?
 - c. How did planning, protection and management of forest lands take place after 2005?
 - d. What are gaps in reclassification, planning, protection and management of forest lands and how should these be addressed?
 - e. What are other socio-economic developments or changes in natural resource exploitation? How are these planned and implemented?
 - f. How does forest land and natural resources exploitation relate to forest changes and status?

3.2 Main Concepts and Legal Framework

We first clarify some of the concepts used in this study, as they are outlined in the Vietnamese legal framework related to forest land governance.

Forest Classification - Based on Decision 1171/QD/30.12.1986 and Forest Protection and Development Law 1993, forests are classified into protection, production and special use forests which can all consist of natural forests or plantations and could be with or without tree cover.

Protection forests are exclusively natural forests where exploitation is legally forbidden, because of their important contributions to limit harmful climate factors, to protect the environment and play role in balancing the ecosystem. These forests are further divided into *different protective functions*. In this study we focus on forests with *watershed protection functions* - which regulate the water source and water flows and prevent soil erosion. Based on natural criteria and factors (such as altitude, slope, distance from the river bank, soil characteristics and rainfall intensity) these areas can be ranked according to their urgency for protection as *very critical, critical and less critical* watershed forests. *Very critical* areas require strict protection as they are close to the water source, have an important role in water and soil regulation, are highly threatened by soil erosion, have dense structure and have an evenly distributed coverage above 70 percent. *Critical watershed* areas have a moderate role in water and soil regulation and should have coverage of at least 50 percent equally distributed and here production and protection purposes can be combined. *Less critical watershed* areas have

low soil erosion where there is potential for agro-forestry production and need for soil conservation and at least 30 percent vegetation coverage. When the coverage in watershed areas is lower than prescribed, artificial and natural regeneration measures need to be taken³.

Production Forests are primarily for economic purposes. These can be both natural forests, as planted forests or plantations that are exploited for income generation. In the study area the type of plantations change across communes and over time, varying from industrial acacia or eucalyptus trees, to tea and rubber plantations.

Special Use Forests in Huong Son is the Vu Quang Nature Reserve. We do not include this type of forest in this study because it is managed by a separate set of laws, regulations and governance mechanisms.

Special notice must be made that in 2005 all provincial authorities were called to conduct an inventory to re-classify forests in their areas (Decision 61/2005/QD-BNN by MARD). Subsequently Ha Tinh province hired consultants for this assignment. After this, a period of noticeably rapid decline of Huong Son forests followed. Because of their significant influence, in this study we pay specific attention to the process and outcomes of the inventory and forest reclassification in this period.

3.3 Study Focus and Methodology

The focus in this study is the Huong Son Forests. Administratively over 80 percent of this forest covers four upland communes: *Son Kim 1*, *Son Kim 2*, *Son Hong* and *Son Tay* and remaining forests situated in lowland communes have been already totally lost. Therefore 'Huong Son Forest' in this study refers to the mentioned *four upland communes* and we particularly zoom into river catchment areas with important watershed functions.

Huong Son was selected for this study because it is strategically important as a forest rich area and it shares borders with Laos where valuable forests can still be found. Studying the history and process of forest loss in this particular district offers us insights and lessons on forest governance and the role of different stakeholders in this process. Huong Son is located between important nature reserves in the region and plays a crucial role in regulating the local ecological balance. A disturbance in this balance would affect the lives and livelihoods of many people. In such cases law and policy is clear about the necessity to protect these forests.

Huong Son was also selected because forest loss in this district has been severe, despite legal safeguards, and this raises questions about the legality of various natural resource exploitation activities such as hydro-dam developments, rubber and industrial timber plantations. The border crossing Cau Treo is widely known as a point to transport illegally felled logs from Laos to Vietnamese timber companies and the army. During our field visits we observed a continuous stream of trucks carrying illegal logs, which confirms studies from Environmental Investigation Agency 2011, Forest Trends 2010, and more recently Global Witness 2013. In this context it is relevant to mention that a bordering district south-east of Huong Son has an industrial zone and a port that opens trade routes for timber and rubber to China and Chinese companies. In addition, being a water catchment area with dense systems of rivers and relatively high altitudes makes Huong Son well-suited for hydro-dam development. In the past thirty years, around thirty small and medium hydro-dams have been built in Huong Son, providing electricity both to local communes and as energy to the national grid. All these facts make Huong Son a highly complex but fascinating case to explore.

³ Classification is based on an earlier Regulation for Establishment of Protection Forest in the Watershed Area (1991), Article 5: Specifications: (Class 1a) Bare hills and grass lands where planting trees is permissible, (Class 1b) is an area covered with small bushes and few trees where only selected species can be planted (Class 1c) bare are with scattered trees (Class IV): non-harvested mature forests that can be harvested but strictly in accordance with harvesting designs and plan and ensuring natural regeneration is a must.

Our research and report have been based on diverse sources of information such as:

Official data, maps and reports

- Relevant decisions by District and Provincial authorities
- District and State Enterprise Forest Use Maps
- District and State Enterprise Forestry Planning Maps
- State Enterprise Progress Reports and Forestry Plan
- Provincial and District Forestry Progress Reports and Plan
- Official data on Forest Classification Huong Son 2005 and 2008
- Official data on (Agricultural) Land Inventory and Land Assessments Huong Son 2005
- District / Communal socio-economic Progress Reports
- Rubber Planning and Maps (District and State Enterprise)
- Informal communication
- Formal and informal interviews with local people, SFE staff, commune and district authorities
- Field visits and observations

Internet

- Earlier research reports in Huong Son area and forests
- Grey literature (reports, papers, case studies found on the internet)
- News articles

Given the socio-political context and the sensitivity of the issues, collecting information on the research subject was not straightforward. However we were able to access both formal and informal information as data collection was mainly done by the principal research member who is a resident in Huong Son with years of experience, knowledge and connections in the government system and with locals. Throughout September and November 2012 he collected maps, reports and information through informal talks. Aside from being a rich source of information himself, his seniority and respected position in the commune enabled us the access to data on governance, official reports, maps and plans which would otherwise be hard or even impossible to obtain. He has also been the reason why government officials, key informants, and some local people talked more openly about their problems and local governance issues that are considered as sensitive.

Aside from informal talks and meetings, data was also collected during a week field visit by the research team, conducting formal interviews with village leaders, State Enterprise staff, Forest Management Board, district authorities, a farmers co-operative and various villagers (from different households and different income levels). We also made observations in the villages, the forests, different plantations (tea, rubber, acacia, and eucalyptus) and at a hydro-dam site amidst a nature reserve. Because informants would only speak on basis of anonymity, all names or clues that could reveal their identity are absent in this report, which is also why a list of respondents is not provided.

There are some limitations in data analysis which must be touched upon. Statistics and maps cannot always be trusted to represent reality because of weak local mechanisms to map, classify and distribute forest lands and because of the weak coordination and exchange between different government departments. Consequently we occasionally found contradictions in data. For example, the SFE gave us different plans and figures for rubber plantations as District authorities. . We dealt with these differences by triangulation; comparing and confirming the information from informants,

observations, maps and official reports and decisions. In this study we draw conclusions only after triangulation and being confident about our evidence. Otherwise the information is presented in a more neutral way without making concluding statements and by mentioning the specific source of information or as a statement.

At times, contradictions in maps and figures were considered to be clues or a source of information in itself and brought us to raise questions we did not foresee, but which were helpful to bring us a step further in understanding local relations and planning and classification mechanisms. Another limitation to the data was that despite our relatively good access, some information was still difficult to obtain, such as on rubber plans, hydro-dam development and the formal and informal links between officials and private companies. Due to this limitation in data collection and time constraints, our analysis and reporting on the hydro-dam and rubber plantations is incomplete.

Our conclusions on the quantitative change in watershed forests also require explanation. These numbers are based on a comparison and combination of data on forest plots with forest use maps and qualitative information. In Huong Son, forests are divided into **85 areas** of 800 to 1,000ha. Each area is further divided into **plots** and an amount of **hectares (ha)**. This data is regularly revised through forest inventory and used in official forest classification and planning. Therefore the reports and maps we obtained on forest classification and planning in different years include extensive and detailed annexes outlining the areas/plots/hectares and specifying characteristics of forests in each of these plots. For example details include whether a plot of forest is rich, average or poor, whether it is a plantation, type of trees, and whether it has been recently exploited.

These data has enabled us to do a detailed analysis of forest changes over time, going as far as the level of plots. Then we compared our conclusions with maps and GIS images to confirm or to identify mistakes in administration.

To draw quantitative conclusions on forest change we used different data sources to compile a list per commune of areas and plots (see illustration in Table 1) that were officially classified as protection forests with 'very crucial' or 'crucial' watershed functions before 2005.

Table 1: Compiled overview of critical watershed forests (meant for protection) and the plots that were reclassified into production forests.

<i>District</i>	<i>Commune</i>	<i>(very) critical Watershed Areas</i>	<i>Plot</i>	<i>Hectare</i>	<i>Classification 2005</i>	<i>Classification 2010</i>
Huong Son	Son Hong	1	1	180.5	Protection	Protection
Huong Son	Son Hong	1	2	124.4	Protection	Production
Huong Son	Son Hong	1	3	2.3	Protection	Protection
Huong Son	Son Hong	4	1	161.7	Protection	Production
Huong Son	Son Hong	4	5	9.6	Protection	Production
Huong Son	Son Hong	4	6	2.6	Protection	Production

This data was compared with classification data from 2010. In this way we could identify the amounts, areas and plots that were reclassified into production forest in this period. These findings were tested and confirmed by decisions following ministerial order to re-classify forests in 2008. Some areas which were reclassified after the 2008 decision were compared to official results and reports on forest reclassification added in the annexes. After an overview of reclassified plots and the plots planned for production - we tried to understand the actors and driving forces behind these changes.

In the next chapter we first describe the quantitative and qualitative changes in watershed forests from the 1990s up to 2012, and try to explain these changes. Underlying reasons are elaborated upon in chapter 3 followed by conclusions and recommendations.

PART II: CHANGES IN CRITICAL WATERSHED FORESTS: LAW VERSUS REALITY

This chapter outlines the general changes in Huong Son forests, focusing in particular on watershed areas. Based on official information from 2005, watershed areas classified as (very) critical in Huong Son are mainly located along the border with Laos, and the border with Nghe An Province and some areas in the centre of the district.

A detailed list of these watershed areas and plots is given in Annex 3. The picture below is the western upland area of Huong Son that before 1955 was fully covered with pristine (dark green) forests. The areas bordered by a red line (right picture) indicate the very critical watershed areas, totaling 34,470ha and accounting for 55 percent of the district's natural forests. The dark green indicates areas with rich forests, the light green average forests and the pale green poor forests that have been heavily exploited. The blank and blue colors show the areas totally cleared and bare.

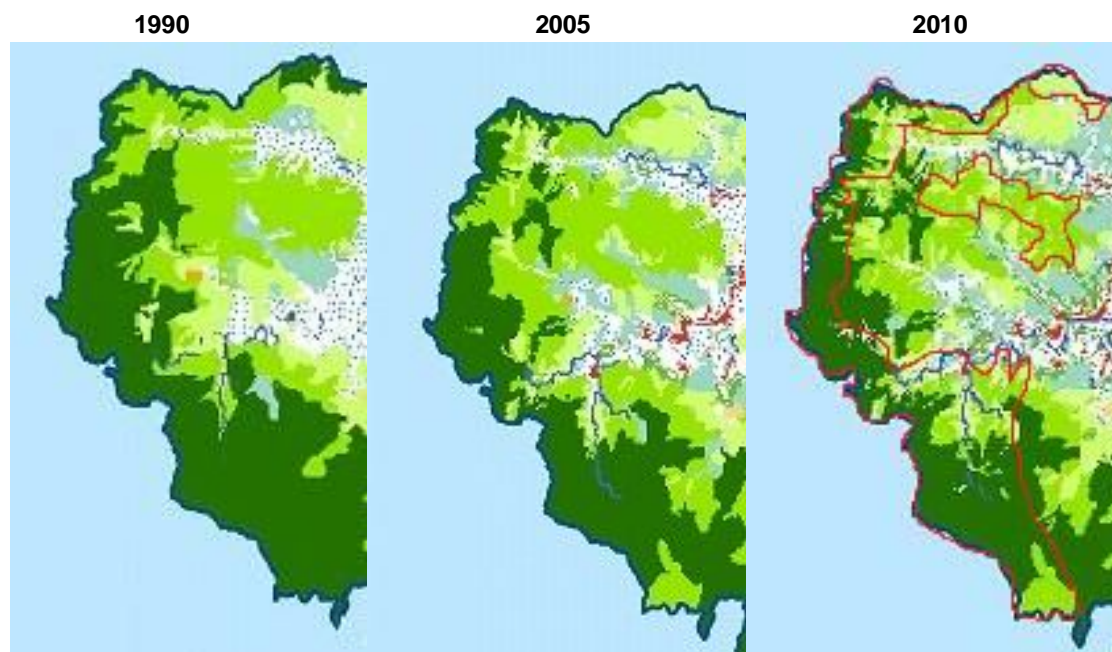


Figure 3: Forest loss, images showing changes in the (very) critical watershed areas that must be protected for climate and ecological regulation.

The first image is of the situation in 1990 during and after intense SFE exploitation and shows the decline in west and central areas. The second image shows that the decline in the period between 1990 and 2005 continued, despite the national call for closing forests. This image shows the increase in poor forests, and the increasing encroachment into rich watershed areas, which are gradually turning into average forest, while some average forests are becoming poor. The same trend can also be seen between 2005 and 2010. The situation in 2009 was reported as follows.

Table 2: Forest situation in Huong Son district in 2009.

<i>Total natural land area</i>	<i>Forestry Land</i>	<i>Plantations</i>	<i>Natural Forests</i>	<i>Rich Natural Forests</i>	<i>Average Natural Forests</i>	<i>Poor and/or recently exploited</i>
110,414.7	84,389.2	12,359	63,894.5	22,098.3	16,766.2	24,844.2
%			100	34.5	26.2	38.8

According to official data in 2009 (about) 34.5 percent of all natural forests were rich, while remaining were average (26.2 percent) and poor or exhausted (38.8 percent). However these figures probably do not reflect reality because they are based on rough estimates and satellite images that show forest coverage rather than other indicators such as forest structure and bio-diversity. The images also do not distinguish between natural and plantation forests. Moreover as we will elaborate upon later on, the quality of the classification process is highly questionable, which complicates the interpretation of the data. Although official figures still refer to certain amount of rich forests, according to local accounts (including local authorities) rich forests can only be found in small amounts on inaccessible mountain slopes along the Laos's border and high in BaMu Mountain. All other natural forests are often referred to as 'empty' by various informants.

Box 2: Look, on the outside these forests look very nice and green. But that is just the color of the leaves; it does not mean anything about forest quality. When you look inside, the forest is empty (a local informant, 2012)



Figure 4: Bare hills in Huong Son district.

Between 1990 up to 2012 also the administrative status of forests changed several times. In 1999 around 52 percent of forests were classified as protection forests, increasing up to 82 percent in 2005 and again reducing to around 50 percent after 2006. Despite these rapid administrative changes in a short period of time, data suggests that most of the watershed areas indicated in Image 2 (above) within redlines (34,470ha) were consistently classified as protection forests. At the same time, as we show below later on, during re-classification some watershed areas, supposedly strictly protected by law, deteriorated severely and underwent administrative changes. Our investigation reveals that considerable amounts of watershed forests were reclassified from protection status into production forests and were planned for exploitation. Our investigation also reveals that such changes often occur based on requests and interests of those who control forests, we elaborate upon this in later sections.

In 2009 a second reclassification took place through which officially 2,537ha of forest were reclassified from protection into production forests⁴. The most recent adjustment has been a Provincial People's Committee Decision (No. 1511/QD/UBND) on 28 May 2012 through which 5,247.4ha of protection forests were reclassified into production, while 2,090ha of production forests were reclassified into protection forests. Considering these changes it is noticeable is that despite the reduced area of watershed areas classified as protection forest, the total amount of officially registered

⁴ Decision 3360/QD/UBND/25.11.2008.

Specific areas and plots reclassified are 16 (7,10), 3(1b,2b), 17 (3a,4a), 36 (3,4,6), 37 (6), 39a (3,5,6), 58 (1,6,8,9)

protection forest remains more or less stable over time. This indicates that forest with less important functions and which are probably already exploited and poor are re-classified as protection forests⁵.

Table 3: Changes of forestland areas through forest reclassification since 1999.

Unit: hectares	1999 ⁶	2006 ⁷	2009 ⁸	2010	Difference 2006 -2010
Forestry Land		83,452		84,416	
Natural Forest Area	62,478	66,583,4	63,894	64,812,6	-1,708,8
Special use forests	9,266.1	9,266.1	9,266	9,266.1	
<i>Natural</i>		9,023	8,944	9,023.31	
<i>Plantation</i>				28.5	
<i>Non Forest</i>				214.5	
Protection Forests	32,499	55,093	34,138	34,155.2	-20,938
<i>Natural</i>		45,305	29,043	28,957.7	-16,347.5
<i>Plantation</i>		5,388.9		3,239.7	-2,149.2
<i>Non Forest</i>		4,399.3		1,920	-4,270.3
Production	24,851	19,530	40,984.9	40,995.6	+21,465
<i>Natural</i>		12,255.1	25,907	26,831.8	+14,576
<i>Plantation</i>		5019.6		8,149	+3,129.4
<i>Non Forest</i>		2,255.5		5,770.8	+3,515

The next table gives an overview of the changes in the (very) critical watershed protection areas, based on our investigation and calculations. This information is based on official reports and maps⁹. However these figures can be considered as the minimum because there are reasons to assume that official data does not reveal the total picture of forest destruction. We touch upon these errors in official mapping and classification in later sections. After the overview in table 3, we give details per commune in coming sections.

Table 4: Status 2010 of (very) critical watershed areas (details see Annex 4).

Commune	Total Forestry area (ha)	(Very) Critical Watershed Forests (ha)	Affected at time of research ¹⁰ (ha) (%of the total	Re-Classified as Production (ha) ¹¹	Converted into plantation (ha)	Additionally under threat or planned for exploitation / converting
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⁵ Some examples we could identify of non-watershed poor forests re-classified as protection: areas 28, 33, 38, 61, 68.

⁶ Forest inventory data by Prime Minister Decision 286 /Tg.

⁷ Document review of three forest types in Ha Tinh, Annex 6

⁸ FIPI (2009) Review and outcomes on 3-types forest classification with Spot 5 images, annex 1

⁹ This information and the details in the Annexes are based on various sources: such as the Report on Outcomes 3 types of Forest Classification Huong Son 2005, approved by Ha Tinh People's Committee / Outcomes 3 types of Forest Classification Huong Son 2010, approved by Ha Tinh People's Committee, official maps on current Situation + plan for Forests / Decision 3360/QD/UBND/25.11.2008 and Decision No.: 1511/QD-UBND on 05.28.2012, and finally qualitative data.

¹⁰ Affected means that forests have been logged to at least some extent and turned average / poor, totally exhausted or converted into mono-plantations. The fourth column specifies the areas converted of the total affected area.

¹¹ In Provincial decision 1150/QD/UBND/28.5.2012 following forest areas that should legally be protected are reclassified into production - 1 (1,2,4a), 16(10), 5(4a), 22(9a), 28(1,2,3), 28, 31(1,45,6,7,8,9), 70(1,2a), 49(3,4,5,7,9), 56(1,2,3,4,7), 50(7,8,9), 33(3,4,5,7,8), 34(4,6), 38(7,8), 39a(1,2,3,4,7,8,9), 72(1,2,3,4,6a,7a,8,9a,10a), 66a (1).

			<i>watershed in the commune)</i>			
Son Hong	17,585	6,964.2 (20.2%)	5,024.9 (72,15%)	2,489.8	106.9	943.4
Son Tay	10,516.7	2,833.1 (8.22%)	1,741.3 (61,46%)	1,744.2	287	-
Son Kim 1	21,267.4	10,847.9 (31.47%)	3,668.2 (33,81%)	859.7	259.2	1,051
Son Kim 2	19,110.1	8,070.8 (23.41%)	2,189 (27,12%)	1,207.3	287.5	-
Others	15,959	5,754.3 (16.7%)	5,754.3 (100%)	-	5754.3 (All bare lands or plantations)	-
Huong Son	84,416	34,470.3 (100%)	18,377(53.31%)	6,301 (18.2%)	6,695(19.4%)	1,994.4 (5.78%)

1. Son Tay commune in Rao Qua valley

Total Loss

Son Tay Commune has a total natural area of 10,591ha which is almost entirely defined as forest land originally covered with forests including 2,833.1ha (26.9 percent) critical watershed areas. Of the four forested communes, Son Tay is visibly the most affected, as nearly all forests have turned into bare lands, poor forests and plantations, including the watershed areas directly at the border with Vu Quang nature reserve. SFE operations started here in 1955 with a period of intensification between 1985 and 1995. By the 1990s all forest areas near national road 8A had turned into scrub and watershed forest were exhausted. Consequently the SFE relocated its operations to other areas. With the re-allocation of poor forests to households after 1993, people converted these into plantations, as this was considered the only way to make these productive. .

At the time of study, of all watershed areas 1,731.6ha were bare lands and the remaining forest areas were surrounded by roads, plantations or planned for rubber. In 2009 when forests were reclassified, 1,744.2ha (61,5 percent) of watershed areas turned officially into production forest. However, despite forest loss and reclassification of watershed areas, the amount of protection forests remains more or less stable (2,689.1ha) with production forests at 6,096ha. Moreover, the plan to protect or regenerate watershed areas seems highly unrealistic given their already damaged status, location near roads and the level of settlement.

2. Son Hong commune in Con River valley

About to be lost

Located in the north-west corner of Huong Son, Son Hong commune has a total natural land area of 18,982ha of which (92.6 percent) were originally classified as forest. Of these forests 6,964.2ha (39.6 percent) are in watershed areas which can be found along the commune's border with Laos and Nghe An province. According to our estimations, at the time of research about 72 percent (5,024.9ha) of these forests have been subject to exploitation and turned average or poor and remaining natural forests are heavily degraded and already turned into scrub. 2,489.8ha (35.75 percent) have been re-classified into production forest and another 943.4ha are under threat for different reasons (details see Annex 4.1).

Exploitation by the SFE in Son Hong started in the 1970's and like other communes intensified between 1985-1995. In the following ten years 17,000ha of forests in Son Hong were closed for exploitation, which allowed for some regeneration. However before fully recovering the forests were re-opened in 2005 by a provincial decision, after a request from the SFE. What followed was a period of rapid decline in forests. In addition, illegal logging by people from Son Hong and surrounding

communes with exhausted forests continued, and according to local accounts also by forestry officials and organized groups.

The construction of roads has enabled access to nearly all forests, with a few exceptions like the high steep areas along the border with Laos. One road was built in 2001 and cuts the commune east-west through the middle. Another road starts at the Nghe An border and runs down south, right next to watershed area, which is now totally exhausted and reclassified as production forest. More recently a secondary road has been constructed that cuts right through the few remaining watershed forest in the north-west corner of the commune. This path starts at the border with Nghe An runs south for about 5km to turn towards the Laos border. In recent district forest use maps signs of exploitation of recently rich watershed forests are visible surrounding this path.

According to several respondents, despite the exploitation, natural forests in Son Hong still have the potential to regenerate naturally because of the good quality of the soil. However, considering forestry plans, this is unlikely to happen. Firstly because 1,800ha of poor and average forests and bare lands have been allocated to the Vietnam Rubber Company, who have already started to clear forests to replace it with rubber. Secondly some areas in the west near the border are planned for SFE exploitation, but the fact that these forests were poor at the time of study suggests that these (294,3ha) will probably be converted into plantations, because that is the only way that the SFE can benefit from these plots within the period planned¹². Zooming into watershed areas also a further decline can be expected as 943.4ha have been reclassified as production forests and planned for SFE exploitation (before year 2020). 410ha of these are poor forests and therefore likely to be converted into plantations. From the few remaining rich plots 112.4ha is planned for exploitation. 6,020ha watershed forests are classified as protection forests but in the coming years these areas are under threat of continuous illegal logging.

Song Con

Three groups were found actively logging in the area, two of the groups were using five or more buffalo and the third an unknown number. Cut logs in piles ready for collection were found as follows: 67 logs, 117 logs, 47 logs. Several other logging trails were seen as well as old campsites. People obviously engaged in logging were seen leaving the village of Doi 7 on two separate dates. Two groups of loggers were seen with snares in their possession, but the remains of only two old snarelines were found. Freshly dead male Red Muntjac *M. muntjak* seen in a village in the lower Song Con valley.

Figure 5: Song Con area extracted from Timmins et al. 1999.

3. Son Kim 1 commune in Nuoc Sot valley

Thin line along the Border

Son Kim 1 commune is in the western part of the district, between the Son Hong and Son Kim 2 communes. Almost the entire natural land area in Son Kim 1 is forest land (21,267ha, equivalent to 94 percent). Of this 10,847ha (i.e. about 31.5 percent) are important watershed areas, mostly along the border with Laos.

The exploitation of timber in Son Kim 1 started after 1986, later than the previous two communes. This is probably the reason why the assessments and studies in 1990s conclude that forests in higher slopes were still in good condition and

Box 3:

Forest coverage in our commune is around 60 percent but all the forests are poor and exhausted (a leader at Son Kim 1 commune)

¹² Area 2 (plot 7) and Area 3 (plots 1a, 1b, 4 and 5) together 294,3ha planned for SFE exploitation.

the lower areas had good potential to recover and retain their original importance, if well protected. Since then the watershed areas officially had protection status but the decline continued.

Our findings show that at least 3,668.3ha have turned average or have been cleared and another 859.7ha were reclassified into production forest, including 301.7ha of rich forests in BaMu which are planned for exploitation. This means that at least 44 percent of watersheds are already affected or under threat and there are indications this figure is actually much higher. One indicator is that official maps show rich forests on areas where forests have been cleared for the Nuoc Sot hydro-power scheme. Surrounding forests are likely damaged and exploitation is taking place along the newly constructed roads leading to the site¹³. Although 300ha of watershed areas were licensed to the hydropower company in 2005, official classification in 2009 still shows these areas as protection forests.

Illegal exploitation of watershed forests is also visible in areas near the road and south of the border crossing with Laos. As for forests in general, the lower slopes near national road 8A are mainly bare lands and some are planned for rubber. Other areas such as BaMu where forests are still in a relatively good status have been planned for SFE exploitation.

4. Son Kim 2 commune in Rao An valley

Among the studied communes, forests in the southern Son Kim 2 are in a relatively better condition. Here 92.5 percent (19,10ha) of the total land area is forest land and 42.2 percent (8,070.8ha) watershed forest. This is the only forest area in Huong Son that had not been officially exploited until 1995, although illegal logging by local people, officials and 'underground forces' as mentioned by a key informant was already ongoing. Notwithstanding that logging started later, the destruction of forests has been rapid. As a key informant explained, in 2005 a case of large scale illegal logging in Rao An area was detected and reported, however authorities kept the information away from public and the loggers were not prosecuted. According to informants some areas here are controlled by 'local bosses' who exploit their self-assigned forests. We could not collect more information on this.

Rao An

Several groups of people were seen on a daily basis traversing the road along the Rao An valley bottom, and two active camps were found along the river. A group of three logging buffalo were seen entering the area. A lorry was seen bringing timber out of the Rao Bun valley. Small timber piles were seen at five points along the Rao An valley road, at the end of trails leading to the slopes. An active camp of c. five people was found logging in the upper Rao Bun valley. A total of three snarelines was found in the Rao An valley. In the upper Rao An Tren valley four snarelines, two active and seven old campsites, and one active Dau De oil extraction camp was found. At one of the active campsites with two people in occupation the remains of Red Muntjac *Muntiacus muntjak*, pig sp. *Sus* and Asiatic Brush-tailed Porcupine *Atherurus macrourus*, and a recently killed Sun Bear *Ursus malayanus* were found. The other active camp was of a group collecting Cay Nha resin. A group of three people who had reportedly been snaring were met leaving the area.

Figure 6: Rao An area extracted from Timmins et al. 1999.

At the time of this study at least 27 percent of watershed areas (2,189ha) had been affected by logging. This was particularly visible in the north around the Rao An river where large areas had been cleared and reclassified as production forest. Also 1,207.3ha had been reclassified into production

¹³ Contrary to our observations, maps indicate all forests at the hydro-dam site (areas 49 and 56) and surroundings (area 60) are rich forests, including forests along the road. During our visit we could observe that the river downstream the reservoir was almost dry despite the rainy season and forests along the road exploited, particularly near the main road.

forests. Recently provincial authorities announced a plan to build a new hydro-dam amidst a watershed area. However due to strong protests by people and local authorities this plan was still pending at the time of our visit. Watershed areas along the Laos border and the southern end of the commune also showed visible signs of logging. Therefore, although the amount of reclassification of watersheds into production forests is relatively low and forests remain officially protected, the current trend of illegal logging heralds that these forests will deteriorate further.

PART III: FACTORS BEHIND FOREST LOSS

1. State Forest Enterprises (SFE)

In this section we explain more about the history and current state of the SFE, whose ineffective protection and management and role in illegal exploitation are significant forces behind forest loss in Huong Son. For a long time Huong Son SFE was the sole authority to exploit forests and controlled almost all natural forests in the district and four studied communes. Despite reforms and policies since 1993 to reallocate forests, the enterprise continues to control majority of forests, despite being in a state of internal crisis since the late 1980s.

In the *period 1975-1985* the SFE fell directly under the government and was fully subsidized to reach nationally determined exploitation targets. With the national economic reforms in 1986 and the shift to operate through market mechanisms, the SFE started facing difficulties, particularly after 1998 when it turned into a private company¹⁴. The first difficulty was the huge cut in human resources and subsidies. While between 1985 and 1995 the enterprise had 5,000 staff, at the time of research this was only 220. The second difficulty was the decrease in revenues from timber because after years of exploitation the natural forests were depleted.

Although in this period the enterprise started to grow non-indigenous plantation trees like pine, acacia and eucalyptus on bare lands and in poor forests, it took several years before income was generated from these. At the same time with the national call for closing of forests (Prime Minister decision 90-CT in March 1992) the SFE's core task changed from exploitation into protecting and regenerating exhausted forests. In other words, the SFE was in a precarious situation in which it had to comply with requirements that were contradictory; it had to operate based on market principles, to take responsibility for the new function 'protecting forests' and deal with reductions in financial, human and natural resources, all at the same time.

In this situation, although forests were closed and funds were made available for regeneration, forest exploitation continued. Firstly because program funds were not used for regeneration but to expand plantations. The second reason is that the Prime Minister's decision to close forests and its accompanying guidelines were very general. This created opportunities to avoid the implementation of the decision without problems.

Thus, based on Prime Minister's decision the Huong Son District people's committee recommended the closing of all forests in Huong Son. But the SFE and Provincial People's committee did not support this idea and only closed around 1/3 of forests: 17,000ha in Con River valley (Son Hong commune) and 10,000ha poor forests in Son Linh Commune, whilst exploitation targets were set which opened the way for SFE to continue exploitation in Son Kim. The enterprise did this through hiring external labor or leasing forests due to its human resource shortages. It is also reported that SFE staff were allocated forests particularly in Rao An area. At that time this was considered to be a legal act because policies facilitated the allocation of forest land to forestry staff, particularly when local people refused to receive exhausted forests. However in this study we could not confirm whether it was also legal to allocate SFE staff rich forests in watershed area, which at times seems to be the case.

After reopening of forests in 2005 the SFE had a yearly target to exploit between 3,000 and 7,000m³ in production forests. Our findings suggest that the actual logging far exceeded set limits and happened (and continues to happen) indiscriminately in both production and protection forests. One

¹⁴ By decision number 504/QĐ/UB dated 09/05/1998 it is renamed from Huong Son Forest Enterprise into Huong Son Forestry Service Company.

driving force behind exceeding logging limits is the local wood processing industry. At the time of research it was estimated by SFE respondents that around 140 illegal wood processing enterprises are operating in the studied areas and another 220 small and medium processors were registered and operating legally.

Box 4: ILLEGAL LOGGING CASE IN SON HONG – 2012

In April 2012 about 333 (to 500) m³ of illegal logs were discovered by an independent team in Son Hong watershed forest area (of 17,000ha). This investigation was called by Province authorities after the District Forest Protection Department of Huong Son Forestry reported 30m³ illegal logs in the period June 2010 and June 2011. They discovered that the head of a Forest ranger station let logs pass through his station in cooperation with the head of the Hong Linh Forest Management Board and an employee of Huong Son forestry service Company and a businessman dealing in timber. Consequently some officials were dismissed and some arrested for these forest crimes.

Various informants indicate or suggest that financial shortages, lack of human resources and low salaries are incentives for forestry staff to get involved in illegal logging. Also our general findings suggest that the combination of financial and human resource shortages, low salaries and the lack of effective mechanisms to monitor operations (both operations of SFE as the operation of companies contracted for logging) create a breeding ground for over-exploitation by outsiders and cooperation between forest officials, protectors and private middlemen in illegal logging and trading of wood.

Recently the SFE handed over 18,375ha of protection forests to the **Ngan Pho Forest Management Board (FMB)**. This board was newly established by a merger of two smaller Management Boards, which could possibly lead to a clearer separation of protection functions and commercial tasks around forests. However, factors that cause encroachment into protection forests (such as weak human resource base, low salaries and weak monitoring) have not been addressed. Not in the SFE, nor in the FMB. Therefore it is doubtful whether the new FMB will be more effective in protecting the forests assigned to them. Similar to the situation of the SFE in 1990s, the FMB is now responsible for the protection of large amounts of forests which are exhausted, and with very limited human and financial resources. Respondents from local authorities, FMB and the SFE complained about limited government investment in the forestry sector, while the expectations from above are not in proportion with the salaries, financial and human resources..

Box 5:

The SFE, forest rangers and illegal loggers are exploiting our communal forests... especially in recent years very rapidly; it is a system from above coming down to destroy our forests (one villager from Son Hong commune).

Respondents from SFE as the FMB mentioned for instance that plans to cooperate with local people in forest protection fail because the available government funds never trickle down from higher authorities. Hence many forests are unprotected and used through 'open access' where anyone who desires can enter and use forest resources.

Another non-addressed issue is the continuing plans to expand the wood industry, while forests are already exhausted. The District reports on the tripling of its forestry product between 2004 and 2008, from 33.4 billion to 135.2 billion VND (Huong Son People's Committee 2009). This is a rapid growth, but there appears to be no long term strategy and no effective mechanisms to monitor and control the legality of timber that is fuelling this growth. As natural forests in general are already

exhausted, the yearly set targets can only be reached through further encroaching upon protection forests.

As we outlined earlier in chapter 2, some protected watershed areas have already been re-classified for exploitation, and in addition several plots are planned for exploitation while having poor or average forests. As these plots are near protected watershed areas, their encroachment seems likely.. In province and district forestry plans developing the local wood industry and setting high targets for timber exploitation continue to be aims for socio-economic development.



Figure 7: Illegally operating local wood processor & logs.

In April 2011 Ha Tinh Province adopted the decision 1302/QD/UBND which requires the SFE to log timber through so called **bidding**. In this method the SFE must publicly advertise for companies to sign up to exploit an area against a set price per m³ of exploited timber. After advertising three times if there are no bidders, the SFE is obliged to take responsibility for the logging and must pay the same price per m³ to the Province. The SFE staff interviewed didn't seem to support this method. This method has the potential to create more transparency in which actors are contracted by the SFE to exploit forests and control the type of forests, amounts and areas they are entitled to exploit. However, problems in monitoring the operations of these private exploiters will probably remain or get even more complicated, because another higher level authority has been added to the process, bringing with it new power dynamics.

By imposing the bidding system the Province is giving a typical example of how the SFE is still directed in a top down manner, despite officially being a private company. At the time of study the SFE had just applied the bidding process and had become responsible to exploit some areas in the next three years. However, lacking the human resources it will probably continue to hire private actors for the work as before. The only difference is that the enterprise must pay the province to exploit forests under its own control.. The question is how will the SFE make up for this financial loss? A further exploitation of protection forests is a plausible answer..

2. Unequal Forest Land Allocation

Although forest people's dependence on forests is widely recognized, their ability to control, access and benefit from forests have been restricted for a long time. The SFE's refusal to re-allocate forests to people has been a hindering factor to establish a sustainable livelihood based on forests. Up until around 1993 the SFE had the sole authority to control and to exploit forests. After forest land reforms the SFE was only willing to allocate bare and exhausted forests while keeping areas with good quality forests and soils. Therefore people were initially reluctant to receive these exhausted lands, as they lacked the capacity to turn these into productive assets . The enterprise also refused for long

time to return 9,266.1ha Vu Quang Nature Reserve area to the Forest Protection Management Board. It is reported that during the years of conflict and unclear responsibilities for protection, the reserve was highly exposed to illegal logging. In 2009, after more than 15 years of reforms, the situation of forest allocation in Huong Son was as follows.

Table 5: Forest allocation in Huong Son district.

Order	Managers/ Management Agencies	Total Natural Forest	Classification			Mechanism/ Proportion
			Special Use	Protection	Production	
		(ha)				(%)
District Total		84,416.9	9,266.1	34,155.2	40,995.6	100.0
I	SUF management board (national garden Vu Quang)	9,266.1	9,266.1	-	-	11.0
II	Protection forest management board (FMB Ngan Pho)	6,881.7		5,387.5	1,494.2	8.2
III	Companies	43,519.7		25,769.2	17,750.5	51.5
1	Huong Son Forestry Service Huong Son Company (SFE)	38,175.0		24,422.2	13,752.8	45.2
2	Technical Cooperation Military Region 4 Company	1,974.4		520.0	1,454.4	2.3
3	Tay Son Tea Factory	363.0			363.0	0.4
4	Human Ecology Practice Area (HEPA)	293.3		162	131.3	0.4
5	Youth Volunteer Team	2,714.0		665.0	2,049.0	3.2
IV	Other managers	24,749.4		2,998.5	21,750.9	29.3
1	District projects	194.5		194.5		0.2
2	Families	13,194.7		147.1	13,047.6	15.6
3	People Committee of Commune	11,360.2		2,656.9	8,703.3	13.5

Total households in the district are about 30,135. In the four studied communes there are 4,629 households (22,541 people). Until the end of 2008, only 2,816 households had received land use certificates covering over 8,273.9ha (Huong Son PC 2009). The table above shows that up until 2009 the SFE was still controlling 45 percent of , mostly protection forests and 15.6 percent had been allocated to households.

Between 2008 and 2011 more reallocation took place and in 2011 forest allocation to households was completed for 65 percent (4,085 households had received 12,316ha) (Huong Son PC 2011). In the studied area forest reallocation at larger scale took place only recently, after growing national critiques on SFEs effectiveness all over Vietnam.. In interviews and progress reports communal authorities of Son Kim 1, Son Kim 2 and Son Hong refer to recent forest reclaims and reallocation, and to reclaims still in process. At the time of our visit in 2012:

2010-2012: Son Kim 1 reclaimed and reallocated 800ha to 150 households and Son Hong 7,000ha.

2012: Son Kim 1, amount of household without forest land is still 50 percent and in some villages like Vung Trong allocation has not yet taken place at all (this village is surrounded by land from the army). Commune authorities are waiting for the land (1,500ha) recently reclaimed from the SFE.

3. Weak Forest Land Governance

In this section we outline steps and actors in forest classification and planning, particularly in the period after 2005. Officially forest inventory and planning roughly takes place as illustrated in the scheme below.

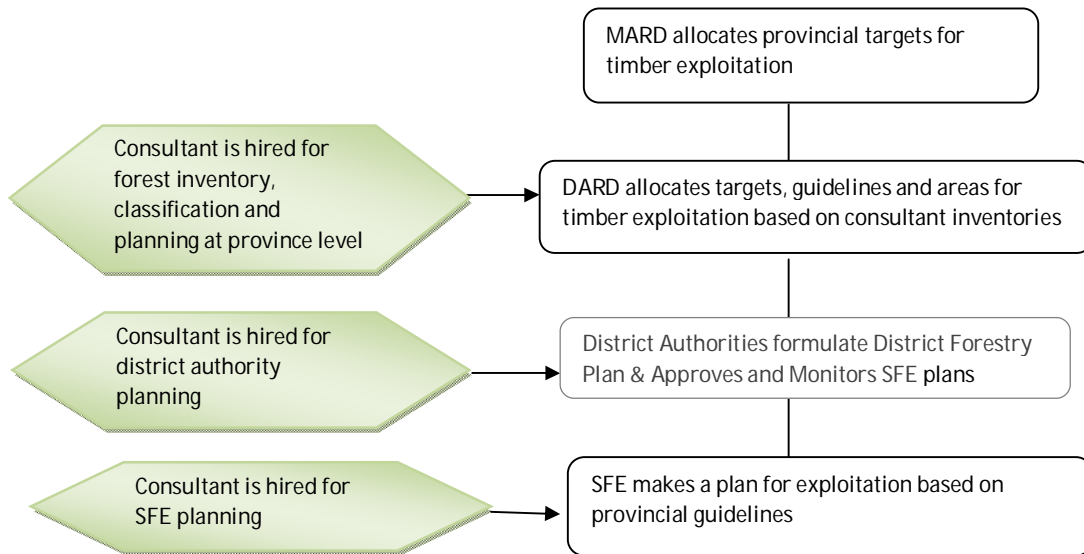


Figure 8: Steps and actors involved in forest classification and planning.

Short after the national call to reclassify forests in 2005, Ha Tinh People's Committee hired the semi government consultant agency Forest Inventory and Planning Institute (FIPI) to carry out forest inventory, reclassification and planning. Another reclassification and planning took place in 2008/2009. Based on the outcomes of these forest inventories, the Province set the guidelines for the District and the SFE to formulate their forestry plans. Subsequently the district and the SFE hired consultants for mapping and planning with concrete targets and areas for exploitation, protection and regeneration up until 2020. Looking at the different steps taken, one can say that nominally government procedures have been followed.

However the quality of the process and results are criticized with the main point of critique being the unrealistic picture the hired agencies show of the forest situation. Huong Son forests have continuously been subject to over-exploitation for several decades, and with a visible speed after 2005. However, data compilation from officially approved inventories as presented in Table 6 shows us a minimal decline and change in forests.

Table 6: Official reported changes of forestland areas by types of forest in Huong Son 1999-2005 (a contrasting picture with study findings)

	1999 ¹⁵	2006 ¹⁶	2009 ¹⁷	2010 ¹⁸	Difference 2006 -2010
TOTAL NATURAL AREA	110,315	110,315	110,415	110,315	0
1 NATURAL FOREST AREA	62,478	66,583,4	63,895	64,812.6	-1,708.8
1a. Broad leaved timber forests	61,879	66,266	63,709	64,477.6	-1,453.4
<i>Rich</i>	26,999	24,087.8	22,098	23,660.5	-427.3
<i>Average</i>	11,792	14,957.6	16,766	13,692.7	-1,264.9
<i>Poor</i>	17,338	15,728.8	14,630	16,221.1	+492.3
<i>Recovery</i>	3,844	11,491.8	10,213	10,904	-587.5
2 PLANTATIONS	4,156	10,437	12,359	11,417	+980.2
<i>Reserve</i>	1,679	5,676.7	7,473	593.4	-5,383.3
<i>Non Reserve</i>	2,431	4,137.3	4,885	4,136.2	-1.1
3 NON FORESTED	No data	6,869.3	8,135	7,905.3	+1,036
1A		1,167.6	1,174.2		
1B		2,183	1,993.2		
1C		3,497	4,737		
Other land types	25,930	26,425.3		25,997	
4. TIMBER RESERVE m³/ha	8748.831 / 1679ha	? / 5976ha		8.321.650	-
<i>Natural Forest</i>	8.626.911	-		8.092.886	-534
<i>Plantation</i>	121.920	-		228.764	+106.844
<i>Bamboo (1000 trees)</i>	4384	-	14 million	10.200	+5816

Official reports suggest that between 2006 and 2010 the amount of rich forests only declined by 427ha. By 2009 they show that there is still a significant amount of rich forests and timber reserves, mainly in SFE controlled forests in the studied communes. The general tone of official reports point at the great potential of Huong Son forests:

'Ha Tinh Forests still have relatively large forest reserves, raw materials for forest exploitation and development. They still have many kinds of timber, herbal plants and rare animal species and other precious products such as rattan, cinnamon and raw material for production and export [.....] in Huong Son due to good protection, the regeneration and restoration of forests have been very good. Forest cover is 69 percent with diverse plants and vegetation with 523 species' Huong Son accounts for 29.5 percent of Ha Tinh province's natural forests which is mostly concentrated in Song Hong, Son Kim 1 and Son Kim 2 (FIPI 2009).

¹⁵ Data on Forest Inventory according to Directive 286 issued by the Prime Minister.

¹⁶ Ha Tinh People's Committee (2006)

¹⁷ FIPI (2009b) Annex 01

¹⁸ BVPTR (2010) Forest Protection and Development Documents Spot 5 images.

These positive findings and conclusions, on which official decisions and plans are based, are in stark contrast with our findings. In interviews local people and commune authorities indicate there are almost no rich forests left, and only to be found in small amounts in high and steep mountains along the Laos border. What is the explanation for the gap between official data and reality?

Limited time spent in the field by the consultant agency is a possible reason for the difference between reality and reports. Local informants criticized small amount of involvement of local actors and limited time the hired agency spent in the field during mapping and forest inventory. In the report on the forest status of Huong Son in 2009, we can see that the inventory is based on a field survey of only a few plots, prior maps and reports and satellite images (Spot 5). However the reliability of older maps is questionable and satellite images provide a general picture of the forest coverage and not quality or biodiversity. As a result the consultant agencies come up with 'too generic' and 'unrealistic' conclusions about forest status..

Non Objective mapping and reporting – information also suggests that inventories and conclusions are not objective assessments but are rather based on forest owners' needs and requests. According to a key informant, the SFE lobbies and cooperates with FIPI to over report forest resources so they receive higher exploitation targets. It is also suggested that over or under reporting

Box 6: EXPANSION OF RUBBER PLANTATIONS IN SON HONG'S NATURAL FORESTS

After ten years of official closing between 1995 and 2005, natural forests in Son Hong were starting to recover from intensive SFE exploitation in prior years. Some protection forests were showing higher tree coverage, with up to 200m³/ha along the border. Before fully recovering, forests were reopened again in 2005. Despite the potential for further regeneration, authorities planned to establish rubber plantations over different areas in the commune and the Huong Khe Rubber Company, under the Vietnam Rubber Plantation Cooperation, was allocated 1,800ha of forests. Against legal provisions the company received the land without the obligation for lease payments. On paper the requested and allocated areas were classified as poor forests.

According to local accounts giving rights over land to this company is a great loss for the people and the commune because it implies the loss of scarce fertile lands along the Son Con River. Rubber is known for its devastating effects on soil and water sources. The areas given to the company were not inhabited but some households who lacked land were cultivating in this area and depended on these lands. After protests and negotiation they only received small compensation.

Communal authorities support the plans for a rubber plantation because these are expected to create stable jobs on a contractual basis for around 300 households. Yet the areas planned for rubber and allocated to the company have slopes greater than 25°. This increases the likelihood of soil erosion and for floods which will directly affect surrounding communes. These communes will also be affected by the environmental pollution. The company started its operation in 2009 with the use of aggressive chemicals, but we were unable to investigate effects.

From this case many questions arise. Has there been any proper social and environmental impact study of this rubber plantation? What is the trade-off of between the environmental loss, loss of livelihoods and the economic benefits derived from rubber? Will the operations in the rubber plantations be monitored properly? In this respect there can be no high expectations from the local authorities, considering their limited resources and capacities. Once lands are (re)allocated, local authorities lack the power to control forest owners. Son Hong people's destiny is from now on in hands of this company whose main concern is to export rubber to Chinese and Japanese markets.

of certain areas and plots is negotiated with the agency so these plots will fit criteria for desired purposes like exploitation, reclassification or changing land use purpose. Subsequently plans for reclassification and forest development are submitted to the provincial department (DARD). Another reason for flaws in mapping could be, even though not mentioned by respondents in this study but commonly reported elsewhere, the cooperation between the forest ranger and the consultant agency to over report in order to hide illegal logging in protected areas.

One issue that comes forward prominently in this study is that after inventory and planning, local people and authorities are not informed about maps and forest classification. Both actors state that they are unaware which forests are protection or production forests and that classification is often changing. They are only informed yearly by the SFE about which plots are planned for exploitation. These claims were also confirmed by SFE staff, who stated that in some areas they place a brick pole every 5km to indicate forest classification in that area. When such poles are placed and noticed by people the classification is said to be stable and cannot change easily. However these poles are only to be found in a few areas. The reason why there are only a few poles, as stated by the SFE, is their lack of money. Though during the talk with staff it also became clear that, keeping things this way is convenient because *it allows for 'keeping flexibility'* in the classification and SFE staff also confirmed that forests are re-classified regularly upon forest owners' requests.

Clearly, classification and planning seem to change often and mainly be driven by the interests of those who control the forests. The often and ad-hoc changes in forest classification lead to confusion among local people and authorities. As a commune leader points out:

Box 7: Earlier on we clearly knew what is protection and what is production forest but now it is totally unclear to us and these forests are used in a mixed way. Neither we (commune authorities) or people know exactly as SFE changes it too often without informing us or showing us the maps.....Every year SFE only comes to inform people after all decisions have been taken about guidelines and areas for exploitation in that year'.

Another example is the case of rubber. At the time of study large areas of natural forests (both production and protection areas) were planned for rubber plantations, particularly in Son Hong. It is difficult to pinpoint exact numbers because of differences in sources and information. District plans indicate the area for rubber at 11,183ha until 2020 and also the SFE is planning for operations. Huong Son People's Committee reports in Provincial decision 723/QD-UBND/17.3.2010 to have 5,372ha rubber. More details about the proposed areas and plots and hectares can be found in Annex 5.

For several reasons it can be assumed that rubber plans bypass legal provisions which indicate that natural forests can only be converted into other purposes under certain criteria. One is that forests must be bare and in a very poor condition and it must be proven that there is no potential to regenerate. In addition, impacts like soil erosion and increased risk of floods because of the high slope should come forward in environmental impact assessments, However the case of rubber in Son Hong shows that such legal safeguards do not seem to play a role in reality.



Figure 9: Local indigenous species are growing rapidly after secondary forests despite the areas were cleared for rubber in Son Hong commune.

4. Powerful Interests

The misuse of power and authority is a major reason for forest loss. Earlier on we outlined several examples illustrating this: roads cutting through watershed forests; the SFE's power to determine forestry plans and exploitation targets; the cooperation among powerful actors in illegal logging, official plans for rubber and allocating land to a company, bypassing legal provisions and which were approved without environmental impact assessment.



Figure 10: Road cutting through protection forests and facilitate better access.

Another case we want to highlight to illustrate misuse of power is the case of Nuoc Sot hydropower.

Nuoc Sot hydro-power scheme

At the end of 1990s the earlier mentioned study on the conservation values of Huong Son forests concluded that Nuoc Sot valley in Son Kim 1 is one of the few areas where forests were still untouched. In the same period Huong Son Hydro Power Joint Stock Company submitted a proposal to provincial authorities and got approval for the construction of a hydropower plant.

This fitted well with the official strategies of the Vietnam government and Ha Tinh province to encourage hydropower energy in order to meet increasing energy demand. However, , this plant was proposed to be built in the middle of primary watershed forest in Nuoc Sot valley, which is not exceptional in this district. Approval from central level is required to reclassify more than 100ha of protection forest for any purpose, including this hydro-power scheme. Yet the company gained control over 300ha watershed area without central approval. How could this happen? The province found a way to avoid central approval by reclaiming 300ha forests from the SFE in three parts: first in 1998 by Decision 504/QD/UB/1998, and later on in 2002 (144ha), and 2004 (104ha) (Huong Son SFE 2010).

So first hurdle bypassed. In 2004, before feasibility and impact assessments are carried out, construction starts. Forests are cleared; a 19km road to the reservoir, 30km road to the border patrol and two ring roads are constructed. One of the companies hired for construction is the Song Da & Ha Tinh Mining Company. Yet it is not until 2007, three years later, that an environmental impact assessment is carried out¹⁹ by the Investment and Trade Consultancy Company Limited. After submission, the report of the impact is approved by Ha Tinh province department of Natural Resources and Environment (Decision 2385/QD/UBND). But although approved, it seems that communal authorities have never been informed about this report, as they indicate that an environmental impact assessment had never been conducted.

This is in line with earlier case investigations on how an Environmental Impact Assessment (EIA) was carried out for this Nuoc Sot hydro-dam and this study concludes that despite legal safeguards, 83 percent of the community had never heard about the project before (Pannature, undated). Moreover the assessment is done haphazardly and merely to comply with administrative procedures as we can conclude from the available report of the EIA.

Table 7: Summary of environmental impact assessments for Nuoc Sot hydro-power scheme.

<i>Identified Environmental Impacts</i>	<i>Measures taken by the project</i>
Water Pollution on the construction site. Water contaminated with oil and dirt from vehicles	Connect the drain to the sedimentation tank and recycle after sedimentation. Set oil filter tank and further treat together with the wastewater from the staff
Wastewater from staff	After biological purification treatment, the wastewater will be used to irrigate nearby farmland.
Air Pollution dust during the blast and during the transportation	Wet blast. Use personal protection equipment on site. A showering system is to be installed to dampen and control dust / particulate matter
Noise pollution blast and excavation during construction	Choose equipment with low noise output, build sound barrier walls and ban construction activity in the evenings
Solid Waste – Waste from the construction and staff	Waste will be sent to the specific landfill or recycled. Collect and send local waste treatment statement
Biodiversity and Ecosystems – Land erosion in the project area occurring during construction e.g. movement onsite of construction related vehicles.	Different protection measures will be adopted at different construction sites to prevent erosion for example re-vegetation
Resettlement	There was no household to be resettled due to the project located in the remote and mountainous area

The EIA report is superficial, failing to refer to several crucial indicators and is coming up with simplistic measures. One important indicator lacking is the assessing the impact of the dam on water amounts, quality and flow and how changes in these could affect bio-diversity on the one hand and livelihood of downstream communes on the other. Same questions can be asked about the deforestation related to the hydro-dam and the roads leading to the site and its possible impacts like loss of biodiversity, soil erosion, and vulnerability to floods. Especially considering historical trends touched upon earlier on and the current conditions in forestry development, any assessment should have easily identified that constructing roads and the facilitating access to protected watershed forests is like opening a door to illegal loggers. At the time of this study, some areas along the roads leading

¹⁹ Conform Decision 80/2006/ND-CP and Circular 08/2006/TT-BTNMT.

to the hydro-dam had already been cleared and other areas with easy access were starting to show signs of degradation.



Figure 11: Huong Son hydropower dam devastating areas of forest.

Local officials also criticized the rationality of building a hydro-dam at the selected site as they pointed out that the rivers supplying the dam's reservoir have insufficient water volumes. These statements were confirmed by our visit to the hydro-dam site as we observed that both the reservoir and river downstream were nearly dry, despite it being the rainy season, reinforcing our conclusion that the decision to build the hydro-dam has not based on solid feasibility studies²⁰. The water intake into the reservoir is derived from Nuoc Lanh stream and after operating the plant the water dissolves into Nam Luong stream. Intended productivity as put in the project proposal seems to be far above reality we found on the ground.

Box 8: People and local authorities strongly rejected this hydrodam because they are already suffering. We all see results of environmental damage; decrease in water, floods, soil erosion and we realize more suffering will come with another hydropower....

Aside from questions about the timing and the quality of the impact and feasibility assessment, other peculiarities can also be pointed about the hydro-dam. One example is the contradiction between information received from informants and the hydro project document about the categorization of the hydro-dam. While local authorities and informants classify it as a 'small' hydro-

²⁰ Estimations: water surface area of the reservoir is 0,48km², power density of 68.75W/m² and 33MW planned to be sold to the National Electric Grid through a 110KV line.

dam, according to the project document it is categorized it as a 'large' hydro-dam²¹. As stated above the capacity of the plant seems to have been over-reported and the choice to categorize it as a large hydro-dam raises questions. One possible explanation is the more favorable tariff structures that apply to large hydro dam²². At the time of our visit the hydro-dam operating company was reported to never pay any tax. Another contradiction in this regard is that respondents in this study point out that Nuoc Sot hydro-dam is operated under provincial regulations, while large hydro-dams are supposed to be subject to regulations under the Ministry of Trade.

Another fact raising question marks about the hydro-dam is that communal authorities were officially informed about plans and reports much later after decisions were already taken and construction had started. When officially informed local authorities and people reacted strongly and sent rejection letters to the province.

However despite these reactions the building of the dam continued. Moreover the official project document hides the fact that the plans were locally rejected. The project document indicates that local actors were informed about the plans through radio broadcast and were invited to comment. It also refers to a stakeholder consultation meeting held on 24 April 2008 with local authorities and representatives and that 'all their comments and concerns were answered and seriously considered'. In the light of all the procedural flaws surrounding the hydro-dam local authorities and journalistic articles come up with the following conclusion.

These suspicions are supported by several indicators, such as the fact that the hydro-dam site only requires 100ha of land while three times that amount has been allocated to the company.

Also road construction in primary forest areas (56 and 60) has led to the total exploitation of some plots along this road. It is also worth mentioning that this hydropower project (and another suggested one in Rao An valley) were used as an excuse to 'survey' forests in not only plots surrounding the hydro-dam but also in areas much further away - until the most southern point of commune Son Kim 2. (All watershed areas surveyed were 56, 60, 61, 70, 72, 73, 78, 79, 81, 83, 85a). According to local accounts, the survey results were used to illegally exploit some areas.

Box 9:

...really...only reason behind Nuoc Sot Hydro-dam is forest exploitation (a local informant 2012)

²¹ In the project proposal the capacity of the hydropower is 33MW, thus classified as a large Hydro-dam. According to Ministry of Industry Decision 2014/QD-BCN on 13.06.2007 hydropower exceeding 30MW falls into the category of large hydropower

²² Ministry of Industry and Trade Decision 18/QD-BCT on 18.7.2008.

PART IV: CONCLUSIONS - FACTORS BEHIND FOREST LOSS IN HUONG SON

As gateway to several Nature Reserves and containing the headwaters and catchment areas of rivers, Huong Son has crucial functions for ecology and the livelihoods of thousands of people living in and around these forests. Since 1955 Huong Son forests have severely depleted and consequently their biodiversity, ecological and socio-economic functions are being lost. For over five decades Huong Son forests have been subject to regulated and unregulated logging with few chances to recover and have been converted over large areas. According to our estimation at least 46,9 percent watershed forests with crucial roles to regulate soil and water flows have been seriously damaged or already lost and most of the remaining areas are under threat from reclassification (into production forests), conversion and pressures from different actors and investments. Main factors that we identified in this study can be summarized as follows.

1. State Enterprises and Mismanagement

Despite prolonged limitations in their productive resources and capacity, the SFE kept control over vast amounts of forests for a long time. Forests under their control have not been protected effectively and some forestry staff has been involved in illegitimate forest exploitation.

The limitations in resources and capacity can be partly understood as the result of historical events and historical conditions. In the early years of SFE reforms, back in the eighties, the SFE found itself in an impossible situation. After years of extensive exploitation it had exhausted its forests, had been cut down in both financial and human resources and at the same time was assigned with a new role and responsibility; regenerating and protecting forests.

Even though the SFE depended on local people's involvement in forest protection and management, these intentions have never been fully realised, mainly because central government funds never trickled down to enable SFE and local authorities to cooperate effectively with people in forest protection.

Ineffective forest protection and management can also be seen as the result of mixed and confusing policies, and roles assigned to the SFE. It is on the one hand expected to operate as a private entity based on market principles and to pay taxes. At the same time it is subject to policies and targets from higher level authorities, for instance meeting official targets and demands from the wood industry. While responsible and accountable for regeneration and protecting watershed forests, it is also required to follow up forest land claims coming from higher authorities, such as in the case of Nuoc Sot Hydropower and the handover of forests to Huong Khe rubber company. In this blurred situation of contradicting roles, authority and limited resources, the lack of a consistent and long term oriented management by SFE should not come as a surprise

2. Weak Forestland Governance

2.1 Lack of local participation in decision making

Living amidst forested hills and mountains, in their daily lives forest peoples are directly confronted with deforestation and the consequences of the depletion of water and soils, and the increased frequency of floods. At the same time decisions that irreversibly change forests and the landscape are taken behind closed doors without considering people's needs or the impacts of interventions. Experience shows that excluding people from the forests does not work, and neither is it desirable.

There are explanations for forest loss in each of the communes studied, and in each case questions arise around how such damaging development plans could be approved.. For instance in Son Hong commune, for what purpose and on by whose authority was a road built right across a protected area (i.e. a road that is now a highway)? Based on which arguments is decided to turn Son Hong natural forests into rubber plantations and how valid are these arguments? Who was involved in these decisions, which have far reaching consequences for people's present and future? Moreover, are these consequences assessed and well considered?

A clear lesson is that (mono) plantation of non-indigenous species has over and over again proven not be an effective livelihood strategy. In Huong Son this is both due to the natural characteristics as the instability of market prices of wood. Therefore the plans to develop and expand rubber in Huong Son can be considered as an herald to the repetition of past mistakes..

In Nuoc Sot the impacts of the hydropower and construction of the road leading to the site, is surrounded by question marks. Whose needs is the hydropower serving? How could the hydro-dam project be approved and construction start, without any local involvement and despite local protests? How come there is such a gap between the proposed project and the actual operations of the hydropower? These questions related to transparency in decision making are complex, yet one of the most crucial issues to address.

2.2 Classification and planning without clear criteria, studies and assessments

Another issue coming forward as point of attention is the need to improve the quality of forest inventories and reclassification. In this study we found an obvious gap between official data, maps and our findings in terms of forest quality and quantities. Hired agencies spend little time in the field and use poor methods Therefore it is not surprising they come up with a poor picture of reality.

A more serious reason for this gap is the lack of independence of the forest inventories and assessments. Maps, data and reports seem to be influenced by the wishes of those who control forests, leading to over or under reporting in certain areas. The result is a vicious circle of an unrealistic picture of reality, which turns into unrealistic goals and targets, followed by unrealistic reporting to demonstrate targets are met. In this sense it is necessary to research deeper into how targets for the wood processing industry and timber exploitation are set , capacities of local administrators, technicians and consultants and the impacts of these targets on people and nature.

In Huong Son forest depletion is likely to continue. Recent cases of reclassification since 2008 have changed the function of watershed protection areas into production, which can be seen as an indicator that forests are depleted to an extent that provincial timber targets can only be reached through further encroaching upon the few remaining watershed forests.

The case of the intrusion of rubber companies illustrates how secondary growth in Son Hong forests and their high potential to recover are hidden, to make the conversion of these natural forests look legal, while they are in fact against the law. Another driving force for continued legal and illegal logging in remaining forests is the unrealistic targets set at provincial level for the wood industry.

It is apparent that the targets are far beyond local capacity to supply wood, and are particularly in contradiction with the maximum logging amounts as allowed by local provisions. This lack of balance between demand and supply pushes up the wood prices and makes illegal logging an even more lucrative business. The result is a situation where the last remaining forests are exploited by unlawful cooperation among local elites.

It is striking that since 2006 over 20,000ha of forests have changed function from protection into production forests, a relatively significant amount. The findings that reclassification takes place regularly and without a clear set of objective criteria and guidelines are worrying, as they lead to arbitrary changes in the functions of forests. Also the unclear division between different types of classification needs to be addressed urgently.

Right now there is still no division in areas and functions: the SFE and the FMB control both production and protection forests and the different types of forest plots can be found in a mixed way in the same area. This leads to unclear division of roles of these bodies and the functions of plots of forests and makes monitoring and protection more complicated.

2.3 Local People's roles and importance in protecting forests neglected

Forest people depend on forests for their livelihood, and as long as their needs are not addressed, people find ways to enter and to derive benefits from forests. This is both their right and their necessity. Therefore, as a commune leader rightly concludes and which we underline:

One of the first and core conditions for people to sustain themselves is to have some form of legal entitlement over a sufficient amount of forest land. Yet this basic condition has still not been met in the studied communes and a significant amount of households are still not entitled to control any forest land. Though we must notice that at the time of research efforts had been made to reclaim forests from the SFE and to allocate them to households.

At the same time, forest allocation alone is not a guarantee for people to make a sustainable living. To make these forests 'productive' forest allocation should go along with support and proper assessments and the introduction of locally viable solutions. Earlier introduced eucalyptus and acacia have proven to be ineffective and not long term solutions. Moreover, specific conditions in the upland areas of Huong Son seem to require a livelihood strategy based on diverse sources of income, like the combination of production forests, with livestock raising, crop production and NTFPs from natural forests.

Vietnam's history of the uplands proves us how people have been able to co-exist peacefully with forests for a long time. People who depend on forests have a stake in their sustainable management. There is need to understand the roles people can play in forest protection and to find ways to make people part of protection. In this sense current emphasis on community based forest management can be considered as a step in the positive direction.

In Huong Son, different examples of community based forest management can be found with valuable lessons for wider application. Here we only touch upon these very briefly but these cases show that if allocated to local actors, forests are much better protected, managed and regenerated.

A first example is the situation in Son Tay commune, which shows that if forest is allocated to people, they will protect and find ways to make a living from it. Although earlier on we conclude that watershed protection areas in this commune are almost entirely lost, the situation for natural forests in general shows a positive picture. Unlike many other areas where forests near or surrounding settlements are often bare and depleted, in Son Tay the natural forests near settlements are in better condition. Unlike in other communes, people here decided to receive the exhausted forests when the SFE offered to allocate them to households in 1993. At the time of study, many households had been able to turn these degraded forest lands into productive assets. Partly people left these forests for natural regeneration and partly used them for timber production. After almost twenty years, forests have regenerated and people derive benefits from them.

The Human Ecology Practice Area (HEPA) is a model for forest protection, and provides evidence for the high regeneration potential of the area. This is a legal safeguard to prevent their conversion /change in use purpose. HEPA is a so called farmer field school where ethnic minority youth from different areas live and receive training to learn about the interaction between people and

Box 10:

'People here depend on forests....we need to find way for people to live with forests....

nature. In 2002 HEPA received 285ha degraded forests and after more than 8 years the district commissioned a study to show the results in terms of forest protection. The survey, conducted by an independent forestry agency, showed the recovery of animal and plant species, plant structure, and a forest density that is almost four times higher than the district's average.

Truong Son Forest Cooperative in Son Kim is another example. This is a collective of commune leaders and local people who were concerned about forest depletion and who wanted to provide an example of how people can make a living from natural forests and protect it at the same time. With the reallocation in 1993 this collective of people received 875ha of exhausted forests in Area 64. The group then reallocated the area among 23 participating households. Each household received a plot in the lower part, a plot in the mid part and a plot in the higher part of the mountain. On the lower parts people established livestock models and/or grew crops or fruit trees. In the middle part they mixed plantation trees with indigenous species while forests in the higher areas are protected and only used for NTFPs. After twenty years, the forests of the cooperative have regenerated and are in a much better condition than other surrounding forests. The cooperative and forest owners allow surrounding households to collect NTFP from the cooperation forests. But whilst timber logging is prohibited cooperative members still face difficulties in protecting forests.

PART V: RECOMMENDATIONS

1. Securing livelihoods through allocation of natural forests to local people

5.1.1 The allocation of production forest lands to households and supporting them in viable land use techniques is a necessary condition for sustainable forest management. Before implementing plans for mono plantations, these proposals should be assessed and piloted thoroughly to test their long term viability and effectiveness.

5.1.2 Locally existing and successful models where indigenous and non-indigenous trees are mixed, should be studied in more detail and improved for wider application. Cases like HEPA and Truong Son Cooperative prove people's ability to protect and benefit from forests at the same time. These cases should also be studied in depth and their lessons integrated into policies and local plans.

5.1.3 Allocation of natural forests to households or community groups for protection should be recognized as part of their livelihood strategy and as an effective solution both for forest protection and regeneration.

2. Actors and mechanisms for forest planning, development and monitoring

5.2.1 There is stressing need to reconsider and adapt current mechanisms for land inventory, forest classification and development and socio economic planning at local level. Particularly the cooperation and streamlining of policies among different departments is a prerequisite for consistent and coherent development. Such coordination is a matter of willingness rather than the availability of time and funds.

5.2.2 In coordination, specific attention should go out to coordination and exchange of information around mapping, land inventories and forest classification. Different departments should use the same information and maps as baseline for their planning. Once formulated and officially approved, development plans and forest classification should be taken as the starting point to assess whether investments and other interventions are in line with plans (rather than continuously changing plans and forest classification to make investments fit into these plans).

5.2.3 To ensure that mapping, land inventories and assessments provide a real picture, sufficient means and time should become available to assist and monitor mapping agencies. These exercises should be carried out by independent actors, and in a participatory way. Moreover control mechanisms must be put in place that ensure these tasks are carried out without influence from forest owners or others who have an own stake in a certain type of land classification. To this end, local committees could be established with a representation of local people and relevant institutions, to monitor the activities of hired consultant agencies.

5.2.4 Create conditions for transparent and effective forests protection: invest in protection units and involve local people in protection.

3. Clarify between production and protection forests and close watershed forest areas exclusively for protection

5.3.1 Assigning different functional uses to different plots in the same area should be avoided. The present habit creates confusion for local people and to those responsible for forest protection. There should be clear separation and borders for production forests and for protection forests.

5.3.2 Bring clarity and a clear division in the types of forests controlled by SFE and FMB, where the former should exclusively control production and the latter controls exclusively (watershed) protection forests.

5.3.3 To regenerate the forests, all watershed protection areas should be closed for all kinds of activity such as the Hydropower Plans in Rao An, and be strictly protected. For the longer term a strategy should be formulated and put into effect for people to use non timber forest products in a sustainable way.

4. Forest-related decisions must be based on clear criteria & guidelines and impacts & feasibility studies

5.4.1 Investments like hydro-dam or rubber plans should be subject to thorough environmental, social and economic impact assessments and to meaningful local consultations before approval. These assessments should be conducted by independent agencies through clear and transparent mechanisms.

5.4.2 Ensure transparent decision making that is in line with government laws and policies. There needs to be a fixed set of guidelines and criteria for forest classification that are clear to all relevant actors.

5.4.3 Forest classification needs to be based on natural functions and watershed vulnerability rather than a status which changes over time, particularly by human activity. This also means that classification should be fixed and only change under exceptional circumstances.

5.4.4 Monitoring must be improved so that decisions comply with legal provisions and safeguards for people and nature. Such as the requirements for feasibility and impact assessments, local participation and taking into account people's needs.

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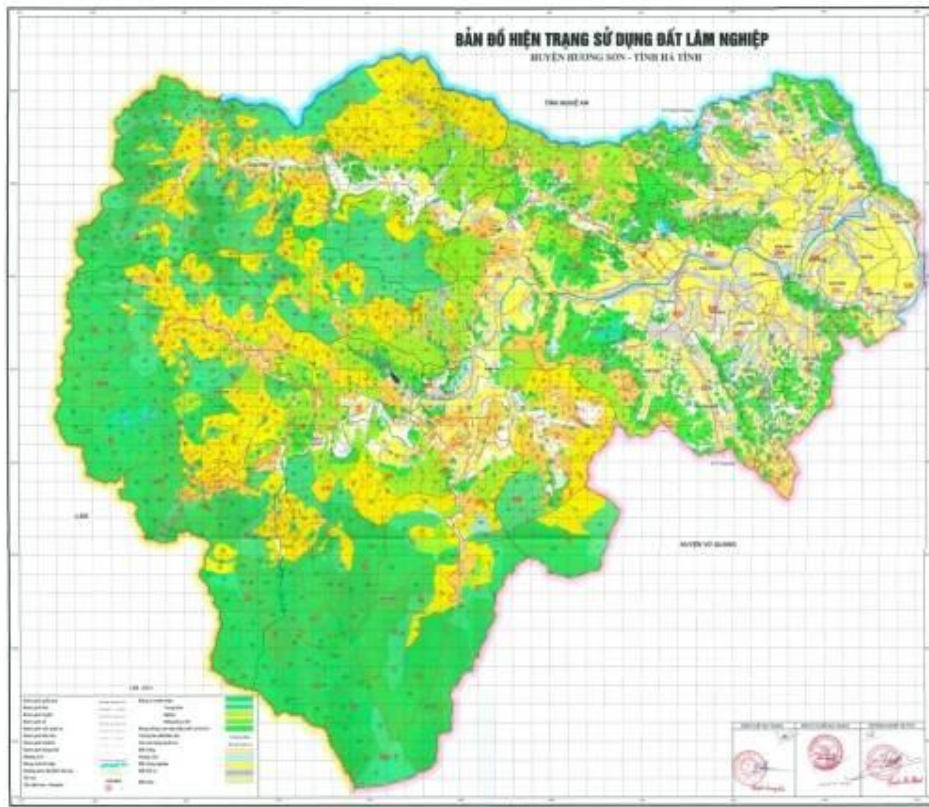
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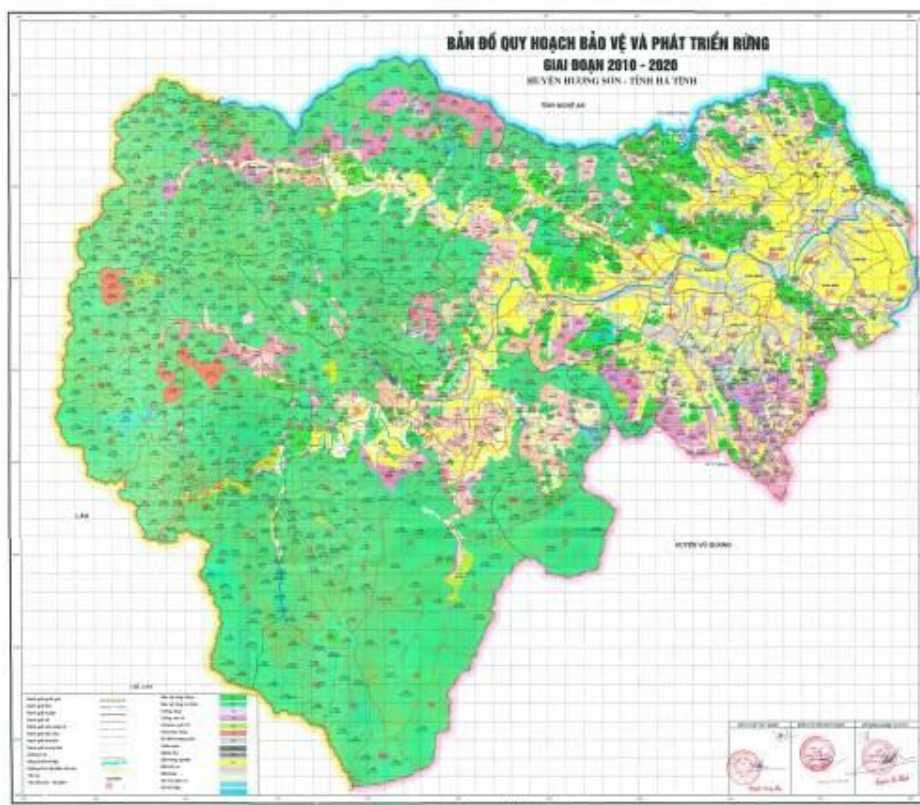
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ANNEXES

Annex 1: Map of current Forestland Uses in Huong Son district 2009.



Annex 2: Map of Forest Protection and Development Plan for Huong Son district 2010-2020.



Annex 3: Areas Identified as (Very) Crucial Watershed Areas - Before 2005 (FIPI 2006)

Son Hong		Son Kim 1		Son Kim 2		Son Tay	
Area	Plots	Area	Plots	Area			
1	1,2,4,	36	3,4,5,6	63	3,6,7	58	1,2,3,4 ,5,6,7, 8,9
2	1,2,3,4,5,6	37	1,2,6	72	1,2,3,4,5,6,7,8,9,10,11,12	65	2,6b,7 b,8b,9 b
3	1a,1b,2a, 2b,3	44	1,2,3,4,5,6,7,8,9	73	1,2,,4,5,6,7	39a	1,2,3,4 ,5,6,7, 8,9,10
5	1,2,3,5	49	1,2,6,8	81	1,2,3,4,5,6,7,8,9,10,11,12	34	1
7	1,2,3	56	5,6,8,9	83	1,2,3,4,5,	66b	
12	1,3,4,7,8,9	60	1,2,3,4,5,6,7,8,9,10 ,11	66a	7	33	
16	7,8,9,10	61	4,5,6	85a	1,2,3,4	38	
17	3,4,6,7,8	67	1,2,3,4,5,6,7,8,9,10				
21	5,7,	68	1,2,3,5,6,7				
22	2,4,5,9,10	70	1,2,4,5,6,7,8,9				
28	1,2,3	79	1,2,3,4,5,6,7,8,9,10 ,11				
31	1,4,6,7,8,9						

Annex 4: Changes in (Watershed Protection) Forests Until 2012

4.1 Son Tay Commune – Rao Qua valley

Area	Plots	Ha	Forest Status	Planning up to 2020	Reclassification into Production forest?	Threats	Notes
34	1	93,4	Plantation	Protection	No	Yes	
34	2,3	221,8	Exploited and poor	Protection	No	Yes	These plots are already poor, plots 1,2 reclassified as production and surrounded by average forests planned for SFE
38	7	82,4	Poor	Protection	No	Yes	Near roads
38	8	137,4	Plantation	Protection	No	Yes	Near roads
39a	1,2,4,7,8,9	591,9	Mostly poor and some average	Protection	Yes	Yes	These plots are already exhausted. Some are very near the road. Surrounding areas are plantations and planned for rubber.
39a	3,5,6,8	599,1	Exploited & Plantations	Rubber	Yes	Yes	Plot 3 is partly the water source where different rivers meet, now surrounded by plantations and plans to replace with rubber
58	1,6,8,9,	553,2	Exploited and Bare	Planned for Rubber	Yes	Yes	This is the watershed area on commune's east bordering Vu Quang. Totally destroyed already and partly plantations
65	6b, 8b	166,6	Exploited and poor	Regeneration	No	Yes	Already affected – surrounding areas planned for rubber
65	7b, 9b	181,7	Average	Regeneration	No	Yes	Surrounding plots are planned for rubber.
66b	2,3	316,7	Average	Protection	No	Yes	

4.2 Son Hong Commune – Con River valley

Area	Plots	Ha	Forest Status	Planned	Reclassified for Production?	Threat	Notes
1	1,2	303,2	Exploited and Poor	SFE Exploitation	Yes	Yes	Already poor forest – likely to converted into plantation
1	4	222,8	Average	Protection	Yes	Yes	Surrounded by forests planned for exploitation posing threat for illegal logging
2	1,2,3, 6,7	684	Mix of rich average and poor	Protection (Plot 7 exploitation)	No	Yes	Small road passing across these plots on the border and forest starting to get affected – illegal logging is likely to continue
3	3	96,3	Average	Protection	No	Likely	Small plots are already converted into plantation. Adjacent to plots of production forests on its south planned for plantation.

3	1a	28,5	Average	Protection	No		Average status indicates illegal logging
3	1b	106,9	Plantation	SFE Exploitation	Yes	Yes	Already converted – to be exploited
3	2b	68,5	Average	SFE exploitation	Yes	Yes	To be exploited (possibly conversion as the plot next to it).
5	1,2,3,5	538,7	Average and poor		No	??	Forests are mostly average which is a sign of (illegal) logging. South to plot 5 rubber is planned on a plot of production forest
7	1,2,3	364,4	Average and part poor	Protection	No	??	Average forests indicate illegal logging. The plots are surrounded by areas planned for rubber
12	1,3,7,8,9 (part 1)	434,2	Poor and average (2928,6)	Protection	No	Yes	Parts of these plots affected because of the small road cutting through it.
12	1,3,7, 8,9 (part 2)	588,7	Rich	Protection	No		Areas in these plots nearer to the border are less affected than parts near the road
16	7,10	352,4	Average	SFE Exploitation	Yes	Yes	Plot at foothill of BaMu mountain
16	8,9,	288,5	Average		No		Average forest indicate illegal logging
17	3,4,6,7 and part 8	789	Mix of plantations, poor and Average	Protection	No		Poor and average indicate illegal logging
21	5,7,	148,4	Rich	Protection	No	Yes	One of the few rich plots on Bamu Foothill. Areas around it are production forests planned for SFE exploitation, but these are average and parts already exploited – illegal logging from the rich 5,7 very likely
22	2,4,5,9	598	Most rich, some average	Protection	<i>Only part of plot 9 (26ha)</i>	Yes	Forests right east of these plots, very near the border , are being logged (average and poor forests) and signs that the loggers already started to encroach the watershed directly on the border as there are areas of average forests. A plot next east to 9 is also planned for SFE exploitation (not watershed area but rich)
22	10	112,4	Rich	SFE exploitation	Yes	Yes	
28	1,2,3	110,4	Exploited		Yes		
31	1,4,5,6,7, 8,9	1187,2	Average (5024,9)	Protection	Yes	Yes	It is a question of the plans for rubber – one map shows rubber planning in the whole northern area up to the

border. But is this plan officially approved? If so, what is the environmental effect of rubber going to be on forests?

4.3 Son Kim 1 Commune – Nuoc Sot valley

Area	Plots	Ha	Forest Status	Planned	Reclassified for Production?	Threat	Notes
36	3	170,5	Poor and Plantation	SFE exploitation	Yes	Yes	Very near the border, half is converted into plantation
36	4	136,5	Rich	SFE exploitation	Yes	Yes	Very near the border – only separated from Laos through two small plots (5) of around 180ha
36	6	165,2	Rich	SFE exploitation	Yes	Yes	Same as plot 4, reclassified but very near the border
37	1,2	120,6	Exploited and poor	Regeneration	No	Yes	Two plots on foothills of Bamu that are already exploited. Now other rich plots at the foothills are planned
37	6	169	Average	SFE exploitation	Yes	Yes	Foothill of Bamu
44	2,4	144,5	Rich	Protection	No	Yes	One of the few areas in the North where a large area is still rich. Only these two plots are under possible threat as they are bordering areas less rich planned for exploitation
49	(1,2,6, 8 watershed forest – total 555) all indicated as rich	114,2	Rich	Protection Forests	No	Yes?	Area North of Nuoc Sot hydropower where upper Lanh stream lies, runs through it and meets the reservoir.
56	5	114,5	Exploited and poor	Protection	No	Yes	Forests along the last part road leading to the reservoir. On some maps presented as rich – but this is part of the 300ha that was cleared for the plant site –The areas are not reclassified as production forests.
	6	118,6	Rich	Protection			
	8	119,2	Poor and exploited	Protection /			
	9	58,3	Rich	Protection			
60	1,4,5,9,10, 11	1018,6	Rich	Protection	No		These are border plots in hydropower area but not directly next to it. Question is whether and how it could be affected? There are for

								instance 2 streams running through the area
60	2,3,6,7,8	578,6	Rich	Protection	No			Directly surrounding the reservoir and include the plant – but not reclassified and forests ostensibly still rich, the question is if it is indeed still rich, and if it will not be subject to illegal logging
67	9,10	129	Average	Protection	No	Yes		Plots along road 8a, where it meets Laos's border. Areas next to road have been subject to logging
68	1	89,2	Bare and Plantation	Plantations	Yes	Yes		It is classified as protection – but lies along the road
68	2,3,5,parts 6,7	481,5	Bare, poor forests	Protection	No	Yes		Areas along the road and areas cleared probably for Rao An hydropower
70	1,2,5,8,9, part of 7	988,1	Exploited and poor	Protection	Yes for 1,2a (129,3ha)	Yes		All near the road and mix of bare, poor forests. This is the area probably cleared for Rao An hydropower and illegal exploitation. Two plots right on the border have been exploited (partly in area 79)
79	1,4 (part)	268	Poor and average	Protection	No	Yes		Part of plot 1 that is exploited is immediately on Laos border and plot 4 very near

4.4 Son Kim 2 commune – Rao An valley

Area	Plots	Ha	Forest Status	Planned	Reclassified for Production	Threat	Notes
63	3	185,5	Plantation	Protection	Yes	Yes	Already converted, near hydropower area and the road
63	6,7	241,5	Poor and average	Protection	No	Yes	Poor and average forest – have been subject to illegal logging and surrounded by plot of production forests with plantations and poor forests
72	1,2,3,4,5, 6,7a,8a,9a,10a	919,8	Exploited Poor forests	Protection and natural regeneration	Yes	Yes	Rao An Hydropower area and surroundings
85a	1,3,4	630,7	Average	Protection	No	Yes	No more rich but average forests
66a	7	109,8	average	Protection	No	Yes	Plot of forest near the road and surrounded by bare lands, poor forests and plantations

65	2	102	Plantation	Rubber	Yes	Yes	Forests turned from rich to poor, then converted to plantations and now planned for rubber.
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Annex 5: SFE Plans

SFE Exploitation 2011-2015 (Huong Son SFE 2010 Table 8)

Area	Plots	Watershed?
3	1b,2b,4,5	
16	7,10	Yes
13	10	
34	7	
2	7	
45	3,4,5,8,7,9,10	
50	1,4,5	
36	4,6	Yes
21	1,2,6	
22	1,6,10	Yes
37	6	
Total	1166,3	

Area	Plots	Watershed?
3	1a, 2b	
36	4, 6	
45	3, 4,5,8,7,9,10	
50	1,4,5	

SFE Plans for Exploitation, Rubber, Protection and Production (Areas and plots)

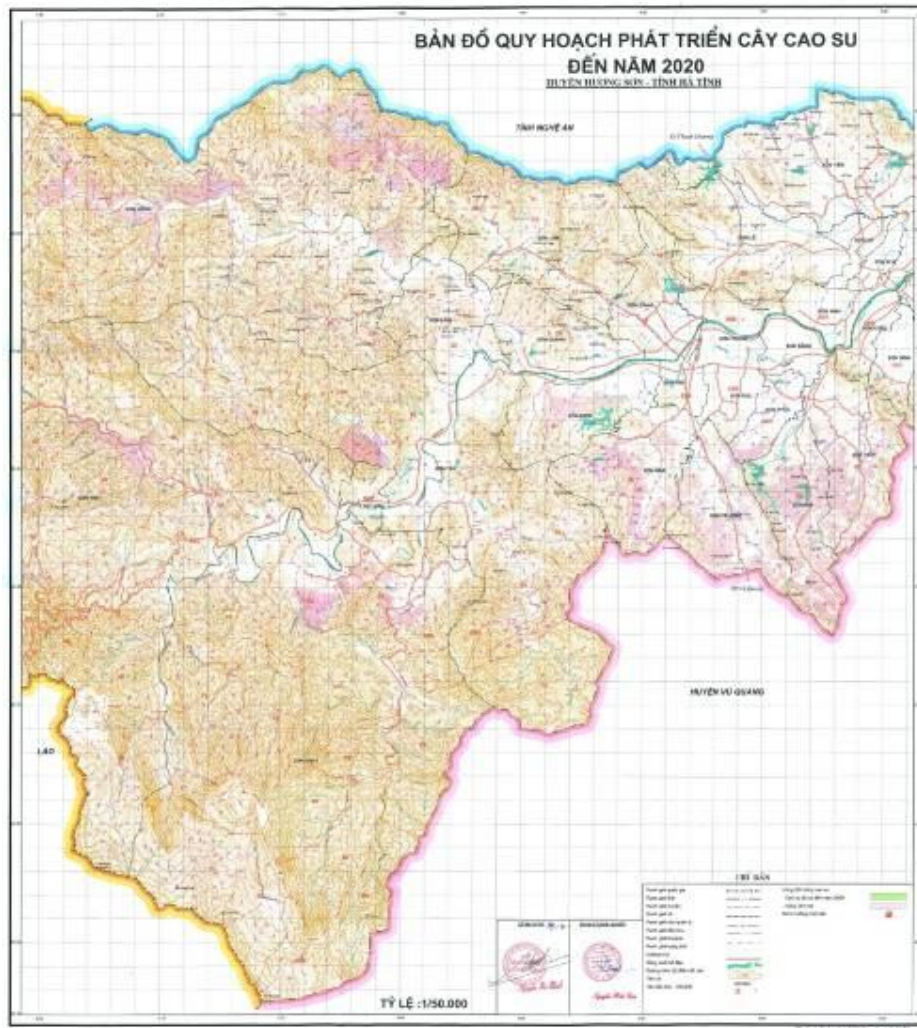
Rubber ²³ 2011 – 2013 (areas and plots)	Protection areas (SFE)	Production areas SFE
1353,5ha	24.333,2ha	13.641
3 (5,7,8)	2,3,5,12,16,17,21,22,33,34,36,37,38,39a,44,49,56,61, 70,72,73,78,79,81,83,85a	2,5,13,16,17,21,22,33,34,37,38,39a, 46,49,50
5 (4,7,8,9,10)		
12(6)		
13 (1,3,4,5,6,7)		
16 (2)+(2, 1)		
36 (3)		
38(1,3,5)		
39a (11,12)		
46(6)+(2,3,6)		
45(4,5)		
50(6)+(2,3,5,6)		

²³ Bieu 9b: Ke hoach trong rung tiep trung 5 nam (2011 - 2015) rung san xuat + Bieu 10: Ke hoach chi tho rung 5 nam (Table 9b: 5 Year Forestry Planning (2011-2015) production forests + Table 10 Forestry Plan)

Annex 6: Planned Rubber District

No.	Communes	Plot	Area	Area with natural forest	Areas with timber volumes under 30m ³ /ha	Areas without reserves	Areas with planted trees
1	Sơn kim1	4tk	337,30	-		-	298,28
		51	156,54				148,56
		46	93,94				81,22
		54	29,62				11,30
		55	57,20				57,20
2	Sơn kim2	5tk	1364,27	849,02	849,02	-	515,25
		47	87,15	-	-		87,15
		57	28,50	17,60	17,6		10,90
		59	182,41	115,56	115,56		66,85
		64	621,84	418,34	418,34		203,50
		66A	444,37	297,52	297,52		146,85
3	Sơn tây	5tk	1913,42	453,78	453,78	-	1459,64
		39A	387,17	36,04	36,04		351,13
		40	297,30	92,26	92,26		205,04
		41	40,27	-	-		40,27
		58	514,09	97,52	97,52		416,57
		65	674,59	227,96	227,96		446,63
4	Sơn Hồng	8tk	1926,73	1495,55	358,75	43,70	374,50
		4	198,20	141,45	30,82	4,26	36,45
		7	104,80	37,92	-	-	63,74
		8	431,12	378,25	159,87	0,48	47,61
		11	401,69	337,82	45,42	8,50	57,52
		16	53,16	47,29	-	-	5,87
		17	126,08	90,59	35,57	3,88	30,41
		18	541,30	393,85	87,07	23,17	132,46
		31	70,38	68,38	-	3,41	0,44
5	Sơn lĩnh	2tk	550,62	72,28	-	-	228,93
		27	406,29	51,45			175,39
		35	144,33	20,83			53,54
Tổng		24 tk	6.092,34	2.870,63	1.661,55	43,70	2876,60

Annex 7: Official Rubber Planning until 2020



Annex 8: Planned areas of small-scale rubber plantations in the upstream

