



# Forestry and Poverty Data in Viet Nam:

## Status, Gaps, and Potential Uses

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## ABBREVIATIONS AND ACRONYMS

CPC	Communal People's Committee Strategy
DOF	Department of Forestry
FAO	Food and Agriculture Organization of the United Nations
FLA	Forest Land Allocation
FPD	Forest Protection Department
GDP	Gross Domestic Product
GSO	General Statistics Office
MARD	Ministry of Agriculture and Rural Development
MB-PF	Management Board for Protection Forest
MB-SUF	Management Board for Special-use Forest
MDF	medium density fiberboard
MOLISA	Ministry of Labor, War Invalids and Social Affairs
MONRE	Ministry of Natural Resources and Environment
NWFP	Non-wood Forest Product
RRI	Rights and Resources Initiative
SFC	state forest company
SFE	state forest enterprise
US\$	United States dollar
VFU	Vietnam Forestry University
VHLSS	Viet Nam Household Living Standard Survey
VND	Vietnamese dong





## PREFACE

This paper is a key output from the Transforming China's Forests Impacts in Southeast Asia: Advancing Pro-Poor Market Reform for Sustainable Livelihoods and Forests project, conducted by RECOFTC and the Rights and Resources Initiative (RRI). The project aim is to advance policy and market reforms in Cambodia, Lao PDR, Thailand, and Viet Nam. Its overall goal is to reduce poverty in forest areas, expand sustainable forest use and trade, and increase the effectiveness and impact of regional analysts and institutions in advancing pro-poor forest policy and market reforms.

Project activities include strategic analytical work that contributes to the development and support of a regional network of policy and market analysts and that supports the engagement of policy and market leaders to raise awareness and advance tenure and policy reforms.

The report is the product of one of the two activities in the Viet Nam component of the project.<sup>1</sup> It focuses on understanding the current situation of data availability with regard to forest resources, forest tenure, markets for forest products, and poverty, with a view to identifying policy barriers, constraints, and issues for further work under the initiative. The Vietnam Forestry University (VFU) carried out a compilation of national and provincial information on the forestry sector and poverty in Viet Nam. Accordingly, it set up a working group led by Nguyen Ba Ngai (see Annex A for the list of group members) to conduct data collection from various sources.

This report presents a synthesis of the data compilation and a discussion of the data based on the work of the working group. The report was written by Nguyen Ba Ngai, Nguyen Quang Tan, William D. Sunderlin, and Yurdi Yasmi, with contributions from Tran Ngoc The and other working group members. RECOFTC's Julian Atkinson, Thomas Enters, and Duncan McLeod provided technical editing support in finalizing the document.

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<sup>1</sup> The other report, *Forest Tenure Reform in Viet Nam: Case Studies from the Northern Upland and Central Highlands Regions*, was written by Nguyen Quang Tan, Nguyen Ba Ngai, Tran Ngoc The, William D. Sunderlin, and Yurdi Yasmi. It is available online at [www.recoftc.org](http://www.recoftc.org) and [www.rightsandresources.org](http://www.rightsandresources.org).





## SUMMARY OF KEY FINDINGS

To develop informed and well-targeted policies, high quality and consistent data are required. Through extensive compilation and review of forestry and poverty data in Viet Nam it became apparent that high quality and consistent data were missing. The main reasons are:

- Adequate coordination among ministries for an integrated data compilation system in Viet Nam does not exist. Various ministries collect data using different criteria, definitions, standards, and methodologies.
- No consistent time-series data compilation has been done. Some data are gathered only for particular years but not for others, leaving gaps for particular periods.
- In some instances data are simply not available.

While we have tried to produce a data set in this report that can be used reliably for analysis, there are certain gaps and inconsistencies in the data that cannot be resolved. People using this data set should be aware of these shortcomings and should acknowledge them in their analyses and reporting. Nevertheless, the data presented in this report may be useful for policy-makers and planners. Some potentially important findings include:

- The area of both natural and plantation forests has grown in Viet Nam.
- There has been a forest tenure shift since the 1990s. The area under State control has decreased and the area under household and community management has increased. These trends are likely to continue in the future.
- The domestic consumption of particleboard has steadily increased during the past 15 years.
- The high poverty rate coincides with high forest cover, which strengthens earlier research findings.

In order to improve data quality and consistency in the forestry sector in Viet Nam, the following recommendations need to be taken into account:

- Coordination among various ministries and agencies needs to be established and strengthened. They need to develop a system and agree upon standards for data collection, measurement, and compilation.
- Clear roles and responsibilities in terms of data collection, data compilation, and publication between ministries and agencies needs to be established.
- Consistency and continuity of data collection need to be ensured.
- Capacity strengthening for ministries and agencies is crucial to enable them to generate high quality, reliable, and consistent data.



## INTRODUCTION: THE NEED FOR HIGH QUALITY INFORMATION

To what extent can poverty alleviation and improved forest management and conservation be advanced optimally? This has been an important question in Viet Nam for a number of years. Is it best to allow national programs that are designed to address these issues to simply advance on their own in response to market developments and with no policy guidance or intervention? If history and recent developments serve as a guide, the answer is *no*.

Although the market has had a role in propelling change, it is clear that improvements in human well-being have been the products of conscious and deliberate planning and policy course corrections by national decision-makers. Likewise, improved forest management and conservation have been the products of an elaborate process of institutional learning and planning, as embodied in related policies and regulations.

Better capacity for conducting policy formulation and implementation must be in place to carry out Viet Nam's national programs. This capacity must be based on high quality national statistics concerning forest resources, levels of human well-being, ownership of and access to forest resources, and the production and trade of forest resources.

Well-grounded knowledge of recent trends in forest land and resource use is an essential precondition for making well-targeted and effective policies and regulations. Moreover, predictive models—which are crucial in anticipating future forestry scenarios and in preparing necessary policy measures—are greatly enriched when they are based on a range of data points that encompass the past and present.

In the past, the lack of quality data in the forestry sector has been an obstacle to institutional reflection and effective policy formulation. There have been many information gaps that make it difficult for policy-makers and planners to make informed decisions. One primary problem is that data are collected at provincial or lower levels but are not integrated into a robust and consistent national database.

Other important problems are that data are gathered in some provinces but not in others; there are inconsistent definitions of terms and variables among provinces; and the types of data gathered from one data-gathering period to the next are inconsistent.

As national efforts toward poverty reduction involve all sectors of the economy, high quality and accurate information needs to be better shared among various ministries and departments involved in the process of socio-economic development and natural resource management.

Against this background, this particular study was conducted to acquire a better understanding of the availability, quality, and potential uses of forestry data from 1990 to 2005 in the following focus areas:

- Forest resources (e.g. forest area by forest type)
- Forest tenure (e.g. types of rights and access, types of recipients in the forest land allocation process)
- Forest products and marketing (information on the harvesting, value-added processing, and trading of forest products and processing facilities)
- Forest forecasts (e.g. prediction on the future uses and supplies of forest products)
- Poverty, focusing on the poverty rate

It is crucial to understand these topics in order to improve policy formulation processes in Viet Nam. Although we explored and analyzed an extensive amount of forestry data, this report is not intended to provide a final solution that can fix all problems regarding data availability and quality. It rather aims at demonstrating the importance of high quality and consistent data to make informed decisions. It also outlines a number of steps that need to be taken to improve data quality.

While we have strived to produce a data set that can be relied on for analysis, there are, as we point out, certain gaps and inconsistencies within the data that cannot be resolved. Those who use the data for analysis and other purposes should be aware of these deficiencies and be attentive to the need to reveal them in their analyses and reporting of the data, as appropriate. This report is only a first step toward a broader assessment of forestry and poverty data in Viet Nam.

There are six sections and a set of annexes. The report begins with a short overview of the relationship between the forestry sector and poverty in Viet Nam. The following section briefly discusses the data compilation process undertaken by the working group that contributed to this report, as well as issues concerning methodology. Then there is an assessment of the data limitations, and decisions made by the working group on how to deal with them. The next part explains the organization of the compiled data and is followed by illustrations of the utility of the data. The final section contains a summary and recommendations. The compiled data are presented in the annexes.





## COUNTRY BACKGROUND

This section begins by introducing general information on the geography, demography, and economics of Viet Nam. It continues with a discussion on the relationship between forests, forestry, and poverty in the country.

### Overview of Viet Nam

Viet Nam is a tropical country located in the Indochinese peninsula of Southeast Asia. The total area of the country is about 33 million hectares (ha), of which 57.6% is classified as forest land.<sup>2</sup> Viet Nam shares a border with China to the north and with Lao PDR and Cambodia to the west. The eastern coast of the country borders the Eastern Sea (known as the South China Sea in Western literature). The population is around 83 million people, with a density averaging 252 people per square kilometer (km<sup>2</sup>).<sup>3</sup> The population is composed of 54 different ethnic groups. The Kinh are the majority group, accounting for around 77% of the national population.

Viet Nam is divided into 59 provinces and five municipalities (hereafter referred to as provinces).<sup>4</sup> They are located in eight economic–ecological regions. Four provinces are located in the Northwest region, 11 each in the Northeast and Red River Delta, six in the North Central coastal region, eight in the South Central coastal region, five in the Central Highlands, six in the Southeast, and 13 in the Mekong River Delta.

Viet Nam has made a number of significant economic achievements in the last two decades. The country's gross domestic product (GDP) tripled between 1990 and 2005, with an average growth rate of 7.6% per annum. Nevertheless, Viet Nam is still a poor country and the gap between rich and the poor is widening. Average GDP per capita in 2005 was only US\$675 and 19.5% of the population in 2004 was classified as living in poverty.

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<sup>2</sup> This land is formally classified as forest regardless of whether there is actual forest on it or not.

<sup>3</sup> Data as of 31 December 2005.

<sup>4</sup> Viet Nam now has 63 provinces. In August 2008 and after completion of the study, Ha Tay province merged with Hanoi.

## Forests, Forestry, and Poverty Alleviation in Viet Nam

After the end of the American War in 1975 (known as the Viet Nam War in Western literature), the country's forest resources were placed under State management. The state forest enterprise (SFE) system, which was set up in the North before the end of the war, was expanded to the South. By 1989, this system consisted of 413 SFEs, managing 6.3 million ha of forest land (MARD 2001). Nevertheless, forest cover decreased at a rapid rate during the years of SFE management. It is estimated that, on average, almost 200,000 ha of forest were lost per year between 1975 and 1990 (United Nations Development Program and State Planning Committee 1990).

Since the launch of reforms in Viet Nam's forestry sector during the early 1990s, important progress has been achieved. First, a greater diversity of stakeholders, including non-state actors, has become involved in the management of national forest resources through the forest land allocation program (FLA) (Nguyen et al. 2008).

While State organizations were the primary forest tenure group in Viet Nam before 1990, national forest resources are currently managed by eight major groups of actors:

- Management Boards for Protection Forest (MB-PFs)
- Management Boards for Special-use Forest (MB-SUFs)
- State-owned Companies (SOCs—formerly SFEs)
- Individual households
- Communities
- Communal people's committees (CPCs)
- Joint-venture companies
- The armed forces

Secondly, forest cover has gradually increased from 27% of the total land area in 1992 to 38% in 2006.<sup>5</sup> This increase can be partially attributed to national reforestation programs, such as Program 327,<sup>6</sup> aimed at re-greening barren land and denuded hills, and implemented between 1992 and 1997, and the Five Million Hectare Reforestation Program (also known as the 661 Program<sup>7</sup>) that began in 1998 and will operate until 2010. In addition to these programs, other factors contributing to the increase in forest cover include national forest tenure reform, the availability of new technologies, market opportunities for cash crops, and the liberalization of and increase in agricultural output (Roth 2005; Sikor 2001).

Significant progress has also been achieved in alleviating poverty since the early 1990s (see Annex B). The national poverty<sup>8</sup> rate decreased from 58.2% in 1993 to 19.5%

<sup>5</sup> Decision No. 2503/QD/BNN-KL of the Minister of MARD, dated 27 August 2007.

<sup>6</sup> Decision No. 327/CT of the Chairman of Council of Ministers, dated 15 September 1992.

<sup>7</sup> Decision No. 661/1998/QD-TTg of the Prime Minister, dated 29 July 1998.

<sup>8</sup> Refer to section 4 on how poverty and poverty rate are defined in Viet Nam and Annex B on poverty norms in Viet Nam.

in 2004, a reduction of more than half of the population living in poverty in just 11 years (see GSO 2000, 2006). The food poverty rate also declined, from 35.6% in 1997–1998 to 11.9% in 2002–2003.<sup>9</sup> The country's success in poverty reduction has generally been attributed to the conversion of the national economy from a centrally planned system to a market-based system through *Doi Moi*<sup>10</sup> and the implementation of agricultural reform policies.<sup>11</sup>

Other factors include various national poverty alleviation policies such as Program 135,<sup>12</sup> a socio-economic development program for 2,500 poor communes, which operated between 1998 and 2003, and Program 134,<sup>13</sup> which started in 2004 and provides poor ethnic minority people with production land, housing, and potable water. Beginning in 2002, national efforts on poverty alleviation have been implemented through the national Comprehensive Poverty Reduction and Growth Strategy.

Superficially, it may seem that successes in poverty reduction and increase in forest cover are unrelated. However, there have been strong links between changes in human well-being and changes in forest and natural resource management in Viet Nam. It is assumed that these links will persist in the future. These links can be summarized as follows:

- During the last 50 years, Viet Nam's ability to support a rapidly growing population has been achieved through considerable expansion of the country's agricultural land area. This has been achieved partly through the conversion of forests into agricultural land.
- The poor tend to have a higher reliance than the nonpoor on forest resources (e.g. timber, non-wood forest products (NWFPs), and the environmental services provided by forests) for meeting their basic needs, for obtaining "gap-filler" income between agricultural harvests, and for providing a "safety net" in the event of emergencies.
- The areas with the highest rates of poverty tend to be the same areas where natural forests are concentrated. These are generally remote upland areas in the country's northern and central regions with large ethnic minority populations. Therefore, poverty alleviation policies aimed at the "poorest of the poor" must take into account the likelihood that many of these people are forest dependent (Müller et al. 2006; Swinkels and Turk 2006).

<sup>9</sup> For more information, see the GSO website ([www.gso.gov.vn](http://www.gso.gov.vn)).

<sup>10</sup> *Doi Moi*, or the economic reform policy, was launched following the Determination of the 6<sup>th</sup> Communist Party Congress in December 1986.

<sup>11</sup> Resolution No. 10 NQ/TU of the Central Committee Secretariat of Viet Nam Communist Party on Renovation of Management in Agriculture, dated 5 April 1988. The agricultural reform policies that emerged from this resolution established free trade in grain, abolished collectivization in agriculture, and allocated farmland to individual households.

<sup>12</sup> Decision No. 135/1998/QĐ-TTg of the Prime Minister, dated 31 July 1998.

<sup>13</sup> Decision No. 134/2004/QĐ-TTg of the Prime Minister, dated 20 July 2004.

- The allocation of agricultural lands to individuals and households successfully contributed to economic growth and a turn towards prosperity in rural areas. It is therefore reasonable to suppose that the allocation of forest lands to local people can contribute similarly to positive outcomes if it is properly designed and implemented.
- There is reason to believe that economic development and increasing incomes are a precondition for the improved management and conservation of forest resources. This is one of the basic messages of the recent “forest transitions” literature, which argues that countries tend to start with a high endowment of forests and then lose forest cover at a high rate as economic development begins. As economic growth and prosperity take hold, it is then possible for forest cover loss to stabilize, and for partial forest cover restoration to occur (Rudel 2005).



## DATA COMPILATION METHODOLOGY AND PROCESS

This section describes the major methodological issues and constraints and data compilation efforts that were undertaken.

### Methodology Issues in Data Collection

At the beginning of the project, the working group developed a list of variables and units of measurement related to the five focus areas. Annex C presents a list of the variables and units of measurement for which data were available for at least one of the years covered by the study. Annex D lists variables for which information was unavailable.

Reliable data on the study's focus areas were only available since 1990. The working group specified three five-year periods, 1990–1995; 1996–2000; and 2001–2005, and sought to assemble data for as many years as possible, recognizing that there is great utility in creating an historical database.

Poverty was a key focus area. As poverty alleviation draws on all sectors of the economy, it would have been useful to also assemble data on crop production, animal husbandry, aquaculture, rural industries, remittances, and migration to obtain a complete view of the development process. It would also have been useful to include information on poverty density along with poverty rates.<sup>14</sup> However, this was not possible given funding and time constraints.

### Study Process

The study lasted from May 2006 to May 2008 and data collection took place in June and July 2006. For the initial process of data collection, a working group was set up that was led by Dr. Nguyen Ba Ngai of VFU, and comprised members from the university

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<sup>14</sup> Müller et al. (2006) demonstrated that areas with high poverty rates in Viet Nam tend to overlap with areas of natural forest and areas with high poverty density tend to be in and near metropolitan areas and coastal areas, where forest cover tends to be low.

and the Legal Department of the Ministry of Agriculture and Rural Development (MARD; see Annex A).

During data collection, working group members drew on published data available in both hard copy and digital form from relevant agencies and sources, of which the most important were:

- MARD departments, including the Forest Protection Department (FPD), the Department of Forestry (DOF), the Information Center, the Board for Enterprise Reform, and the Forest Sector Support Program and Partnership
- The Forest Inventory and Planning Institute
- The Department of Land Registration and Statistics in the Ministry of Natural Resources and Environment (MONRE)
- The General Statistics Office (GSO)
- The Ministry of Planning and Investment
- The information center of the World Bank office in Viet Nam
- The library for the Ha Noi office of the Food and Agriculture Organization of the United Nations (FAO)
- The National Library of Viet Nam in Ha Noi
- The Extension and Training Support Project for Forestry and Agriculture in the Uplands, implemented by Helvetas

To obtain various perspectives, discussions were held between working group members and officials from the World Bank office in Viet Nam, MONRE, FPD, and the DOF. Initial findings were discussed with various stakeholders at a national workshop in Ha Noi on 25 January 2008 and feedback from that workshop is reflected in this report.





## DATA LIMITATIONS

This report presents data on forest resources, forest tenure, forest products and markets, and poverty from various years spanning the period 1990–2005, and forecasts predicting the supply of and demand for various wood products for selected years up to 2020. No similar data set exists within any single agency in Viet Nam. There are two reasons for the large scope of our data set. First, the data set at hand is rich in dimensions. It consists of three different subsets from three different sectors of the economy (forest land, forest, and poverty). Secondly, it is the only complete data set that has been compiled at the provincial level (cf. national- and regional-level data) for multiple years.

An assessment of the data reveals three major limitations: (1) data inconsistencies from different sources, (2) data inconsistencies between different time periods, and (3) gaps between expected and available data. The discussion that follows elaborates on the three limitations and provides recommendations made by the working group to overcome these.

The number of provinces increased from 53 during 1993–1995 to 64 in 2004, as 11 provinces were subdivided and became 22 new entities.<sup>15</sup> This has created a number of time-series inconsistencies for the data of the concerned provinces. As data from the years prior to the subdivision cannot be disaggregated, data for the subdivided provinces from these years are listed under the original provinces.

### Inconsistencies in Data From Different Sources

Discrepancies exist in the data that come from different Government agencies. This is the case for data concerning poverty rates and forest land tenure.

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<sup>15</sup> See Annex E for a list of province subdivisions by year.

### Poverty Data

Since the early 1990s, poverty data have been mainly collected by the Ministry of Labor, War Invalids and Social Affairs (MOLISA) and the GSO (see Annex B). MOLISA's poverty rate definition is based on household income and assets. Total household income from a variety of sources is divided by the number of household members. The results are compared against defined poverty thresholds. Households whose per capita income falls below the poverty threshold (differentiated by location in the country) are classified as poor.

The method used by the GSO relies on both income and expenditure per capita to compute a poverty rate. The GSO defines a threshold based on the cost of a consumption basket that includes food and nonfood items, with spending on food being sufficient to secure 2,100 calories per day per person. Households are considered poor when their income and expenditure levels are not high enough to afford this consumption basket. Based on this method, the GSO conducted the Viet Nam Household Living Standard Survey (VHLSS) for 1992–1993, 1997–1998, 2002, and 2004 in collaboration with the World Bank. The GSO published only regional-level poverty data in 1993 and 1998, while the more recent surveys of 2002 and 2004 included provincial-level data.

This report presents the available GSO data, as the use of both income and expenditure to compute the poverty rate is likely to be more reliable than the income data and fixed poverty thresholds applied by MOLISA. The official poverty threshold being used by the Government is based on the monthly average income per capita sufficient to provide 2,100 calories of food intake per person per day. This calorie target is then converted into Vietnamese dong (VND) cash equivalent based on current market prices. Furthermore, the GSO method and data are commonly used in poverty assessments by various international and nongovernmental organizations. However, only data on food poverty from the GSO are available for 2004. The study therefore took data on the general poverty rate from the World Bank.

### Forest Land Tenure Data

Data on forest land tenure were obtained from MARD and MONRE, with the former classifying forest tenure according to the following tenure groups:<sup>16</sup>

- State enterprises
- MB-SUFs
- MB-PFs
- Joint-venture companies
- Households and individuals
- Collectives

<sup>16</sup> Decision No. 78/2002/QĐ-BNN of the Minister of MARD, dated 28 August 2002.

- The armed forces
- CPCs
- Others

MONRE classifies land tenure<sup>17</sup> according to:

- Households and individuals
- Economic organizations
- Foreign and joint-venture companies
- CPCs
- Others (this category includes land that is non-allocated or leased)

While forest tenure data collected by MARD are more detailed, MONRE data are considered official as it is the Government ministry in charge of land management. The working group therefore decided to select data on forest land tenure from MONRE, and used MARD data when necessary forest land data were not available in the MONRE data set.

### Inconsistencies in Data Between Different Time Periods

Data variables differ in the three time periods (1990–1995, 1996–2000, and 2000–2005), creating gaps and inconsistencies. This is because data-keeping agencies have changed the variables over time. For example, forest tenure data collection categories shifted from 1995 to 2004. For 1995, only data for households were compiled; however, for 2004, forest tenure data are available for both households and communities. Another example concerns poverty data. The 1992–1993 and 1997–1998 VHLSS' provide only regional-level data, while the 2002 and 2004 data provide statistics by province.

Therefore, statistics are presented for one or two years from each time period that had the most complete sets of reliable data for the project's focus areas. Notwithstanding a number of exceptions (detailed in Section 6), the key years are 1993 and 1995 for the period 1990–1995, 1999 for the period 1996–2000, and 2002 and 2004 for the period 2001–2005.

### Gaps Between Expected and Available Data

The original intention was to collect a comprehensive data set on forest land, forest resources, production, forecasts, and poverty. However, this proved to be an impossible goal. In many cases the data simply did not exist, or existed only for some provinces. As a consequence, it was impossible in some cases to aggregate the regional and

<sup>17</sup> Legal document number 1553/HD-TCDC of the General Cadastral Department, dated 12 October 1999.

national data. Because of such information gaps, the working group decided to limit the scope of the data set to the period spanning 1990 to 2005. Although the data in the 1990–2005 period are not complete, they at least begin to provide useful insights on trends that are of interest.

Annex D lists examples of variables of interest for which data were not available in the 1990–2005 period and are therefore not included in the compiled data. However, this should not be viewed as a complete list of the unavailable data. Readers will also notice gaps in the available data in one or more of the study years. For example, in Annex F, data on bamboo stock and bamboo area in plantations and natural forests are only available for 1999.

It would have been useful to have data for periods prior to 1990. For example, Viet Nam is in the midst of a forest transition: the country possessed high initial forest stocks prior to the mid-1950s which were rapidly deforested from 1960 to 1990; only in recent years has forest cover loss been slowed and regrowth occurred. The data on forest area suggests that the forest transition may be unfolding in different ways in different parts of the country. If accurate forest cover data dating back to the 1980s were available, it would be possible to have a better understanding of the ways in which earlier phases of the forest transition unfolded.



## DESCRIPTION OF THE COMPILED DATA

The data compiled in this report are organized according to five focus areas:

- Forest resources
- Forest tenure
- Forest products and markets
- Forest forecasts
- Poverty

Available data are presented for the selected key years of the study—1993, 1995, 1999, 2002, and 2004—along with forecasts for selected years up to 2020 in wood product supply and demand. This section gives a brief description of the data set that is contained in Annexes F through J.

### Forest Resource Data

Data on forest resources are compiled in Annex F, which includes five tables (see Box 1) presenting the information by province. Annex F.1 presents data on forest resources from 1993. Annex F.1 only contains data on areas classified as forest, non-forested area, natural forest area, natural timber volume, and the number of bamboo trees. Columns, for which information for 1993 is unavailable, are left blank in the table to be structurally consistent with tables presenting data for 1999, 2002, and 2004. Similarly Annex F.1 also lists all 64 provinces that currently exist, even though there were only 53 provinces in 1993.

A note is made for each province that did not exist at the time, indicating why data are not available and where to find relevant forest data, usually in the original province from which the new province emerged. For example, no disaggregated data exist for what are now Vinh Long and Ben Tre provinces, as they were formed through subdivision of Ben Tre; a note is made in the entry for Vinh Long province and data for the pre-subdivided Ben Tre province is presented in the Ben Tre entry.

**BOX 1: LIST OF TABLES ON FOREST RESOURCE DATA**

Annex F.1	Status of Forest Resources in 1993
Annex F.2	Status of Forest Resources in 1999
Annex F.3	Status of Forest Resources in 2002
Annex F.4	Status of Forest Resources in 2004
Annex F.5	Expansion of Plantation Forest Area per Province for the Years 1995, 1999, 2002, and 2004

Annex F.2 presents data on forest resources for 1999. For this year, much more data are available compared to 1993; only data for the area classified as forest and natural timber volume are unavailable for all provinces. By this year, there were 61 provinces in the whole country. A note is made in the entries for the three not-yet-existing provinces indicating where to find the relevant data.

For 2002, data (in Annex F.3) are available for the following eight variables:

- Total physical area
- Area classified as forest
- Forested area
- Natural forest area
- Plantation forest area
- Non-forested area
- Natural timber forest area
- Plantation timber forest area.

Similar to 1999, there were 61 provinces in 2002 so the entries for the three new provinces are left blank.

For 2004 (Annex F.4), data are available for ten variables:

- Total physical area
- Forested area
- Natural forest area
- Plantation forest area
- Non-forested area
- Natural timber forest area
- Plantation timber forest area
- Bamboo forest area
- Natural bamboo area
- Plantation bamboo area



Finally, Annex F.5 provides provincial-level figures for plantation forest expansion for 1995, 1999, 2002, and 2004. Data for 1993 are not available.

## Forest Tenure Data

Due to the unavailability of reliable data for forest tenure, the report only presents information for 1995, 1999, and 2004 for forest areas under contract, and information for 1995 and 2004 for forest areas under the management of different stakeholders. This information is contained in five tables under Annex G (see Box 2). Similar to the tables on forest resources, the forest tenure tables present information by province grouped according to region.

### BOX 2: LIST OF TABLES ON FOREST TENURE

Annex G.1	Forest Areas Under Contract in 1995
Annex G.2	Forest Areas Under Contract in 1999
Annex G.3	Forest Areas Under Contract in 2004
Annex G.4	The Forest Tenure Situation in 1995
Annex G.5	The Forest Tenure Situation in 2004

Annex G.1 presents information on forest contracting in 1995. Unfortunately, data are available only for forests under contract to individual households from SFEs and state forest companies (SFCs).

In contrast, data on forests under contract are available for all variables for 1999 (Annex G.2).

The table for 2004 (Annex G.3) presents data on the following variables only:

- Total forest area contracted by SFEs/SFCs
- The number of households receiving contracts from SFEs/SFCs
- Forest area contracted to households by SFEs/SFCs
- Total forest area contracted by MB-PFs
- Total forest area contracted by MB-SUFs

Annex G.4 presents the following data on areas of forest under various stakeholder management categories in 1995:

- Forests allocated to individuals and households
- Forests under the management of in-country economic organizations (e.g. SFEs and forestry companies)
- Forests under the management of foreign and joint-venture companies
- Forests under management of CPCs
- Forests under other management arrangements

Annex G.5 presents data on areas of forest under various stakeholder management categories in 2004. It lists information on the same stakeholder categories as Annex G.4, but includes additional data on forests under community management.

## Forest Products and Market Data

Annex H presents production and economic data on forest goods (see Box 3). Annex H.1 gives an overview of timber production by province for 1995, 1999, 2002, and 2004. Data for 1993 are not available.

### **BOX 3: LIST OF TABLES ON FOREST PRODUCTS AND MARKET DATA**

Annex H.1	Wood Production Data for 1995, 1999, 2002, and 2004
Annex H.2	Gross Outputs From the Forestry Sector for 199, 1999, 2002, and 2004
Annex H.3	National Forest Products: Removal and Production for 2003 and 2004
Annex H.4	National Forest Products: Imports and Exports for 2003 and 2004
Annex H.5	List of Wood and Forest Product Processing Facilities With Export Turn- whose value of exports exceeded US\$ 2 million in 2005
Annex H.6	List of Paper and Wood-based Panel Production Enterprises

In Annex H.2, information is presented on the value of gross output of the forestry sector for 1995, 1999, 2002, and 2004. To make the data comparable across years, all figures in this annex have been converted to 1994 base prices, using price deflators.

Annex H.3 lists data on the removal and production of selected forest products. However, only national-level statistics for 2003 and 2004 are available for such products.

Similarly, the data on the import and export of selected forest products (Annex H.4) are only available at the national level and for 2003 and 2004.

Annex H.5 presents information on 38 wood and forest product processing enterprises whose value of exports exceeded US\$2 million in 2005. Enterprises are grouped by region and by province.

Annex H.6 provides data on 72 paper and wood-based panel production enterprises. As in Annex H.5, enterprises are grouped by region and by province.

## Forestry Sector Forecasts

Annex I presents some national-level forestry sector forecasts for 2010, 2015, and 2020 (see Box 4). The forecasts are drawn from the work prepared for the National Forest Development Strategy 2006–2020 (MARD 2006). They are based on analyses of current production, consumption, and capacity trends in the forestry sector. Annexes I.1 and I.2 provide two forecasted options (strategic and high options, respectively) on demand for the following products:

- Sawn timber
- Medium density fiberboard (MDF)
- Particleboard
- Plywood and veneer
- Paper
- Wood pulp
- Coal mine posts

The two options are based on sensitivity analyses of the predicted capacity for domestic production and consumption of the concerned products.

Annex I.3 presents forecast data on the production capacity of sawn timber, particleboard, MDF, material demand for furniture, and particles/chips for 2020. It also presents a prediction of the increase in demand for these products between 2005 and 2020.

Annex I.4 compares forecasted timber demand and supply, including specifications of large and small dimensions, for 2010 and 2020.

### **BOX 4: LIST OF TABLES ON FOREST FORECAST**

- |           |  |
|-----------|--|
| Annex I.1 | Forecasts of Wood Product Demand in 2010, 2015, and 2020: Strategic Option |
| Annex I.2 | Forecasts of Wood Product Demand in 2010, 2015, and 2020: High Option      |
| Annex I.3 | Forecasts of Production Capacities for Primary Forest Products Up to 2020  |
| Annex I.4 | Forecasts of Timber Supply and Demand for 2010 and 2020                    |

## Poverty Data

Data on poverty are presented in two tables in Annex J. An overview of the poverty situation for the periods 1992-1993 and 1997-1998 are shown in Annex J.1. As mentioned previously, poverty rates for these two periods are only available by region. For each period, data on both the general poverty rate and the food poverty rate are presented.

Annex J.2 provides data on poverty rates by province for 2002 and 2004. Similar to the previous table, both the general poverty rate and food poverty rate are exhibited.

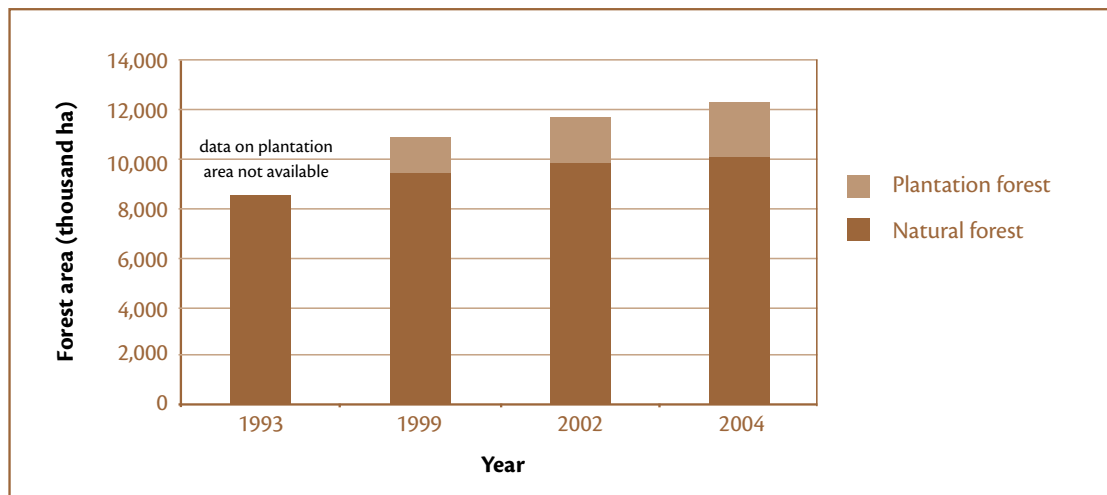
## ILLUSTRATIONS OF DATA UTILITY

This section provides some illustrations of possible uses of the data presented in the annexes. It discusses how the data can be used for understanding time-series trends and then demonstrates the utility of correlating data on both forests and poverty.

### Recent Trends

The forest resource data provide an overview of changes in the area of natural forest, plantations, and bamboo forests between 1993 and 2004. Figure 1 indicates that the natural forest area increased from 8.6 million ha in 1993 to over 10 million ha in 2004, an increase of almost 17% over 11 years. The plantation area expanded from 1.47 million ha in 1999 to 2.2 million in 2004, an increase of 51% over five years.<sup>18</sup> The data provide an indication in the progress of forest rehabilitation and ecosystem maintenance that may be useful for policy-makers and planners for setting new targets.

**FIGURE 1: FOREST AREA CHANGE IN VIET NAM, 1993–2004**

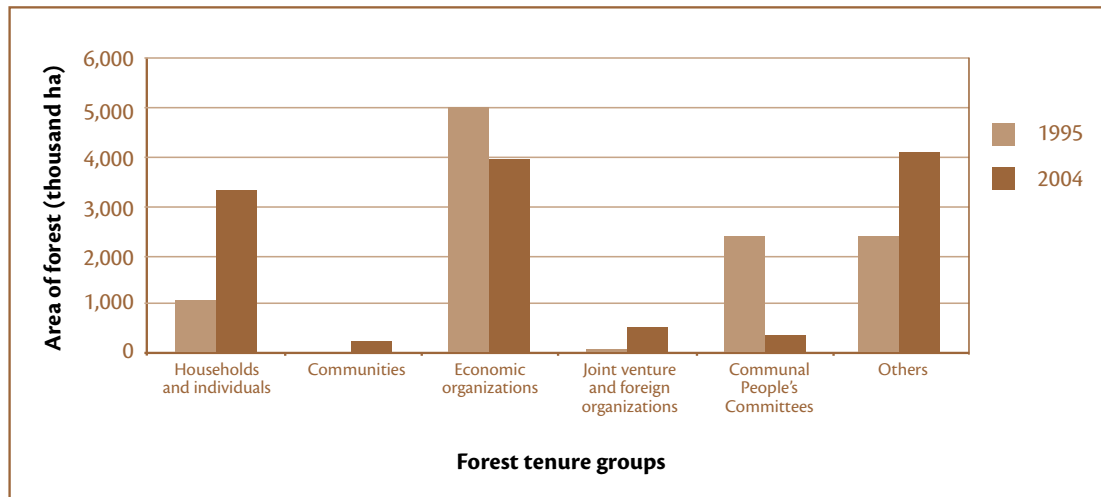


Note: the data presented in this figure are aggregated from provincial data (Annexes F1–F4). Not all data presented in these annexes can be aggregated to the national level because data are missing for some provinces.

<sup>18</sup> Data are unavailable for plantation area in 1993.

Figure 2 illustrates the changes in the country's forest tenure situation between 1995 and 2004. In general, the area of forest under the control of State actors has decreased, as the area of forest administered by (State) economic organizations and CPCs has declined from 7.4 million ha in 1995 to 4.3 million ha in 2004. During the same period, the area of forest under individual and household tenure has expanded from around 1 million ha to 3.3 million ha. Most importantly, community forest management emerged as a new forest tenure group during this period.

**FIGURE 2: FOREST TENURE CHANGE IN VIET NAM BETWEEN 1995 AND 2004**



Regarding forest products and markets, Figure 3 indicates that gross forestry sector output in Viet Nam increased between 1995 and 2004. Total output values have increased from around 5 billion dong in 1995 to over 6.2 billion dong in 2004, a growth of almost 24% in nine years. Nevertheless, the volume of timber production has been unstable over the same period. A decline was observed for 1999. Production increased in 2002 and remained approximately the same in 2004.

**FIGURE 3: CHANGES IN NATIONAL TIMBER PRODUCTION AND FORESTRY OUTPUT, 1995–2004**

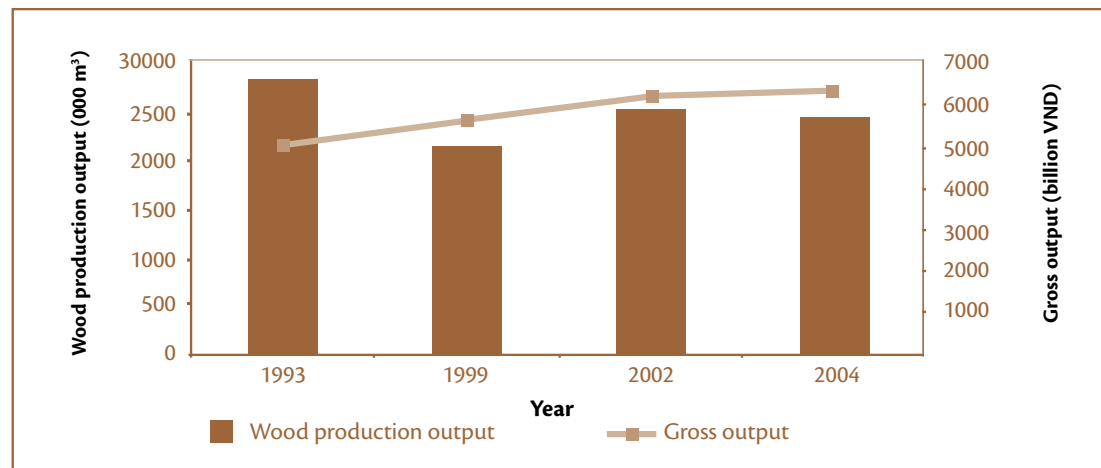
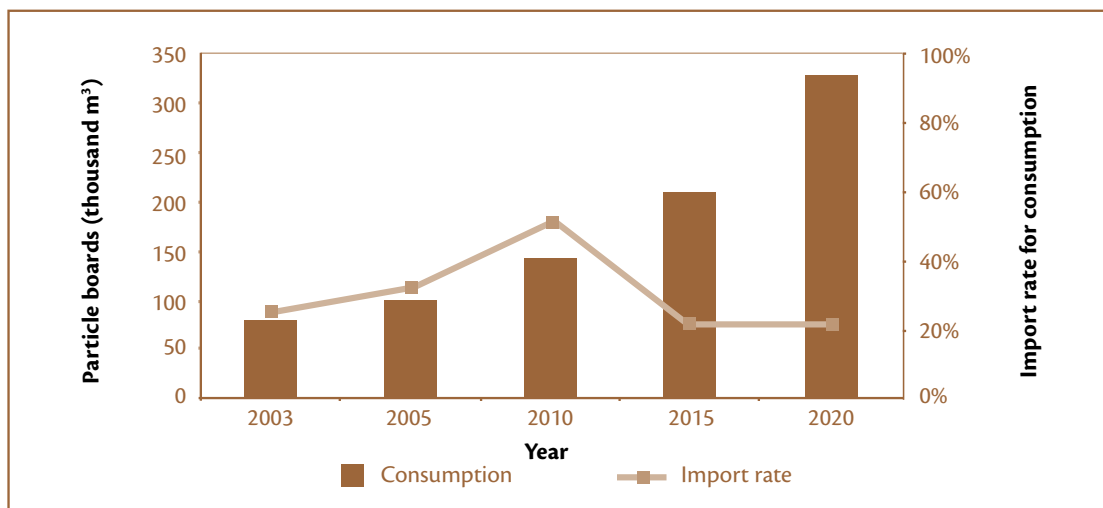


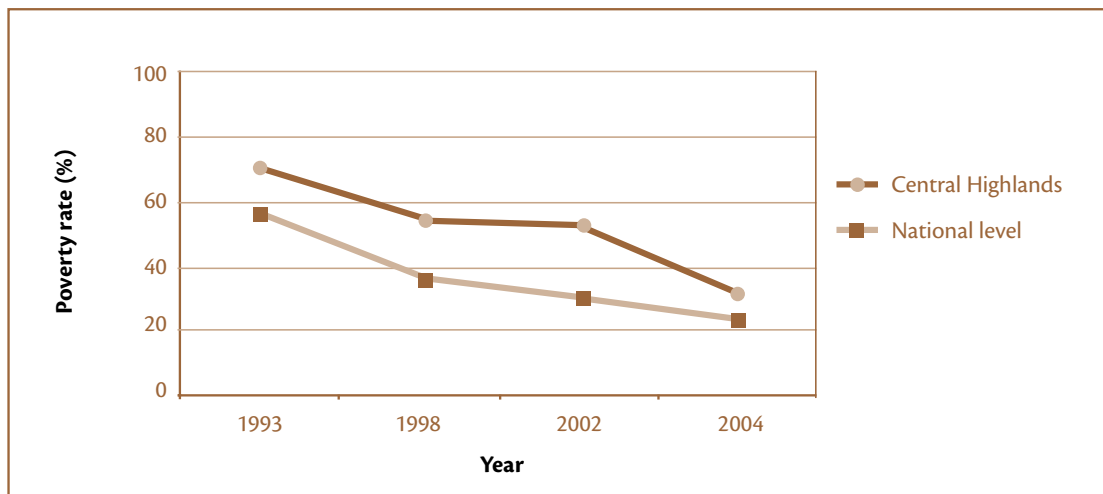
Figure 4, based on the strategic option (Annex I.1), predicts growth in the consumption of particleboard. Based on the expected capacity of particleboard production facilities in Viet Nam, it is also predicted that imports will continue to grow until 2010, by which time domestic particleboard production is predicted to meet 80% of demand. Although the quantity of imported particleboard is predicted to grow in 2015 and 2020, its share of total supply is expected to be approximately 20% for these two years.

**FIGURE 4: PREDICTED CHANGES IN NATIONAL PARTICLEBOARD CONSUMPTION UP TO 2020**



The poverty data in Annex J show the overall reduction in poverty since 1993. However, while the poverty rate declined between 1993 and 2004 both nationally, and specifically in the Central Highlands, the percentage of poor people in the Central Highlands is still higher than the national average (Figure 5).

**FIGURE 5: CHANGES IN POVERTY RATES IN VIET NAM, AT BOTH THE NATIONAL LEVEL AND IN THE CENTRAL HIGHLANDS REGION, 1993–2004**



## CORRELATIONS BETWEEN DIFFERENT DATA TYPES

Available data can also be used to explore correlations among variables. For example, Table 1 presents the results of a correlation analysis concerning the poverty rate, forested area, area of forest allocated to individuals and households, and the gross output from the forestry sector. Previous studies have indicated that areas with a high poverty rate in Viet Nam tend to overlap with areas of natural forest (cf. Müller et al. 2006).

Using the 2004 data, our calculation shows that provinces with high poverty rates are also those that have large forest areas (correlation coefficient of 0.5790, significance level of 1%) and high outputs from the forestry sector (correlation coefficient of 0.4552, a significance level of 1%). Our analysis also indicates that by 2004, provinces with a large forest area overlapped with those that had allocated more forest to individuals and households (correlation coefficient of 0.4348, significance level of 1%) and had higher outputs from the forestry sector (correlation coefficient of 0.5763, significance level of 1%) than those provinces with a smaller forest area.

The correlation between two variables does not necessarily imply a causal relationship. A decrease in the poverty rate over time is probably the result of a variety of factors, including the structural change of the economy, national development policies, and Government programs. Similarly, large areas of forest under household and individual management may be the result of progressive forest land allocation programs within particular provinces only.

**TABLE 1: CORRELATION ANALYSIS OF 2004 DATA ON THE POVERTY RATE, FORESTED AREAS, ALLOCATED FOREST LANDS, AND GROSS OUTPUT FROM THE FORESTRY SECTOR**

	Forested Area	Forest Allocated to Households and Individuals	Poverty Rate
Forest Areas Allocated to Households and Individuals	0.4348***		
Poverty Rate	0.5790***	0.5058***	
Gross Output from the Forestry Sector	0.5763***	0.5606***	0.4552***

Note: \*\*\* indicates a significance level of 1%.

Interested readers can doublecheck the analysis in this study using relevant 2004 data presented in Annex F.4 (forested area), Annex G.5 (forest allocated to households and individuals), Annex H.2 (gross outputs of the forestry sector), and Annex J.2 (poverty rate).





## SUMMARY AND RECOMMENDATIONS

This report has compiled time-series data on forest resources, forest tenure, forest products and markets, forest forecasts, and poverty. The data are compiled as a time series incorporating the period from 1990 to 2005 and disaggregating national data to the provincial level where possible. Additionally, this report provides a discussion on the limitations of the collected data, a description of different components of the data set, and illustrations of their utility.

### Summary of Main Findings

Data analysis has generated the following findings:

- **Report achievements:** The data set presented in this report comes from the following agencies: (1) forestry data from MARD; (2) land data from MONRE; and (3) poverty data from the GSO and MOLISA. Until now, a compilation of this kind has not been available. There are a number of useful dimensions to this data set. First, it is cross-disciplinary, combining data on forestry and poverty. Secondly, it disaggregates national data to the provincial level, when possible. Thirdly, it provides trends. Therefore, despite many limitations the data can be potentially useful for policy-makers to consider new policies regarding forests, forestry, and poverty reduction.
- **Inconsistency of data:** In the course of compiling the data set, discrepancies between data produced by different agencies appeared. Examples include differences in the poverty data collected by the GSO and MOLISA, and forest tenure data collected by MARD and MONRE. In most cases, inconsistencies are due to methodological differences in the data collection and compilation processes of different agencies. For each case in which discrepancies were found, the working group assessed the data collected and chose the optimal data for presentation in this report.
- **Inconsistency of data over time:** Almost no single measurement of data exists for all three specified periods; the availability of information changes from one year or period to the next. This is primarily because agencies have changed the variables being measured over time. There are thus blanks in the data set

where information is not available in certain years. The report therefore focuses on one or two years in each of the three five-year periods for which data are most available. The key years are 1993 and 1995 for the period 1990–1995, 1999 for the period 1996–2000, and 2002 and 2004 for the period 2000–2005.

- **Unavailable data:** Some important variables are absent because of the unavailability of reliable data at the provincial level for the target years. The most prominent examples include figures on timber growth in natural and plantation forests, NWFP production, and illegally traded timber. Systematically collected data for the provincial level were also not available before the 1990s.

## Recommendations

Clearly, there are important weaknesses in the system of data gathering and integration in Viet Nam. In spite of improvements over the years, gaps and inconsistencies remain, which make analysis challenging, and in some cases, impossible. To overcome this problem, measures need to be taken to collect, regularly update, and make available the necessary data. These measures include but are not limited to:

- **Developing a comprehensive set of variables and indicators.** Various agencies of different economic sectors should develop a list of practical and consistent variables and indicators to generate information needed within their agencies. Based on this systematic identification, a comprehensive, multi-institutional set of variables and indicators can be developed.
- **Clarifying the tasks of data collection, compilation, and publication.** To minimize costs and to overcome the problem of multiple agencies collecting data for the same variables, it is recommended that data collection be clearly assigned among different sectors of the economy as well as within each sector. In addition, the tasks of compilation and publication should also be clearly assigned. It is probably best if the GSO (and its line agencies at the local level) can serve as the central institution for compilation and publication as the institution is meant to provide statistical data for various sectors in Viet Nam. While the current system of data compilation for the national statistical yearbook is undertaken in the same way as is proposed here, the yearbook does not include a comprehensive set of policy-relevant variables and indicators.
- **Developing a cross-sectoral database.** Based on the prepared set of variables and indicators, a database needs to be developed. Its structure should enable capturing the diversity of conditions at the local level. At the same time, it should allow the creation of concise summaries for the regional and national levels. In other words, the structure should enable the aggregation of detailed

data and desegregation of summary data. In addition, the structure should permit a certain level of openness so that new variables can be added without the need to revise the entire system.

- **Organizing data collection and updating regularly.** The collection of data by various institutions should be conducted regularly with good coordination. Important data such as forest cover, areas of plantation and poverty, need to be collected consistently using agreed upon methodologies and standards. Data collection should be done at the commune level and aggregated to the district, provincial, and national levels. In addition, data should be updated on an annual or biennial basis to ensure that information is up to date.
- **Making the data available to the public.** Data should be accessible by the public. This is being done by the GSO on its website. This will enable data analyses by a wide range of researchers and analysts, with the contribution of additional perspectives enhancing the information available for decision making.



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<sup>19</sup> References listed here include both those cited in the text and those cited in the annexes

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## ANNEXES

### Annex A: List of Working Group Members

- Dr. Nguyen Ba Ngai, team leader, Vietnam Forestry University
- Ms. Do Thi Ngoc Bich, lecturer on forest product processing and markets, Vietnam Forestry University
- Mr. Hoang Xuan Y, lecturer on forest inventory and planning, Vietnam Forestry University
- Dr. Pham Xuan Phuong, senior expert in Forestry Policy, Ministry of Agriculture and Rural Development
- Mr. Tran Ngoc The, expert in forestry information, Vietnam Forestry University
- Ms. Nghiem Phuong Thuy, expert in social forestry, Vietnam Forestry University
- Ms. Nguyen Huong Thao, expert in information and English, Vietnam Forestry University

## Annex B: Poverty Norms

The Ministry of Labor, War Invalids and Social Affairs (MOLISA) uses a methodology based on household income to calculate poverty rates. Households are deemed poor if their income per capita falls below a conventional threshold that varies between urban, rural, and mountainous areas. Poverty rates are defined as the share of the population with incomes falling below the following thresholds:

	General Poverty	Food Poverty
<b>For 1993</b>		
▪ Rural areas	15 kg of paddy/person/month	8 kg of paddy/person/month
▪ Urban areas	20 kg of paddy/person/month	13 kg of paddy/person/month
<b>For 1995</b>		
▪ Rural areas	20 kg of paddy/person/month	13 kg of paddy/person/month
▪ Urban areas	25 kg of paddy/person/month	13 kg of paddy/person/month
<b>For 1997</b>		
▪ Mountainous rural and distant island areas	15 kg of paddy/person/month (equivalent to VND55,000)	13 kg of paddy/person/month (equivalent to VND45,000)
▪ Delta rural and midland areas	20 kg of paddy/person/month (equivalent to VND70,000)	13 kg of paddy/person/month (equivalent to VND45,000)
▪ Urban areas	25 kg of paddy/person/month (equivalent to VND90,000)	13 kg of paddy/person/month (equivalent to VND45,000)
<b>For 2001</b>		
▪ Mountainous rural and distant island areas	VND80,000/person/month	VND50,000/person/month
▪ Delta rural and midland areas	VND100,000/person/month	VND50,000/person/month
▪ Urban areas	VND150,000/person/month	VND50,000/person/month

The General Statistics Office (GSO) relies on both income and expenditures to compute poverty rates. It defines a threshold base on the cost of a consumption basket which includes food and non-food items, with food spending being large enough to secure 2,100 calories per day per person. Households are considered poor when their income or expenditure level is not high enough to afford this consumption basket.

The food poverty threshold is defined as the income equivalent to buy basic food enough to secure 2,100 calorie intake per person per day. Households with income per capita falling below this threshold are poor households:

	General Poverty	Food Poverty
<b>For 1995</b>		
▪ Rural areas		VND95,000/person/month
▪ Urban areas		VND125,000/person/month
<b>For 2002</b>		
▪ Rural areas	VND160,000/person/month	VND112,000/person/month
▪ Urban areas	VND160,000/person/month	VND146,000/person/month
<b>For 2004</b>		
▪ Rural areas	VND173,000/person/month	VND124,000/person/month
▪ Urban areas	VND173,000/person/month	VND163,000/person/month

Note: empty cells indicate that data are not available or missing



## Annex C: List of Variables and Units of Measurement

No.	Variables/Sub-variables (Unit of Measurement)
<b>1</b>	<b><i>Forest Resources</i></b>
1.1	Total physical area (ha)
1.2	Area classified as forest (ha): area of land officially classified as forest, whether or not there is forest on it. Some of this land may in reality be used for upland agriculture.
1.3	Forested areas (ha): the area of land with forest (natural or plantation) on it
1.4	Natural forest area (ha): area of land with natural (timber, bamboo or mixed) forest on it
1.5	Plantation forest area (ha): area of land with plantation (usually timber but sometimes include bamboo and mixed timber and bamboo) forest on it
1.6	Non-forested area (ha): area of land classified as forest but has no forest on it
1.7	Natural timber forest area (ha)
1.8	Timber volume in natural forest (m <sup>3</sup> )
1.9	Plantation timber forest area (ha)
1.10	Bamboo forest area (ha)
1.11	Number of bamboo trees (thousand trees)
1.12	Natural bamboo forest area (ha)
1.13	Plantation bamboo forest area (ha)
1.14	Expansion of plantation forest area (ha)
<b>2</b>	<b><i>Forest Tenure</i></b>
2.1	Total forest area under contract (ha)
2.2	Forest area contracted for protection and management (ha)
2.3	Area contracted for zoning for regeneration (ha)
2.4	Forest area contracted by state forest enterprises (SFEs) or state forest companies (SFC) (ha)
2.5	Number of households contracted by SFEs/SFCs
2.6	Area contracted to households by SFEs/SFCs (ha)
2.7	Forest area contracted by management boards for protection forest (MB-PFs) (ha)
2.8	Forest area contracted by management board for special-use forest (MB-SUFs) (ha)
2.9	Forest area allocated to households and individuals (ha)
2.10	Forest area allocated to communities (ha)

- 2.11 Forest area under management of economic organizations (ha)
- 2.12 Forest area under management of foreign and joint-venture organizations (ha)
- 2.13 Forest area under management of communal people's committees (CPCs) (ha)
- 2.14 Forest area under other management arrangements (ha)

### 3 *Forest Products and Markets*

- 3.1 Wood production (thousand m<sup>3</sup>): outputs of wood production
- 3.2 Gross outputs of forest products (billion VND)
- 3.3 Removal of wood fuel and wood for charcoal (thousand m<sup>3</sup>)
- 3.4 Removal of industrial round wood (thousand m<sup>3</sup>)
- 3.5 Removal of sawn logs and veneer logs (thousand m<sup>3</sup>)
- 3.6 Removal of pulpwood (round & split) (thousand m<sup>3</sup>)
- 3.7 Removal of other industrial round wood (thousand m<sup>3</sup>)
- 3.8 Production of wood chips and particles (thousand m<sup>3</sup>)
- 3.9 Production of sawn wood (thousand m<sup>3</sup>)
- 3.10 Production of plywood (thousand m<sup>3</sup>)
- 3.11 Production of particleboard (thousand m<sup>3</sup>)
- 3.12 Production of medium density fiberboard (MDF) (thousand m<sup>3</sup>)
- 3.13 Production of mechanical wood pulp (thousand tons)
- 3.14 Production of semi-mechanical wood pulp (thousand tons)
- 3.15 Production of chemical wood pulp (thousand tons)
- 3.16 Production of other pulp (thousand tons)
- 3.17 Production of graphic paper (thousand tons)
- 3.18 Production of sanitary and household paper (thousand tons)
- 3.19 Production of packaging materials (thousand tons)
- 3.20 Production of other paper and paperboard (thousand tons)
- 3.21 Import and export of industrial round wood (thousand m<sup>3</sup>/thousand US\$)
- 3.22 Import and export of wood chips and particles (thousand m<sup>3</sup>/thousand US\$)
- 3.23 Import and export of plywood (thousand m<sup>3</sup>/thousand US\$)
- 3.24 Import and export of particle board (thousand m<sup>3</sup>/thousand US\$)
- 3.25 Import and export of MDF (thousand m<sup>3</sup>/thousand US\$)
- 3.26 Import and export of chemical wood pulp (thousand tons/thousand US\$)
- 3.27 Import and export of other pulp (thousand tons/thousand US\$)
- 3.28 Import and export of paper and paperboard (thousand tons/thousand US\$)

- 3.29 Wood and forest product processing facilities
- 3.30 Paper and wood-based panel production enterprises

#### 4 *Forest Forecasts*

- 4.1 Forecast of log and fiber demand
- 4.2 Forecast of production capacity
- 4.3 Balance of supply and demand for big and small timber

#### 5 *Poverty*

- 5.1 General poverty rate (%)
  - 5.2 Food poverty rate (%)
-

## Annex D: Unavailable Data

No.	Variables/ Sub-variables
<b>1 Forest Resources</b>	
1.	Timber growth volume in natural forests
2.	Timber growth rate in natural forests
3.	Timber growth volume in plantation forests
4.	Timber growth rate in plantation forests
5.	Growth volume of bamboo stock in natural forests
6.	Growth rate of bamboo stock in natural forests
7.	Growth volume of bamboo stock in plantation forests
8.	Growth rate of bamboo stock in plantation forests
<b>2 Forest Tenure</b>	
9.	Area contracted to collectives by state forest enterprises (SFEs) and state forest companies (SFCs)
10.	Area contracted to households by management boards for protection forest (MB-PFs)
11.	Area contracted to collectives by MB-PFs
12.	Area contracted to households by management boards for special-use forest (MB-SUFs)
13.	Area contracted to collectives by MB-SUFs
14.	Forest under the management of SFEs/SFCs
15.	Forest under the management of MB-PFs
16.	Forest under the management of MB-SUFs
<b>3 Forest Products and Markets</b>	
17.	Production of non-timber forest products
18.	Volume of illegally traded timber
<b>4 Poverty</b>	
19.	Poverty density

## Annex E: Province Subdivisions Between 1991 and 2004

Year	Original Province	New Provinces	Source of Information
1991	Cuu Long	Vinh Long	Resolution of the 8th session of the IIX National Assembly, 26 December 1991
		Tra Vinh	
	Hau Giang	Can Tho	
		Soc Trang	
1997	Nam Ha	Nam Dinh	Resolution of the 10th session of the IX National Assembly, 6 November 1996, and effective from 1/1/1997
		Ha Nam	
	Hai Hung	Hung Yen	
		Hai Duong	
	Ha Bac	Bac Giang	
		Bac Ninh	
	Bac Thai	Bac Can	
		Thai Nguyen	
	Minh Hai	Bac Lieu	
		Ca Mau	
Song Be	Binh Duong		
	Binh Phuoc		
Quang Nam - Da Nang	Da Nang		
	Quang Nam		
Vinh Phu	Vinh Phuc		
	Phu Tho		
2004	Lai Chau	Lai Chau	Decree 02/2004/NĐ-CP, dated 2 January 2004, in the Official Gazette No. 7/2004
		Dien Bien	
	Can Tho	Can Tho	Decree 05/2004/NĐ-CP, dated 2 January 2004, in the Official Gazette No. 7/2004
		Hau Giang	
	Dak Lak	Dak Lak	Decree 08/2004/NĐ-CP, dated 2 January 2004, in the Official Gazette No. 7/2004
		Dak Nong	

## Annex F: Status of Forest Resources

## Annex F.1: Status of Forest Resources in 1993

No.	Province	Total Physical Area (ha)	Area Classified as Forest† (ha)	Forested Area† (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area† (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)	
<b>Northwest</b>															
1	Lai Chau	1,629,413	1,629,413	1,629,413	229,004	1,400,409	1,400,409	8,008,482				32,366			
2	Dien Bien	Dien Bien was part of Lai Chau province in 1993; data are presented in line 1)													
3	Son La	1,156,301	1,156,301	1,156,301	137,386	1,018,915	1,018,915	6,340,526				92,599			
4	Hoa Binh	279,398	279,398	279,398	114,594	164,804	164,804	4,054,576				50,019			
<b>Northeast</b>															
5	Lao Cai	563,979	563,979	563,979	154,982	408,997	408,997	12,724,172				140,680			
6	Yen Bai	501,404	501,404	501,404	123,792	377,612	377,612	11,913,672				61,039			
7	Ha Giang	614,646	614,646	614,646	208,562	406,084	406,084	16,821,942				174,632			
8	Tuyen Quang	414,056	414,056	414,056	169,051	245,005	245,005	12,594,842				471,389			
9	Phu Tho (Vinh Phu in 1993)	170,276	170,276	170,276	31,555	138,721	138,721	1,812,083				99,991			
10	Cao Bang	665,149	665,149	665,149	92,514	572,635	572,635	2,283,816				3,213			
11	Bac Can (Bac Thai in 1993)	394,654	394,654	394,654	126,622	268,032	268,032	7,423,602				83,391			
12	Thai Nguyen	(Thai Nguyen was part of Bac Thai province in 1993; data are presented in line 11)													
13	Quang Ninh	386,820	386,820	386,820	133,317	253,503	253,503	4,679,307				5,987			
14	Lang Son	673,817	673,817	673,817	112,195	561,622	561,622	5,227,366				18,137			
15	Bac Giang (Ha Bac in 1993)	181,561	181,561	181,561	54,711	126,850	126,850	2,053,056				459			
<b>Red River Delta</b>															
16	Vinh Phuc	Vinh Phuc and Phu Tho were collectively Vinh Phu province in 1993; data for this former province are presented under Phu Tho in line 9)													
17	Bac Ninh	Bac Ninh and Bac Giang were collectively Ha Bac province in 1993; data for this former province are presented under Bac Giang in line 15)													

No.	Province	Total Physical Area (ha)	Area Classified as Forest (ha)	Forested Area (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)	
18	Hai Phong	21,951	21,951	7,123	14,828			14,341							
19	Hai Duong (Hai Hung in 1993)	11,738	11,738	2,390	9,348			145,495							
20	Hung Yen (Hung Yen and Hai Duong were collectively Hai Hung province in 1993; data for this former province are presented under Hai Duong in Line 19)														
21	Ha Noi	2,074	2,074			2,074									
22	Ha Tay	9,592	9,592	1,930	7,662			82,350							
23	Ha Nam (Nam Ha in 1993)	21,756	21,756		21,756										
24	Nam Dinh (Nam Dinh and Ha Nam were collectively Nam Ha province in 1993; data for this former province are presented under Ha Nam in Line 23)														
25	Thai Binh	12,042	12,042												
26	Ninh Binh	34,501	34,501	11,275	23,226			55,913							
<b>North Central Coast</b>															
27	Thanh Hoa	660,301	660,301	289,654	370,647			13,165,306				669,466			
28	Nghé An	1,106,565	1,106,565	507,032	599,533			33,812,319				731,082			
29	Ha Tinh	316,325	316,325	164,515	151,810			20,696,729				10,201			
30	Quang Binh	478,539	478,539	223,344	255,195			26,701,803							
31	Quang Tri	276,859	276,859	81,875	194,984			8,097,833				1,304			
32	Thua Thien Hue	327,157	327,157	160,365	166,792			15,780,045							
<b>South Central Coast</b>															
33	Da Nang (Quang Nam - Da Nang in 1993)	871,289	871,289	451,369	419,920			42,682,347				8,212			
34	Quang Nam (Quang Nam and Da Nang were collectively Quang Nam - Da Nang province in 1993; data for this former province are presented under Da Nang in Line 33)														
35	Quang Ngai	330,497	330,497	56,051	274,446			8,753,358							
36	Binh Dinh	391,389	391,389	150,193	241,196			10,439,382							
37	Phu Yen	380,023	380,023	157,632	222,391			15,367,226							

No.	Province	Total Physical Area (ha)	Area Classified as Forest <sup>1</sup> (ha)	Forested Area <sup>2</sup> (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area <sup>3</sup> (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)	
38	Khanh Hoa		343,185		156,835		186,350		17,365,536			24,284			
39	Ninh Thuan		251,217		154,350		96,867		9,970,099			25			
40	Binh Thuan		599,192		434,143		165,049		27,523,141			25,378			
Central Highlands															
41	Kon Tum		972,027		668,335		303,692		59,192,581			919,203			
42	Gia Lai		1,372,354		838,567		533,787		81,653,873			11,519			
43	Lam Dong		860,815		636,806		224,009		50,426,472			525,434			
44	Dak Lak		1,548,411		1,253,032		295,379		98,046,677			712,831			
45	Dak Nong (Dak Nong was part of Dak Lak province in 1993; data is presented in line 44)														
Southeast															
46	Dong Nai		167,464		99,870		67,594		5,066,069			66,370			
47	Ba Ria-Vung Tau		67,580		34,677		32,903		1,184,792						
48	TP Ho Chi Minh		20,339		6,707		13,632		15,291						
49	Binh Duong (Song Be in 1993)		456,922		272,722		184,200		11,550,079			612,637			
50	Binh Phuoc (Binh Phuoc and Binh Duong were collectively Song Be province in 1993; data for this former province are presented under Binh Duong in line 49)														
51	Tay Ninh		100,019		43,350		56,669		1,241,505						
Mekong River Delta															
52	Long An		11,000				11,000								
53	Dong Thap		3,000				3,000								
54	Tien Giang		3,300				3,300								
55	Ben Tre (data presented is aggregated with that of Vinh Long)		3,762		287		3,475		12,398						
56	Vinh Long (Data for 1993 is aggregated with and presented under Ben Tre in Line 55)														
57	Tra Vinh		19,700				19,700								



No.	Province	Total Physical Area (ha)	Area Classified as Forest† (ha)	Forested Area† (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area† (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)	
58	Can Tho	3,139	3,139				3,139								
59	Hau Giang (Hau Giang was part of Can Tho province in 1993; data is presented in Line 58)														
60	Soc Trang	10,122	10,122	1,900	1,900		8,222		45,611						
61	Bac Lieu	93,191	93,191	7,142	7,142		86,049		131,390						
62	Kien Giang	224,550	224,550	69,084	69,084		155,466		2,225,372						
63	An Giang	35,895	35,895	25	25		35,870		286						
64	Ca Mau (Ca Mau and Bac Lieu were together Minh Hai province in 1993, data presented in Bac Lieu province – line 61 – were of the former Minh Hai province)														

Source: Central Steering Unit for Forest Inventory (1993)

† See more information on these variables in Annex C

Note: empty cells indicate that data are not available or missing

## Annex F.2: Status of Forest Resources in 1999

No.	Province	Total Physical Area (ha)	Area Classified as Forest (ha)	Forested Area (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)	
<b>Northwest</b>															
1	Lai Chau	1,691,923	485,986	473,845	12,141	1,000	434,626	12,141	9,894	72,067	9,894	9,894	9,894		
2	Dien Bien (Dien Bien was part of Lai Chau province in 1999; data are presented in line 1)														
3	Son La	1,405,500	310,135	287,161	22,974	790,192	239,389	20,988	39,531	175,909	37,545	1,986	37,545	1,986	
4	Hoa Binh	474,942	167,320	123,403	43,917	159,855	43,939	37,235	16,458	82,615	9,779	6,679	9,779	6,679	
<b>Northeast</b>															
5	Lao Cai	804,400	240,184	202,589	37,595	303,664	161,660	36,186	23,757	170,390	23,757	170,390	23,757		
6	Yen Bai	688,292	258,918	180,430	78,488	309	146,424	60,180	34,130	93,225	23,865	10,265	23,865	10,265	
7	Ha Giang	788,437	284,537	262,957	21,580	326,887	210,497	19,146	25,006	98,818	25,006	98,818	25,006		
8	Tuyen Quang	582,002	297,128	235,635	61,493	151,521	146,859	55,945	48,294	452,364	46,424	1,870	46,424	1,870	
9	Phu Tho	350,634	115,106	56,511	58,595	85,758	39,728	53,834	16,707	53,844	15,929	778	15,929	778	
10	Cao Bang	669,072	208,586	199,673	8,913	233,382	199,173	6,251	859	2,354	500	359	500	359	
11	Bac Can	479,554	235,247	224,114	11,133	199,595	194,754	8,425	11,619	66,605	11,442	177	11,442	177	
12	Thai Nguyen	356,639	139,421	99,796	39,625	59,859	62,716	39,266	5,300	18,952	5,300	18,952	5,300		
13	Quang Ninh	611,081	221,815	170,827	50,988	205,555	120,291	43,955	14,697	92,178	14,697	92,178	14,697		
14	Lang Son	818,725	243,331	184,017	59,314	390,398	173,640	46,503	9,615	18,990	9,431	184	9,431	184	
15	Bac Giang	382,265	97,975	64,441	33,534	64,871	63,232	33,472	154	92	92	62	92	62	
<b>Red River Delta</b>															
16	Vinh Phuc	135,220	26,167	9,605	16,562	7,491	9,474	16,562	6	67	6	67	6	6	
17	Bac Ninh	79,972	567	567	567	401	567	567							
18	Hai Phong	151,369	8,580	6,493	2,087	4,408	2,689	2,087							
19	Hai Duong	166,078	9,867	3,104	6,763	396	3,104	5,773							
20	Hung Yen	89,084													
21	Ha Noi	91,846	4,166	4,166	4,166	2,096	3,902								
22	Ha Tay	219,296	14,104	4,393	9,711	5,492	4,313	8,131	91	274	80	11	80	11	
23	Ha Nam	84,238	8,012	6,652	1,360	3,558	6,652	1,360							
24	Nam Dinh	167,800	5,541	1,125	4,417	2,664	4,416								

No.	Province	Total Physical Area (ha)	Area Classified as Forest (ha)	Forested Area (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)	
25	Thai Binh	153,780	6,515	6,515	19,229	6,515		6,515							
26	Ninh Binh	142,736	26,853	23,566	4	11,359		2,754							
<b>North Central Coast</b>															
27	Thanh Hoa	1,116,833	405,713	322,003	83,710	306,189	185,418	34,815	133,330	749,203	86,292	47,038			
28	Nghe An	1,638,233	684,398	623,086	61,311	555,338	488,623	51,847	90,158	830,014	86,318	3,840			
29	Ha Tinh	605,574	206,505	169,367	37,139	158,844	167,808	35,984	400	3,235	389	11			
30	Quang Binh	803,760	486,688	447,837	38,851	146,387	447,811	38,851							
31	Quang Tri	465,134	138,161	103,097	35,064	171,152	103,097	34,969							
32	Thua Thien Hue	500,920	214,184	170,243	43,941	141,988	170,243	41,542	151					151	
<b>South Central Coast</b>															
33	Da Nang	124,837	52,132	37,066	15,066	13,751	37,066	15,066							
34	Quang Nam	1,040,514	425,921	388,803	37,118	368,977	378,872	29,991	9,931	49,655	9,931				
35	Quang Ngai	511,534	126,605	91,933	34,672	209,851	89,464	34,091	2,297	16,330	2,297				
36	Binh Dinh	602,555	196,067	151,760	44,307	188,992	151,760	44,307							
37	Phu Yen	503,512	156,776	135,813	20,963	143,752	135,813	20,963							
38	Khanh Hoa	518,672	181,790	163,941	17,849	137,293	146,121	17,838	15,291	92,236	15,291				
39	Ninh Thuan	335,227	157,415	151,838	5,577	114,099	134,451	5,577	851						
40	Binh Thuan	784,859	367,469	342,489	24,980	126	302,976	24,980	6,059	14,013	6,059				
<b>Central Highlands</b>															
41	Kon Tum	961,440	612,489	602,530	9,959	252,562	399,465	9,959	134,370	1,521,339	134,370				
42	Gia Lai	1,549,751	742,672	728,372	14,300	434,551	718,391	14,300	9,568	95,158	9,568				
43	Lam Dong	976,150	618,537	591,210	27,327	45,863	355,358	27,327	80,446	334,086	80,446				
44	Dak Lak	1,953,461	1,017,955	1,008,265	9,690	209,128	872,335	9,690	66,405	579,304	66,405				
Dak Nong (Dak Nong was part of Dak Lak province in 1999; data are presented in line 44)															
<b>Southeast</b>															
46	Dong Nai	586,035	150,353	110,678	39,675	28	79,960	39,051	7,683	104,747	7,578	105			
47	Ba Ria-Vung Tau	196,232	35,452	16,026	19,426	10,149	13,179	19,426	121	491	121				

No.	Province	Total Physical Area (ha)	Area Classified as Forest (ha)	Forested Area (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)
48	TP Ho Chi Minh	209,199	35,296	11,852	23,444	757	22	22,319						
49	Binh Duong	271,744	11,304	4,101	7,204	5,217	4,101	1,625						
50	Binh Phuoc	685,393	164,959	153,986	10,973	41,935	53,053	10,973	49,558	170,657				
51	Tay Ninh	402,783	40,215	34,463	5,752	21,662	34,463	5,752						
Mekong River Delta														
52	Long An	444,866	35,925	1,554	34,372	11,361	1,554	34,371						
53	Dong Thap	323,530	9,059	368	3,914	550	3,914	2,168						
54	Tien Giang	232,609	3,414	1,009	2,405	1,343								
55	Ben Tre	228,715	147,374	8,019	1,794	6,225	8,564							
56	Tra Vinh	296,423	1,908	1,907	101									
57	Can Tho													
58	Hau Giang (Hau Giang was part of Can Tho province in 1999; data are presented in line 58)													
59	Soc Trang	320,027	8,476	1,687	6,790	5,647								
60	Bac Lieu	248,927	4,149	2,291	1,858	1,538								
61	Kien Giang	624,565	86,753	44,064	42,689	39,086	32,605	42,689						
62	An Giang	340,623	9,186	583	8,603	7,345	583	8,603						
63	Ca Mau	521,070	99,304	9,753	89,551	61,359	536	89,551						

Source: Central Steering Unit for Forest Inventory (2001); MARD (2002, pp. 462-463); FPD (2000)

Note: empty cells indicate that data are not available or missing

### Annex F.3: Status of Forest Resources in 2002

No.	Province	Total Physical Area (ha)	Area Classified as Forest (ha)	Forested Area (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)	
<b>Northwest</b>															
1	Lai Chau	1,691,923	1,484,762	564,297	546,974	17,323	920,466	546,974		17,323					
2	Dien Bien (Dien Bien was part of Lai Chau province in 2002; data are presented in line 1)														
3	Son La	1,405,500	898,434	480,658	458,208	22,450	417,777	458,208		22,450					
4	Hoa Binh	466,252	326,008	194,209	152,175	42,035	131,799	152,175		42,035					
<b>Northeast</b>															
5	Lao Cai	805,708	543,958	288,822	236,912	51,910	255,136	236,912		51,910					
6	Yen Bai	688,293	568,196	270,711	180,430	90,281	297,485	180,430		90,281					
7	Ha Giang	788,437	603,684	298,560	262,957	35,603	305,124	262,957		35,603					
8	Tuyen Quang	586,800	448,563	330,460	259,356	71,104	118,103	259,356		71,104					
9	Phu Tho	351,957	203,572	144,257	69,547	74,710	59,316	69,547		74,710					
10	Cao Bang	669,072	555,169	295,310	276,570	18,739	259,860	276,570		18,739					
11	Bac Can	479,554	434,841	247,796	224,114	23,682	187,045	224,114		23,682					
12	Thai Nguyen	355,720	206,500	146,593	102,158	44,435	59,907	102,158		44,435					
13	Quang Ninh	606,373	428,551	241,702	164,249	77,453	186,849	164,249		77,453					
14	Lang Son	830,633	698,233	271,278	185,302	85,977	426,955	185,302		85,977					
15	Bac Giang	382,200	186,483	148,373	71,544	76,829	38,110	71,544		76,829					
<b>Red River Delta</b>															
16	Vinh Phuc	135,220	33,658	27,156	9,410	17,746	6,502	9,410		17,746					
17	Bac Ninh	79,972	976	656	656	656	320	656		656					
18	Hai Phong	151,919	20,473	14,461	10,773	3,688	6,012	10,773		3,688					
19	Hai Duong	164,772	15,192	14,661	3,103	11,557	531	3,103		11,557					
20	Hung Yen	89,084													
21	Ha Noi	91,846	6,256	5,986	5,986	5,986	270	5,986		5,986					
22	Ha Tay	221,276	24,953	18,063	4,393	13,670	6,890	4,393		13,670					
23	Ha Nam	84,953	11,306	8,603	6,582	2,020	2,703	6,582		2,020					

No.	Province	Total Physical Area (ha)	Area Classified as Forest (ha)	Forested Area (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)	
24	Nam Dinh	167,631	8,205	5,604	1,125	4,479	2,601	1,125		4,479					
25	Thai Binh	153,780	25,744	6,515		6,515	19,229			6,515					
26	Ninh Binh	142,763	30,266	27,428	23,812	3,616	2,838	23,812		3,616					
<b>North Central Coast</b>															
27	Thanh Hoa	1,111,239	705,612	436,405	335,629	100,776	269,207	335,629		100,776					
28	Nghe An	1,649,967	1,232,118	707,626	636,966	70,659	524,493	636,966		70,659					
29	Ha Tinh	605,574	365,350	228,910	179,778	49,132	136,440	179,778		49,132					
30	Quang Binh	805,195	669,130	497,984	448,397	49,586	171,147	448,397		49,586					
31	Quang Tri	476,887	344,201	172,709	109,894	62,815	171,492	109,894		62,815					
32	Thua Thien Hue	505,399	399,746	234,454	177,550	56,904	165,292	177,550		56,904					
<b>South Central Coast</b>															
33	Da Nang	125,625	66,892	53,297	37,066	16,231	13,595	37,066		16,231					
34	Quang Nam	1,040,514	794,898	431,668	388,803	42,865	363,230	388,803		42,865					
35	Quang Ngai	513,151	343,680	141,069	97,392	43,678	202,610	97,392		43,678					
36	Binh Dinh	602,506	373,310	218,162	161,586	56,577	155,148	161,586		56,577					
37	Phu Yen	503,506	286,416	154,336	129,767	24,569	132,080	129,767		24,569					
38	Khanh Hoa	469,343	319,084	191,658	163,939	27,719	127,426	163,939		27,719					
39	Ninh Thuan	335,227	261,514	159,296	145,844	13,452	102,218	145,844		13,452					
40	Binh Thuan	784,692	452,622	367,924	332,979	34,945	84,698	332,979		34,945					
<b>Central Highlands</b>															
41	Kon Tum	961,450	856,972	631,276	602,109	29,167	225,696	602,109		29,167					
42	Gia Lai	1,549,571	1,109,009	760,245	728,907	31,339	348,764	728,907		31,339					
43	Lam Dong	976,220	661,627	632,281	586,487	45,794	29,346	586,487		45,794					
44	Dak Lak	1,957,644	1,205,076	994,482	980,975	13,507	210,594	980,975		13,507					
45	Dak Nong (Dak Nong was part of Dak Lak province in 2002; data are presented in line 44)														
<b>Southeast</b>															
46	Dong Nai	586,030	179,457	153,344	110,672	42,672	26,114	110,672		42,672					

No.	Province	Total Physical Area (ha)	Area Classified as Forest† (ha)	Forested Area† (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area† (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)
47	Ba Ria-Vung Tau	197,514	45,601	35,452	16,026	19,426	10,149	16,026		19,426				
48	TP Ho Chi Minh	209,198	35,967	34,933	13,830	21,103	1,035	13,830		21,103				
49	Binh Duong	268,347	13,767	11,903	2,429	9,475	1,864	2,429		9,475				
50	Binh Phuoc	685,599	193,366	167,340	127,863	39,477	26,026	127,863		39,477				
51	Tay Ninh	402,923	60,781	41,996	34,636	7,360	18,785	34,636		7,360				
<b>Mekong River Delta</b>														
52	Long An	444,866	79,151	53,163	971	52,193	25,988	971		52,193				
53	Dong Thap	323,800	15,064	9,789	368	9,789	5,275	368		9,789				
54	Tien Giang	232,609	4,832	4,282	368	3,914	550	368		3,914				
55	Ben Tre	231,501	8,213	3,797	910	2,887	4,416	910		2,887				
56	Vinh Long	147,374												
57	Tra Vinh	236,585	14,596	6,002	1,982	4,020	8,594	1,982		4,020				
58	Can Tho	296,810	2,465	1,986		1,986	479			1,986				
59	Hau Giang (Hau Giang was part of Can Tho province in 2002; data are presented in line 58)													
60	Soc Trang	322,300	14,357	9,106	1,687	7,420	5,250	1,687		7,420				
61	Bac Lieu	241,813	5,768	3,990	2,437	1,552	1,778	2,437		1,552				
62	Kien Giang	626,905	117,045	71,767	47,381	24,386	45,279	47,381		24,386				
63	An Giang	340,623	18,165	12,074	583	11,491	6,091	583		11,491				
64	Ca Mau	519,507	114,832	97,724	9,484	88,240	17,108	9,484		88,240				

Source: FPD (2003)

Note: empty cells indicate that data are not available or missing

Annex F.4: Status of Forest Resources in 2004

No.	Province	Total Physical Area (ha)	Area Classified as Forest (ha)	Forested Area (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)	
<b>Northwest</b>															
1	Lai Chau	906,512	318,466	303,758	14,708	467,255	243,899	13,959	26,817	26,069	748				
2	Dien Bien	955,411	367,681	356,242	11,439	411,217	315,935	11,231	6,771	6,563	208				
3	Son La	1,405,500	526,722	497,429	29,293	389,427	385,559	22,856	43,391	42,576	815				
4	Hoa Binh	466,253	200,210	150,267	49,943	126,082	46,433	49,681	9,743	9,481	262				
<b>Northeast</b>															
5	Lao Cai	635,708	274,607	224,839	49,768	144,970	185,647	47,746	24,876	24,876					
6	Yen Bai	688,292	328,865	214,471	114,394	230,310	177,121	80,439	35,061	23,644	11,417				
7	Ha Giang	788,437	333,774	289,007	44,767	269,910	193,098	41,645	25,006	25,006					
8	Tuyen Quang	586,800	332,644	259,052	73,592	115,549	170,242	68,052	48,290	46,421	1,870				
9	Phu Tho	351,957	154,238	69,547	84,691	49,233	46,275	79,472	21,902	20,666	1,236				
10	Cao Bang	669,072	303,971	292,227	11,744	272,125	180,777	11,068	676	676					
11	Bac Can	485,721	261,304	224,032	37,272	173,299	148,656	30,627	13,490	11,438	2,052				
12	Thai Nguyen	354,110	155,336	104,824	50,511	50,481	63,727	50,313	2,433	2,433					
13	Quang Ninh	606,428	261,268	167,868	93,400	171,694	117,601	76,983	13,905	13,905					
14	Lang Son	830,524	333,671	222,365	111,305	364,456	210,981	83,771	10,397	10,190	207				
15	Bac Giang	382,200	155,077	73,577	81,500	30,649	72,334	43,258	85	48	37				
<b>Red River Delta</b>															
16	Vinh Phuc	137,148	27,812	9,409	18,404	5,681	9,371	17,377	2	2					
17	Bac Ninh	80,480	699	699	699	126	699	699							
18	Hai Phong	151,919	14,559	10,773	3,786	5,812	3,786	3,786	113	113					
19	Hai Duong	164,772	9,649	3,103	6,545	531	3,103	6,545							
20	Hung Yen	89,084													
21	Ha Noi	91,846	5,845	5,845	5,845	785	4,260	4,260							
22	Ha Tay	219,296	16,636	4,426	12,210	6,556	1,716	12,210	80	80					
23	Ha Nam	84,953	8,837	6,582	2,254	2,469	2,254	2,254							
24	Nam Dinh	167,631	5,793	1,125	4,668	2,412	4,668	4,668							



No.	Province	Total Physical Area (ha)	Area Classified as Forest† (ha)	Forested Area† (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area† (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)	
25	Thai Binh	153,780	6,973	6,973	6,973	16,577		6,973							
26	Ninh Binh	138,272	27,479	23,697	3,781	2,374	11,494								
<b>North Central Coast</b>															
27	Thanh Hoa	1,111,660	470,756	356,825	113,931	231,398	189,245	55,366	141,010	83,394	57,616				
28	Nghe An	1,648,729	745,557	662,925	82,633	502,801	558,965	70,864	87,629	83,704	3,925				
29	Ha Tinh	605,574	245,062	184,458	60,604	120,183	182,899	59,161	389						
30	Quang Binh	805,186	508,960	449,024	59,935	159,294	303,363	59,935							
31	Quang Tri	474,573	191,429	117,419	74,010	153,196	115,647	73,948							
32	Thua Thien Hue	505,399	243,556	178,983	64,573	109,149	178,983	62,324	151					151	
<b>South Central Coast</b>															
33	Da Nang	125,624	52,512	37,054	15,458	12,323	37,054	15,458							
34	Quang Nam	1,040,514	445,291	388,209	57,082	349,991	378,514	50,413	9,696	9,694	2				
35	Quang Ngai	513,603	162,448	100,089	62,359	141,781	97,678	61,385	2,297	2,297					
36	Binh Dinh	602,506	229,197	167,067	62,130	145,121	167,067	61,330	1					1	
37	Phu Yen	503,506	156,075	128,623	27,452	126,042	128,623	26,632							
38	Khanh Hoa	469,343	196,130	163,534	32,596	122,356	145,715	30,328	15,291	15,291					
39	Ninh Thuan	336,006	151,541	140,812	10,730	75,084	118,567	10,730	863	863					
40	Binh Thuan	782,230	318,833	292,673	26,160	88,717	254,979	21,225	5,649	5,649					
<b>Central Highlands</b>															
41	Kon Tum	961,450	630,804	597,959	32,845	204,014	400,170	32,845	129,062	129,062					
42	Gia Lai	1,549,571	760,292	727,489	32,803	349,002	717,554	32,762	9,522	9,522					
43	Lam Dong	976,220	616,084	573,836	42,248	38,850	347,143	40,961	73,711	73,711					
44	Dak Lak	1,306,201	604,810	587,846	16,964	146,207	543,426	16,956	28,771	28,763				8	
45	Dak Nong	651,442	370,536	361,180	9,356	45,579	264,756	7,701	47,440	47,440					
<b>Southeast</b>															
46	Dong Nai	586,030	154,874	110,122	44,752	22,980	80,066	42,836	7,335	7,275	60				
47	Ba Ria-Vung Tau	197,514	30,230	14,417	15,813	6,424	12,197	15,813	109	109					

No.	Province	Total Physical Area (ha)	Area Classified as Forest (ha)	Forested Area (ha)	Natural Forest Area (ha)	Plantation Forest Area (ha)	Non-forested Area (ha)	Natural Timber Forest Area (ha)	Natural Timber Volume (m <sup>3</sup> )	Plantation Timber Forest Area (ha)	Bamboo Forest Area (ha)	No. of Bamboo Trees ('000 trees)	Area of Natural Bamboo (ha)	Area of Plantation Bamboo (ha)
48	TP Ho Chi Minh	298,500	35,278	13,821	21,457	1,033	20,994							
49	Binh Duong	268,347	15,934	1,056	14,878	1,309	14,878							
50	Binh Phuoc	685,599	173,237	123,403	49,833	146,589	47,788							195
51	Tay Ninh	402,923	46,187	34,703	11,484	17,602	34,703							
Mekong River Delta														
52	Long An	449,187	70,391	800	69,591	9,081	69,591							
53	Dong Thap	323,800	11,025	11,025	11,025	4,813	11,025							
54	Tien Giang	286,663	12,029	306	11,723		11,723							
55	Ben Tre	231,501	3,849	985	2,864	4,367								
56	Vinh Long	147,374												
57	Tra Vinh	236,585	5,671	1,230	4,441	7,267								
58	Can Tho	138,960												
59	Hau Giang	157,850	2,001	1,559	2,001	479								
60	Soc Trang	322,301	9,135	1,559	7,576	5,779								
61	Bac Lieu	254,190	5,532	2,455	3,077	2,976								
62	Kien Giang	628,497	89,537	48,931	40,606	30,470	35,594							
63	An Giang	340,623	12,809	583	12,227	6,688	583							
64	Ca Mau	519,970	97,151	9,293	87,859	19,651	558							

Source: FPD (2005) and MARD (2005)

Note: empty cells indicate that data are not available or missing

### Annex F.5: Expansion of Plantation Forest Area per Province for the Years 1995, 1999, 2002, and 2004

\*All units are in ha.

Provincial name	1995	1999	2002	2004
<b>Whole country</b>	<b>209,600</b>	<b>230,100</b>	<b>190,000</b>	<b>184,200</b>
<b>Northwest</b>	<b>8,000</b>	<b>17,300</b>	<b>16,900</b>	<b>16,200</b>
1 Lai Chau	2,200	2,200	2,400	1,400
2 Dien Bien				2,200
3 Son La	3,400	8,600	6,800	4,500
4 Hoa Binh	2,400	6,500	7,700	8,100
<b>Northeast</b>	<b>44,900</b>	<b>64,900</b>	<b>50,800</b>	<b>58,300</b>
5 Lao Cai	4,100	2,900	2,200	1,800
6 Yen Bai	8,600	6,100	9,100	4,900
7 Ha Giang	3,400	7,700	4,500	9,500
8 Tuyen Quang	5,600	6,600	4,800	3,300
9 Phu Tho	3,800	3,600	5,500	9,400
10 Cao Bang	600	4,000	1,400	2,500
11 Bac Can	1,400	5,300	3,400	3,800
12 Thai Nguyen	2,000	2,000	2,000	1,900
13 Quang Ninh	7,300	6,000	6,200	6,700
14 Lang Son	2,500	13,000	7,200	10,000
15 Bac Giang	5,600	7,700	4,500	4,500
<b>Red River Delta</b>	<b>10,500</b>	<b>5,400</b>	<b>5,600</b>	<b>3,400</b>
16 Vinh Phuc	1,400	1,500	900	700
17 Bac Ninh		100	100	
18 Hai Phong	4,000	800	1,300	400
19 Hai Duong	1,000	200	100	200
20 Hung Yen				
21 Ha Noi	300	100	500	400
22 Ha Tay	1,000	200	1,100	200
23 Ha Nam	200	100	200	100
24 Nam Dinh	700	500	100	100
25 Thai Binh	400	1,100	900	1,100
26 Ninh Binh	1,500	800	400	200
<b>North Central Coast</b>	<b>41,000</b>	<b>39,300</b>	<b>34,400</b>	<b>31,900</b>
27 Thanh Hoa	12,700	5,200	5,800	6,900
28 Nghe An	9,700	6,800	10,400	10,100
29 Ha Tinh	4,000	14,000	7,200	4,700
30 Quang Binh	4,000	5,100	2,200	1,600
31 Quang Tri	5,200	4,600	5,200	5,000
32 Thua Thien Hue	5,400	3,600	3,600	3,600
<b>South Central Coast</b>	<b>32,800</b>	<b>22,500</b>	<b>16,300</b>	<b>26,600</b>
33 Da Nang	1,700	400	400	200
34 Quang Nam	9,100	8,800	4,600	6,800
35 Quang Ngai	5,900	4,600	2,800	6,700

Provincial name	1995	1999	2002	2004
36 Binh Dinh	6,300	2,900	4,100	6,400
37 Phu Yen	6,500	2,600	2,800	3,700
38 Khanh Hoa	3,300	3,200	1,600	2,800
39 Ninh Thuan	1,900	1,600	2,900	400
40 Binh Thuan	5,100	3,500	4,200	2,600
<b>Central Highlands</b>	<b>11,100</b>	<b>9,500</b>	<b>26,700</b>	<b>17,000</b>
41 Kon Tum	3,100	1,300	8,400	3,200
42 Gia Lai	2,100	5,200	7,400	7,200
43 Lam Dong	3,100	2,200	5,500	2,600
44 Dak Lak	2,800	800	5,400	3,000
45 Dak Nong				1,000
<b>Southeast</b>	<b>21,800</b>	<b>12,200</b>	<b>13,300</b>	<b>7,200</b>
46 Dong Nai	9,400	2,700	1,300	1,100
47 Ba Ria-Vung Tau	2,400	1,000	1,500	600
48 TP Ho Chi Minh	600	100	200	
49 Binh Duong		400	100	600
50 Binh Phuoc	700	2,300	2,600	1,100
51 Tay Ninh	1,700	600	500	800
<b>Mekong River Delta</b>	<b>39,500</b>	<b>17,200</b>	<b>22,700</b>	<b>21,400</b>
52 Long An	100	3,500	7,200	5,000
53 Dong Thap	400	200	900	200
54 Tien Giang	400	100	1,000	1,300
55 Ben Tre	300	200	100	
56 Vinh Long				
57 Tra Vinh		600	200	200
58 Can Tho			100	300
59 Hau Giang				
60 Soc Trang		600	500	500
61 Bac Lieu	200	1,300	200	
62 An Giang	700	1,600	1,600	800
63 Kien Giang	26,200	2,600	5,200	6,100
64 Ca Mau	11,200	6,500	5,700	7,000

Source: GSO (2006)

Note: empty cells indicate that data are not available or missing

## Annex G: Forest and Forest Land Tenure

### Annex G.1: Forest Areas under Contract in 1995

No.	Province	Total Forest Area Under Contract (ha)	Forest Area Contracted for Protection and Management (ha)	Area Contracted for Zoning for Regeneration (ha)	Forest Area Contracted by SFEs/SFCs (ha)	No. of Households Contracted by SFEs/ SFCs	Area Contracted to Households by SFEs/ SFCs (ha)	Forest Area Contracted by MB-PFs (ha)	Forest Area Contracted by MB-SUFs (ha)
<b>Northwest</b>									
1	Lai Chau						20,000		
2	Dien Bien						15,000		
3	Son La						4,780		
4	Hoa Binh				2,400		10,442		
<b>Northeast</b>									
5	Lao Cai				5,246		36,453		
6	Yen Bai				7,890		34,492		
7	Ha Giang						4,350		
8	Tuyen Quang						2,125		
9	Phu Tho						15,670		
10	Cao Bang						12,900		
11	Bac Can				2,500		10,281		
12	Thai Nguyen						11,000		
13	Quang Ninh				12,345		43,290		
14	Lang Son						14,596		
15	Bac Giang						26,838		
<b>Red River Delta</b>									
16	Vinh Phuc						407		
17	Bac Ninh								
18	Hai Phong								
19	Hai Duong						7,080		
20	Hung Yen								
21	Ha Noi								
22	Ha Tay								
23	Ha Nam				17		337		

No.	Province	Total Forest Area Under Contract (ha)	Forest Area Contracted for Protection and Management (ha)	Area Contracted for Zoning for Regeneration (ha)	Forest Area Contracted by SFEs/SFCs (ha)	No. of Households Contracted by SFEs/SFCs	Area Contracted to Households by SFEs/SFCs (ha)	Forest Area Contracted by MB-PFs (ha)	Forest Area Contracted by MB-SUFs (ha)
24	Nam Dinh								
25	Thai Binh								
26	Ninh Binh					308			
<b>North Central Coast</b>									
27	Thanh Hoa				22,134		98,673		
28	Nghe An						43,751		
29	Ha Tinh				21,389		67,490		
30	Quang Binh				1,750		51,980		
31	Quang Tri				3,412		12,500		
32	Thua Thien Hue				5,432		20,202		
<b>South Central Coast</b>									
33	Da Nang				7,479		12,994		
34	Quang Nam				10,000		90,000		
35	Quang Ngai				2,884		11,548		
36	Binh Dinh				5,230		30,762		
37	Phu Yen				5,123		45,000		
38	Khanh Hoa						57,809		
39	Ninh Thuan				2,346		35,186		
40	Binh Thuan				11,450		74,084		
<b>Central Highlands</b>									
41	Kon Tum				15,689		147,495		
42	Gia Lai				3,872		126,173		
43	Lam Dong				930		88,821		
44	Dak Lak				6,900		52,000		
45	Dak Nong								
<b>Southeast</b>									
46	Dong Nai				897		29,441		
47	Ba Ria-Vung Tau				168		2,520		

No.	Province	Total Forest Area Under Contract (ha)	Forest Area Contracted for Protection and Management (ha)	Area Contracted for Zoning for Regeneration (ha)	Forest Area Contracted by SFEs/SFCs (ha)	No. of Households Contracted by SFEs/ SFCs	Area Contracted to Households by SFEs/ SFCs (ha)	Forest Area Contracted by MB-PFs (ha)	Forest Area Contracted by MB-SUFs (ha)
48	TP Ho Chi Minh								
49	Binh Duong								
50	Binh Phuoc				5,200	22,349			
51	Tay Ninh								Mekong River Delta
52	Long An					2,340			
53	Dong Thap					1,200			
54	Tien Giang								
55	Ben Tre				297	1,498			
56	Vinh Long								
57	Tra Vinh				787	2,044			
58	Can Tho								
59	Hau Giang								
60	Soc Trang					2,345			
61	Bac Lieu								
62	Kien Giang				350	7,627			
63	An Giang								
64	Ca Mau				13,345	75,000			

Source: Data provided by an official from Legal Department under MARD

Note: empty cells indicate that data are not available or missing

## Annex G.2: Forest Areas under Contract in 1999

No.	Province	Total Forest Area Under Contract (ha)	Forest Area Contracted for Protection and Management (ha)	Area Contracted for Zoning for Regeneration (ha)	Forest Area Contracted by SFEs/SFCs (ha)	No. of Households Contracted by SFEs/SFCs	Area Contracted to Households by SFEs/SFCs (ha)	Forest Area Contracted by MB-PFs (ha)	Forest Area Contracted by MB-SUFs (ha)
<b>Northwest</b>									
1	Lai Chau	80,952	13,588	67,364	6,700	20,635	6,947	141	
2	Dien Bien								
3	Son La	253,153	115,464	137,689	6,599	2,012	2,012	21,010	
4	Hoa Binh	65,801	62,487	3,314	11,310	2,300	5,100	30,838	15,024
<b>Northeast</b>									
5	Lao Cai	16,712	10,712	6,000	49,389	13,030	57,342	34,097	13,616
6	Yen Bai	123,744	118,314	5,430	45,910	7,523	33,296		
7	Ha Giang	50,653	44,653	6,000	14,389	1,200	5,600	53,689	
8	Tuyen Quang	41,048	20,230	20,818	30,996	7,435	32,225	42,196	
9	Phu Tho	29,240	25,740	3,500	20,389	4,200	4,200	5,445	
10	Cao Bang	77,931	45,924	32,007	54,186		7,337	845	
11	Bac Can	65,570	45,360	20,210	20,954	5,300	17,000	15,943	
12	Thai Nguyen	15,200	11,200	4,000	17,595	540	2,050	4,125	20,093
13	Quang Ninh	24,748	20,848	3,900	64,338	8,012	25,000	20,540	2,055
14	Lang Son	143,941	86,421	57,520	22,592	20,000	80,966	21,956	
15	Bac Giang	31,024	27,624	3,400	27,509	4,500	15,700	6,383	5,288
<b>Red River Delta</b>									
16	Vinh Phuc	9,800	9,200	600	1,820	622	1,230	10,784	
17	Bac Ninh	200	200						
18	Hai Phong							1,961	
19	Hai Duong	7,177	5,067	2,110	9,332				
20	Hung Yen	500	500						
21	Ha Noi	2,206	2,206		1,985				
22	Ha Tay	3,100	2,100	1,000	959			6,603	
23	Ha Nam				860				
24	Nam Dinh								1,855
25	Thai Binh	10,264	2,272	7,992					



No.	Province	Total Forest Area Under Contract (ha)	Forest Area Contracted for Protection and Management (ha)	Area Contracted for Zoning for Regeneration (ha)	Forest Area Contracted by SFEs/SFCs (ha)	No. of Households Contracted by SFEs/ SFCs	Area Contracted to Households by SFEs/ SFCs (ha)	Forest Area Contracted by MB-PFs (ha)	Forest Area Contracted by MB-SUFs (ha)
26	Ninh Binh				2,441			9,758	14,170
<b>North Central Coast</b>									
27	Thanh Hoa	91,939	83,817	8,122	62,791	5,200	22,900		40,797
28	Nghé An	121,000	100,000	21,000	157,392	7,200	31,340		94,353
29	Ha Tinh	117,847	107,847	10,000	105,279	1,400	5,790	7,733	59,161
30	Quang Binh	97,885	88,390	9,495	284,321		7,280		40,646
31	Quang Tri	21,900	19,800	2,100	42,208	2,500	17,500	4,088	93
32	Thua Thien Hue	25,100	18,000	7,100	39,516	7,520	34,789	67,647	30,671
<b>South Central Coast</b>									
33	Da Nang				20,251	920	5,600		15,934
34	Quang Nam	45,200	42,500	2,700	131,997		8,900	7,968	3,142
35	Quang Ngai	44,714	37,714	7,000	13,261	5,200	25,600	73,549	
36	Binh Dinh	30,295	24,458	5,837	82,702	5,000	37,732	1,866	
37	Phu Yen	16,716	15,816	900	64,277		7,917	2,615	16,638
38	Khanh Hoa	16,852	14,622	2,230	122,057	5,400	21,532	1,180	
39	Ninh Thuan	67,500	59,500	8,000	55,313		6,200	39,424	31,677
40	Binh Thuan	42,000	40,000	2,000	150,112	4,900	52,000	121,984	30,023
<b>Central Highlands</b>									
41	Kon Tum	69,600	68,700	900	328,630	3,700	32,670	32,681	53,596
42	Gia Lai	79,865	77,861	2,004	376,499	3,200	61,586	93,639	36,383
43	Lam Dong	196,000	193,000	3,000	207,290	20,000	70,399	222,844	105,061
44	Dak Lak	114,173	106,162	8,011	662,705	3,625	52,457	53,123	181,545
45	Dak Nong								
<b>South East</b>									
46	Dong Nai	107,041	106,821	220	101,833			1,567	34,901
47	Ba Ria-Vung Tau	4,290	3,482	808	6,007			8,075	12,813
48	TP Ho Chi Minh	38,000	38,000		776			30,625	
49	Binh Duong	12,700	12,700		6,431				

No.	Province	Total Forest Area Under Contract (ha)	Forest Area Contracted for Protection and Management (ha)	Area Contracted for Zoning for Regeneration (ha)	Forest Area Contracted by SFEs/SFCs (ha)	No. of Households Contracted by SFEs/ SFCs	Area Contracted to Households by SFEs/ SFCs (ha)	Forest Area Contracted by MB-PFs (ha)	Forest Area Contracted by MB-SUFs (ha)
50	Binh Phuoc				58,886	4,000	22,000	79,514	25,383
51	Tay Ninh	47,470	32,360	15,110				22,377	13,941
Mekong River Delta									
52	Long An	2,390	390	2,000	4,174		1,444	911	
53	Dong Thap	11,000	2,000	9,000	1,996			2,287	2,821
54	Tien Giang	3,266	3,266					2,029	
55	Ben Tre	2,386	2,268	118				3,414	
56	Vinh Long								
57	Tra Vinh	1,500	1,500			359	2,567	8,019	
58	Can Tho				1,908				
59	Hau Giang								
60	Soc Trang	1,840	1,840		5,685	123	1,234	2,478	116
61	Bac Lieu	157		157					109
62	Kien Giang	7,900	7,000	900	79	799	5,134	13,542	44,440
63	An Giang	2,771	2,771		362				
64	Ca Mau	100,945	99,361	1,584	80,103	250	2,500		61

Source: MARD (2000, 2002)

Note: empty cells indicate that data are not available or missing

### Annex G.3: Forest Areas under Contract in 2004

No.	Province	Total Forest Area Under Contract (ha)	Forest Area Contracted for Protection and Management (ha)	Area Contracted for Zoning for Regeneration (ha)	Forest Area Contracted by SFEs/SFCs (ha)	No. of Households Contracted by SFEs/ SFCs	Area Contracted to Households by SFEs/ SFCs (ha)	Forest Area Contracted by MB-PFs (ha)	Forest Area Contracted by MB-SUFs (ha)
<b>Northwest</b>									
1	Lai Chau				1,335			36,189	7,500
2	Dien Bien				3,243	8,200	60,987	3,418	962
3	Son La				25,317	912	4,577	8,757	83,873
4	Hoa Binh				30,152	622	2,566		23,505
<b>Northeast</b>									
5	Lao Cai				26,606	424	10,976	141,626	22,278
6	Yen Bai				63,074	12,268	136,918		20,150
7	Ha Giang				28,832	2,077	28,002		98,035
8	Tuyen Quang				37,412	4,657	29,775	8,702	48,017
9	Phu Tho				33,021	7,200	25,000		16,262
10	Cao Bang							33,901	1,928
11	Bac Can				28,828	915	9,200		39,430
12	Thai Nguyen				24,545	2,100	8,755	4,395	33,193
13	Quang Ninh				240,410	3,681	70,685	16,644	22,163
14	Lang Son				51,140	1,348	6,607		29,788
15	Bac Giang				36,962	5,745	24,539	13,850	16,466
<b>Red River Delta</b>									
16	Vinh Phuc				2,049	423	1,280		14,739
17	Bac Ninh								595
18	Hai Phong				45				9,938
19	Hai Duong				7,487				1,460
20	Hung Yen								
21	Ha Noi				2,435				
22	Ha Tay				1,093			3,254	12,220
23	Ha Nam				275				
24	Nam Dinh				9				1,856
25	Thai Binh							23,550	

No.	Province	Total Forest Area Under Contract (ha)	Forest Area Contracted for Protection and Management (ha)	Area Contracted for Zoning for Regeneration (ha)	Forest Area Contracted by SFEs/SFCs (ha)	No. of Households Contracted by SFEs/SFCs	Area Contracted to Households by SFEs/SFCs (ha)	Forest Area Contracted by MB-PFs (ha)	Forest Area Contracted by MB-SUFs (ha)
26	Ninh Binh				2,870			9,943	16,188
<b>North Central Coast</b>									
27	Thanh Hoa				100,470	4,554	58,073	1,915	92,065
28	Nghé An				249,026	4,445	87,918	13,423	109,331
29	Ha Tinh				107,907	7,408	73,300	91,832	95,099
30	Quang Binh				405,688	3,631	70,677		92,259
31	Quang Tri				86,363	9,200	48,572		40,526
32	Thua Thien Hue				118,719	952	6,108	55,775	79,539
<b>South Central Coast</b>									
33	Da Nang				23,525				21,670
34	Quang Nam				125,907	2,000	18,000	17,942	98,500
35	Quang Ngai				73,423	2,500	6,100	136,443	
36	Binh Dinh				106,895	4,650	46,521	60,727	
37	Phu Yen				29,276	2,000	11,907	84,736	31,998
38	Khanh Hoa				129,992	921	31,800	42,066	
39	Ninh Thuan				63,197	434	13,354	85,086	49,359
40	Binh Thuan				90,388	21,904	88,441	229,863	36,899
<b>Central Highlands</b>									
41	Kon Tum				333,969	2,041	4,000	94,085	98,731
42	Gia Lai				320,873	715	44,340	328,499	60,178
43	Lam Dong				280,761	3,258	104,169	384,649	103,668
44	Dak Lak				330,578	2,292	37,462	17,701	244,608
45	Dak Nong				331,256	1,674	45,344	11,205	28,179
<b>Southeast</b>									
46	Dong Nai				84,387	4,008	17,750	2,276	95,263
47	Ba Ria-Vung Tau				5,769			11,669	15,967
48	TP Ho Chi Minh				3,882			37,069	
49	Binh Duong				8,102			4,145	5,941

No.	Province	Total Forest Area Under Contract (ha)	Forest Area Contracted for Protection and Management (ha)	Area Contracted for Zoning for Regeneration (ha)	Forest Area Contracted by SFEs/SFCs (ha)	No. of Households Contracted by SFEs/ SFCs	Area Contracted to Households by SFEs/ SFCs (ha)	Forest Area Contracted by MB-PFs (ha)	Forest Area Contracted by MB-SUFs (ha)
50	Binh Phuoc				141,252	6,519	80,428	119,169	32,456
51	Tay Ninh				32			33,549	32,218
<b>Mekong River Delta</b>									
52	Long An				9,149	613	1,404		5,472
53	Dong Thap				2,403			2,687	7,638
54	Tien Giang							5,155	101
55	Ben Tre							5,351	4,510
56	Vinh Long								
57	Tra Vinh								
58	Can Tho								
59	Hau Giang				203				4,240
60	Soc Trang				6,167	535	3,526	5,789	343
61	Bac Lieu								389
62	Kien Giang				4,103	359	2,667	46,062	50,583
63	An Giang							14,057	601
64	Ca Mau				139,271	11,448	94,580	4,659	17,424

Source: MARD (2004, 2005)

Note: empty cells indicate that data are not available or missing

## Annex G.4: The Forest Tenure Situation in 1995

No.	Province	Households and Individuals	Communities	Economic Organizations	Foreign and Joint-venture Organizations	Communal People's Committees	Others
<b>Northwest</b>							
1	Lai Chau	6528		109294			131893
2	Dien Bien (Dien Bien was part of Lai Chau in 1995; data are presented in line 1)						
3	Son La	22119		113044		76690	537
4	Hoa Binh	114031		14638		61083	34362
<b>Northeast</b>							
5	Lao Cai	8988		72583		115829	1247
6	Yen Bai	42621		38622		104609	10078
7	Ha Giang	43161		9260		123095	92598
8	Tuyen Quang	8992		195823			253
9	Phu Tho (Vinh Phu)	37345		46823		12715	7719
10	Cao Bang	74888		6459		20518	53490
11	Bac Can (Bac Thai)	121148		30111		2082	2191
12	Thai Nguyen (Thai Nguyen was part of Bac Thai in 1995; data are presented in line 11)						
13	Quang Ninh	47427		68619		68941	11033
14	Lang Son	18623		85099		32860	36053
15	Bac Giang (Ha Bac)	33097		50932		13380	23594
<b>Red River Delta</b>							
16	Vinh Phuc (Vinh Phuc was part of Vinh Phu in 1995; data are presented in line 9)						
17	Bac Ninh (Bac Ninh was part of Ha Bac in 1995; data are presented in line 15)						
18	Hai Phong	65		2771		1373	20
19	Hai Duong	4305		6911		929	
20	Hung Yen						
21	Ha Noi			6256		311	150
22	Ha Tay	3439		6725	149	4499	429
23	Ha Nam (Nam Ha)	109		1976		256	1688
24	Nam Dinh (Nam Dinh was part of Nam Ha in 1995; data are presented in line 23)						
25	Thai Binh					1870	
26	Ninh Binh	1724		2100		1643	11330
<b>North Central Coast</b>							
27	Thanh Hoa	109652		78903		134361	52526
28	Nghe An	38941		147834		398334	58
29	Ha Tinh	6295		151376		41982	609
30	Quang Binh	9177		188184		20179	242242
31	Quang Tri	3681		46044		10539	51094
32	Thua Thien Hue	16161		50193		85299	30257
<b>South Central Coast</b>							
33	Da Nang (Quang Nam-Da Nang)	16035		139456		403038	8798
34	Quang Nam (Quang Nam was part of Quang Nam-Da Nang in 1995; data are presented in line 33)						
35	Quang Ngai	11820		60884		37178	37008

No.	Province	Households and Individuals	Communities	Economic Organizations	Foreign and Joint-venture Organizations	Communal People's Committees	Others
36	Binh Dinh	21470		10430	470	32870	127493
37	Phu Yen	6472		2439		135094	28676
38	Khanh Hoa	11982		96071		141916	42015
39	Ninh Thuan	244		142930		284	27535
40	Binh Thuan	49833		223185		46875	162389
<b>Central Highlands</b>							
41	Kon Tum	26360		224612		23317	399981
42	Gia Lai	18195		377998		2279	448321
43	Lam Dong	378		514862		422	36298
44	Dak Lak	14738		1009001		182953	13155
45	Dak Nong (Dak Nong was part of Dak Lak in 1995; data are presented in line 44)						
<b>Southeast</b>							
46	Dong Nai	10659		153118		1810	5842
47	Ba Ria-Vung Tau	6769		31943		7577	1835
48	TP Ho Chi Minh	160		14150		5522	14826
49	Binh Duong (Song Be)	26890		297473	620	15997	1286
50	Binh Phuoc (Binh Phuoc was part of Song Be in 1995; data are presented in line 49)						
51	Tay Ninh	564		6655		3057	28541
<b>Mekong River Delta</b>							
52	Long An	25335		9169		325	47
53	Dong Thap	5507		3886			2617
54	Tien Giang	910		446		1469	
55	Ben Tre	5471		1881		219	
56	Vinh Long (Vinh Long was part of Ben Tre in 1995; data are presented in line 55)						
57	Tra Vinh	6511		857		1563	
58	Can Tho	915		1792		26	
59	Hau Giang (Hau Giang was part of Can Tho in 1995; data are presented in line 58)						
60	Soc Trang	461		5510		307	815
61	Bac Lieu (Minh Hai)	2850		85184		1547	3755
62	An Giang						7820
63	Kien Giang	14977		51137	13759	4150	24943
64	Ca Mau (Ca Mau was part of Minh Hai in 1995; data are presented in line 61)						

Source: Data provided by an official from Land Registration Department under MONRE

Note: empty cells indicate that data are not available or missing

## Annex G.5: The Forest Tenure Situation in 2004

No.	Province	Households and Individuals	Communities	Economic Organizations	Foreign and Joint-venture Organizations	Communal People's Committees	Others
<b>Total for Viet Nam</b>							
<b>Northwest</b>							
1	Lai Chau	124463.4		20886.63			583.94
2	Dien Bien	421993.4	8897.61	7333.63		660.88	2850.9
3	Son La	122442.2	43784.05	65519.45			84327.31
4	Hoa Binh	167889.8	886.9	15157.39		3734.64	24981.04
<b>Northeast</b>							
5	Lao Cai	56432.91		20421.64			152179.6
6	Yen Bai	123856.9		85232.91		55856.99	6.27
7	Ha Giang	68219.02		14129			282164.8
8	Tuyen Quang	46233.02		44492.01		352.13	38304.78
9	Phu Tho	98899.47		25851.6	309.83	4399.5	8570.84
10	Cao Bang	297199.7	110972.1	1622.7		5271.55	31468.4
11	Bac Can	198695.7		21229.77			26193.43
12	Thai Nguyen	93244.32	5.43	12572.11		8125.25	18851.7
13	Quang Ninh	78765.21	220.42	79797.43	225.3	51736.81	44516.43
14	Lang Son	1802.97		302432.9	44878.56	2249.47	256615.5
15	Bac Giang	61236.47	1.7	37500.97		9088.66	19793.42
<b>Red River Delta</b>							
16	Vinh Phuc	12362.12		2876.47		1205.53	16100.64
17	Bac Ninh	169.79		3.01		2.89	151.59
18	Hai Phong	5747.18		14.19	19.5	1573.45	8509.04
19	Hai Duong	2340.72		8.28		1154.46	5355.09
20	Hung Yen						
21	Ha Noi	2307.56		2525.45		590.04	3.51
22	Ha Tay	3601.36		1875.57		1238.34	9618.38
23	Ha Nam	180.61				7.83	69.7
24	Nam Dinh					261.59	4031.46
25	Thai Binh					2027.61	
26	Ninh Binh	3157.42	3505.24	236.9	27004.52	22348.92	
<b>North Central Coast</b>							
27	Thanh Hoa	280531.4		67478.35	6.48	43574.09	135037.7
28	Nghe An	437108.8		113918			224826.6
29	Ha Tinh	32346.87		99690.96		1667.14	161950.1
30	Quang Binh	166.37		436702.4	358304	6192.6	78398.43
31	Quang Tri	26621.69	64.67	38665.25		4988.28	43354.15
32	Thua Thien Hue	22723.85	1858.38	94910.42		1546.58	89088.57
<b>South Central Coast</b>							
33	Da Nang	53469.93		59251.4	53566.14	7477.9	5685.26
34	Quang Nam	29580.39	3190.92	42282.55		1325.47	82976.34
35	Quang Ngai	50928.37	4.46	62627.13		701.84	53699.41
36	Binh Dinh	19526.29		87883.58	9801.4	39.01	52186.49
37	Phu Yen	168385.9		840.07	11255.98	47100.71	109189.2



No.	Province	Households and Individuals	Communities	Economic Organizations	Foreign and Joint-venture Organizations	Communal People's Committees	Others
38	Khanh Hoa	18656.76		150377.3		3407.74	11038.83
39	Ninh Thuan	3914.21		54733.96		94.08	96820.49
40	Binh Thuan	3855.85		119136.3			264005.9
<b>Central Highlands</b>							
41	Kon Tum	6162.85		445879.2		359.14	45139.4
42	Gia Lai	13266.07		246767.5		38419.71	293585.9
43	Lam Dong	11142.33		181567.9	1.18	15.99	425545.1
44	Dac Lac	4707.87	2127	224616.3			304241.7
45	Dac Nong	878.13		296213.7			41197.17
<b>Southeast</b>							
46	Dong Nai	21978.95		59807.55	143.43	1154.13	95665.92
47	Ba Ria-Vung Tau	678.9		6010.22		456.66	28487.54
48	TP Ho Chi Minh	1222.98		32331.58	21.57		117.32
49	Binh Duong						12650.74
50	Binh Phuoc	7314.91		133925.2			196229.1
51	Tay Ninh	87.83		149			66247.67
<b>Mekong River Delta</b>							
52	Long An	51267.15		6143.97		711.65	7584.53
53	Dong Thap	3827.03				13.84	10599.81
54	Tien Giang	9226.58		49.73		147.7	1463.64
55	Ben Tre	6421.2	4800.86		435.98		5236.84
56	Vinh Long						
57	Tra Vinh	4172.46					2781.28
58	Can Tho	0.14		227.14			
59	Hau Giang	2056.9		2566.1		12.59	3.03
60	Soc Trang	2800.73		3929.79		24.11	5473.92
61	Bac Lieu						4831.65
62	An Giang	9418.14		1024.96		61.66	3336.71
63	Kien Giang	14976.41		10059.39		97.57	80952.09
64	Ca Mau	4996.13		97109.46			3983.08

Source: Data provided by an official from Land Registration Department under MONRE

Note: empty cells indicate that data are not available or missing

## Annex H: Forest Products and Markets

## Annex H.1: Wood Production Data for 1995, 1999, 2002, and 2004

Unit: Thousand m<sup>3</sup>

No.	Provincial name	1995	1999	2002	2004
<b>Whole country</b>		<b>2,793.1</b>	<b>2,122.5</b>	<b>2,504.0</b>	<b>2,443.1</b>
<b>Northwest</b>		<b>254.0</b>	<b>230.4</b>	<b>207.3</b>	<b>173.3</b>
1	Lai Chau	125	101.2	117.8	8.4
2	Dien Bien				63.7
3	Son La	101	89.4	47.6	54.1
4	Hoa Binh	28	39.8	41.9	47.1
<b>Northeast</b>		<b>572.0</b>	<b>475.0</b>	<b>530.0</b>	<b>625.0</b>
5	Lao Cai	48.6	22.1	29.9	25.6
6	Yen Bai	56	78	123	148.8
7	Ha Giang	58.5	66.5	55.6	52
8	Tuyen Quang	65.7	72.2	89.9	110.2
9	Phu Tho	65.8	46.1	50.6	99
10	Cao Bang	50.8	39.5	22.5	22.3
11	Bac Can	22.3	23	23	24.3
12	Thai Nguyen	39.7	11.8	11.1	20.8
13	Quang Ninh	36	13.1	21.1	23.9
14	Lang Son	63	70	67.9	59.5
15	Bac Giang	65.6	32.7	35.4	38.6
<b>Red River Delta</b>		<b>255.8</b>	<b>129.5</b>	<b>112.7</b>	<b>95.6</b>
16	Vinh Phuc	69.2	15.8	30	28.2
17	Bac Ninh	12.4	5.5	6.8	5.8
18	Hai Phong	30	31.8	18.7	8.5
19	Hai Duong	10	0.2	1.8	2
20	Hung Yen		19.8	11.3	9.8
21	Ha Noi	8.5	4.1	3.5	2.2
22	Ha Tay	9.4	10.1	7.1	6.2
23	Ha Nam	19.7	11	9.6	12.7
24	Nam Dinh	32.3	14	7.9	5.8
25	Thai Binh	45.3	9.7	8.5	5.7
26	Ninh Binh	19	7.5	7.5	8.7
<b>North Central Coast</b>		<b>323.4</b>	<b>219.4</b>	<b>226.8</b>	<b>283.8</b>
27	Thanh Hoa	65	47.8	32.5	33.1
28	Nghe An	125	93	85	92
29	Ha Tinh	32	21.8	28.4	42.8
30	Quang Binh	43	17.7	29.2	36.3
31	Quang Tri	23.9	8.9	24.7	31.8
32	Thua Thien Hue	34.5	30.2	27	47.8
<b>South Central Coast</b>		<b>280.1</b>	<b>254.7</b>	<b>314.3</b>	<b>365.3</b>
33	Da Nang		18.2	22.8	14
34	Quang Nam	125	64.4	64.2	89.2
35	Quang Ngai	45.9	60.5	77.5	91.1

36	Binh Dinh	43	68.7	102.2	129.8
37	Phu Yen	22.6	12.6	13.2	11.1
38	Khanh Hoa	43.6	30.3	34.4	30.1
39	Ninh Thuan	12	4.6	8.7	5.8
40	Binh Thuan	38	18.3	27.5	25.1
<b>Central Highlands</b>		<b>415.3</b>	<b>243.5</b>	<b>419.8</b>	<b>283.9</b>
41	Kon Tum	42	31.9	39.9	36.3
42	Gia Lai	84.4	47.8	142	113.2
43	Lam Dong	88	36.7	57.7	65.5
44	Dak Lak	200.9	127.1	180.2	53.8
45	Dak Nong				15.1
<b>Southeast</b>		<b>171.8</b>	<b>107.8</b>	<b>132.7</b>	<b>101.5</b>
46	Dong Nai	48	41.5	22.7	14.1
47	Ba Ria-Vung Tau	6	0.2	0.6	1
48	TP Ho Chi Minh	18.3	15.4	38.8	10.6
49	Binh Duong		4	1.9	1.5
50	Binh Phuoc	9	8.5	11.1	16.3
51	Tay Ninh	40.5	15.3	21.4	27.1
<b>Mekong River Delta</b>		<b>520.7</b>	<b>462.2</b>	<b>560.4</b>	<b>514.7</b>
52	Long An	221	70	70	76.5
53	Dong Thap	45	95.1	90.1	91.6
54	Tien Giang	50	61	61.7	67.1
55	Ben Tre	6	6.3	6.2	9.3
56	Vinh Long	20	17.7	16	15.1
57	Tra Vinh	13	16.5	26.7	42.3
58	Can Tho	17.5	16.5	18.5	10.5
59	Hau Giang				9.3
60	Soc Trang	19.4	23.7	22.6	30.1
61	Bac Lieu		2.8	3.2	2.9
62	An Giang	30	43.5	44.2	59
63	Kien Giang	41.3	24.1	125.4	42.9
64	Ca Mau	57.5	85	75.8	58.1

Source: GSO (2006)

Note: empty cells indicate that data are not available or missing

## Annex H: Forest Products and Markets

## Annex H.1: Wood Production Data for 1995, 1999, 2002, and 2004

Unit: Billion VND

No.	Provincial name	1995	1999	2002	2004
<b>Whole country</b>		<b>5,033.7</b>	<b>5,624.2</b>	<b>6,107.6</b>	<b>6,230.9</b>
<b>Northwest</b>		<b>460.7</b>	<b>576.3</b>	<b>641.2</b>	<b>656.8</b>
1	Lai Chau	177.5	201	219.2	109.5
2	Dien Bien				126.9
3	Son La	160.7	223.1	228.3	236.4
4	Hoa Binh	122.5	152.2	193.7	184
<b>Northeast</b>		<b>1,238.2</b>	<b>1,723.5</b>	<b>1,816.9</b>	<b>1,864.9</b>
5	Lao Cai	152.9	186.2	207.2	198.1
6	Yen Bai	74.5	266.5	275	308.1
7	Ha Giang	101.6	132.9	127.2	131.3
8	Tuyen Quang	81.1	177.6	192.9	190.6
9	Phu Tho	163.9	111.3	134.2	155.8
10	Cao Bang	80.2	156.4	139.5	126.2
11	Bac Can	137.3	86.7	95	97.4
12	Thai Nguyen	55	51	57.4	65
13	Quang Ninh	107.2	78.5	90.1	100.9
14	Lang Son	167.5	360.7	381	369.3
15	Bac Giang	117	115.7	117.4	122.2
<b>Red River Delta</b>		<b>301.6</b>	<b>273.3</b>	<b>228.7</b>	<b>207.0</b>
16	Vinh Phuc	52	40.6	43.4	37.1
17	Bac Ninh	10	10.1	10.7	6.3
18	Hai Phong	32.9	32.3	27.9	23.2
19	Hai Duong	69.2	15.9	18.7	16.9
20	Hung Yen	25.6	25	10.2	9.1
21	Ha Noi	13.4	11.7	10.5	6.9
22	Ha Tay	25.1	38.1	28.8	27.2
23	Ha Nam	12.5	18.4	13.6	17.7
24	Nam Dinh	22.2	22.9	25.8	24.5
25	Thai Binh	18.5	38.6	17.8	14
26	Ninh Binh	20.2	19.7	21.3	24.1
<b>North Central Coast</b>		<b>1,133.7</b>	<b>1,092.5</b>	<b>1,180.9</b>	<b>1,225.6</b>
27	Thanh Hoa	332.7	307.1	347.4	346
28	Nghe An	412.5	406.2	416.8	432.6
29	Ha Tinh	125.2	160.2	164.4	173.4
30	Quang Binh	111	89.4	92.3	92.9
31	Quang Tri	52.8	42	58.5	73.5
32	Thua Thien Hue	99.5	87.6	101.5	107.2
<b>South Central Coast</b>		<b>463.9</b>	<b>423.2</b>	<b>459.6</b>	<b>484.1</b>
33	Da Nang	20.4	20.4	22.1	22.6
34	Quang Nam	139.8	127.6	131.4	138
35	Quang Ngai	72.8	94.1	99.3	107.7

36	Binh Dinh	106.3	93.5	124.8	133.4
37	Phu Yen	36.7	33.4	27.3	30.8
38	Khanh Hoa	87.9	54.2	54.7	51.6
39	Ninh Thuan	20.5	15.4	18.6	18.1
40	Binh Thuan	68.7	41	48.6	40.1
<b>Central Highlands</b>		<b>419.0</b>	<b>352.6</b>	<b>473.3</b>	<b>444.9</b>
41	Kon Tum	50.3	59.1	83	89.5
42	Gia Lai	106.8	68	111.3	107.1
43	Lam Dong	57	66.6	90	94.3
44	Dak Lak	204.9	158.9	189	122.7
45	Dak Nong				31.3
<b>Southeast</b>		<b>350.0</b>	<b>332.8</b>	<b>377.5</b>	<b>379.8</b>
46	Dong Nai	50.8	71.3	51	61.5
47	Ba Ria-Vung Tau	50.6	25.6	36.4	35.5
48	TP Ho Chi Minh	82.9	34.6	43	35.8
49	Binh Duong	20.4	38.6	43	48.3
50	Binh Phuoc	8.1	21.5	28	23.4
51	Tay Ninh	48	84.8	108.9	117.1
<b>Me Kong River Delta</b>		<b>666.6</b>	<b>850.0</b>	<b>929.5</b>	<b>967.8</b>
52	Long An	160.9	193.6	217.5	236.5
53	Dong Thap	108.5	144.9	163.6	169.8
54	Tien Giang	70.9	93.1	99.7	99.4
55	Ben Tre	35.6	16.8	25.2	21.3
56	Vinh Long	22.2	31.1	29.5	28.7
57	Tra Vinh	10	32.2	47.8	58.7
58	Can Tho	37.3	26.3	29.9	12.3
59	Hau Giang				19.6
60	Soc Trang	35.6	39.8	38	44.2
61	Bac Lieu	3.6	19.3	15.6	15.6
62	An Giang	46.1	68.3	71.6	75.9
63	Kien Giang	42.5	37.4	60	93.7
64	Ca Mau	93.4	147.2	131.1	92.1

Source: GSO (2006)

Note: empty cells indicate that data are not available or missing

### Annex H.3: National Forest Products: Removal and Production for 2003 and 2004

Product	Unit	2003	2004
<b>Roundwood Removals</b>			
Woodfuel for charcoal	'000 m <sup>3</sup>	21,500	21,250
Industrial roundwood	'000 m <sup>3</sup>	2,350	2,750
Sawlogs & veneer logs	'000 m <sup>3</sup>	350	350
Pulpwood (round & split)	'000 m <sup>3</sup>	1,650	1,850
Other industrial roundwoods	'000 m <sup>3</sup>	550	650
<b>Production</b>			
Wood chips & particles	'000 m <sup>3</sup>	950	1,100
Sawnwood	'000 m <sup>3</sup>	550	600
Plywood	'000 m <sup>3</sup>	11	15
Particleboard	'000 m <sup>3</sup>	43.5	48
Medium density fiber	'000 m <sup>3</sup>	48.9	54
Wood pulp (mechanical)	'000 ton	25	30
Wood pulp (semi-mechanical)	'000 ton	106.5	127
Chemical wood pulp	'000 ton	100	121
Other pulp	'000 ton	375	431.825
Graphic paper	'000 ton	145	175
Sanitary & household paper	'000 ton	33	46.2
Packaging materials	'000 ton	313.4	376
Other paper & paperboard	'000 ton	123.6	148.3

Source: DOF (2005)

### Annex H.4: National Forest Products: Imports and Exports for 2003 and 2004

Product	Unit of Quantity	IMPORT				EXPORT			
		2003		2004		2003		2004	
		Quantity	Value (US\$ '000)	Quantity	Value (US\$ '000)	Quantity	Value (US\$ '000)	Quantity	Value (US\$ '000)
Industrial round wood	'000 m <sup>3</sup>	2,100	300,000	2,550	520,000				
Wood chips & particles	'000 m <sup>3</sup>					631,049	104,700	742,2	117,700
Plywood	'000 m <sup>3</sup>	15	1,600	15	1,600				
Particleboard	'000 m <sup>3</sup>	36,856	4,120	35	3,910				
Medium density fiberboard	'000 m <sup>3</sup>	34,28	6,750	38	7,410				
Chemical wood pulp	'000 tons	80		120					
Other pulp	'000 tons			8					
Paper and paperboard	'000 tons	425		525		96,427	50,800	115	60,500

Source: DOF (2005)

Note: empty cells indicate that data are not available or missing

### Annex H.5: List of Wood and Forest Product Processing Facilities with Export Turnover of Over US\$2 Million in 2005

No.	Name of Enterprise	Location	Products and Specialization	Export Turn-over (Mil US\$)
<b>Red River Delta</b>				
1	Bamboo and Rattan Import-Export Stock Company of Viet Nam	Ha Noi	Bamboo and rattan for import and export	7
2	Fine Art Handicraft Import-Export Stock Company	Ha Noi	Fine arts, handicrafts, and wood commodities for import and export	10.7
3	Fine Art Production and Business Export Company	Ha Noi	Fine arts, handicrafts, and bamboo and rattan commodities production; raw material for export	2.1
4	Hung Thinh Production and Commercial Limited Company	Ha Noi	Fine arts, handicrafts, and wood commodities production for export	2.4
5	Thanh Long Import-Export Company	Ha Noi	Fine arts, handicrafts, and wood commodities for import and export	9.7
6	Van Minh Limited Company	Ha Tay	Fine arts and handicrafts; wood commodities and civil construction; wood production and export	2.5
7	Ngoc Son Bamboo and Rattan Weaving Private Enterprise	Ha Tay	Fine arts and handicrafts; bamboo, rattan, sedge, and fern commodities production; business and export	2.8
8	Ngoc Son Bamboo & Rattan Enterprise	Ha Tay	Fine arts and handicrafts; bamboo, rattan, sedge, and fern commodities production; business and export	43.9
9	Nam Ha-Udomxay Import & Export Stock Company	Nam Dinh	Fine arts, handicrafts, and wood commodity production for import & export	2.2
<b>South Central Coast</b>				
10	Viet Nam-Japan Pulpwood Production Joint-venture Company	Da Nang	Wood chip processing for export; reforestation support	14.4
11	Hoang Bao Import and Export Business Limited Company	Da Nang	Fine arts and handicrafts; wood commodities; interior decoration and gifts	2
12	Duy Thanh Fine-Art Handicraft Commodity Export Limited Company	Da Nang	Fine arts and handicrafts; bamboo, rattan, leaf, pottery and porcelain; commodities export	4.2
13	Cam Pha Company	Quang Nam	Wood and non-timber forest products processing	19.2
14	Quang Nan Special Forest Products Export Company	Quang Nam	Special forest products production and processing	8.4
15	Dai Thanh Limited Company	Binh Dinh	Wood-refining and forest products production and processing; agro-forest products and food processing	7.5
16	My Tai-Binh Dinh Limited Company	Binh Dinh	Refined wood and other forest product production for export and domestic distribution	2.9
17	Phu Tai Stock Company	Binh Dinh	Refined wood production and processing	5.2
18	Quoc Thang Limited Company	Binh Dinh	Agriculture and forest products commodities production and export	9
19	Binh Dinh Import and Export Company	Binh Dinh	Forest product production, processing, and export	5.9
20	Duyen Hai Private Enterprise	Binh Dinh	Refined wood production, processing, and export	18
21	Binh Dinh Production, Investment & Service Import-Export Company	Binh Dinh	Reforestation and pulpwood business; forest product harvesting, processing, and trading	18.1
22	Khanh Hoa Forest & Aquatic Products Processing Stock Company	Khanh Hoa	Forest product production and processing for export; bamboo and rattan table and chair commodities	3.1



No.	Name of Enterprise	Location	Products and Specialization	Export Turn-over (Mil US\$)
<b>Central Highlands</b>				
23	Duc Nhan Enterprise	Kon Tum	Forest product harvesting and processing; fine arts and furniture commodities production	3.7
24	Truong Thanh Private Company of Wood Processing	Dak Lak	Reforestation, wood harvesting, and processing; wood and bamboo product production	3.7
<b>South East</b>				
25	Duc Thanh Wood Processing Stock Company	TP Ho Chi Minh	Plantation wood product production for family-use	2.6
26	Savimex Cooperation, Exploitation, and Export Stock Company	TP Ho Chi Minh	Wood production and processing for import & export; interior decoration; assets business	15
27	Sai Gon-Daclak Production & Business Company	TP Ho Chi Minh	Wood furniture production and export; import-export services; restaurant and hotel	2.7
28	SCANSIA PACIFIC Joint-venture Company	TP Ho Chi Minh	Open-interior wood furniture production for export	13.3
29	Saigon Sundries Import & Export Stock Company	TP Ho Chi Minh	Sundries; fine arts and handicrafts; wood commodities trading; textile-sewing; leather-shoes; household appliances	12.5
30	Ho Chi Minh City Commercial Cooperative Union	TP Ho Chi Minh	Agricultural and forest products commodities processing	2.5
31	Forest & Handicraft Products Production, Import & Export Stock Company	TP Ho Chi Minh	Wood product production and export for industrial consumption	25.9
32	Thuan An Wood Processing Stock Company	Binh Duong	Rubber and other wood product production and business	3.5
33	Asian Import & Export and Construction Company	Binh Duong	Wood furniture production for export, trade, and construction	6
34	Thien Thanh Production and Commercial Limited Company	Binh Duong	Porcelain pottery and fine art wood commodities production and export	2.3
35	T&L Glass Export Limited Company	Binh Duong	Fine arts and handicrafts; wood commodities production and business	3.4
<b>Mekong River Delta</b>				
36	Quang Minh Cooperative	Tien Giang	Fine arts and handicrafts; wood commodities production for export	2.4
37	Vinh Long Production & Business Stock Company	Vinh Long	Fine arts and handicrafts; commodities production and export	5.2
38	Meko Fine Art Handicraft Enterprise	Can Tho	Fine arts and handicrafts; wood commodities production	4.6

Source: MARD (2006), Annex 2a

## Annex H.6: List of Paper and Wood-based Panel Production Enterprises

Unit: m<sup>3</sup>/year

No.	Name of Enterprise	Province	Capacity		Type of Commodity
			Pulp	Paper	
<b>Northwest</b>					
1	Son La Particleboard Mill	Son La	2000 m <sup>3</sup> /year		
<b>Northeast</b>					
2	Bao Yen Forest Enterprise	Lao Cai	12,600	2,400	De paper
3	Yen Bai Agro-forest Product & Foodstuff Company	Yen Bai	7,000	7,000	Votive paper for export
4	Hai Yen Limited Company	Yen Bai	2,600	2,400	De paper
5	Yen Son Stock Company	Yen Bai	14,000	13,000	Votive paper
6	Export De Paper Mill	Ha Giang	4,000	3,600	votive paper
7	Tuyen Quang Paper Company	Tuyen Quang	1,500	1,200	De paper for votive paper
8	Bai Bang Pulp and Paper Company	Phu Tho	61,000	100,000	Printing, writing, & packaging paper
9	Lua Viet Paper Company	Phu Tho	6,000	6,000	Packaging and votive paper
10	Viet Tri Paper Company	Phu Tho	10,000	35,000	Printing, writing, & coated paper
11	Viet Tri Wood-based Panel Mill	Phu Tho	Particleboard 4000m <sup>3</sup> /year; Fiber board 2000m <sup>3</sup> /year		
12	Bac Kan Special Forest Products Company	Bac Kan	2,800	2,400	De paper
13	Thai Nguyen Export Paper Company	Thai Nguyen	8,000	7,500	De paper
14	Hoang Van Thu Paper Company	Thai Nguyen		20,000	Packaging paper
15	Truong Xuan Paper Company	Thai Nguyen		10,000	Printing, writing papers
16	Thai Nguyen Particleboard Mill	Thai Nguyen	16500 m <sup>3</sup> /year		
17	Ha Long Commercial Company	Quang Ninh	5,600	5,100	De paper
18	Bac Giang Export Paper Company	Bac Giang	1,500	1,350	De paper
19	Hoa Binh Paper Stock Company	Bac Giang	3,000	2,700	De paper
<b>Red River Delta</b>					
20	Thuan Thanh Paper Company	Bac Ninh		500	Packaging & toilet paper
21	Phu Giang Paper & Cover Company	Bac Ninh	1,500	10,000	Packaging paper
22	Hoang Long Limited Company	Bac Ninh	3,300	5,000	De & votive paper
23	Binh Minh Paper Limited Company	Bac Ninh		14,000	Printing, writing & packaging paper
24	Chi Thiet Paper Enterprise	Bac Ninh		1,500	
25	Hop Tien Paper Company	Bac Ninh		12,000	Printing & writing paper
26	Dong A Limited Company	Bac Ninh		12,000	Printing & writing paper
27	Hong Vuong Paper Stock Cooperative	Bac Ninh		3,000	Packaging paper
28	Hai Phong Paper Stock Company	Hai Phong	1,500	4,000	Votive paper
29	Hoa My Limited Company	Hai Phong	2,600	2,400	
30	My Huong Paper Cooperative	Hai Phong		15,000	Packaging paper
31	Chemical & Electric Material Company	Hai Phong		6,000	Votive paper
32	Thanh Long Paper Mill	Hung Yen		2,500	Different types of paper

No.	Name of Enterprise	Province	Capacity		Type of Commodity
			Pulp	Paper	
33	Viet Nam Paper Share Company	Ha Noi			
34	Airlines Printing Company	Ha Noi		350	Toilet paper
35	Truc Bach Paper Company	Ha Noi		3,000	Toilet & packaging paper
36	Tan Thanh Dong Limited Company	Ha Noi		6,000	Surface paper
37	Cau Duong Wood Mill	Ha Noi		10,000	Tissue paper
38	Paper-cellulose Industrial Institute	Ha Noi		450	Different types of paper
39	Van Dien Paper Stock Company	Ha Tay	1,500	19,000	Packaging paper
<b>North Central Coast</b>					
40	Muc Son Paper Company	Thanh Hoa	16,000	15,000	Packaging paper
41	Lam Son Paper Company	Thanh Hoa	4,500	17,000	Packaging paper
42	Bim Son Paper & Cover Company	Thanh Hoa	800	1,500	Different types of paper
43	Lam Kinh Paper Enterprise	Thanh Hoa	3,000	3,000	Packaging paper
44	Lam River Paper Stock Company	Nghe An	5,400	5,400	Packaging & votive paper
45	An Chau Paper Limited Company	Nghe An		1,800	Carton
46	Nghe An MDF Mill	Nghe An	30000 m <sup>3</sup> /year		
47	Quang Tri MDF Mill	Quang tri	60000 m <sup>3</sup> /year		
48	Statistic Print & Cover Production Company	Thua Thien Hue		4,000	Packaging paper
<b>South Central Coast</b>					
49	Rang Dong Paper Stock Company	Khanh Hoa	1,100	10,000	Packaging & votive paper
<b>Central Highlands</b>					
50	Gia Lai MDF Mill	Gia Lai	54000 m <sup>3</sup> /year		
51	Thanh Loi Limited Company	Lam Dong	4,400	4,000	Votive paper
52	Dak lak Particleboard Mill	Dak Lak	1000 m <sup>3</sup> / year		
<b>Southeast</b>					
53	Dong Nai Paper Company	Dong Nai		20,000	Printing, writing, & package paper
54	Tan Mai Paper Company	Dong Nai	40,000	68,500	Printing, writing, & package paper
55	Tan Mai Particleboard Mill	Dong Nai	1000 m <sup>3</sup> / year		
56	Xuan Duc Paper Stock Company	TP Ho Chi Minh	2,000	20,000	Votive paper
57	Linh Xuan Paper Company	TP Ho Chi Minh		4,000	Toilet paper & paper towels
58	Vinh Hue Paper Company	TP Ho Chi Minh	7,200	8,000	Package, toilet, & votive paper
59	Phu Tho Paper & Cover Ltd. Company	TP Ho Chi Minh		6,000	Packaging paper
60	Saigon Paper Limited Company	TP Ho Chi Minh		40,000	Packaging and toilet paper
61	Pham Thu Limited Company	TP Ho Chi Minh		3,000	Packaging paper
62	Quang Phat Limited Company	TP Ho Chi Minh		10,000	Packaging paper
63	Tan Hoa Hiep Limited Company	TP Ho Chi Minh		4,000	Packaging paper
64	Tan Phu Cuong Limited Company	TP Ho Chi Minh		10,000	Printing & writing paper
65	Tan Phu Binh P& T Ltd. Enterprise	TP Ho Chi Minh		15,000	Packaging paper
66	Binh An Paper Company	Binh Duong		7,500	Printing, writing, & packaging paper

No.	Name of Enterprise	Province	Capacity		Type of Commodity
			Pulp	Paper	
67	New Toyo Tissue Paper Company	Binh Duong		20,000	Toilet paper
68	Chau Thoi Limited Company	Binh Duong	5,800	5,000	Votive paper
69	An Binh Paper Limited Company	Binh Duong		30,000	Packaging paper
70	Van Phat Limited Company	Binh Duong		38,500	Writing and coated paper
71	Vinh Phu Paper Enterprise	Binh Duong	200	8,000	Packaging paper
<b>Mekong River Delta</b>					
72	Western Part Cover Limited Company	Can Tho		5,000	Packaging paper

Source: MARD (2006), Annex 2b

Note: empty cells indicate that data are not available or missing

## Annex I: Forest Forecasts

### Annex I.1: Forecasts of Wood Product Demand in 2010, 2015, and 2020: Strategic Option

Products	2010	2015	2020
<b>Sawn timber (big timber in m<sup>3</sup>)</b>			
Consumption	3,588,989	5,009,542	6,991,506
Imported rate of consumption	22%	20%	31%
Imports (including refined products)	788,989	1,009,542	2,191,506
Production capacity	4,000,000	5,000,000	6,000,000
Production	2,800,000	4,000,000	4,800,000
Demand for logs/timber (big)	5,090,909	6,666,667	7,741,935
<b>Medium density fiberboard (m<sup>3</sup>)</b>			
Consumption	79,600	117,400	166,400
Imported rate of consumption	45%	5%	5%
Imports	35,820	5,870	8,320
Exports		50,470	3,920
Production capacity	80,000	180,000	180,000
Production	43,780	162,000	162,000
Demand for logs (small)	78,804	291,600	291,600
<b>Particleboard (m<sup>3</sup>)</b>			
Consumption	147,600	215,500	312,500
Imported rate of consumption	54%	20%	20%
Imports	79,600	43,100	62,500
Exports		25,600	20,000
Production capacity	80,000	220,000	300,000
Production	68,000	198,000	270,000
Demand for logs (small)	136,000	380,769	490,909
<b>Plywood and veneer (m<sup>3</sup>)</b>			
Consumption	18,366	26,149	37,246
Imported rate for consumption	100%	54%	44%
Imports	18,366	14,149	16,446
Production capacity		15,000	26,000
Production		12,000	20,800
Demand for logs (big)		30,000	52,000
<b>Paper and paper for cover (ton)</b>			
Total consumption	2,176,784	3,478,112	5,361,529
Imported rate of consumption	41%	39%	40%
Imports	896,784	1,370,112	2,149,529
Exports	100,000	100,000	100,000
Production capacity	1,500,000	2,400,000	3,600,000
Production of printing and writing paper	1,380,000	2,208,000	3,312,000
Fiber demand	1,437,500	2,300,000	3,450,000
<b>Wood pulp (ton)</b>			
Imports	1,437,500	2,300,000	3,450,000
Use of wooden by-products	41%	43%	40%

Products	2010	2015	2020
Bamboo	590,286	982,111	1,379,032
Production capacity	900,000	1,400,000	2,200,000
Production	847,214	1,317,889	2,070,968
Non-wood fiber and recycled waste paper	847,214	1,317,889	2,070,968
Demand for material (m <sup>3</sup> )	3,388,856	5,271,554	8,283,871
<b>Export demand</b>			
Chips for export (dried tons)	1,250,000	1,250,000	500,000
Small logs for making chips (m <sup>3</sup> )	2,250,000	2,250,000	900,000
Wood furniture and other refined products (m <sup>3</sup> )	2,352,000	2,856,000	3,360,000
Wood demand for furniture and other refined products (m <sup>3</sup> )	2,940,000	3,570,000	4,200,000
Coal mine posts (m <sup>3</sup> )	120,000	160,000	200,000
<b>Demand for materials for domestic consumption and export (m<sup>3</sup>)</b>			
Total demand for industrial big logs	8,030,909	10,266,667	11,993,935
Small logs for particleboard, MDF, & chips/particles	2,464,804	2,922,369	1,682,509
Small logs/material for paper pulp	3,388,856	5,271,554	8,283,871
Coal mine post	120,000	160,000	200,000
<b>Total demand (m<sup>3</sup>)</b>	<b>14,004,569</b>	<b>18,620,590</b>	<b>22,160,316</b>

Source: MARD (2006)

Note: empty cells indicate that data are not available or missing

## Annex I.2: Forecasts of Wood Product Demand in 2010, 2015, and 2020: High Option

Products	2010	2015	2020
<b>Sawn timber (big timber in m<sup>3</sup>)</b>			
Consumption	3,588,989	5,009,542	6,991,506
Imported rate of consumption	22%	20%	31%
Imports (including refined products)	788,989	1,009,542	2,191,506
Production capacity	4,000,000	5,000,000	6,000,000
Production	2,800,000	4,000,000	4,800,000
Demand for logs/timber (big)	5,090,909	6,666,667	7,741,935
<b>Medium density fiberboard (m<sup>3</sup>)</b>			
Consumption	79,600	117,400	166,400
Imported rate of consumption	5%	5%	5%
Imports	3,980	5,870	8,320
Exports		50,470	3,920
Production capacity	84,000	180,000	180,000
Production	75,620	162,000	162,000
Demand for logs (small)	136,116	291,600	291,600
<b>Particleboard (m<sup>3</sup>)</b>			
Consumption	147,600	215,500	312,500
Imported rate of consumption	54%	5%	5%
Imports	79,600	10,775	15,625
Production capacity	80,000	220,000	320,000
Production	68,000	204,725	296,875
Demand for logs (small)	136,000	393,702	539,773
<b>Plywood and veneer (m<sup>3</sup>)</b>			
Consumption	18,366	26,149	37,246
Imported rate of consumption	100%	54%	44%
Imports	18,366	14,149	16,446
Production capacity		15,000	26,000
Production		12,000	20,800
Demand for logs (big)		30,000	52,000
<b>Paper and paper for cover (ton)</b>			
Total consumption	2,176,784	3,478,112	5,361,529
Imported rate of consumption	41%	39%	40%
Imports	896,784	1,370,212	2,149,529
Exports	100,000	100,000	100,000
Production capacity	1,500,000	2,400,000	3,600,000
Production of printing and writing paper	1,380,000	2,208,000	3,312,000
Fiber demand	1,437,500	2,300,000	3,450,000
<b>Wood pulp (Ton)</b>			
Total fiber consumption	1,437,500	2,300,000	3,450,000
Imported rate of fiber consumption	21%	21%	21%
Imports	301,875	483,000	724,500
Use of wooden by-products			
Bamboo			
Production capacity	1,200,000	1,933,000	2,900,000

Products	2010	2015	2020
Production	1,129,200	1,818,953	2,728,900
Non-wood fiber and recycled waste paper	1,129,200	1,818,953	2,728,900
Demand for material (m <sup>3</sup> )	4,516,800	7,275,812	10,915,600
<b>Export demand</b>			
Chips for export (dried tons)	1,250,000	1,250,000	500,000
Small logs for making chips (m <sup>3</sup> )	2,250,000	2,250,000	900,000
Wood furniture and other refined products (m <sup>3</sup> )	2,352,000	2,856,000	3,360,000
Wood demand for furniture and other refined products (m <sup>3</sup> )	2,940,000	3,570,000	4,200,000
Coal mine (m <sup>3</sup> )	120,000	160,000	200,000
<b>Demand for materials for domestic consumption and export (m<sup>3</sup>)</b>			
Total demand for industrial big logs (m <sup>3</sup> )	8,030,909	10,266,667	11,993,935
Small logs for particleboard, MDF, & chips/particles (m <sup>3</sup> )	2,522,116	2,935,302	1,731,373
Small logs/material for paper pulp (m <sup>3</sup> )	4,516,800	7,275,812	10,915,600
Coal mine post (m <sup>3</sup> )	120,000	160,000	200,000
<b>Total demand (m<sup>3</sup>)</b>	<b>15,189,825</b>	<b>20,637,781</b>	<b>24,840,908</b>

Source: MARD (2006)

Note: empty cells indicate that data are not available or missing



### Annex I.3: Forecasts of Production Capacities for Primary Forest Products up to 2020

Products	Extended Potentiality 2005–2020	Anticipated by 2020
Sawn timber	2,000,000 m <sup>3</sup>	6,000,000 m <sup>3</sup>
Particleboard	220,000 m <sup>3</sup>	312,000 m <sup>3</sup>
Medium density fiberboard	126,000 m <sup>3</sup>	220,000 m <sup>3</sup>
Furniture (material demand for furniture)	2.3 million m <sup>3</sup>	3.4 million m <sup>3</sup>
Particles/chips		500,000 m <sup>3</sup>

Source: MARD (2006)

Note: empty cells indicate that data are not available or missing

**Annex I.4: Forecasts of Timber Supply and Demand for 2010 and 2020**

Item	2010			2020		
	Total ('000 m <sup>3</sup> )	Big Logs/ Timber ('000 m <sup>3</sup> )	Small Logs/ Timber ('000 m <sup>3</sup> )	Total ('000 m <sup>3</sup> )	Big Logs/ Timber ('000 m <sup>3</sup> )	Small Logs/ Timber ('000 m <sup>3</sup> )
Demand	14,000	8,000	6,000	22,000	12,000	10,000
Supply	14,000	8,000	6,000	22,000	12,000	10,000
Domestic	9,700	3,700	6,000	20,000	10,000	10,000
Import	4,300	4,300		2,000	2,000	

Source: MARD (2006)

Note: empty cells indicate that data are not available or missing

## Annex J: Poverty

### Annex J.1: Poverty Rate by Region, 1992–1993 and 1997–1998

	1992-1993		1997-1998	
	General Poverty (%)	Food Poverty (%)	General Poverty (%)	Food Poverty (%)
Northeast	86.1	29.6	62.0	17.6
Northwest	81.0	26.2	73.4	22.1
Red River Delta	62.7	24.2	29.3	8.5
North Central Coast	74.5	35.5	48.1	19.0
South Central Coast	47.2	22.8	34.5	15.9
Central Highlands	70.0	32.0	52.4	31.5
Southeast	37.0	11.7	12.2	5.0
Mekong River Delta	47.1	17.7	36.9	11.3
National level	58.1	24.9	37.4	15.0

Source: GSO (1999, 2000); World Bank (2003)

## Annex J.2: Poverty Rate by Province, 2002 and 2004

No.	Province	2002		2004	
		General Poverty (%)	Food Poverty (%)	General Poverty (%)	Food Poverty (%)
Whole country		28.9	9.9	19.5	6.9
Northwest		68.0	28.1	58.6	21.8
1	Lai Chau	76.56	35.68	74	35.71
2	Dien Bien			66	26.23
3	Son La	62.61	22.85	56	17.3
4	Hoa Binh	65.96	27.43	54	20.62
Northeast		38.4	14.1	29.4	9.4
5	Lao Cai	60	29.56	54	24.26
6	Yen Bai	41.67	13.91	35	7.87
7	Ha Giang	69.25	19.08	59	16.2
8	Tuyen Quang	39.31	10.63	27	8.4
9	Phu Tho	41.92	12.51	25	7.4
10	Cao Bang	60.15	27.01	36	21.93
11	Bac Can	68.69	30.74	50	24.22
12	Thai Nguyen	22.36	16.09	22	8.58
13	Quang Ninh	6.41	4.47	6	2.34
14	Lang Son	38.74	12.75	38	9.21
15	Bac Giang	32.7	9.34	20	3.85
Red River Delta		22.4	6.5	12.1	4.6
16	Vinh Phuc	38.96	9.24	17	4.3
17	Bac Ninh	12.14	3.05	3	2.86
18	Hai Phong	11.95	5.57	7	3.97
19	Hai Duong	23.06	8.47	10	5.46
20	Hung Yen	17.08	6.34	15	3.92
21	Ha Noi	5.17	2.25	4	1.5
22	Ha Tay	25.97	9.79	16	6.93
23	Ha Nam	31.75	9.48	27	8.91
24	Nam Dinh	29.13	6.86	17	5.36
25	Thai Binh	37.42	6.08	14	4.3
26	Ninh Binh	31.52	7.99	16	4.98
North Central Coast		43.9	17.3	31.9	12.2
27	Thanh Hoa	48.4	16.43	36	11.17
28	Nghe An	43.04	17.32	30	13.4
29	Ha Tinh	49.65	22.55	37	14.04
30	Quang Binh	36.64	18.06	31	13.79
31	Quang Tri	41.8	19.4	33	11.91
32	Thua Thien Hue	29.7	10.69	15	8.76
South Central Coast		25.2	10.7	19.0	7.6
33	Da Nang	4.33	1.83	3	1.38
34	Quang Nam	36.28	14.31	31	11.47
35	Quang Ngai	36.14	13.96	27	9.62
36	Binh Dinh	28.31	10.14	15	5.65
37	Phu Yen	21.04	13.62	20	9.5

No.	Province	2002		2004	
		General Poverty (%)	Food Poverty (%)	General Poverty (%)	Food Poverty (%)
38	Khanh Hoa	9.72	6.22	11	5.01
39	Ninh Thuan	45.03	13.35	32	12.13
40	Binh Thuan	15.7	5.77	10	4.08
<b>Central Highlands</b>		<b>51.8</b>	<b>17.0</b>	<b>33.1</b>	<b>12.3</b>
41	Kon Tum	44.72	17.15	42	13.12
42	Gia Lai	63.75	18.18	46	13.74
43	Lam Dong	35.96	15.72	18	8.62
44	Dak Lak	54.58	17.01	35	12.58
45	Dak Nong			24	19.99
<b>Southeast</b>		<b>10.6</b>	<b>3.2</b>	<b>5.4</b>	<b>1.8</b>
46	Dong Nai	10.33	2.08	6	1.15
47	Ba Ria-Vung Tau	7.64	3.72	6	2.74
48	TP Ho Chi Minh	1.98	1.26	0	0.2
49	Binh Duong	8.56	1.68	2	0.34
50	Binh Phuoc	31.05	7.94	9	4.87
51	Tay Ninh	18.13	5.48	14	2.76
<b>Mekong River Delta</b>		<b>23.4</b>	<b>7.6</b>	<b>19.5</b>	<b>5.2</b>
52	Long An	16.17	6.11	11	4.27
53	Dong Thap	31.42	7.11	11	5.83
54	Tien Giang	16.56	6.54	10	3.91
55	Ben Tre	16.08	9.26	14	5.86
56	Vinh Long	24.85	7.56	14	4.24
57	Tra Vinh	33.62	13.51	19	9.04
58	Can Tho	21.94	5.21	16	2.04
59	Hau Giang			18	5.8
60	Soc Trang	37.43	12.14	24	8.47
61	Bac Lieu	21.28	7.92	26	6.46
62	An Giang	15.07	6.15	15	3.38
63	Kien Giang	22.8	6.25	22	5.08
64	Ca Mau	31.96	7.71	16	6.09

Source: Data for 2002 are from SRV (2005)

Data for 2004 are provided by an official from the World Bank office in Viet Nam

Note: empty cells indicate that data are not available or missing





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