

**Prime Minister**

**SOCIALIST REPUBLIC OF VIETNAM**  
**Independence – Freedom - Happiness**

**VIET NAM FORESTRY DEVELOPMENT STRATEGY**  
**2006 - 2020**

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## Preface

Vietnam has a natural area of over 33.12 million hectares, of which 12.6 million ha of forests and 6.16 million ha of barren land are targeted for agriculture and forestry production. Thus, the forestry sector has been managing and running production activities on the largest area of land, as compared with other sectors in the national economy. The forest land area is distributed mainly in the mountainous and hilly areas of the entire country, where 25 million people from different ethnic groups live. These people have low education levels, backward farming practices, slow economic development and many livelihood problems.

Forestry not only creates forest products as commodities and services contributing to the national economy, but also plays an important role in environmental protection, such as watershed protection, soil and water conservation, and climate regulation, contributes to protecting national security as well as border and island areas; and makes vital contributions to livelihood improvement and poverty reduction for people in the rural and mountainous areas.

According to the existing regulation on classification of the national economic sectors, forestry is ranked as the economic sector level II, with major activities being reforestation / afforestation, forest protection, harvesting of forest products and some forestry services. The final products are materials supplied to processing industries and consumption.

Based on the current published data, the GDP of the forestry sector comprises just over 1% of the total national GDP. The GDP value of forestry has been just calculated, due to the current practice of statistics, as the value of official production activities as planned, without including the values of forest products exploited, processed and marketed by people; particularly the value of industry for processing forest products is not yet included. Significant impacts of forests, such as protection functions for watershed, coastal and urban environment, values for biodiversity conservation, conservation of gene sources, and ecotourism, etc., have not been accounted for in the GDP of forestry. This is leading to insufficient understanding by different levels, sectors and society concerning the efficiency of one sector managing almost half of the national land area with a rich forest resource, and where 25 million people live. This insufficient awareness could affect the policy formulation by the State related to the development and investment for the forestry sector.

According to the definition of Food and Agriculture Organization of the United Nations (FAO) and the United Nations' classification of the forestry sector, which is recognized by many countries in the world, and based on the current situation of Vietnam, there is a need to have a comprehensive concept on the forest sector, as follows:

*Forestry is a specific technical economic sector, including all activities connected with commodity production and services from the forest, such as reforestation / afforestation, harvesting, transportation, production and processing of forest products, and providing environmental services related to forests; the forestry sector plays very important role in the protection of the environment, biodiversity conservation, and poverty reduction, particularly for the people in the mountainous areas, and contributes to social stability and to national defense security.*

On the basis of the Forest Protection and Development Law in 2004, and other related laws, the orientation for national socio-economic development in the next period and a full concept of the forest sector, there is a need to make comprehensive adjustments for the orientation of

sector development in order to meet the needs of renovation and the trends of international economic integration, thereby creating conditions for the mobilization of more domestic and foreign resources for sectoral development investments. Only with full awareness and consistent action concerning the role, position and the needs of the sector, then could forestry have the conditions to develop rapidly, strongly, and contribute to the industrialization, modernization of rural agriculture, hunger eradication, poverty reduction for people in the mountainous areas, environmental protection, and basically to lead our country to become an industrial nation with modern trends by the year 2020, as stated in the 10th Congress resolution.

Due to the above-mentioned reasons, a National Forestry Strategy for the period 2006 – 2020 is needed, as a basis for orientation of the long-term sector development. This strategy has built upon the previous Forestry Development Strategy, period 2001 – 2010, approved by the Ministry of Agriculture and Rural Development (MARD), and the framework of the Forest Sector Support Program (FSSP), and added new viewpoints and orientations to meet the requirements for renovation, international economic integration and sustainable development.

The contents of the strategy consist of 8 parts:

- Part one: Current status of the forestry sector
- Part two: Context and development projection
- Part three: Viewpoints, Objectives and Development orientation
- Part four: Solutions for implementation
- Part five: Programs
- Part six: Implementation arrangement
- Part seven: Monitoring and evaluation
- Part eight: Estimated fund requirement and funding sources

The main text is followed by tables and annexes attached with this strategy.

## **Part one: THE CURRENT STATUS OF THE FORESTRY SECTOR**

### **I. Current status of forest resources and land potential for forestry development**

Due to unsustainable management and a very high need for conversion of forest land and for forest products for socio-economic development, the forest area and forest quality have been continuously decreased over the years. Based on available documents, in 1943 Vietnam had 14.3 million ha of forests, with 43% forest cover; by the year 1990 only 9.18 million ha remained, with a forest cover of 27.2%. During the period 1980 – 1990, the average forest lost was more than 100,000 ha each year. But from 1990 to the present, the forest area has been increased gradually, due to afforestation and rehabilitation of natural forest (exception for the case of some areas, like the Central Highlands and the South-East region, where the forest area still has the tendency to be reduced). Based on the official statement in Decision No. 1970/QĐ/BNN-KL-LN, dated 6 July 2006, as of 31 December 2005, the total national forest area was 12.61 million ha (forest cover of 37%), including 10.28 million ha of natural forest and 2.33 million ha of plantation forest, which can be classified into the 3 forest types as follows:

- Special-use forest: 1.93 million ha, comprising 15.2%;
- Protection forest: 6.20 million ha, comprising 49.0%; and
- Production forest: 4.48 million ha, comprising 35.8%.

The total timber volume is 813.3 million m<sup>3</sup> (94% from natural forest and 6% from plantation forest), and there are around 8.5 billion bamboo stems. The average timber volume of natural forests is 76.5m<sup>3</sup>/ha and 40.6m<sup>3</sup>/ha for plantation forests. Timber is mainly concentrated in 3 regions: Central Highlands: 33.8%, the North Central Region: 23% and the South Central Region: 17.4%. The total cultivated area of non-timber forest products (NTFP) is 379,000 ha, mainly in the North Central Region, Central Highlands and North East Region.

With these forest resources, the present average in our country is 0.15 ha forest/ person and 9.16 m<sup>3</sup> timber/ person. Vietnam belongs to the low group of countries, in comparison with the international averages of 0.97 ha/person and 75 m<sup>3</sup>/ person, respectively.

The unused land of the entire country is 6.76 million ha, of which barren land on hilly and mountainous areas is 6.16 million ha, equivalent to 18.59% of the total national area. The gradual decreased distribution of barren land for the regions as follows: North East 28%, North West 21%, North Central Region 19%, South Central Coast 13%, Central Highlands 12%, South East 5%, etc. Out of the total bare land area, 71% is located at the elevation less than 700 meters and 38% of the area has slopes of 16<sup>0</sup>-35<sup>0</sup>. This bare land and denuded mountainous, hill area will be a potential -- but also a challenge -- for development of forest production in the next phase, because most of the land is on the slope, degraded and scattered in distribution.

### **II. Effectiveness assessment of forestry activities from 1996 - 2005**

#### **1. Main Achievements of the forestry sector**

- On the scale of the entire country, the period of forest degradation has been overcome in term of area. The forest area increased from 9.3 million ha in 1995 to 11.31 million ha in 2000 and to 12.61 million ha in 2005 (increased, on average, around 0.3 million ha/year). The area of new plantations has been increased from 50,000 ha/year to 200,000 ha/year, and with the rapid regeneration of natural forests zoned for protection, has resulted in significant improvement of the capacity on protection

function of the forests and biodiversity conservation. The increased harvested yield from plantation forest (about 2,000,000 m<sup>3</sup> each year) could partially supply the paper and mining industries, wood chips for export, and fuelwood, thus contributing to reduction of the pressure on natural forests.

- The timber processing industry and export of forest products have vigorously developed in recent years (exports of wooden products increased from USD 61 million in 1996 to USD 1,034 million in 2004 and up to USD 1,500 million in 2005), which has significantly contributed to the export turnover of the entire country and created opportunities for development of forest plantations supplying raw materials to industry.
- The forestry sector has actively participated in job creation and income generation for the people, particularly for ethnic minorities (e.g. in Bac Can Province, for the households that have recently emerged from poverty, the income from forestry activities is 32.8% of the total income, whereas for the better-off household group, respectively, 16.8% of their income comes from forestry; in Central Highlands, the forestry income of the better-off household group is nearly 40%, as compared with poor household group, which is 17%); most of the domestic needs for timber and fuelwood could be met.

*The main reasons for the achievements:*

- The State has paid more attention to forest protection and development, and developed policies and large national investment programs, such as Program 327, the 5 Million Hectare Reforestation Program (5MHRP), and the forest land and forest allocation policy, etc. The awareness by the society, the people and different levels of the administration towards forest protection and development has been increased.
- The continuous and sustainable growth of the national economy, firstly in the agricultural economy, has created favorable conditions for forestry development.
- Science and technology transfer on plantation establishment techniques have made progress, contributing to boost the quality and efficiency of afforestation in the recent years.
- Forest protection and development and poverty reduction in rural mountainous areas have received significant support from the international community. Substantial effort and sacrifice have been provided by people working in forestry professions, under difficult working conditions with both material and spiritual shortages.

**2. Shortcomings and weaknesses**

- Although the forest area is increasing, the quality and biodiversity of the natural forests in many locations have been continuously reduced. (In comparing the forest inventory results from 1999 to those of 2005, the rich forest area has been reduced by 10.2% and the medium forest area reduced by 13.4%; meanwhile, the regenerated forest increased by 20.7%, and the plantation forest area increased by 50.8%). The implementation progress of the 5MHRP has not reached the objectives (for the period 1998-2005, the total of new plantation forest area only achieved 70% of the target, and afforestation of industrial plantations has only achieved 49% of the target). In some locations, the forest is being destroyed due to changes of land use purposes, illegal

logging, slash-and-burn agriculture, etc. (From 2000 to 2005, the average recorded forest destruction comprised 9,345 cases/year and 2,160 ha/year). Unusual floods, drought, and landslides happened partly because of the forest loss or degradation.

- The growth of the forestry sector is low and unsustainable. (According to the General Statistics Office (GSO), the development of the forestry sector is 4.9% in 2000; 1.9% in 2001; 1.6 % in 2002; 1.1% in 2003; 1.1% in 2004; 1.2% in 2005). The sector is low in profit, weak in competitiveness, and the potential of forest resources have not been properly and comprehensively exploited, particularly for non-timber forest products (NTFPs) and environmental services. Plantations, as well as natural forests, have low productivity and quality, and have not yet met the demands for socio-economic development, especially for large timber as raw material for processing industries and export.
- Although the timber processing industry has developed rapidly in recent years, it is still *ad hoc* and unstable, lack planning and a strategic vision, with weak competitiveness. The linkages and the production assignment are not yet well developed. No trademarks have been established in international markets. Investment funds are lacking to develop and modernize the technology. Raw material sources are unstable, and depend on imports. (In the last 4 years, the export turnover from the processing of forest products suddenly increased 400%, but imports have provided 80% of the raw materials).
- The sector's impacts on poverty reduction are still limited. It has not created much employment, and the incomes of people with forestry work are low and unstable. (In Thanh Hoa province, the average income from forestry of better-off households is around VND 461,000/person/year, whereas that of households that have escaped poverty is VND 786,000/person/year and of the poor households, VND 241,000/person/year). Most of the mountainous people cannot earn their living solely from forestry work. Forestry workers and staff are still facing very difficult livelihoods.

*Causes of the existing constraints are mainly:*

*\* Internal Causes (i.e., internal to the forest sector):*

- The forestry awareness of different levels and sectors is still not full and comprehensive. The values of the forest are not properly valued, e.g. environmental services for the society are not valued. Forestry is not yet considered as a complete economic sector including afforestation, harvesting, processing of forest products, and services provided by the forest. Particularly the awareness of some state management staff has not been changed concerning the role and position of the forestry sector in the new [economic] mechanism, in the process of speeding up industrialization, modernization of agriculture, and rural and international integration. Forestry is not yet considered as a technical economic sector that is important and special, which needs adequate budget investments and special mechanisms and policies.
- The forest policy system is not yet integrated: it is inappropriate, i.e., not suitable policy for forest socialization and market mechanisms. New policies and mechanisms have not been supplemented on time for investment in development of production forests, wood processing and NTFPs to create the momentum for accelerating various economic sectors, particularly households, community and private enterprises participating in the development of forestry activities.



- Forestry socialization has been implemented without evident changes. Forest and forest land management is insufficient, and progress in land and forest allocation slow. Natural and plantation forests have not been boldly allocated to people, in particular to communities, households, and individuals. (By 31 March 2006 nearly 20% of the forest land has been allocated and land use certificates (LUC) issued to households). The participation of the non-state sector in forestry activities has not been proportional to its potentiality.
- The forestry organizational administrative system is not yet unified, but still fragmented and split. The quantity, capacity and qualifications of the managerial, scientific and technical staff could not yet meet the requirements for entering into market mechanisms and international integration. Staff allocations are unbalanced between forest protection and development work, consequently reducing the efficiency and effectiveness of the management machinery. Basically the management of forest and forestry has been decentralized to local levels. But it is still not creating enough preconditions, in term of policy, technical and material facilities and staff, in order to bring into play the role of local administrations in management, protection and development of forest, especially at the commune and district levels.
- Technology and science have not yet created the catalysts to make fundamental changes in the economic efficiency of forest activities, as it has not yet been linked to production and markets. The orientation for the development of forest tree planting materials is still insufficient: it has made no significant contribution to increase the yield of the natural forest. No solutions are yet available for proper utilization of million of hectares of poor natural forest for generating income for mountainous people. The forestry extension network is still lacking and very weak.
- Until now, forestry development has mainly relied on the state budget, and not yet mobilized to the maximum the resources of non-state sectors and environmental services. The investment in the forestry sector and forestry activities is still very low compared with the needs. The management of resources used for investment is not yet strict and widespread, and the efficiency is not so high. The investment structure is unbalanced, e.g. more investment has been made to protection forest and special-use forest and less attention has been paid to production forest. Not enough attention has been paid to development of infrastructure for the forestry sector.

\* *External causes (i.e., external to the forest sector):*

- Forests are widely spread. Nonetheless, the population pressure on forest land and forest products is increasingly, especially in the mountainous areas where land is lacking for agricultural production and where free migration exists.
- The production cycles of forest tree species is long, with low profit and many risks. Forestry occurs in mountainous areas with poor social-economic development. The competitiveness of forest trees is very low compared with many other crops.

### **III. Opportunities and challenges**

#### **1. Opportunities**

- Demands of national and international markets for forest products have strongly increased. Our national economy is developing stably, with a high speed of growth.

The international integration will create great opportunities for speedy development and expansion of production and businesses in forestry, processing and trading of forest products by households, communities, state and private enterprises.

- International economic integration creates opportunities for improvement of the investment environment, access to world markets for forest products, receiving modern technology and financial investment, particularly in development of the timber processing industry and of NTFPs for export, thereby promoting the process of sustainable forest management.
- Our Party, State, and society, as well as the international community, are paying more and more attention to environmental protection as well as forest protection and development.

## **2. Challenges**

- Population growth is increasing and spontaneous migration is still happening. Inefficient land use in mountainous areas puts constant pressure on forests for expansion of agricultural land areas.
- Increasing demands for forest products have put pressures on forest resources and the environment, particularly on natural forests. The current demands for forest products exceed the sustainable supply from the forest. The suitable land areas for afforestation of high- yielding production forest are limited and scattered.
- The competitiveness of forestry production is still low. International integration not only is an opportunity, but also a great challenge, for the forest product processing industry and trade of forest products. The competition will be more critical in the future, in both international and domestic markets.
- There exist inadequacies between the requirements for fast, comprehensive and sustainable development and the restricted resources of the forest sector (e.g. human resources, infrastructure, funding, management capacity, etc).
- The importance of forestry has not been comprehensively, objectively and fairly evaluated, which has affected the formulation of investment and development policies of the sector.

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## **Part two: CONTEXT AND DEVELOPMENT PROJECTIONS**

### **I. Socio-economic context**

#### ***1. Some international trends influence the socio-economic development in the country***

- Economic globalization and integration are considered as current trends, which will expand to most sectors. They are creating many development opportunities as well as inequity, creating big problems and challenges for many countries. Economic and trade competitiveness, and competition for natural resources, energy, market, funding sources, and technology among different countries have become more critical over time. Science and technology, particularly, information technology, has further accelerated and facilitated the formation of the knowledge economy. It has impacted on many aspects and deeply changed various fields of social life in all nations.
- Peace, cooperation and development are common regional and international trends. Global issues, such as population, environment, financial and food security, and diseases have become more critical than ever. The increased need for development cooperation has controlled from the beginning the selection of development strategies for all economic sectors nationwide, including forestry. The construction of trans-Asian roads lines and economic corridors that link the northern Vietnam to south-western China will create many development opportunities for agriculture and forestry production.
- Regarding foreign funding flows, as a general trend, ODA funds will be reduced and FDI funds will be increased, targeting the locations with favorable investment environments and productive sectors that could generate high economic efficiency.

These international and regional development trends will have a strong impact on our local situation. These are opportunities to create new steps forward in social and economic development in general, and in the forestry sector in particular.

#### ***2. Development context over the last years in the country***

- After 20 years of renovation (1986-2005), our country has reached considerable achievements in socio-economic development. The average GDP is 7.5%/year. Economic growth is not really stable, however, and its quality and development efficiency are still low.
- Industrial production has a high growth rate: the average growth is 15.7%/ year. In particular, forest product processing has been thrived recently, with the export turnover increased by 400% over the last four years. Agriculture and rural reform has rapidly enhanced agricultural production values. Vietnam has become one of the world's top exporters of rice, coffee, pepper, etc. Notwithstanding these developments, the progress in renovation of technology is slow and the competitive capacity is low. Agriculture and forest land has not been used properly, productivity and quality are low. The process of transferring the production structure, industrialization, agriculture and rural modernization is slow. Science and technology have not yet really become the foundation and momentum for development of agriculture and forestry production.
- Vietnam has obtained remarkable achievements in social aspects. Living standards have been substantially improved; the poverty status is continuously decreased.

Human development has been positive, even in rural mountainous areas. Nevertheless, the rate of poor households is still high and many households risk relapsing into poverty, especially among the groups of ethnic minorities in remote and isolated areas. Human resource development could not yet meet the reform process requirements.

- Many policies have been promulgated or revised to adapt gradually to the requirements of the market mechanism and international integration, step-by-step, to create a comprehensive, secure and more favorable legal environment for production and business activities. Administrative reform, however, still is not determined enough; the administrative mechanisms are slowly being renovated, and thus still ineffective and inefficient, while the public sector staff capacity and quality are still weak.
- International economic integration has considerably developed. Total export turnover has sharply increased, to over 16%/year. The trade liberalization policy has created momentum to encourage domestic and foreign enterprises to directly embark on the import-export business, including both timber and NTFP. The participation in, and implementation of, international commitments and conventions related to forestry (CITES, RAMSAR, CBD, UNCCD, etc.), have created not only favorable conditions -- but also emerging many challenges -- for agriculture and forest enterprises while competing on international and even on domestic markets.
- The Forestry Development Strategy has been developed while the 5-year Socio-economic Development Plan (SEDP, 2006 – 2010) has begun implementation. The SEDP aims to bring our country out of the “less developed” status, and thus create a foundation to enable our country basically to become a modernized industrial country by 2020.

## **II. Projections on population and GDP growth to 2020**

- Population: Vietnam will have about 100 million people by 2020 (assuming the growth rate is 1.5%/ year from 2001-2010 and 1.3%/year from 2011-2020) or 98.6 million people (if the growth rates are 1.4% and 1.2% respectively).
- GDP growth rate used in the projection models (scenarios) will be an estimated 7.2%/year during period of 2006 - 2020. Average GDP/ capita will reach 1,050 - 1,100 USD by 2010, in accordance with the Government’s 5-year Socio-Economic Development Plan for 2006–2010. By 2020, Vietnam will be out of the “poor countries” group, and basically become a modernized industrial country.

## **III. Projection on forest products and environment services demand**

The population growth, in combination with economic growth, shall create increasing demands for forest products and services. The analysis and projection [of these trends] in this strategy mainly focus on forest products, particularly timber. (See Table 1 for details).

## **Part three: VIEWPOINTS, OBJECTIVES AND DEVELOPMENT ORIENTATION**

### **I. Development viewpoints**

**1. Forestry development is to integrate the management, protection, and appropriate utilization of resources, starting from afforestation and reforestation, to the harvesting, processing of forest products, environmental services, ecotourism, etc. (As explained in the new concept about forestry presented in the Preface.)**

Forestry, as well as agriculture, is not only a sector producing raw materials, but also includes processing, businesses and services. The contributions of the sector have to be assessed, [including] also the values added by the products generated from the production, business and processing, and services of the sector. Hence, the forestry sector could be treated equally with other economic sectors.

**2. Forestry development is to make significant contributions to economic growth, poverty reduction and environmental protection.**

Forestry development must be in line with the policy of national socio-economic development and market mechanisms. Forestry should move quickly into a commercial production sector, to be efficient and sustainable, meeting the requirements of renovation and international integration. It should undertake appropriate harvesting of the comprehensive benefits of the forest, focusing on the productivity, quality, and efficiency of the commercial production and, in particular, environmental services from the forest.

Forestry development contributes to diversification of the rural economy, job creation and income generation, and improvement of livelihoods for people working with forest activities, especially for ethnic minority people in the mountainous, remote and isolated areas. It contributes to poverty reduction in the rural areas, protection of the natural environment, biodiversity conservation and stabilization of national defense and security.

**3. Sustainable management, utilization and development of forests are the foundation for forestry development.**

Forests have to be managed closely and belong to specific owners. Unless the forest owners (organizations, enterprises, households, communities etc.) will get clear benefits, rights and obligations, then the forest resources cannot be sustainably protected and developed.

Activities of forestry production must be based on a foundation of sustainable management, through planning forest protection and development and aiming at continuous improvement of forest quality. Conservation, protection and development have to be combined with appropriate harvesting and utilization of forests. Afforestation, zoning for regeneration of forest, reforestation, and forest enrichment need to be linked with protection of existing forest. Forestry should be encouraged together with agriculture, aquaculture and other rural occupations. Multi-purpose plantation establishment should be strongly encouraged in combination with protection. Development for timber and NTFP should be connected with development of the forest products processing industry, thus contributing to socio-economic growth, environment and to sustainable national development.

#### **4. Forestry development has to base on speeding up and making more profound the policy related to socialization of forestry activities, and attracting investment resources for forest protection and development.**

The socialization of forestry should continue to be implemented and made more profound. Multiple stakeholders should be encouraged in the utilization of forest resources (including special-use and protection forests), as well as multiple ownership for the management and use of production forests and forest products processing entities. The form of shareholding will be applied gradually and widely to the forestry production units. The processing units shall be linked with raw material supply areas.

Forest protection is the forest owner's responsibility, as well as the responsibility of different administrative levels, sectors, organizations, village communities and the whole society. Forest protection has to rely upon the people, in collaboration with the full-time protection forces and local administration.

Resources for forest development need to be diversified. Efforts are needed to strengthen the attraction of capital from private sector, ODA, FDI and other fund sources generated from environmental services for forest protection and development.

The investment by the State is a partial payment by the society for the environmental values provided by the forest. The economic sectors that use forest products and services also have to pay for the forest protection and development activities: such payments should be accounted for in the production and service costs of those sectors.

## **II. Objectives and tasks until 2020**

### **1. Objectives**

To sustainably establish, manage, protect, develop and use 16.24 million ha of land planned for forestry; to increase the ratio of land with forest up to 42 – 43% by the year 2010 and 47% by 2020; to ensure a wider participation from various economic sectors and social organizations in forest development, to increase their contributions to socioeconomic development, environmental protection, biodiversity conservation and environmental services supply, to reduce poverty and improve the livelihoods of rural mountainous people, and to contribute to national defense and security.

### **2. Tasks**

#### **a) Economic tasks**

Three forest types need to be sustainably established, managed, protected, utilized and developed. Existing natural forests should be well-managed, forest plantation areas should be expanded and their productivity should be improved, agroforestry activities should be strengthened, and bare land areas should be used effectively and properly for forestry development. Timber and NTFP production and processing must be competitive and sustainable to meet basically the domestic needs, and export of timber products and other forest products.

The specific tasks are:

- The rate of forestry production growth (including forest products processing industry and environmental services) will be from 4 – 5%/year. Efforts will be made to increase the forestry sector's contribution to the national GDP to 2 -3% by 2020.

- 8.4 million ha production forest, to include 4.15 million ha plantation forests, both concentrated industrial plantations and NTFPs, and 3.63 million ha natural production forest, should be managed sustainably and effectively. The area of regenerated natural forest and agro-forestry area is 0.62 million ha. Efforts will be made to get forest certification of 30% of the production forest areas. (Those areas will be assessed and issued certification for meeting sustainable forest management standards.)
- Appropriate planning, management and effective use of the protection forest system, of approximately 5.68 million ha, and 2.16 million ha of special-use forests.
- 1.0 million ha of new plantation will be established by 2010 and 1.0 million ha for the next phase. 0.3 million ha/year will be reforested after harvesting.
- Zoning for regeneration of 0.8 million ha of forest.
- Scattered tree planting: 200 million trees/year.
- Domestic harvested timber volume will be 20-24 million m<sup>3</sup>/year (including 10 million m<sup>3</sup> large timber), basically meeting the demand of raw material for forest products, pulp processing industry and export.
- Fuelwood harvest for the rural areas will be maintained at a level of 25-26 million m<sup>3</sup>/year.
- Forest products annual export values will increase to over USD 7.8 billion (including USD 7 billion of timber products and USD 0.8 billion from export of NTFPs).
- Annual revenue from forest environmental values will increase, reaching USD 2 billion by 2020, through clean development mechanism (CDM), ecotourism, erosion control, water sources protection, etc.

#### ***b) Social tasks***

Livelihood improvement for forest-dependent people will be carried out through socialization and diversification of forest activities. Employment should be created, capacity and awareness and livelihoods of people should be improved, particularly minority groups, poor households and women in remote areas, so that step-by-step they could gradually earn their livelihoods from forest activities, and contribute to hunger alleviation and poverty reduction, and national defense security. The main specific tasks are:

- Generate 2 million more jobs for forestry laborers (including timber and NTFP processing sector and traditional art handicraft villages);
- Improve income, contribute to poverty alleviation and reduce by 70% the number of poor households in key forest areas;
- Complete allocation and lease forests and forest land to organizations, enterprises, households, individuals, and communities, before 2010.

- Increase the number of laborers receiving vocational training up to 50%, with special focus on ethnic groups, poor households and women in remote and isolated areas.

### **c) Environmental tasks**

- Forest protection, natural protection and biodiversity conservation are aimed to effectively contribute to watershed, coastal and urban protection, natural disaster mitigation, erosion control, protection of water sources and environmental protection, and to create income sources from environmental services (environmental fees, CO<sub>2</sub> market, ecotourism, etc.) for the national economy.
- Forest cover will be increased to 42 - 43% by 2010 and to 47% by 2020;
- 0.25 million ha of protection and special-use forest will be planted by 2010.
- Forest - related violations will be minimized. Slash-and-burn cultivation should be limited on forest land.

## **III. Forest development orientation**

### **1. General orientation**

#### **a) Orientation on planning of 3 forest types and forest land**

Based on criteria pertaining to special use and protection forests, and the needs for production forest development in order to meet socio-economic objectives, the orientation on planning of forest areas and forest land up to 2020 is as follows:

- *Protection forest:*
  - The national protection forest system should be reviewed and rearranged with the area to be around 5.68 million ha, mainly of very critical areas. It will include 5.28 million ha of watershed protection forest, 0.18 million ha of wave-break and sea encroachment protection forest; 0.15 million ha of wind-and sand-shielding protection forest, and 70,000 ha of environmental protection forest for big cities and industrial zones, and focus on establishing national border and island protection forests.
  - For watershed protection forests, it is needed to review and arrange appropriately ongoing projects, and focus on developing investment projects, in order to protect and restore protection forests in Northern mountainous region (i.e., basins of the Da, Hong, Lo, and Gam rivers), Northern Central region (i.e., river basins of Ma, Ca, and Gianh), Southern Central region (i.e., river basins of Cai, Con, Da Rang, and Tra Khuc), and Central Highlands (i.e., Xe Xan, Ba, and Dong Nai river basins).
  - For tide-shielding, sea encroachment, wind- and sand-shielding, focus should be put to developing projects on protection, restoration and development of mangrove forests in Northern, North Central, Central coastal regions and the Mekong river delta, and to consolidate and develop the system of sand- and wave- shielding forests in Central coastal regions.
  - For environmental protection forests, efforts should focus on developing projects for big cities, e.g. Ha Noi, Ho Chi Minh, Da Nang, Hai Phong, Ha Long, and Can Tho, and industrial zones, such as Dung Quat, Vung Tau, Bien Hoa, and Binh Duong.



- Establish protection forest for national defense and on the borders with China, Laos, and Cambodia.
- *Special – use forest*
  - A review and consolidation of the existing special-use forest system will be done, with a total area not to exceed 2.16 million ha, while aiming to improve forest quality and biodiversity values, and ensuring that all MARD criteria are met; without creating more national parks and nature reserves. For ecosystems not yet part of, or poorly represented in the special-use forest system, it is possible to invest in developing some new areas in Northern mountainous region, North Central region, Central Highlands, and wetland in Northern and Southern delta regions. Biodiversity corridors need to be established to create larger ecological areas.
- *Production forest*
  - The total area of planned production forest is 8.4 million ha, in which 3.63 million ha is natural forest and 4.15 million ha is plantation forest; focusing on establishment of concentrated raw material areas of forest for industry. Sustainable management should aim at multi-purpose use. The remaining planned land area for production forest development is 0.62 million ha and will be used for reforestation and agroforestry.
- According to the Forest Protection and Development Law, forests are classified according to 3 types: special-use, protection, and production forests. However, to approach the international classification, it is needed to study the international classification of two types of forests -- protection and production forest. (See Table 2 for details)

**b) Orientation on management, protection, development and utilization of forest**

- *Forest management*
  - A total of 16.24 million ha of forest and forest land will be managed in a unified manner, on the basis of establishment of the national permanent forest estate with the block, compartment and plot system delineated on maps and demarcated in the field. Forest management has to be based on the linkage of economic efficiency with environmental values and benefit-sharing by different forest owners with communities.
  - By 2010, all forest areas (natural and plantation forests) and forest land basically have to be allocated and leased to forest owners belonging to various economic entities:

State organizations will be managing most of the special-use forest (about 85%), large- scale, nationally-important protection forests (about 70%), and some concentrated plantation and natural production forest areas (about 25%). The total remaining areas of production forest (75%), special-use forest (15%) and protection forest (30%) mainly are managed by private enterprises, communities, cooperatives, households, and individuals as stipulated in the law.

Households and village communities will be allocated or leased natural production forest, plantation forest, forest land and small-scale, scattered special-use forest and protection forest areas, which are historically attached to communities (over many generations), as stipulated in the law. The scattered forest areas adjacent to villages will be allocated to households. Priority will be given to poor households and ethnic minorities for forest garden development meeting the household consumption needs.

Enterprises will be allocated and leased production forest areas (natural and plantation forests) and small-scale special-use forest and protection forests as stipulated in the law. Models related to community, household and individual involvement in the protection and management of forests, which are under the management of state organizations, should be multiplied.

- Allocation and lease of forest to forest owners will have to be based on the planning, and forest protection and development plan approved by responsible authorities. Depending on the target groups being allocated or leased forest, and depending upon the forest type, the State will collect fees at the appropriate levels concerning the use of forest and forest land as legally regulated.
- Modernization of forest management work should be based on widespread application of information technology and remote sensing images, in statistics, inventory, up-dating this information, and monitoring of forest resources and forest land.
- *Forest protection, nature and biodiversity conservation*
  - People's awareness should change from purely protection of forest trees to protection of continuous developing ecosystems as well as to ensure an optimal way for forest regeneration and utilization capacity. Efforts have to be focused on controlling the harvesting of forest products on the forest sites; checking and controlling the transportation and disposing of forest products are complementary measures to forest protection.
  - Forest protection and conservation must be based on the development principle, which creates conditions for forest owners and local people to engage in forest protection and development activities in order to make legitimate income on forestry activities. The State will provide essential support to communities, households, and individuals involved in forest protection activities, when direct forest – based income is not yet available.
  - Forest protection and conservation is the direct responsibility of the forest owners, with the collaboration of local village communities, and the effective support of the forestry state management agencies and local authorities. Forest owners should arrange forest protection forces themselves. Village communities are an important local force in forest protection work.
  - Forest protection is also a responsibility of local authorities and law enforcement agencies. The Chairpersons of the People's Committees at different levels are responsible for implementation arrangement for forest protection and any uncontrollable violations of the Forest Protection and Development Law happening in their localities.

- Special attention should be paid to the development and strengthening of full-time and part-time forest rangers of various forest owners and village communities for building sufficient capacity, in order to quickly respond to violations of forest law and natural disasters, such as forest fires, pests and diseases.
- Forest conservation should combine in-situ and ex-situ conservation on a wide range, including the domestication and rearing of wildlife under the legal regulations and aiming at high economic efficiency to create commodities and to serve forest conservation. Efforts should be put on development of buffer zones and biodiversity corridors.
- Forest rangers are the core force supporting forest owners, communes and villages. They are the main force responsible for settling violations of forest protection and development law and advising authorities at different levels on forest protection work. For communes having forests, a local forest ranger and the commune forestry staff will directly advise the Commune People's Committee on forest protection and development work. The armed forces and legal enforcement agencies should consider forest protection as a politically important duty to contribute for protection of national security, particularly for protection forests along the national borders.
- The State should ensure that funding for regular administrative costs and other costs for forest protection activities by management boards of special use and protection forest. In the future, the State will enhance the fee collection for environmental services from the forest in order to support the additional budget for forest protection.
- The role of associations, forest product consumers and users of services from the forest in forest protection should be strengthened step-by-step.
- Focus should be put on communication work to improve awareness on forest protection and development for all members of society, and an appropriate budget will be earmarked for this important political task.
- *Forest development:* Planning, classifying and having development plans for 3 forest categories (special-use, protection and production forests); conservation and protection in association with development of ecotourism, outdoor recreation, and other environmental services.
  - Development of special-use forests will be mainly through the preservation of current status, creation of most suitable habitats for endemic flora and fauna species, specific eco-systems conservation and development to improve forest quality and biodiversity values.

Beside protecting the existing status of a specific forest ecosystem in the core zone, the land areas without forest, planned for grazing, and vacant areas for wildlife should be either zoned for natural regeneration, combined with enrichment planting with indigenous species, or used for agroforestry to generate income for people still living within the special-use forest. The strict protection zones should be kept at just adequate levels; attention should be paid for investment in the ecological rehabilitation areas to ensure the conservation capacity for endemic plant and animal species. Ecotourism and outdoor recreation activities should be strengthened. A

renovation of new management approaches for special-use forest should be studied, to be in line with new international perceptions on nature conservation.

- Development of protection forest is to ensure the ultimate protection requirements (protection for watersheds, tide-shielding, sea encroachment, wind- and sand-shielding, etc.), and to contribute to biodiversity conservation. It is recognized all forest areas possess protection functions. Only forest areas with very critical protection functions, however, are named as “protection forests”. Depending upon the classification of a forest, i.e., how critical its protective functions, different practices could be combined, such as protection with agricultural production, aquaculture, scenic landscape management, outdoor recreation, ecotourism, harvesting of forest products and other benefits from protection forest.

Watershed protection forests should be established as concentrated forests, with multiple layers, and connected to other areas of forest. They are mainly to be based on natural regeneration. Protection forests for wind- and sand-shielding, sea encroachment and environmental protection need to be developed as forest belts suitable with bio-physical conditions of each area.

- Production forest is mainly developed with the direction of intensive cultivation focusing on productivity and quality; it should be combined with agriculture and aquaculture production, ecotourism, outdoor recreation and other environmental services.

Natural production forests should be managed with essential silvicultural techniques to reach the maximum productivity and efficiency. Enhancement of regeneration and development of natural forests will use silvicultural rehabilitation measures and forest enrichment with multi-purpose species and NTFPs, aiming to improve the forest quality, value and also the income for the mountainous people. For poor, weak regenerated natural forest areas and plantation forests with low quality, it is possible to improve by the establishment of new plantations with higher economic efficiency and environmental values.

Development of production plantation forests should be prioritized according to the planning of raw material areas for processing industry, by mixed planting of small, fast-growing trees with perennial large timber trees, while growing of multi-purpose tree species, NTFPs, and species having high economic values in Vietnam will be encouraged. Development of plantation production forests will be based on the market demands and concentrated in areas with competitive advantage, stable production and high economic efficiency. Effort has to be made to improve quickly the productivity of plantation forests by using modern bio-technology and intensive cultivation techniques in order to meet basically the demand of material for processing industry of forest products by 2020. Focus should be put on development of species, for which Vietnam has a comparative advantage.

- Scattered tree planting should be strongly developed, to meet effectively, and in a timely manner, the subsistence needs for local households in timber and fuelwood, especially in the delta and coastal areas.
- All economic entities are encouraged to invest into development forests and development of medium- and large-scale concentrated raw material areas, to ensure materials for processing industries and improve land use efficiency.

Various forms of joint-venture, joint-business and establishing forestry cooperatives should be encouraged.

- Scientific technology should be used as a basis for forestry development, as well as application of advanced scientific achievements, technology and local people's experiences in forestry production. Two main research directions should be promoted for forest development, i.e., forest tree breeding and silvicultural measures, which are aiming at increasing not only productivity and quality, but also the values for environmental protection, nature and biodiversity conservation of the forests.
- The State should strengthen building up infrastructure for forest development, with particular attention to be paid to the system of forest roads, forest fire prevention and fighting system, and control of pests and diseases.
- Income sources should be diversified through the development of tree crops, promoting short-rotation animal husbandry to generate immediate income while establishing small-scale plantation forests, and taking part in natural forest enrichment and protection. Rural occupations should be developed, particularly in small- and medium-scale forest product processing, to generate higher income for mountainous people, particularly for poor households, and help moderate households avoid falling into poverty.
- *Orientation on forest utilization and development of forest product processing industry*
  - Forest harvest and use  
Forest resources should be harvested and used appropriately, and at the same time, silvicultural measures used to regenerate and improve forest quality. Forest harvesting will be matched to the functions and protection level of specific forests.

Sustainable harvesting and utilization of natural forests should be based on a forest management plan. The major principles should be that the main harvest will be applied in rich-quality production forests, with the appropriate harvest level depending upon the mean annual increment (forest growth rate). For medium- and poor-quality production forests, the main intervention will be harvest aiming at regeneration and enrichment of forests.

Environmental services from forests, such as watershed, coastal and city protection, outdoor recreation, carbon credits of CDM, etc., should be maximized to generate revenue for reinvestment in forest protection and development.

Benefits from forest utilization and harvesting should be available for forest owners and communities participating in forest protection management, while negative environmental impacts of harvesting and use of forest should be limited. The state encourages organizations, households, individuals and local communities to invest, manage, harvest and use forests sustainably.

About 70% of the current production forest areas are poor-quality natural forests and newly-restored forests, in which no harvesting of forest products can be permitted in the upcoming 5 - 10 years. They should be zoned, improved and enriched to improve their quality to create supply sources for large timber, NTFPs and environmental services after 2010.

Plantation and agricultural waste, as well as other materials, will be encouraged to be used as fuels in order to minimize the use of fuelwood from natural forests.

Planting and using of NTFPs should be strengthened, focusing on advantageous products, such as bamboo, rattan, raisin, medical herbs, and foodstuff, and raising of forest animals is encouraged. Legal mechanisms should be available to allow forest owners to manage, harvest and use NTFPs in accordance with legal regulations.

- Development of forest products processing industry

The forest products processing industry and trade must become a key economic factor of the forestry sector, developed in line with market mechanisms based on advanced technologies and maximum efficiency in forest product utilization to meet needs for domestic consumption and export. The non-state sector plays an important role and is encouraged to invest in development of forest product processing industry. Attention should be paid to development quality using measures on renovation of management mechanisms, renovation of state-owned enterprises, encouraging the participation of private sector, and creating healthy and more transparent markets.

Development of products should focus on those with high competitive advantages, such as indoor and outdoor furniture, wooden art handicrafts and other products made from bamboo and rattan. From now to 2015, efforts should focus on review, consolidation and upgrading of the system of small- and medium-scale forest product processing factories and development of the large-scale forest product processing industry after 2015.

Forest products processing industry zones should be developed and expanded in areas that, on the one hand, could sufficiently conveniently and stably provide materials and convenient infrastructure conditions, and on the other hand, ensure profit generation and would be competitive in regional and international markets. Besides enhancing large-scale processing industry modernization, due attention should be paid to the development and modernization of small-scale forest products processing industries in rural areas and traditional handicraft villages, in order to contribute to diversification of rural and agriculture economy. Construction of integrated plantation-based timber and NTFP processing units should be encouraged.

The processing of wood-based panels and pulp should be enhanced, to reduce gradually processing of woodchip for exports. Encouragement needs to be provided to utilization of products made from artificial wood-based panels and timber from plantation forest.

- Orientation on forest product export and import

To be in line with international integration trends, the forest product processing industry will be developed accordingly, and thus not aim to produce, or self-supply, all its own raw materials. Currently, Vietnam still has to import materials for export processing and partly for domestic consumption. Import of materials should be arranged well, associated with strengthening of large timber and NTFP plantation establishment, to gradually meeting the demand of material for processing, reduce the dependence on imported materials and increase value-addition of processed products.

Key export products include indoor, outdoor furniture, wooden-art handicrafts and NTFP-based processed products. Attention should be paid to major markets, such as United States, European Union and Japan.

Diversification and continuous improvement of the quality and designs of processed products is needed to meet the interests of national and international customers, while paying special attention to develop trade brands and achieving forest certification for export items.

## **2. Orientation on forestry development by regions**

### **a) Northern midland mountainous region**

- Northwest sub-region: (*Dien Bien, Lai Chau, Son La and Hoa Binh*)
  - Develop and strengthen watershed protection forests following hydropower terraces on the Da River in order to mitigate drought, flood, and erosion and to improve water supply capacity for hydropower plants and irrigation systems.
  - Further preserve high mountain tropical forest ecological systems and rare, valuable forest flora and fauna gene sources, as well as develop ecotourism.
  - Diversify income sources on the basis of social forestry development, gradually reduce and replace the shifting cultivation by agroforestry for forest protection and development and improvement of livelihoods for communities.
  - Establish material supply areas for timber processing industry (paper, wood-based panels) and NTFPs; priority will be given to develop specific small-scale wooden and NTFP processing, which is suitable with the regional characteristics.
- Northeast sub-region: (*Ha Giang, Cao Bang, Bac Can, Lao Cai, Tuyen Quang, Yen Bai, Lang Son, Thai Nguyen, Quang Ninh, Vinh Phuc, Phu Tho, Bac Giang, Bac Ninh*).
  - Establish material supply areas linked with processing industries to meet essential demands on paper, woodchip, pit props, and furniture on the basis of intensive cultivation of 1.5 million ha production forests (including natural and plantation forests) and use high productivity sites on nearly 1 million ha of bare land for industrial concentrated material plantations establishment.
  - Establish the Northern forest products processing industry and trade cluster within the development triangle: Hanoi – Hai Phong – Quang Ninh and adjacent areas. Develop forest product processing villages. One additional MDF factory will be constructed with the annual capacity of 100,000 m<sup>3</sup> of products and the existing mills should be modernized, such as the Viet Tri and Thai Nguyen wood-based panel mills etc.; strengthen export activities with special attention paid to the Chinese market.
  - Develop and consolidate the system of protection forest for watershed of rivers and coastal protection forest.
  - Further establish and consolidate national parks, nature reserves areas, historical and landscape areas, and ecotourism development.

**b) Northern delta region** (*Hanoi, Hai Phong, Ha Tay, Hai Duong, Hung Yen, Ha Nam, Nam Dinh, Thai Binh, Ninh Binh*)

- Establish and consolidate protection forest areas for urban environment, industrial zone and coastal protection; strengthen scattered tree planting, improve environmental landscape and partly meet household consumption needs.
- Consolidate and protect existing national parks, such as Cuc Phuong, Tam Dao, Ba Vi, Cat Ba, Xuan Thuy, nature reserves areas, cultural, historical and landscape areas; strengthen ecotourism and outdoor recreation activities.
- Apply new technologies and provide capacity building for enterprises and traditional handicraft villages involved in furniture and NTFP processing.

**c) Northern Central region** (*Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri, Thua Thien Hue*)

- Concentrate on establishment and consolidation of protection forests for watershed, coastal protection, sand and wave-shielding, and prevention of erosion and earth crumbling along the sea coast.
- Protect and strengthen national parks, such as Pu Mat, Vu Quang, Ben En, Bach Ma, Phong Nha – Ke Bang, and other nature reserves areas. Establish special use forest areas in North and Central Greater Anamites / Truong Son to protect high biodiversity of the region in association with watershed protection.
- Establish and develop timber and NTFP material supply areas, which are linked with processing industries to emerging local forest product industrial areas based on existing and potential markets; accelerate wooden product processing (initially, chips for pulp and paper production) and rural handicraft villages, with special emphasis on NTFP processing (pine resin, bamboo and rattan).
- Strengthen community-based forest management modality, especially for protection forests in scattered watersheds, and areas needing sand - shielding and improvement of poor soils.

**d) Southern Central Coastal region** (*Da Nang, Quang Nam, Quang Ngai, Binh Dinh, Phu Yen, Khanh Hoa, Ninh Thuan, Binh Thuan*)

- Strengthen the watershed protection forest system, particularly in steeply-sloping mountainous areas, where the forest has been lost, and enhance the establishment of protection plantations for wind- and sand-shielding and for control of coastal erosion and earth crumbling.
- Enhance the protection of the existing forests and plant new forests in dry areas, such as Ninh Thuan and Binh Thuan, to improve water sources and cultivated land.
- Protect and consolidate the existing national parks, such as Nui Ong and Takou, and continue to develop the areas of special-use forest in Southern Greater Anamites / Truong Son and various traditional cultural historical areas, and strengthen ecotourism development.
- Develop key afforestation areas for industrial material supply and NTFPs, in association with concentrated key export-processing zones from Quy Nhon to Da



Nang. Upgrade technology and equipment for processing of export furniture, wood-based panels and pulp.

- Construct one more particle board factory with an annual production capacity of above 100,000 m<sup>3</sup> of products.

**d) Central Highlands** (*Gia Lai, Kon Tum, Dac Lac, Dac Nong, and Lam Dong*)

- Immediate identification of the permanent forest estate should be carried out for the Central Highlands related to formation of production forest areas and large timber supply; at the same time the system of watershed protection forests for Southern Central and Southeast coastal regions will be consolidated and protected.
- Strengthen the protection of national parks and nature reserves areas with rich biodiversity, such as Ngoc Linh, Yok Don, Chu Yang Shin, Bi Dup-Nui Ba, and Chu Mom Ray. Preserve endemic species in mixed *Dipterocarpus* forests (Dipterocarps) and *Pinus Kesiya* forests, and develop ecotourism.
- Efficiently manage natural forests, regenerate and enrich forests while making the best use of site potential for plantation establishment of multi-purpose forests (to produce large timber, small timber, NTFPs, and environmental services) to meet basic demands for forest product materials for processing centers in Central Highlands and Southern Central coastal provinces.
- Strengthen the capacity and upgrade processing equipment and technologies for clusters of forest product processing industries, such as in Buon Ma Thuot, Buon Ho, Pleiku, An Khe, and Kon Tum.
- Accelerate the implementation of land policies on forest, land and forest allocation, community forestry development to contribute to job creation, livelihood improvement and raising awareness and knowledge for ethnic groups in Central Highlands, particularly in remote and isolated areas.

**e) Southeast region** (*Ho Chi Minh City, Binh Phuoc, Tay Ninh, Binh Duong, Dong Nai, Ba Ria – Vung Tau*)

- Establish quickly the permanent forest estate; strengthen and protect the protection forest system for watershed, dam and lakes and hydropower plants, such as Tri An, Dau Tieng, and Thac Mo, and enhance the development of environmental protection forests for industrial zones, big cities and coastal protection.
- Enhance regional forest product processing and intensive cultivation of plantation forests to supply a part of the materials for the industrial cluster processing and export of Ho Chi Minh City – Bien Hoa – Binh Duong - Vung Tau and Tan Mai and Dong Nai paper mill.
- Strengthen protection and biodiversity conservation in special-use forests, such as Bu Gia Map, Con Dao, Cat Tien, Lo Go-Sa Mat, and Can Gio national parks and other nature reserves areas; attention should be paid to development of ecotourism and outdoor recreation.

**g) Mekong delta region** (*Long An, Dong Thap, An Giang, Tien Giang, Hau Giang, Vinh Long, Ben Tre, Kien Giang, Can Tho, Tra Vinh, Soc Trang, Bac Lieu, Ca Mau*)

- The permanent forest estate should be quickly established for three types of forests. Enhance scattered tree planting on aquaculture and agriculture land. The

relationship between protection of mangrove forest and aquaculture should be well addressed.

- Establish and consolidate protection forest areas for wave shielding, sea coast protection and other construction works.
- Consolidate and protect the special-use forests, accelerate the rehabilitation of Mangrove and *Melaleuca* forest ecosystems. Research and apply effective solutions for forest fire prevention and fighting. Encourage conservation and development of traditional endemic animal species, e.g. python, crocodiles, turtles, snakes, and bees.
- An appropriate scale of forest product processing units should be developed. Priority is given to research on utilization of *Rhizophora*, *Melaleuca*, *Eucalyptus* etc., to produce pulp, wood-based panel, and furniture for domestic consumption and export.
- Integrated agriculture - forestry - aquaculture business activities should be organized ensure the livelihoods of the people and at the same time to protect the environment.

## **Part Four: SOLUTIONS FOR IMPLEMENTATION**

### **I. Solutions on policy and laws**

#### **1. Policies for forest and forest land management**

- Develop a legal corridor/framework for establishing the national permanent forest estate, which will be demarcated in the field.
- Revise and complete the allocation and lease policy for forest and forest land to create momentum for encouraging various economic sectors to be involved in forest protection, development, and forest product business as well as ensuring that the forest owners receive satisfactory benefits.
- The priority will be given to land allocation, and allocation, and contracting protection forests to communities, cooperatives, and households for long-term protection, management and utilization according to approved planning and plans.
- Step-by-step, favorable conditions will be created for land tenure rights, use and ownership of forest following the laws of production and trading activities, and the laws of commodities production, such that forests will become commodities, and thus a real fund source for forestry development. Accumulation of land for formation of concentrated material plantation forests through lease, or providing forest use and forest land tenure rights as shares for the households and individuals is encouraged.
- Continued testing and scaling-up models of community forest management. Regulations for forest management and multiple stakeholder benefit-sharing should be finalized. Finalize and implement policies, mechanism on allocation and lease of natural production and protection forests. Piloting and developing the legal basis for allocation, or lease, of special-use forests to non-state economic sectors, particularly for ecotourism and outdoor recreation activities.
- Review, development and finalization of legal documents on forest management, protection, development and utilization should be strengthened. Eradicate insufficient, troubling administrative procedures. Positive local custom and customary practices should be considered in the development of forest protection and development regulations.
- Further decentralize the state management of forests to district and commune administration levels. Regulate clearly the responsibilities and rights of forest owners, the government at different levels, law enforcement agencies and forest protection forces by the forest owners as well as villages and communes, regarding the loss and destruction of forests in their areas.
- Strengthen the legal dissemination and education to improve the awareness and responsibilities of different levels, sectors, each forest owner, each person and the whole society in forest protection and development, in parallel with the enhancement of state management, institutions and legislation.

## **2. Finance and credit policies**

- Specific investment policy related to civil works for the forestry sector should be developed, and the investment practices by the State in the sector should be renovated according to the forest protection and development plan, instead of allocation of budget on the basis of the current cost norms.
- Develop insurance and security mechanisms for all the economic entities involved in forestry production to have equal access to long-term loans appropriate to forest tree production cycles from investment and credit sources.
- Establish a transparent and stable investment environment to attract investors, especially foreign investment; ensure clear industrial ownership rights, land tenure rights, long-term forest use and ownership rights, provide accurate information on investment opportunities and forest resources, simplify procedures on enterprise establishment. Policies should be available to redirect state investments from direct investment to indirect investment (infrastructure, tree breeding/seed, science and technology etc.) creating favorable conditions for private enterprise investments in production and forest product processing.
- Forestry development planning should be made available to the public, and to pilot and scale up the tendering on leasing production forest, protection and special-use forests for ecotourism and outdoor recreation purposes. The State will strengthen the planning work and support to develop some projects on concentrated plantations areas for industrial raw material to call for domestic and overseas investment.
- Develop and step-by-step implement mechanisms for fee collection for environmental services that forestry is making and supplying for the society, such as watershed protection for hydro-power plants, irrigation, city environment and coastal protection, ecotourism and outdoor recreation. Organizations and individuals that are getting benefits have the responsibility to pay the fees, in order to create new financial sources for re-investing in the forestry sector for a balanced and sustainable development. Mechanisms should be developed in this new period so that the forestry sector could “use the forest to develop the forest” and there is no need for state subsidization.
- Small scale CDM-afforestation projects should be developed to generate income for the poor people; small enterprises and larger scale projects will be carried out by other enterprises.
- Strengthen forest evaluation work and use it as the basis for forest transactions. Establish the Forest Protection and Development Fund at central and local levels from different funding sources (state budget, ODA funds, environmental service fees, carbon credits, ecotourism, and revenues from treatment of violations to the Forest Protection and Development Law, and other contributions) together with appropriate management and utilization mechanisms for this fund.
- Increase budget from the State allocated for management, protection and development of special-use, protection, production forests, scientific research, forestry extension, human resource training, development of a modern forest management system, forest inventory and planning, establishment of high-quality forests for seed and nurseries, and adequate investments in construction of forestry infrastructure similar to agriculture infrastructure.

- For special use and protection forests, the annual State budget allocates administrative budget for management boards and operational costs for commune and village forest protection groups. For production forests, the State provides support for planting of rare and valuable species with long rotation and forestry infrastructure construction, particular forestry roads, facilities and equipment for forest fire prevention and fighting, pest and diseases control for centralized material plantation areas.
- The State strengthens contract-based protection for protection forests, by promoting getting direct benefits from forests and other income sources, including payments for environmental services. Sufficient investment will be given to developing agroforestry and NTFP (concentrated plantations and establishment under forest canopy areas) so as to replace the current contract mechanism, which uses money from the state budget.
- The State provides supporting mechanisms related to preferential loans for households involved in forest protection and development, especially poor households, ethnic minorities in remote and isolated areas for development of production with agroforestry practices, NTFPs, cattle raising, and planting agriculture crops before receiving income from forests.
- The State provides seedlings, fertilizer to, households, individuals, and village communities, especially poor households, to establish small-scale production plantations. This support can be considered as the State's payments for the environmental benefits that these forests provide to the society.
- Study the mechanism for risk insurance for the afforestation activities of forest owners; initially the support funds from the Fund for Forest Protection and Development could be used.

## **II. Renovation of organizing forest production and business and encouragement of economic entities participating in forest protection and development**

- State Forest Enterprises (SFEs) should be enhanced to become share-holding companies by equitisation (i.e., the State does not keep the majority of shares). Various kinds of joint-venture and collaboration between state companies and private companies, and with communities, in afforestation, forest protection and forest product processing and develop economic cooperation in forestry.
- For the renovation of SFEs, where forest land is available in a concentrated area, SFES will be restructured as effective operational units to become medium- and large-scale State Forest Companies with diversified production and business connected to processing industries and trade of forest products. Those companies will be the core element for sector development and then will be equitised, becoming independent in finance, as integrated production and business entities in accordance with the laws. The State will allocate budget for completion of forest and forest land allocation or lease, support training to improve the capacity of their staff and workers as well as provide budget for forest inventory and development of forest management plan concerning the first rotation.
- Pay attention to development of forestry production businesses by households, forest farms, village communities and cooperatives. For mountainous households, the state

provides financial support to change crop structure to agroforestry systems, aiming to minimize shifting cultivation.

- Develop priority mechanisms for poor households, ethnic minorities and women to participate in concentrated industrial plantations, small-scale enterprises processing forest products, and forest farms, to create additional employment and to increase income.
- Encourage private sector and non-government organizations to participate in research, training and extension activities, through the modality of competitive bidding.
- Develop policies encouraging all economic entities, particularly international and national private agencies, in forest business and forest product processing. Provide forest land use tax exemption during the first rotation for enterprises, households and individuals engaged in forest production and reduction or exemption from taxes for newly-established forest product processing enterprises or technology renovation. Simplify procedures on harvesting, transportation, and trade of forest products.

### **III. Solutions on planning, plan and monitoring**

- Review planning of 3 forest types, adjust areas of protection and special-use forests that do not meet the criteria to be reclassified as production forests; identify the national permanent forest estate and carry out boundary demarcation in the field.
- Carry out forest resource inventory, statistics work and monitoring linked with land statistics and inventory. Develop and update databases on forest resources management, and apply advanced technology to improve the quality of forest inventory and planning.
- Improve the quality of planning development and implementation arrangements of forest protection and development plans by different levels, forestry units and communities linked with planning and the socio-economic development plan of the areas. While developing the planning and protection plans for special-use forests, the planning and protection and development plans for buffer zone and biodiversity corridor should also be developed.
- Renovate methodologies and improve the quality of planning in the direction of strengthening inter-sectoral linkages, using inter-sectoral information and promoting the participation of relevant agencies.
- Carry out planning and develop forest product processing industrial zones and trade, linked to review and building up of centralized production areas for industrial raw materials. Plans to replace low- productivity plantation forests should be available. Attention will be paid to development planning for craft villages, small-scale forest product processing and forest farms.
- Forestry projects have to be integrated with programs and projects on poverty reduction, agriculture and rural development in the same areas for better utilization of ODA and government funds. Management boards for special-use, protection forest and forestry companies should participate in providing support services, or in management of local socio-economic development projects.

- Monitoring and evaluation work of planning and plan implementation on forest protection and development, statistics, inventory and monitoring of forest resource development should be strengthened and appropriate revisions of plans will be carried out. Monitoring and evaluation systems should be developed soon and strengthen capacity for agencies involved in planning, financial management and sectoral monitoring at different levels in order to ensure closer linkages in plan development and financial management.
- Consolidate the existing forestry sector information and monitoring system to facilitate monitoring and evaluation of forestry sector's strategy implementation and to meet requirements on forestry sector management and international integration.

#### **IV. Solution on sector organization and management**

- The sectoral organizational renovation should target development of a consistent strong state forestry management and organization system, ranging from central to local levels throughout the country.
- Quickly develop a road map for renovating the forestry organizational structure linked with administration reform and international integration. Establishment of state management organizations and strengthening managerial staff for forestry at districts and communes with forests should be considered as first priority within the next five years. Forestry staff will be arranged in communes having forests.
- Encourage and support the establishment of groups and associations, such as associations of people involved in forestry production, business, processing and exporting and importing forest products.
- Establish long-term coordination mechanisms among research, training, education and extension organizations and forest owners, enterprises and communities, in order to integrate research, training and extension into forestry production and business.

#### **V. Solutions on science and technology**

- Scientific technological research activities need to meet the production and market requirements while involving participation of forest owners and enterprises.
- Review and complete technical guidelines and procedures on: afforestation, zoning for forest regeneration, improvement, tending and enrichment of forest, pests, diseases and forest fire control and forest harvesting and utilization, etc.
- Develop and implement the Forestry Research Strategy for the period 2006-2020 with a focus on break-through research within the sector, such as on biotechnology, NTFP refining technology, high-yielding afforestation, improvement of poor natural forests and effective conversion and utilization of shifting cultivated land, economic valuation of forest environmental values, agroforestry solutions and policy mechanisms to create momentum attracting economic entities and people to participate in forest production and earn substantial incomes from forestry activities.
- Develop and implement the 2006-2020 forest tree seed and seedling strategy in order initially to meet demands for high-quality seeds and seedlings used for afforestation under the Project 661 and other programs and projects.

- Develop and implement the National Proposal on NTFP Development and Conservation during the period 2006-2020.
- Focus on research on solutions for agroforestry, cultivation of NTFPs and cattle raising, etc. to increase income for the poor people working in forestry activities, particularly for poor households.
- Establish national standards for sustainable forest management and Chain of Custody (CoC); develop national standards for wood and NTFP products, to meet requirements of main export markets.
- Promote the application of modern technologies and equipment for forest product processing. Foreign investment should be considered as a modern technology transfer channel. Encourage application of technologies, which are advanced, environmentally-friendly, material-saving, and able to use wood and agriculture waste in the processing of forest products. Encourage research and use of new materials as replacements for timber and firewood to reduce the pressures on forests.
- Step-by-step renovate the activities and capacity strengthening for forestry institutes, universities, and schools to become qualified consultancy organizations meeting the requirements of forestry sectoral management organizations, processing enterprises and various forest owners.
- Establishment of technology transfer centers, scientific technological consultancy centers and intensive training centers under research and education institutions is encouraged.
- Forestry extension organizations are established from central level to provinces and districts having a large area of forest under the agriculture extension system at different levels. Communes that possess much forest will have a full-time or part-time forestry extension staff member: in remote, isolated areas, using forest extension agents belonging to ethnic minority groups is prioritized. Quickly develop voluntary forestry extension organizations for the communes and villages, particularly in remote, isolated areas, where it is difficult for the state agriculture system to access. The State should provide the necessary support for voluntary organizations working in forestry extension.
- Mechanisms will be developed for research, training and forestry extension institutes on increase their self-responsibility and independence concerning the quality and quantity of outputs contracted in line with competitive bidding modalities.

## **VI. Solution on training human resources**

- Develop and implement a training strategy and improve capacities for forestry staff at all levels, particularly at the commune level and in remote, isolated areas, to meet the requirements for sectoral renovation and international integration.
- Focus on training and forestry extension activities for the poor, particularly ethnic minorities and women, so that they are able to generate stable incomes from diversification of crops and livestock. Pay special attention to training for ethnic minority youth and forestry staff in remote, isolated areas.



- Enhance management capacities for management staff, enterprises, communities and households working in forestry through on-site short courses and forestry extension; strengthen their capacity on self-developing, implementing and monitoring forest protection and development plans step-by-step.
- Improve capacities and technical facilities of forestry training units. Enhance training staff and skilled workers in forest products production and processing enterprises, forest farms and handicraft villages.
- Develop a proposal on comprehensively renovating the forestry education-training system in terms of structure, curriculum, contents, teaching methods and management mechanisms to improve the training quality. Training has to be based on demand, theory linked with practice and the time for students to practice at production units increased. Efforts need to be made so that by 2020 some forestry institutes, universities, or schools will achieve international standards on research and training.
- Develop short training programs based on prioritized training topics for farmers working with forest activities, forestry workers and professionals working in traditional handicraft villages.
- Encourage domestic forestry training and extension organizations, NGOs and international projects to support training and extension activities to those working on forestry activities, with priorities to be given to poor households and women.
- Develop planning and provide opportunities for intensive training to scientists and teaching staff in different fields of forestry to focus on economy, forest management and social forestry, and create favorable conditions to attract young researchers, women and ethnic minority peoples to be involved in scientific research and teaching.
- Develop distance-learning modalities to satisfy the increasing training needs. Forest environmental education should be soon introduced to the teaching program of all schools in the entire country.

## **VII. Solutions on international cooperation**

- Strengthen the international economic integration of forestry sector, now that Vietnam is a WTO member, through active participation and close regional and bilateral cooperation with international forestry organizations.
- Strengthen mobilizing, attracting and utilizing ODA funds strategically and effectively to serve forest protection and development, biodiversity conservation, environmental protection, poverty reduction, livelihood improvement for forest-dependent people, and improve the efficiency of forestry sector management. Improve ODA management practices within the sector, accelerate disbursements for ODA-funded projects, and manage and utilize effectively funds of the Trust Fund for Forests (TFF) and the Vietnam Conservation Fund (VCF). Pilot and scale-up the new approach (sector-wide or program approaches) aiming at more effectively use of international funding sources.
- Gradually develop a favorable “legal corridor” (enabling environment) and improve the investment environment to attract Foreign Direct Investment (FDI) from foreign

investors, especially for industrial material plantation establishment, forest product processing and technology transfer.

- Consolidate and strengthen activities of the Forest Sector Support Partnership to coordinate international funding sources supporting implementation of programs under the Forestry Development Strategy.
- Take initiative and cooperate actively with advanced regional and international countries, institutes and universities in the fields of forestry research, education, training, and forestry extension in order to accelerate a quick accessibility to standards of forestry science and technology, to develop human resources and upgrade equipment for the sector.
- Continue to implement multilateral environment agreements and international commitments related to forestry, for which Vietnam is a signatory, such as the Convention on International Trade of Endangered Wildlife Species (CITES), United Nations Convention on Biological Diversity (UNCBD), United Nations Convention on Combating Desertification (UNCCD), and United Nations Framework Convention on Climate Change (UNFCCC), to improve the status of Vietnam in the world and in the region, and also to seek new support funding sources, e.g. the Global Environment Facility (GEF), Clean Development Mechanism (CDM), etc.

## **Part Five: PROGRAMS**

The objectives and orientations of the Forestry Development Strategy will be implemented through the following programs:

### ***Three development programs:***

1. Sustainable forest management and development program
2. Forest protection, biodiversity conservation and environmental services development program
3. Forest products processing and trade program

### ***Two support programs***

1. Research, education, training, and forestry extension program
2. Renovation of the forestry sector institutions, policies, planning and monitoring program

### **I. Sustainable forest management and development program**

#### ***1. Objectives***

To manage, develop and use forest sustainably and effectively to meet the basic demands for forest products for domestic consumption and export, to contribute to national economic growth, stabilization of society, particularly for mountainous ethnic minorities areas, while ensuring the protection functions, biodiversity conservation and providing environmental services contributing to sustainable national development.

#### ***2. Tasks***

- Establish the national permanent forest estate for three forest types, mapping and boundary demarcation in field, manage sustainably and effectively all stable production forest areas, including 3.63 million ha of natural forests and 4.15 million ha of plantation forests (including industrial raw material plantations, NTFP and other plantation forests).
- All forests and forest lands are to be allocated, or leased, to forest management entities before 2010.
- Establish and implement plans of forest management and capacity building for forest owners, such as: forestry companies, cooperatives, communities, and foreign fund-invested enterprises, etc.
- Stabilize wood production from natural forests, plantation forests and scattered planted trees with timber production targets of 9.7 million m<sup>3</sup>/ year by 2010 and 20 - 24 million m<sup>3</sup>/ year by 2020 (including 10 million m<sup>3</sup> large timber) and develop NTFPs to meet major demands for domestic consumption and export.
- Provide small timber for pulp processing: 3.4 million m<sup>3</sup>/year by 2010, and 8.3 million m<sup>3</sup>/year by 2020.

- Improve the productivity and quality of plantation forests, with an average annual increment of 15 m<sup>3</sup>/ha based on the implementation of forest tree seed strategy during period 2006-2020.
- Enrich 0.5 million ha of poor degraded forests contributing to increase the quality of natural forests.
- Afforest 1.0 million ha of new forests by the year 2010 (of which, 0.75 million ha of production forest and 0.25 million ha of special-use forest) and 1.5 million ha for the next phase, and harvested forest will be replanted after logging operations at the rate of 0.3 million ha/year.
- Annually plant 200 million scattered trees, equivalent to 100,000 ha of plantation forests, to serve local demands of wood and fuelwood for home consumption.
- Undertake forest inventory periodically; consolidate and update database of forest resources and related socio-economic aspects.
- 100% of production enterprises will develop, implement, monitor and evaluate the forest management proposals (plans).
- At least 30% of production forest areas are to be issued with certification on sustainable forest management by 2020.
- Invest in equipment to modernize forest management work.

## **II. Program on forest protection, biodiversity conservation and environmental services development.**

### **1. Objectives**

Protect forests and conserve biodiversity in an effective manner with active participation of local community people and enhance the contribution of environmental services from forests.

### **2. Tasks**

#### a) Forest protection (protection, special-use and production)

- Protect effectively 16.24 million ha of forest and forest land area.
- One hundred percent of documents regulating forest protection are disseminated to forest owners and local people.
- The State will continue to allocate 1.5 million ha special-use and protection forests under protection contracts by 2010.
- Reduce by 80% the cases violating the forest protection and development law.
- 100% of forest owners, villages, and communes having forests will arrange their forest protection forces and 100% forest rangers at communes and forest protection forces will be trained to improve capacity.

- Invest to infrastructure, equipment, operational costs for protection, forest fire prevention and control, and pest and disease control.

b) Management of protection and special-use forest systems

- Develop and consolidate the protection forest system (watershed, coastal and urban environment) with a total area of about 5.68 million ha and special-use forest system with a total area not exceeding 2.16 million ha.
- 100% of protection and special forest areas will have their management owners (state agencies, private owners or communities) and availability of planning, medium- and long-term forest protection and development plan. 0,25 million ha of new protection and special-use forests will be planted by 2010.
- Continue to pilot and scale-up community-based forest management modality and other modalities (community management, share-holding company, cooperative, joint venture, joint business, etc.)

c) Environmental services

- Study on the valuation of the forest environmental services, such as water source protection, erosion control, sedimentation prevention, CO<sub>2</sub>-sequestration, ecotourism, etc.; develop mechanisms for payment of environmental services during the period 2006-2010.
- The Forest Protection and Development Fund will be established and implemented by 2007.

### III. Forest products processing and trade program

#### 1. Objectives

Produce internationally-competitive products mainly on the basis of sustainable domestic sources for wood and NTFPs; apply advanced and environmentally-friendly technologies to meet the basic demands for domestic consumption and for export; and develop the forest product processing industry to become a key economic factor of the forestry sector.

#### 2. Tasks

a) Reorganize the wood and NTFP processing industries in order to match the production capability with the sustainable raw material supply sources.

b) Strengthen the production capacity of forest product processing industry to meet the basic demands for domestic consumption and for export, which are:

- Total capacity of sawn timber: 6 million m<sup>3</sup>/year
- Particle board: 320,000 m<sup>3</sup> of products/year
- MDF board: 220,000 m<sup>3</sup> of products/year
- Value of exported wood products: 7.0 billion USD (3.5 million m<sup>3</sup> of products)

- NTFPs for export: 0.8 billion USD

c) By 2020, NTFPs will become one of the main production commodities, accounting for more than 20% of the total value of forestry production, the average exported NTFP value will increase 15-20%, attracting 1.5 million laborers and incomes from NTFPs will comprise 15-20% of the rural household economy.

#### **IV. Program on Research, Education, Training and Forestry Extension (RETE)**

##### **1. Objectives**

Improve the quality and effectiveness of RETE activities to develop high-quality human resources for the forestry sector. Science and technology are the basis for sector development. Research and training are linked with production and markets to increase the contribution to economic growth of the forestry sector, to protect the environment and to improve the livelihoods of people working in forestry activities.

##### **2. Tasks**

###### **a) Research**

- Focus research on some key areas, such as bio-technology, refining technologies for NTFPs, high-yielding plantations, agroforestry, and rehabilitation of poor degraded natural forests.
- Improve technologies and equipment for the forest product processing industry, in order to enhance its competitive capacity and to meet the requirements of international economic integration.
- Study, on a scientific and practical basis, to develop break-through policies within the forestry sector (high-profit production, socialization, NTFP development; valuation of environmental services; attracting funds of domestic and foreign private sector, etc.)

###### **b) Education and Training**

- An average of 5000 students per year will be trained regularly in the schools under MARD and attention will be paid to train key staff for capacity improvement.
- Vocational training will be conducted for 50% of farmers working on forestry activities and those from craft villages with forest product processing.
- Environment and forest protection subjects will be introduced into the training curriculum for all primary and secondary schools from 2008.
- 80% of local forest management staff will be trained on forest inventory and development and implementation of forest protection and management plans.
- Improve the capacity of teaching staff pool and provide basic equipment for forestry institutes and schools.
- Complete and update the training curriculum and textbooks to meet requirements of renovation and international economic integration.

- Enhance the linkages between the forestry training and forestry extension systems. One or two forestry training schools will meet international standards by 2020.

### ***c) Forestry extension***

- Improve the professional level on forest protection and management for 80% farmer households.
- Attract 50% of forestry-related private sector entities and mass organizations to be involved in forestry extension activities.
- At least one full-time or part-time forestry extension agent will be arranged for each commune having large areas of forest; a voluntary extension system is developed and its capacity should be strengthened.
- Improve and update the issues and methodology for forestry extension to be suitable for the levels of the farmers, particularly for the poor households and ethnic minorities.
- Develop linkages between forestry extension and training systems with forest owners and forest product processing enterprises.

## **V. Program on renovating the forest sector institutions, policy, planning and monitoring**

### ***1. Objectives***

Create a favorable legal environment for forestry activities according to the market orientation and international integration, with a broad participation of households, communities and private sector. Strengthen the organizational system while planning work and monitoring in the forestry sector are renovated.

### ***2. Tasks***

- a) Develop and update the policy, legal and forestry institutional systems, to be more decentralized to local levels and to develop the forestry sector sustainably, according to the market orientation and socialization of forestry activities.
- b) Develop mechanisms and policies to create momentum to encourage the participation of various economic entities in forest protection and development, and to stimulate development of the forestry economy among domestic and international economic entities.
- c) Reorganize and improve the effectiveness of the state management system in forestry aiming at unified forest management, protection, utilization and development functions; clarify the functions and tasks of forestry organizations at all levels and diversify the modalities of forestry services.
- d) Reorganize some forestry companies to be operated according to the market mechanism in remote forestry areas facing many difficulties where there is lack of investments from non-state economic entities; moving towards equitization of inefficient forestry production and forest product processing enterprises.

- đ) Develop, implement and scale-up modalities related to management and protection of community forests.
  
- e) Establish the state forest extension system at different levels and provide supporting mechanisms for voluntary extension organizations in communes and villages having forests.
  
- g) Establish specialized units in monitoring and evaluation, to be linked with consolidation of the sectoral planning system at all levels.



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## **Part six: IMPLEMENTATION ARRANGEMENTS**

### **I. Task assignment**

- MARD is the focal point organization with the tasks to coordinate and cooperate with other ministries, branches and People's Committees of the provinces and municipalities under the central government to organizing the implementation of Forest Development Strategy (FDS), and incorporating FDS issues into the national Socio-Economic Development Plans and plans of ministries, branches and local levels.
- The Ministry of Planning and Investment (MPI) and Ministry of Finance (MoFi), in cooperation with MARD, will balance and allocate funds by calculating the revenue sources from the state budget and other fund sources to implement the Strategy issues effectively.
- The Ministry of Natural Resources and Environment (MONRE), together with MARD, will provide guidance to local levels to review the land use planning, allocation and leasing of forest land in line with objectives and tasks of the Forestry Development Strategy and develop a proposal to establish the linkage between the forest and land inventories, which are carried out every 5-years nationwide.
- The General Statistics Office (GSO), together with MARD and related agencies, will identify the contents, criteria and indicators to be used for monitoring and evaluation of forestry sector; steer and provide guidance to local levels to conduct statistics, forest inventory and studies on the contribution to the economy and the environment, in accordance with the new concept of the forestry. It is proposed that the existing classification of the forestry sector (in Decree 75/CP dated 27 October 1973) will be reviewed, and an amendment, based on the new concept, be submitted to the Government.
- Other ministries and sectors are responsible to organize the implementation of the issues of Strategy related to their own sector. People's committees of provinces and cities directly under central government are responsible for development and implementation of strategy and plan for forestry development in their respective areas. Forestry projects have to integrate with poverty reduction, agriculture and rural development projects in the same area.
- Annually, MARD, in collaboration with other ministries, sectors and provinces, will organize an assessment on the strategy implementation and submission of a report to the Prime Minister. The issue of forest protection and development is considered as an important part of the annual report of Government to the National Assembly.

### **II. Establishment of the Coordination Sub-Committees for program implementation**

A Coordination Sub-Committee should be established for implementation of each program.

#### **1. Members**

- Leader: leader of one program-related agency under MARD.

- Members are representatives from different related agencies, units, communities, state and private enterprises, Partnership members; concerned international projects may also voluntarily participate in the program.

## **2. Tasks**

- Develop medium-term and annual plans for program, including: objectives, contents of activities, outputs, budget and funding sources to implement the program.
- Propose activities for cooperation between participating stakeholders and seek financing sources for implementation.
- Support to develop specific contents for the program and seek recommended financing by ministries, international organizations and private sector.
- Discuss and propose to develop or revise the related policies and mechanisms.
- Discuss and propose the development or revision of procedures, regulations, textbooks and technical, and economic norms.
- Periodically organize plenary meetings and thematic workshops with different stakeholders, using the strategy forum for information exchange among the stakeholders.
- Collaborate with international partners, related organizations and agencies to seek financial sources to support medium-term and annual activities of the Coordination Sub-Committee for program implementation.

### **III. Estimated progress of the strategy implementation for 2006-2010**

(See Table 3 for details)

### **IV. List of priorities in 2007-2010**

Based on the action plan (2007-2010) of different programs in the Strategy, aiming at effective utilization of national resources while making use of support by international partners in order to implement the key tasks for the sector development, 21 priorities are to be developed and implemented during 2007-2010. (See Table 4.)

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## **Part seven: MONITORING AND EVALUATION**

### **I. Monitoring**

Monitor the implementation of the Forestry Development Strategy to improve the effectiveness and efficiency of the strategy implementation through providing information and feedback to policy makers and planners in order to adjust the plan and find solutions in a timely manner.

*Key issues for monitoring of the Strategy implementation:*

- Evaluate the achievements obtained as well as constraints with regards to the objectives and implementation progress.
- The mobilization of resources and finance at different levels.
- Analyze and assess the impacts during the Strategy implementation process at different levels.
- Assess the efficiency of policies related to the implementation of the Strategy objectives.
- Identify and analyze critical issues arising inside and outside of the sector, and international issues that influence to the process of Strategy implementation and essential adjustments that should be carried out.

### **II. Evaluation**

Focus on evaluation of the key impacts on development. Specific plans will be prepared for each survey and evaluation on the basis of the objectives and tasks of the strategy. To ensure an objective evaluation, without bias, this work should be assigned to independent units or organizations, including international organizations and NGOs.

*Evaluation issues:*

- Evaluate the changes in terms of politics, economy, society and environment related to the Strategy objectives.
- Provide information about the outputs of Strategy implementation, such as in biodiversity conservation, increased protection values; improved livelihoods of the people, contribution of the forestry sector to the socio-economic development process at different levels.
- Evaluate the coordination between the Strategy implementation and local socio-economic development plan.
- Evaluate the changes in the policy environment and impacts of the policy solutions.
- Evaluate the impacts of the forestry on poverty alleviation and hunger elimination.
- Evaluate the environmental impacts, including the contribution to the global environment, such as carbon sequestration.

- Quantify the contributions of the forestry sector to the national economy, local economy, international trade and job creation.
- Evaluate the implementation of the committed international conventions.
- Conduct a periodical evaluation at the end of each 5-year plan. The first evaluation will be conducted in 2009 and the evaluation results will be used as inputs to the next 5-year plan, for the period 2011-2015.

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**Part eight: ESTIMATED BUDGET REQUIREMENTS AND FUNDING SOURCES**

The total fund requirements for the Strategy for the entire period 2006 – 2020 is VND 106,759.06 billion, in which the demand for the period 2006 – 2010 is VND 33,885.34 billion, and for the period 2011 – 2020 is VND 72,873.72 billion. (See details in Tables 5, 6 and 7).

**Table 1. Projection on demands of forest products, NTFP and environmental services**

	2003	2005	2010	2015	2020
<b>I. Domestic and export timber (1,000 m3)</b>	<b>7,420</b>	<b>10,063</b>	<b>14,004</b>	<b>18,620</b>	<b>22,160</b>
1. Large timber for industry and civil construction.	4,561	5,373	8,030	10,266	11,993
2. Small timber used for export wood-based panels & wood chips	1,649	2,032	2,464	2,922	1,682
3. Small timber for pulp production	1,150	2,568	3,388	5,271	8,283
4. Pit-props	60	90	120	160	200
<b>II. Forest products &amp; NTFP (mil. USD)</b>	<b>721</b>	<b>1,700</b>	<b>3,700</b>	<b>4,800</b>	<b>7,800</b>
1. Timber products	567	1,500	3,400	4,200	7,000
2. NTFPs	154	200	300	600	800
<b>III. Environmental services (mil. USD)</b>	<b>0</b>	<b>0</b>	<b>250</b>	<b>900</b>	<b>2,000</b>
1. Clean development mechanism	0	0		400	800
2. Protection in watershed, coastal and urban area	0	0	200	300	800
3. Eco – tourism			50	200	400
<b>IV. Fuelwood (mil m3)</b>	<b>25</b>	<b>25</b>	<b>25.7</b>	<b>26.0</b>	<b>26.0</b>

*\* Only possible collected values of environmental services are calculated.  
Total environmental value is not yet calculated*

**Table 2. Orientation for planning of forest and forest land areas**

(mil. ha)

Categories of forest and land	Status in 2005 *	Planned	
		2010	2020
<b>Total forest land area</b>	<b>19.02</b>	<b>16.24</b>	<b>16.24</b>
• Forested land	12.61	14.07	15.57
• Unused land	6.41		
• Re-afforested land after harvesting		0.30	-
• Bare land in forest		0.05	0.05
• Area of forest rehabilitation and agroforestry		1.82	0.62
<b>1. Protection forest</b>	<b>9.47</b>	<b>5.68</b>	<b>5.68</b>
• Forested land	6.19	5.67	5.67
• Unused land	3.38		
• Bare land for afforestation		0.01	0.01
<b>2. Special- use forest</b>	<b>2.32</b>	<b>2.16</b>	<b>2.16</b>
• Forested land	1.92	2.12	2.12
• Unused land	0.40		
• Bare land for afforestation		0.04	0.04
<b>3. Production forest</b>	<b>7.10</b>	<b>8.40</b>	<b>8.40</b>
• Forested land	4.48	6.28	7.78
○ Natural forest	3.10	3.63	3.63
○ Plantation forest	1.38	2.65	4.15
• Unused land	2.62	-	-
• Land for reforestation after harvesting		0.30	0
• Land for forest rehabilitation and agroforestry		1.82	0.62
<b>Ratio of forested land</b>	<b>37%</b>	<b>42.6%</b>	<b>47%</b>

\* The current status of forest and unused land of the country as accounted by 31/12/2005 as stated in Decision No. 1970/QĐ/BNN-KL-LN, dated 6/7/2006 by MARD.

**Table 3. Projected implementation progress of Strategy in 2006 - 2010**

Program	Task	Target to 2020	Implementation period 2006-2010	Ratio% (5)=(4)/(3)	Note
1	2	3	4	5	6
Sustainable forest management and development	1. Classification, planning, identification of permanent forest estate on the map and in the field	16.24 mil. ha	16.24 mil. ha	100%	
	2. Land allocation & lease	100%	100%	100%	
	3. Zoning for regeneration	803,000 ha	803,000 ha	100%	
	- Continuous regeneration zoning	403,000 ha	403,000 ha	100%	
	- New regeneration zoning	400,000 ha	400,000 ha	100%	
	4. New afforestation, including centralized production (orientation targets)	2.25 mil. ha	750,000ha	33.3%	
	5. Afforestation of protection and special-use forests	250,000 ha	250,000 ha	100%	
	6. Forest enrichment		500,000 ha	100%	
	7. Scattered tree planting	3 bil. trees	1 bil. trees	33.3%	
	8. Development of data and monitoring system to manage 14 mil. ha of forests	1 system	1 system	100%	
9. Develop forest management database and proposal for production units	100 %	100 %	100%		
10. Management capacity improvement for forest owners, development of standards, and forest certification issuance	100% area of production forest	- Capacity building for forest owners - Standards development & 30% of area certified	30%		



Program	Task	Target to 2020	Implementation period 2006-2010	Ratio% (5)=(4)/(3)	Note
1	2	3	4	5	6
	11. Forestry seed program	80% accepted seed/seed-lings; 50% vegetative seedlings	60% and 40%	75 and 80%	
	12. Domestic large timber production	10 mil. m <sup>3</sup>	3.7 mil. m <sup>3</sup>	37%	Support zoning, enrichment
	13. Small timber production	10 mil. m <sup>3</sup>	6 mil. m <sup>3</sup>	60%	- as above-
	14. NTFP production value for domestic consumption	0.8 USD	50%		
Forest Protection Biodiversity Conservation and Environmental Services Development	1. Development of protection forest system	5.68 mil. ha	5.68 mil. ha	100%	
	2. Development of special-use forest system	2.16 mil.	2.16 mil.	100%	
	3. Forest protection contracts	1.5 mil. ha	1.5 mil. ha	100%	
	4. Forest protection system established in forested communes and villages	100%	100%	100%	
	5. Establishment of forest management boards/groups (state or community)	100%	100%	100%	
	6. Development and implementation of forest protection and development plans	100%	100%	100%	
	7. Piloting and scaling up participatory forest protection and development approaches	100%	30%	30%	
	8. Assessment of environment services and payment mechanisms	2010	2010	100%	

Program	Task	Target to 2020	Implementation period 2006-2010	Ratio% (5)=(4)/(3)	Note
1	2	3	4	5	6
	9. Development of Forest Protection and Development Fund	2007	2007	100%	
	10. Number of violations of the forest protection and development law	Reduced by 80 %	Reduced by 40 %	50%	
Forest Products Processing and Trade	1. Re-organization of wood and NTFP processing sector	2015 (100%)	70%	70%	
	2. Imported timber	3.5 mil. m <sup>3</sup>	5.0 mil. m <sup>3</sup>		Large timber
	3. Sawn timber production	6 mil. m <sup>3</sup>	4.0 mil. m <sup>3</sup>	66.6%	
	4. Particle board product/ year	320,000 m <sup>3</sup>	68,000 m <sup>3</sup>	21.5%	
	5. MDF board product/ year	220,000 m <sup>3</sup>	170,000 m <sup>3</sup>	77.3%	
	6. Wood product export value/ year	7 bil. USD	3.4 bil. USD	48.57%	3,4 mil. m <sup>3</sup> product/ year
	7. Value of NTFP product export/ year	0.8 bil. USD	0.5 bil. USD	62.5%	
	8. Job creation	1.5 mil. laborers	0.5 mil. laborers	33.3%	
	9. Ratio % of NTFP income in household economy	15-20%	10%	50 – 60%	
	10. Pulp production	2 mil. tons	0,85 mil. ton	42.5%	* 60% demand
Research, Education Training Forestry Extension (RETE)	1. Investments in forestry research	2% GDP forestry	2% GDP forestry	100%	
	2. Research on seed and seedlings	60% area planted with tissue cuttings	40%	66.6%	
	3. Improvement of wood processing technology and NTFPs secondary processing	70% enterprises and craft villages using new technology	40%	57.2%	

Program	Task	Target to 2020	Implementation period 2006-2010	Ratio% (5)=(4)/(3)	Note
1	2	3	4	5	6
RETE	4. Study and development of break-through policies	Complete policies	Pilot and scale-up	20%	
	5. Regular training	5,000 students/year	5,000 students/year	100%	In forestry schools
	6. Vocational training	50% farmers occupied forest and in craft villages	25%	50%	
	7. Training for managers	80% of total staff	30%	37.5%	
	8. Establishment of linkage between research, training and forestry extension	Network completed	Implementation	10%	
	9. Development of schools with international standards	1 to 2 schools	Implementation	10%	
	10. Forestry extension	80% Farmer households trained	30%	37.5%	
	11. Participation in forestry extension activities	Attract 50% private and mass organization	20%	40%	
	12. Commune forestry extension system	100% communes with large forests have forest extension workers	100 %	100%	
	13. Development of voluntary commune and village extension	100% communes with forest	30%	30%	
	14. Development of extension programs and materials	Complete and update	Develop and produce	50%	

Program	Task	Target to 2020	Implementation period 2006-2010	Ratio% (5)=(4)/(3)	Note
1	2	3	4	5	6
	15. Development of linkages: forestry extension, training, forest owners and enterprises	Finalize network	Develop and announce	50%	
Renovating the forest sector institutions, policy, planning and monitoring	1. Development and update of the policy, legal and forestry institutional systems	Update and complete	Develop and implement	50%	
	2. Development of mechanisms to promote the participation of private sector, community, and households in forestry activities	Complete	Develop and implement	50%	
	3. Reorganization and improvement of effectiveness of the state administration system on forestry		Completed	100%	
	4. Re-organization of state forest companies in key forestry areas	100% Forestry companies	100%	100%	
	5. Development of community forestry management	4 mil. ha community forests	2.5 mil. ha	62.5%	
	6. Establishment of state forestry extension organizations at all levels	Complete	Complete	100%	
	7. Development of M&E unit, linked with strengthening planning system	Complete	Develop and implement	50%	

**Table 4. List of priorities for 2007-2010**

No.	Name of priorities
<b>A</b>	<b>Development programs</b>
1	<b><i>Establishing the national permanent forest estate</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: MONRE, People's Committees of Provinces (PPCs)</li> </ul>
2	<b><i>Finalizing inventory, assessment and monitoring system on forest resource development to support sustainable forest management</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD, PPCs</li> </ul>
3	<b><i>Enhancing allocation, lease of forest and forest land to various economic entities</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: MONRE, PPCs</li> </ul>
4	<b><i>Piloting modalities for sustainable forest management for forest owners</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD, PPCs</li> </ul>
5	<b><i>Piloting and developing community forest management</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: MONRE, PPCs</li> </ul>
6	<b><i>Developing and managing sustainably raw material plantations for forest product processing industry</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: Ministry of industry, PPCs</li> </ul>
7	<b><i>Developing scattered tree plantation and agroforestry</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD, PPCs</li> </ul>
8	<b><i>Conserving and developing non-timber forest products (NTFPs)</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: Ministry of Science and Technology (MOST), Ministry of Health, PPCs</li> </ul>
9	<b><i>Strengthening management and supply of high quality seed and seedlings in forestry</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: MOST, PPCs</li> </ul>
10	<b><i>Strengthening capacity in forest protection, forest fire prevention and fighting, biodiversity and law enforcement in the forest sector</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: Ministry of Police, PPCs</li> </ul>
11	<b><i>Piloting payment mechanisms for forest environmental services to re-invest in forest protection and development</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: Ministry of Finance, PPCs</li> </ul>
12	<b><i>Enhancing investments in material-saving and environmentally-friendly technologies in forest product processing</i></b> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaborating agencies: Ministry of Industry, MOST, PPCs</li> </ul>

13	<p><b><i>Developing craft villages, small- and medium-scale forest product processing enterprises</i></b></p> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: Ministry of Industry and Ministry of Trade</li> </ul>
14	<p><b><i>Developing support services for forest product business</i></b> (market information, market study, business promotion, technology transfer, ISO certification issuing, and development and dissemination of trade marks of enterprises etc.)</p> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: Ministry of Trade, MOST, PPCs</li> </ul>
<b>B</b>	<b>Support programs</b>
15	<p><b><i>Enhancing bio - technology applications in forestry</i></b></p> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agency: MOST</li> </ul>
16	<p><b><i>Strengthening capacity for forestry training schools and universities</i></b></p> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agency: Ministry of Training and Education</li> </ul>
17	<p><b><i>Strengthening capacity for state and voluntary forestry extension systems</i></b></p> <ul style="list-style-type: none"> <li>• Executing agencies: MARD, PPCs</li> </ul>
18	<p><b><i>Enhancing the renovation of State Forest Enterprises (SFEs)</i></b></p> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: MONRE, PPCs</li> </ul>
19	<p><b><i>Establishing and testing different financial mechanisms supporting forest protection and development work</i></b></p> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: Ministry of Finance, PPCs</li> </ul>
20	<p><b><i>Strengthening capacity on planning, coordination and monitoring for programs, projects and international commitments in forestry</i></b></p> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: MPI</li> </ul>
21	<p><b><i>Developing and consolidating the information system for forestry sector management</i></b></p> <ul style="list-style-type: none"> <li>• Executing agency: MARD</li> <li>• Collaboration agencies: MPI, GSO</li> </ul>

**Table 5. Aggregation of fund demands for 2006 - 2020**

(VND bil.)

No.	Item	2006-2010	2011-2020	Total	%
A	<b>Investment costs</b>	<b>31,946.17</b>	<b>68,413.63</b>	<b>100,359.80</b>	<b>94.0</b>
1	Sustainable forest management and development program	16,214.55	28,220.80	44,435.35	44.3
2	Forest protection, biodiversity conservation and environmental services development program	3,871.00	10,262.60	14,133.60	14.1
3	Forest product processing and trade program	10,428.07	26,662.50	37,090.57	37.0
4	Research, education, training and forestry extension program	546.98	848.82	1,395.80	1.3
5	Renovation of forest sector institutions, policy, planning and monitoring program	885.57	2,418.91	3,304.48	3.3
B	<b>Regular costs</b>	<b>1,939.17</b>	<b>4,460.09</b>	<b>6,399.26</b>	<b>6.0</b>
	<b>Total funds needed</b>	<b>33,885.34</b>	<b>72,873.72</b>	<b>106,759.06</b>	<b>100.0</b>

**Additional explanations on the implications of Table 5 are as follows:**

Needed funds are calculated on the basis of 2 types: investment and recurrent costs.

The recurrent costs are calculated on the basis of data for funds mobilized in the past 5 years (2001 – 2005); expected GDP growth for 2006 – 2010 (about 7.2% on average) and 4 – 5% of growth of forest production value.

The investment costs are calculated based on:

- Operational items and volume of each program;
- Prices based on proposed revisions that MARD submitted to the Prime Minister with respect to the 5 Million Hectare Reforestation Project (5MHRP) and other relevant norms; and
- Forestry roads in 2006 – 2010.

The source of funds for implementation of the strategy in 2006 – 2010 are based on:

- Financing mobilized in 5 years between 2001 and 2005, and expectations that potential financing sources will increase by 30% as compared with the past 5 years;
- The supply source of the state budget is considered sufficient to meet the demand;
- For the program on timber and forest product processing and trade, the funding sources are assumed to be sufficient to meet funding requirements on the basis of assessment on current situation of timber processing activities and growth speed of this production sector;
- ODA funds are calculated using existing committed projects for 2006 – 2010;
- Distribution of funding sources by operational items and features of each program has been based on the analysis done by the financial experts; and
- Balance between funding demand and supply capabilities reflects the additional funding needed for implementation of the forestry strategy.

**Table 6. Aggregation of fund demands for 2006 - 2010**

No.	Item	Allocated by year (VND bil.)					Total (VND bil.)	USD (mil.)	%
		2006	2007	2008	2009	2010			
<b>A</b>	<b>Investment costs</b>	<b>5,720.84</b>	<b>6,317.42</b>	<b>6,515.48</b>	<b>6,620.02</b>	<b>6,771.41</b>	<b>31,946.17</b>	<b>1,996.64</b>	<b>94.3</b>
1	Sustainable forest management and development program	2,580.00	3,140.55	3,383.20	3,485.40	3,625.40	16,214.55	1,013.41	50.8
2	Forest protection, biodiversity conservation and environmental services development program	788.00	816.00	761.00	753.00	753.00	3,871.00	241.94	12.1
3	Forest product processing and trade program	2,085.61	2,085.61	2,085.61	2,085.61	2,085.63	10,428.07	671.75	32.6
4	Research, education, training and forestry extension program	90.50	99.05	108.46	118.80	130.17	546.98	34.19	1.7
5	Renovation of forest sector institutions, policy, planning and monitoring program	176.73	177.21	177.21	177.21	177.21	885.57	55.35	2.8
<b>B</b>	<b>Regular costs</b>	<b>354.17</b>	<b>370.00</b>	<b>380.00</b>	<b>390.00</b>	<b>445.00</b>	<b>1,939.17</b>	<b>121.20</b>	<b>5.7</b>
	<b>Total funds needed</b>	<b>6,075.01</b>	<b>6,688.42</b>	<b>6,895.48</b>	<b>7,010.02</b>	<b>7,216.41</b>	<b>33,885.34</b>	<b>2,117.83</b>	<b>100</b>



Table 7. Structure of fund demands for 2006-2010 according to fund sources and programs

No.	Program	Sources of funds (VND bil.)							Total
		State budget	Foreign investment	Official Development Assistance (ODA)	Investment by state enterprises, cooperatives	Household & individual investments	Foreign Direct Investment (FDI)	Others	
1	<b>Program: sustainable forest management and development</b>	<b>4,266.00</b>	<b>2,995.52</b>	<b>2,494.52</b>	<b>1,372.90</b>	<b>2,030.01</b>	<b>2,940.82</b>	<b>114.78</b>	<b>16,214.55</b>
	<i>% compared with total program fund</i>	<i>26.31</i>	<i>18.47</i>	<i>15.38</i>	<i>8.47</i>	<i>12.52</i>	<i>18.14</i>	<i>0.71</i>	<i>100.00</i>
	<i>% compared with total of each fund</i>	<i>55.77</i>	<i>60.07</i>	<i>59.88</i>	<i>37.89</i>	<i>60.39</i>	<i>37.59</i>	<i>100.00</i>	<i>50.76</i>
2	<b>Program: forest protection, biodiversity conservation and environmental services development</b>	<b>2,945.66</b>		<b>690.00</b>	<b>117.67</b>	<b>117.67</b>			<b>3,871.00</b>
	<i>% compared with total program fund</i>	<i>76.10</i>		<i>17.82</i>	<i>3.04</i>	<i>3.04</i>			<i>100</i>
	<i>% compared with total of each fund</i>	<i>38.51</i>		<i>16.56</i>	<i>3.25</i>	<i>3.01</i>			<i>12.12</i>
3	<b>Program: forest product processing and trade</b>		<b>1,990.80</b>	<b>11.27</b>	<b>2,122.00</b>	<b>1,422.00</b>	<b>4,882.00</b>		<b>10,428.07</b>
	<i>% compared with total program fund</i>		<i>19.09</i>	<i>0.11</i>	<i>20.35</i>	<i>13.64</i>	<i>46.82</i>		<i>100</i>
	<i>% compared with total of each fund</i>		<i>3.,93</i>	<i>0.27</i>	<i>58.57</i>	<i>36.33</i>	<i>62.41</i>		<i>32.64</i>
4	<b>Program: research, education, training and forestry extension</b>	<b>318.98</b>		<b>206.64</b>	<b>10.68</b>	<b>10.68</b>			<b>546.98</b>
	<i>% compared with total program fund</i>	<i>5.,32</i>		<i>3.,78</i>	<i>1.95</i>	<i>1.95</i>			<i>100</i>
	<i>% compared with total of each fund</i>	<i>4.17</i>		<i>4.96</i>	<i>0.29</i>	<i>0.27</i>			<i>1.71</i>
5	<b>Program: Renovation of forest sector institutions, policy, planning and monitoring</b>	<b>118.72</b>		<b>766.85</b>					<b>885.57</b>
	<i>% compared with total program fund</i>	<i>13.40</i>		<i>86.13</i>					<i>100.00</i>
	<i>% compared with total of each fund</i>	<i>1.55</i>		<i>1.,32</i>					<i>2.77</i>
	<b>Total</b>	<b>7,649.36</b>	<b>4,986.32</b>	<b>4,169.28</b>	<b>3,623.25</b>	<b>3,580.36</b>	<b>7,822.82</b>	<b>114.78</b>	<b>31,946.17</b>
	<b>%</b>	<b>23.9</b>	<b>15.6</b>	<b>13.1</b>	<b>11.3</b>	<b>11.2</b>	<b>24.5</b>	<b>0.4</b>	<b>100.0</b>