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The report on
Developing Monitoring Frameworks of Sustainable Forest Management (SFM) in Vietnam

Forest restoration in Vietnam

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Abbreviation

CPRGS: Comprehensive Poverty Reduction and Growth Strategy
DAR: Department of Agricultural and Rural Development
GTZ: German Agency for Technical Cooperation
GSO: General Statistics Office of Vietnam
GFGs: Global Forest Goals
Gov: Government
JICA: Japan International Cooperation Agency
MONRE: Ministry of Natural Resources and Environments
MARD: Ministry of Agricultural and Rural Development
NGOs: None Government Organizations
PES: Payment for Environmental Services
PEFC: Program for the Endorsement of Forest Certification
REDD: Reducing Emissions from Deforestation and forest Degradation.
$REDD^{+}$: Refers to conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks in developing countries
SFM: Sustainable Forest Management
SDGs: Sustainable Development Goals
UN: United Nations
UNSPF: United Nations Strategic Plan for Forests
UNFI: United Nations Forest Instrument
UNFF: United Nations Forum on Forests
UNFCC: United Nations Framework Convention on Climate Change
VNFOREST: Vietnam Administration of Forestry
VFCS: Vietnam Forest Certification Scheme
VPA-FLEG: Voluntary Partnership Agreement - Forest Law Enforcement Governance and Trade.
WB: World Bank
5MHRP: Five Million Hectares Reforestation Program

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Executive summary

Vietnam has about 33.1 million ha of natural lands and 97.58 million persons (GSO, 2020). Total of forest and forestry land is 17.99 million ha, accounted for 54.4 % of total natural lands. In which the areas with forests is 14,677 million ha, corresponding forest cover is 42.01% in 2020 that increased 1.5 times higher than that in 1990 (MARD, 2020). Through the long historical development process, the national forestry has obtained a great achievement as demonstrated by the total value of export forestry products which was over US$ 13.2 billion in 2020 ranking Vietnam 5th in the world and 2nd in Asia in term of exporting wood and forest products, the forest sector has contributed to 31% of total value export of agricultural products in Vietnam and reached to 5% of total value of national export and attracted about 20 million labors in the country (VNFOESRT, 2020). Today, Vietnam forestry is identified as an important economic sector that plays a vital role on watershed and environmental protection, biodiversity and landscape conservation. In addition, Vietnam forestry also contributes to national economic development by providing forestry products for domestic consumption, limitation and mitigation of natural disasters, creating jobs and improvement livelihood of local people living in the remote areas.

To promote sustainable forestry development, Vietnam government has issued many important policies such as Forestry Protection and Development Law in 2004, Forestry Law in 2017, Planning Law in 2017, Vietnam Forestry Development Strategy in 2006 and just renewed in 2020, Planning Systems of Specially Used Forest in 2014 etc. All those policies have focused on promoting sustainable forestry management (SFM) aimed at contributing to national economic and social development, poverty reduction, ensuring national security, environmental protection, biodiversity conservation and combating climate change.

Vietnam's national forest policies are mostly in line with United Nations Strategic for Forests (UNSPF) 2017-2030 however a review was conducted to identify gaps in policies and data availability for monitoring, assessment and reporting. This work was carried out as part of capacity building efforts in Vietnam that included a Gap Analysis of all valid key forest policies and programs to assess the availability of the major data sources in relation to the reporting requirement for the Six (6) Global Forest Goals (GFGs) and twenty-six (26) Targets of the new Voluntary National Reporting Format. This work identifies areas where the relevant data were not available within the national forest policies and programs were identified as gaps in the data requirement for reporting on progress towards the achievement of the Goals and Targets. The major sources of financial inflow for SFM within the country were also evaluated. This report is the outcome of the inventory of information sources and gap analysis and includes recommendations as to how the identified gaps in the data sources within the national forest policies and programs should be addressed in Vietnam.

Chapter 1: General introduction and background

1.1. Introduction

The United Nations Forum on Forests (UNFF) has coordinated global efforts on monitoring assessment and reporting on SFM of member states of the United Nations. Since its inception in 2000, the Forum has reached notable milestones including the adoption of the first UN Forest Instrument in 2007, and most recently, the adoption in 2017 of the first UN Strategic Plan for Forests 2017- 2030 and the creation of the Global Forest Financing Facilitation Network (GFFFN). The heart of the UNSPF is the six GFGs and 26 associated targets to be reached by 2030, this program is voluntary and universal. Therefore, it is necessary to develop national monitoring frameworks to monitor and evaluate progress towards the achievement of the GFGs and Targets, the UN Forest Instrument (UNFI) and the Voluntary National Contributions (VNCs) of the UNSPF . Vietnam was selected as a pilot country to build the country's capacity in identificating appropriate data sources from the relevant forest-related organization.

1.2. The task of this study

This study aims to develop a monitoring system to measure progress towards to SFM, implementation of the UNFI, GFGs and forest related SDGs as follows:

• Prepare a background analytical study on availability of forest data, beyond the bio-physical information, including socio-economic forest related data, mapping of existing gaps and identifying tools to address these gaps; and the national and international reporting requirements on forests and forest related goals and targets.

• Liaise with the key forest-stakeholders and assist in mobilizing the country team and coordinating national inputs in the project development and formulation and implementation of:

a. Map existing national forest related-databases and identifying potential data gaps and tools to address these gaps - this will include not only "classic forest inventories" but also financial data/flows for forests and contribution of forests to food security and poverty eradication;

b. Develop the monitoring framework for international forest-related goals and targets (serving the UN Forest Instrument, GFGs, SDGs and FRA2020); and

c. One national virtual workshop (tentatively scheduled in September) to review and validate available forest data in Vietnam attended by a range group of stakeholders from relevant sectors (agriculture, water, energy, finance, nature conservation). The workshop will also review and identify available forest- related data and data gaps.

• Present the findings of the initial background analytical study at the virtual workshop and prepare a report of the national workshop.

• Finalize the background analytical study based on the feedback and inputs from the virtual national workshop, including comments from UNFFS. The study should include an executive summary, clear conclusions and recommendations.

The outcome of this study is a report of the Inventory of Information sources and Gap Analysis and includes recommendations as to how the identified gaps in the data sources within the national forest policies and programs.

1.3. The methods of study

The methodology applied included:

Desk study: In order to carry out the assignment, the key policies and programs of the forestry sector involved in SFM were reviewed. These included polices and programs from the Government to the Ministry of Agricultural Rural Development (MARD) and Vietnam Forestry Administration (VNFOREST) and other NGOs. The analysis also included identification of sources of financial flows to the public, civil society and the private sector organizations. Lack of data or information in relation to the relevant Global Forest Goal and target, was noted as a gap that needs attention with regards to what needs to be done to address the issues.

- **Personal telephone interviews:** Due to the pandemic, interviews of key person/experts working in forestry management at national and local levels were c to identify databases in order to better understand the information available in relation to SFM; discuss and identify data gaps conducted..

- **Data Analysis:** Focusing on the GFGs and associated targets, reviewed the data and aligned activities and selected indicators of the current national policies and programs in the forestry sectors related to SFM. This included indicators on measuring performance in the national development agenda, national forest programs and other forest-related programs contributing to SFM. The collected documents were classified into six topics to review as follow:
    - Reverse the loss of forest cover worldwide through SFM, including protection, restoration, afforestation and reforestation, and increase efforts to prevent forest degradation and contribute to the global effort of addressing climate change;
    - Enhance forest-based economic, social and environmental benefits, including by improving the livelihoods of forest dependent people;
    - Increase significantly the area of protected forests worldwide and other areas of sustainably managed forests, as well as the proportion of forest products from sustainably managed forests;
    - Mobilize significantly increased, new and additional financial resources from all sources for the implementation of SFM and strengthen scientific and technical cooperation and partnerships;
    - Promote governance frameworks to implement SFM, including through the UN Forest Instrument, and enhance the contribution of forests to the 2030 Agenda; and Enhance cooperation, coordination, coherence and synergies on forest-related issues at all levels, including within the UN System and across Collaborative Partnership on Forests member organizations, as well as across sectors and

relevant stakeholders.

1.4. Structure of the report

This report was developed on the basis of both the general structure suggested by the UNFFS consultant and adjustments were made according to the situation in Vietnam. The structure of the report is therefore composed of six chapters.

Chapter 1: Provides a general introduction and background including the rational of the assignment and the methodology used.

Chapter 2: Provides a national profile and general information on Vietnam including natural condition, social-economic and resources conditions.

Chapter 3: Covers f orest resources and management. It provides information and data on forest classification, forest and forestry lands, change of forest and administration forest in Vietnam.

Chapter 4: Covers Vietnam's national forest policies including Forestry Law and other decrees, circulars and decisions related to the forest sectors and other important forest policies.

Chapter 5: Identifies gaps and the monitoring framework based on the forest policies review identify appropriate data gaps related to the targets of the Global Forest Goals.

Chapter 6: Conclusions and recommendations. In this chapter, the general conclusions and recommendations on how to address the gaps and improve upon the information needs. The chapter also provides recommends on the future policies formation towards to 2025 and vision for 2030 in line with GFGs .

Chapter 2: National profile

1.1. Natural conditions

• Geographical location

Vietnam is located in the Eastern part of the Indochina peninsula, bordering China to the North, Laos and Cambodia to the West with a long land border of 4,550 km, and facing the Eastern Sea (South China Sea) and the Pacific to the East and the South. As showed on the map, Vietnam is an S-shaped long strip of land, stretching from 23°23' to 8°27' North latitude. The country's total length is 1,650 km from the northernmost point to the southernmost point. Its width, stretching from the Eastern coast to the Western border, is about 500 km at the widest part and 50 km at the narrowest part.

• Topographical condition

Vietnam has a diverse topography. The country's territory is made up of hills, mountains, deltas, coastal lines and continental shelf, reflecting the long history of geology and topography formation in a monsoon, humid climate and a strongly weathered environment. The topography is lower from the Northwest to the Southeast, which is clearly shown in the flows of major rivers. Three quarters of Vietnam's territory are made up of low mountains and hilly regions. Regions with elevation less than 1,000 meters above sea level make up 85% of the territory. Mountainous regions over 2,000 meters above sea level only accounted for 1% of total lands. Mountain ranges and hills form a large bow facing the Eastern Sea with 1,400 km length from the Northwest to the Southeast. The highest mountain ranges are all located in the West and Northwest. Fan Xi Pan Peak, with a height of 3,143 meters, is considered the roof of Indochina. Nearer to the Eastern Sea the mountain range is lower and ends with a coastal strip of lowland. From Hai Van pass to the South, the topography is less complex. A long limestone mountain range is replaced by large granite mountains followed by a vast plateau known as the Central Highlands behind Truong Son range to the East.

• Climate condition

Vietnam is located in the tropical and temperate zone. Therefore, Vietnam's climate is characterized by high temperature and humidity all year round and it changes by seasons and by regions from the lowland to highland, from North to South and from East to West. There are two major climate regions in Vietnam. Northern Vietnam (from Mong Cai to Hai Van pass) has a tropical monsoon climate with four distinguishable seasons (spring, summer, autumn and winter) and is influenced by the highly humid Northwest monsoon from the Asian mainland and Southeast monsoon from Thailand and Laos and the Eastern Sea. Southern Vietnam (from Hai Van pass to Ha Tien) has moderate tropical climate given the weak influence of monsoons and is characterized by dry and rainy seasons and warm weather all year round. In summer, the average temperature is 25°C (Ha Noi 23°C, Hue 25°C, Ho Chi Minh City 26°C). In winter, temperature

in the North reaches the lowest in December and January. In Northern mountainous regions such as Sa Pa, Tam Dao and Hoang Lien Son, the temperature is sometimes down to 0°C with snow.

Vietnam's climate is also characterized by a considerable amount of sunshine with the number of sunny hours varying between 1,400 and 3,000 hours per year. The average rainfall each year stands between 1,500 mm and 2,000mm. Air humidity is 80%. Given the influence of monsoon and complex topography, Vietnam is often prone to natural disasters such as storms, floods and droughts (each year, the country suffers from 6 to 10 tropical storms). The diversity of climate and topographical conditions making the country has diversity of forest types and rich in biodiversity.

1.2. Socio-economic condition

• Population

In 2020, Vietnam's population was estimated at 97.58 million persons. Close to thirty-six million (35.93 million people) or 36.82% of the population live in urban areas while 61.65 million people (63.18%) live in rural areas. Further, 49.8% of the population are male while 50.20% are female (GSO, 2020).

• Demographic information

Fifty-four ethnic groups live in Vietnam. The largest is Kinh (85.3% of total population), followed by Tay (1.9%), Thai (1.8%), Muong (1.5%), Hmong (1.4%) and Khmer (1.3%). The rest of the ethnic minorities make up 6.8% of the population. Most of ethnic minorities live in rural and mountainous areas and depend on forests for their livelihoods (GSO, 2020).

• Administrative system/division

According to GSO 2020, Vietnam has 63 provinces and National City, in which there are 58 provinces and 5 national cities. The capital of Vietnam is Ha Noi. In the whole country, there are 78 cities under provinces, 49 urban districts, 51 towns, 529 rural districts, 1,714 wards, 605 town districts and 8,295 communes (GSO, 2020).

• GDP per capita

From 2010 to 2020, Vietnam's economic growth rate was higher than the population growth. From 2010, the country's GDP increased from US$1,273 per person in to US$ 2,202 per person in 2016 and reach US$ 2,779 in 2020. Although the COVID-19 pandemic had a great impact on the private sector, Vietnam's economy has continued to grow. Between 2019 and 2020, GDP per capita increased from US$ 2,714 to US$ 2,779. GDP per capita of Vietnam is showed in Figure 1.

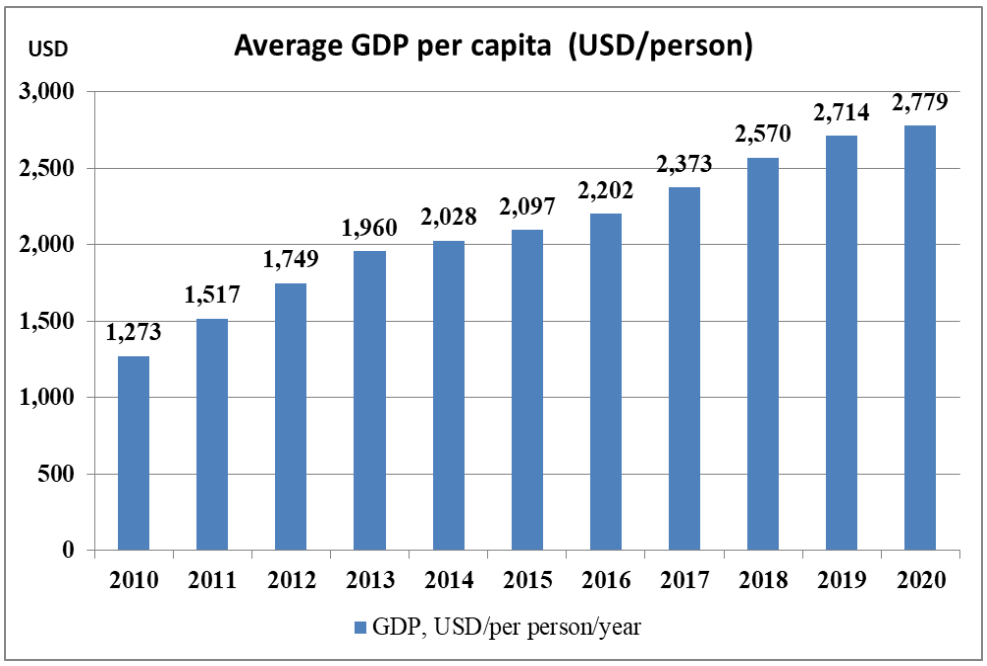

Figure 1: GDP per capital of Vietnam from 2010 to 2020
(Sources from GSO 2010, 2020)

• Employment

According to GSO 2020, the labor force aged 15 years and over reached 54.8 million persons, a decrease of 924.5 thousand persons compared to 2019 due to the negative impact of the COVID-19 pandemic. The employed population at 15 years of age and above by agriculture, forestry and fishing was 17,724.6 thousand persons accounted for 33.1% of total labor in the whole country (GSO, 2020).

1.3. Natural resources condition

• Land areas and land types

Vietnam's total land area is 33,123.6 thousand ha and mostly used for agricultural production with 27,289.4 thousand ha accounted for 82.4% of total lands. See table 1.

Table 1: Land types in Vietnam

No	Types of land	Areas (unit 1,000 ha)
	TOTAL	**33,123.60**
I	**Agricultural land**	**27,289.40**
1.1	Agricultural production land	**11,498.50**
-	Annual crop land	6,952.10
-	Perennial crop land	4,546.40
1.2	Forestry land	**14,940.80**
-	Production forest	7,480.40
-	Protection forest	5,256.90

-	Specially used forest	2,203.50
1.3	Water surface land for fishing	**795.3**
1.4	Land for salt production	**17.0**
1.5	Other agricultural lands	37.8
II	**Non-agricultural land**	**3,773.80**
2.1	Homestead land	721.7
2.2	Specially used land	1,893.20
2.3	Rivers and specialized water surfaces	984.8
2.4	Others	174.1
III	**Unused land**	**2,060.40**

(Updated 31/12/2018; sources: GSO 2020)

• Agricultural production

According to GSO (2020), production of cereals recorded 47.3 million tons nationwide, of which paddy production reached 42.8 million tons, spring paddy production reached 19.9 million tons; autumn paddy production reached 14.8 million tons; winter paddy production gained 8.1 million tons. The following numbers were production records of several perennial crops and fruits: rubber reached 1,226.1 thousand tons; pepper reached 193.3 thousand tons; coffee reached 1,763.5 thousand tons; orange, mandarin reached 1,359.7 thousand tons; and mango recorded 892.7 thousand tons. Livestock population in 2020 was recorded as follows: buffalo population reached 2.3 million heads; cattle population was at 6.2 million heads, pig population reached 22 million heads; poultry population was at 512.7 million heads. Production of fishery reached 8.5 million tons including catching 3.9 million tons and aquaculture 4.6 million tons.

• Forestry production

In 2020, the COVID-19 pandemic also had a major impact on the forest sector, particularly in wood production. This was due an increase in demand for consumer wood processing products. Wood production in the year was estimated at 17,169.7 thousand m^3, an increase of 5.2% in comparison with that of the previous year (increasing by 7% in 2019). The area of newly concentrated forest in 2020 was estimated at 270.4 thousand hectares, an increase of 0.5%, in comparison with that in 2019 (MARD, 2020).

• Flora and fauna

Vietnam's soil is diverse with high fertility, thus providing very favourable conditions for the development of agriculture and forestry. Vietnam is also endowed with abundant and diverse flora, including 14,600 species of vegetation. Vietnam's flora is mainly covered by tropical forests with plants and trees adapted much sunshine, high temperature and high humidity (Pham Hoang Ho, 1991, 1993).

The fauna in Vietnam is as abundant and diverse as the flora. There exists a variety of precious species listed in the World Red Book. At present, there are 275 species of mammals,

800 species of birds, 180 species of reptiles, 80 species of amphibians, 2,400 species of fish and 5,000 species of insects. Dense forests, limestone mountain forests, and multi-canopied forests provide habitats of different species of monkeys, languors, gibbons and wild cats. Vietnamese forests have typical monkey species such as white-headed languors, delacours languors and black languors. Likewise, there are valuable species of birds such as pheasants and pheinardia ocellata. The high mountains in the North have many furred wild animals like selenartos, small bears, big black squirrels, foxes, otters and civet cats (MARD, 2021).

1.4. Poverty situation

• Poverty rate

Vietnam is a successful country for poverty reduction. Since 2016, Vietnam applied new regulation on estimating poverty according to Decision No.59/2015/QĐ-TTg of Prime Minister which examines poverty focusing on health care, education, living condition, information approach and social support. According to new standard, poverty rate in 2016 was estimated at 9.9% and reduced to 5.3% in 2019 and 4.8% in 2020 (UNDP, 2020). Most poor people live in rural, mountainous areas and work in the agricultural sector, including forestry, fishery and cultivation; and experience food insecurity, poor infrastructure (electricity, road and water supply) and poor housing.

Poor people especially who living in mountainous areas are faced with many challenges for their livelihood development. Firstly, due to their low income, they are unable to purchase high quality seedling, fertilize, machine resulting in low productivity. They often get loan to invest in agriculture activity and for their daily living. Secondly, they lack the capacity to effectively market their produce resulting in low returns. Poor communities also lack access to to access high quality education and training, which bring negative effect to their opportunity to overcome poverty in the future (UNDP, 2017). Further, the effect of climate change such as drought, flood, storm, land slide, pose additional challenges for poor people. For this reason, most forest-related policies include poverty reduction actions focused on the rural poor and ethnic minorities.

• Comprehensive poverty reduction and growth strategy

The Comprehensive Poverty Reduction and Growth Strategy (CPRGS) is an action program that translates the Government's Ten-Year Socio-economic Development Strategy, Five-Year Socio-economic Development Plan as well as other sectorial development plans into concrete measures with well-defined road maps for implementation. The CPRGS recognizes that despite the country's relatively rapid economic change, poverty remains a pressing issue. The CPRGS includes major policies and measures for various sectors with respect to poverty reduction and growth for agriculture and rural development. They include:

- Ensure food security;
- Diversify agricultural production;
- Attach importance to market research and ensure timely provision of information;
- Increase investments in agriculture;
- Link the production of high value crops to developing storage and processing

facilities;

- Promote research and efficient use of natural resources;
- Expand agricultural, forestry, fishery activities and extension activities in a manner that is suitable to production conditions in different areas in a way that is responsive to the demand of poor people;
- Develop fisheries and diversify aquaculture;
- Develop a disaster prevention strategy to minimize losses; and
- Stabilize livelihoods and production in disaster-prone areas.

The strategy also recognizes the importance of land and land availability as a limiting factor in poverty alleviation and includes an objective to implement land use planning and grant land use rights in order to increase the efficiency of land use. For forestry, the objectives are aimed at developing the forest sector a profitable sector that creates jobs and raises incomes for people in mountainous areas. There is a recognized need to provide adequate incentives to people who plant forests and to promote the role of the community in the protection and natural regeneration of forests. The CPRGS includes the continuation of the implementation of the 5 million hectares re-afforestation project (5MHRP) and acceleration of the process of the allocation of land and forest, especially in important, environmentally sensitive areas.

Mechanisms include the review and revision of policies on investment in forest development including adjusting cost norms and unit prices in forest protection, providing interest free or low interest loans for afforestation, adequate investment in infrastructure in forest areas (e.g. roads to transport materials, storage facilities, etc.), the development of the forest processing industry to increase the value received from forestry and the creation of forestry-related income generating opportunities (Hilary et al., 2017).

• National policies for forest protection and development linked with poverty reduction

In order to promote sustainable poverty reduction in the mountainous areas linked with forest protection, the Government of Vietnam adopted the resolution No.30a/2008/NQ-CP dated 27/12/2008 on national support for rapid and sustainable poverty reduction in 61 of the poorest districts in the country. Households or individuals who participated in forest protection receive financial support 1.5 timeshigher 1.5 times than other areas. Households that assign land for planting production forest receive a one-off support of between VND 5 million to VND 10 million/ha for buying seedlings, fertilizers to partially make up for their labor costs and get all products from their plantation forest.

The Government of Vietnam issued Decree No. 75/2015/ND-CP dated 9/9/2015 on policies and mechanisms for forest protection and development linked with rapid and sustainable poverty reduction for ethnic minorities for the period 2015 to2020. Poor ethnic minorities and Kinh households that reside in disadvantaged communes in ethnic minority and mountainous areas and participate in forest protection and forest restoration, receive VND[1] 400,000 per hectare for up to 30 ha of forest annually. Those involved in restoration of degraded forest with adding

[1] Vietnamese's currency, VND 23,110 equivalents US$ 1 updated 16/9/2021.

tree species receive a support of up to VND 1.6 million per hectare per year in the first three years and VND 600,000 for the subsequent next three years for tending forest. The support is to be decided by chairpersons of provincial-level People's Committees based on their local practical conditions. Poor households reforest production forests and plant NTFPs receive one-off between VND 5 million and VND10 million per hectare to purchase seedlings, fertilizers and partially make up for their labor costs. Those households faced with food scarcity but used their farmland to plant forest, receive additional support equivalent to 15 kg of rice per person per month for up to seven years during the initial afforestation period. In addition, the Bank for Social Policies and the Bank of Agriculture and Rural Development offers these households a loan of VND 15 million per hectare without requiring collateral, at an annual interest rate of 1.2 percent for up to 20 years to support planting of production forests and NTFPs, and a loan of VND 50 million for raising livestock up to 10 years. This policy has significantly contributed to reduce the poverty rate for forest dependent ethnic minorities living.

Chapter 3: Forest resources and management

3.1. Forest classification

According to circular No.33/2018/TT-BNN-PTNT dated 16/11/2018, issued by the Ministry of Agricultural and Rural Development on regulations of inventory and monitoring forest, the forest classification is as follow:

Table 2: Forest classification in Vietnam

Forest Types	Traits
1. Classification forest based on purpose	
1.1. Specially used forest	Forests mainly used for natural forest ecology preservation, forest biological gene sources, scientific research, national ecological standard samples, scientific research; protection historical and cultural relics and places of scenic beauty; resting and tourism, combined with environmental protection.
1.2. Protection forest	Forest are mainly used to natural resource protection as water, soil, air, and prevention soil erosion, counter desertification, limit disasters, regulate climate and protect environment, combined with ecological tourism, providing environment services.
1.3. Production forest	Forests are mainly used for production and trading of timber, non-timber forest products and protection of the environment.
2. Classification forest based on the origin	
2.1. Natural forest	• Primary forests: forests are not affected by human or natural disasters; The structure of the forest is relatively stable. • Secondary forest: The forest has been affected by human or natural disasters to the extent that forest structure is changed. a. Restore forests: forests formed by natural regeneration on land

	that has lost forest due to slash-and-burn, forest fire or exhaustion; b. Post-harvest forest: forest that has been exploited for timber or other forest products.
2.3. Plantation forest	• Forests formed by human cultivation, including; a. New planted forests on land without forests; b. Replanted forests after the exploitation of planted forests; c. Natural regenerated forest from exploited plantations.
3. Classification forest based on site condition	
3.1. Forest in mountain land	• Forests grow on the hills and mountains.
3.2. Forest in rocky mountain	• Forests develop on rocky mountains, or on exposed rocky areas with no or very little soil on the surface.
3.3. Flooded forest	• Forests grow on areas regularly flooded or periodically submerged. a. Mangrove forest: It is a coastal developed forest and large estuaries with frequent or periodic flooded tides. b. Forest on alkaline soils: It is a forest growing on alkaline soil. c. Fresh-water submerged forests are forests where fresh and submerged freshwater is regularly or regularly flooded.
3.4. Forest on sandy soil	• Forest on the sand dunes.
4. Classification forest based on species	
4.1.Wood forest	• Broad-leaved forest: Leafy forest accounts for over 75% of the total number of trees; • Coniferous forests; • Mixed broadleaf and coniferous forests.
4.2. Bamboo forest	• Mainly composed of tree species such as: bamboo, maize, bamboo shoots, bamboo shoots, vases, plots, leeches, mounds, mounds, bushes, etc.
4.3. Mixed and bamboo forest	• Wood-bamboo mixed forests: forests with timber accounts for> 50% of forest cover; • Bamboo-wood mixed forest: Bamboo forest accounts for more than 50% of forest cover.
4.4. Coconut forest	• Mainly composed of coconut.

According to MARD 2020, Vietnam has 14,677,215 ha of forest, including 2,173,231ha of specially used forest, 4,685,504 ha of protection forest and 7,818,480 ha of production forests. Most of forests are natural forest with 10,279,185ha. As a result of forest restoration program, the plantation forest areas in Vietnam have been widely developed and obtained 4,398,030 ha as showed in table 2.

Table 3: The forest and forestry lands

Unit: ha

Types of forests	Total	Specially used forests	Protection forests	Production forest
Total forest areas	**14,677,215**	**2,173,231**	**4,685,504**	**7,818,480**
I. Based on origin	**14,677,215**	**2,173,231**	**4,685,504**	**7,818,480**
1. Natural forest	10,279,185	2,081,425	4,070,519	4,127,240
2. Plantation forest	4,398,030	91,805	614,985	3,691,240
II. Based on site condition	**14,677,215**	**2,173,231**	**4,685,504**	**7,818,480**
1. Forest in mountain land	13,416,393	1,852,963	4,046,125	7,517,305
2. Forest in rocky	973,241	281,338	498,639	193,264
3. Flooded forest	238,954	38,504	124,381	76,069
4. Forest on sandy soil	48,628	426	16,359	31,842
III. Forest based on species	**10,279,185**	**2,081,425**	**4,070,519**	**4,127,240**
1. Wood forest	8,893,205	1,888,805	3,611,670	3,392,731
2. Bamboo forest	238,430	28,330	65,968	144,133
3. Mixed wood and bamboo forest	1,143,192	164,182	392,669	586,342
4. Coconut forest	4,358	110	213	4.035

(Sources from MARD, 2021)

3.2. Forest and forestry land

In Vietnam, forestry land consists of three kinds of forest land: land that has both natural forests and planted forests; new forest plantation; and bare land. Therefore, noting that in total forest area is 14,677,215 ha in 2020, the forest areas used to calculate the average forest cover in the whole country is only 13,919,557 ha because the rest of the forest areas 757,658 ha is new plantation forest that to not fully meet the forest standards following the forest stand after forest formulation period (MARD, 2020).

Table 4: The forest areas and forestry land

Unit: 1,000 ha

No	Items	Total	Classified in 3 types of forest		
			Specially used forests	Protection forests	Production forests
	Sum	**17,995.5**	**2,378.7**	**5,762.3**	**9,854.5**
	Proportion (%)	**100.0**	**13.2**	**32.0**	**54.8**
I	**Land with forest**	**13,919.6**	**2,164.7**	**4,609.7**	**7,145.1**
1	Natural forest	10,279.2	2,081.4	4,070.5	4,127.2
2	Plantation forest	3,640.4	83.3	539.2	3,017.9
II	**Land without forest**	**4,076.0**	**213.9**	**1,152.6**	**2,709.4**
1	New planted forest but not yet become a forest	757.7	8.5	75.8	673.4
2	Restoration-oriented protection	789.1	49.5	318.3	421.3
3	Other lands	2,529.2	155.9	758.5	1,614.8

(Sources from MARD, 2021)

In total of forest and forestry land is 17,995.5 thousand ha, in which is 13,919.6 thousand ha forests and 4,076 thousand ha of area without forest. The forestry lands are classified into three types as follow:

a. Specially used forestry land: Accounted for 13.2 % of total forestry land with 2,378.7 thousand ha, mainly located in north central and central highlands. In which, the areas with forest is 2,164.7 thousand ha accounted for 91% and the area without forest is 213.9 thousand ha accounted only 9.0% of total areas of specially used forestry lands.

b. Protection forestry land: Accounted for 32.0% of total forestry land with 5,762.3 thousand ha, mainly located in northern midlands and mountains and central coastal. In which, the areas with protection forest is 4,609.7 thousand ha, accounted for 80% and the area without forest is 1,152.6 thousand ha accounted 20% of total areas of protection forestry lands.

c. Production forest land: Accounted for 54.8% of total forestry land with 9,845.5 thousand ha, mainly located in Northeast, Central highlands and North central. In which, the area with productive plantation forest is 7,145.1 thousand ha, accounted for 72.5% and the area without forest is 2,709.4 ha, accounted for 27.5% of total production forest lands.

3.3. Forest cover and its trends

Due to a multitude of reasons, Vietnam's forest cover significantly reduced from 43% in 1943 to 27% in 1990. The Forest cover slightly increased to 38% in 2006 and 39% in 2010 (MARD, 2021). Faced with many negative effects from deforestation, the Vietnamese government has paid attention and endeavored to recover forest. From 1990 to 2020, a number of

forest restoration programs and projects have been implemented including: the Greening the hills program 327 (1995-1998); Five Million Hectares Reforestation Program (5MHRP) (code 661) (1998-2010); Forest protection and development program (2010-2020); and Sustainable forest development program; and other forest recover programs (WB, JICA, GTZ). As a result, the country's forest cover has continuously increased from 39.7% in 2011 to 42.01% in 2020 (MARD, 2020).

Table 5: Trends in forest area and forest cover 2011-2020 in Vietnam

Years	Forest area (unit: ha)			The forest areas to calculate forest cover	Forest cover (%)
	Natural forest	Plantation forest	Total forest areas		
2011	10,285,383	3,229,681	13,515,064	13,138,100	39.7
2012	10,423,844	3,438,200	13,862,043	13,463,600	40.7
2013	10,398,160	3,556,294	13,954,454	13,558,474	41.0
2014	10,100,186	3,696,320	13,796,506	13,382,444	40.42
2015	10,157,519	3,886,337	14,061,856	13,520,984	40.84
2016	10,242,141	4,135,541	14,377,682	13,631,934	41.19
2017	10,236,415	4,178,966	14,415,381	13,717,981	41.45
2018	10,255,525	4,235,770	14,491,295	13,785,642	41.65
2019	10,292,434	4,316,786	14,609,220	13,864,223	41.89
2020	10,279,185	4,398,030	14,677,215	13,919,557	42.01

(Sources from MARD 2011 to 2020)

According to the Vietnam's national standards for forest stand after forest formulation period for fast and slow growing tree species, some new established plantation forest areas can be calculated in the total of plantation forest areas. These figures may not used to calculate forest cover because they do not meet the standards of total height, stump diameter and canopy. Vietnam tends to keep stable forest cover from 42.0 to 43.0% and upgrade the quality of both natural forests and plantation forests in forestry development strategy period 2021 to 2025 and vision for 2030.

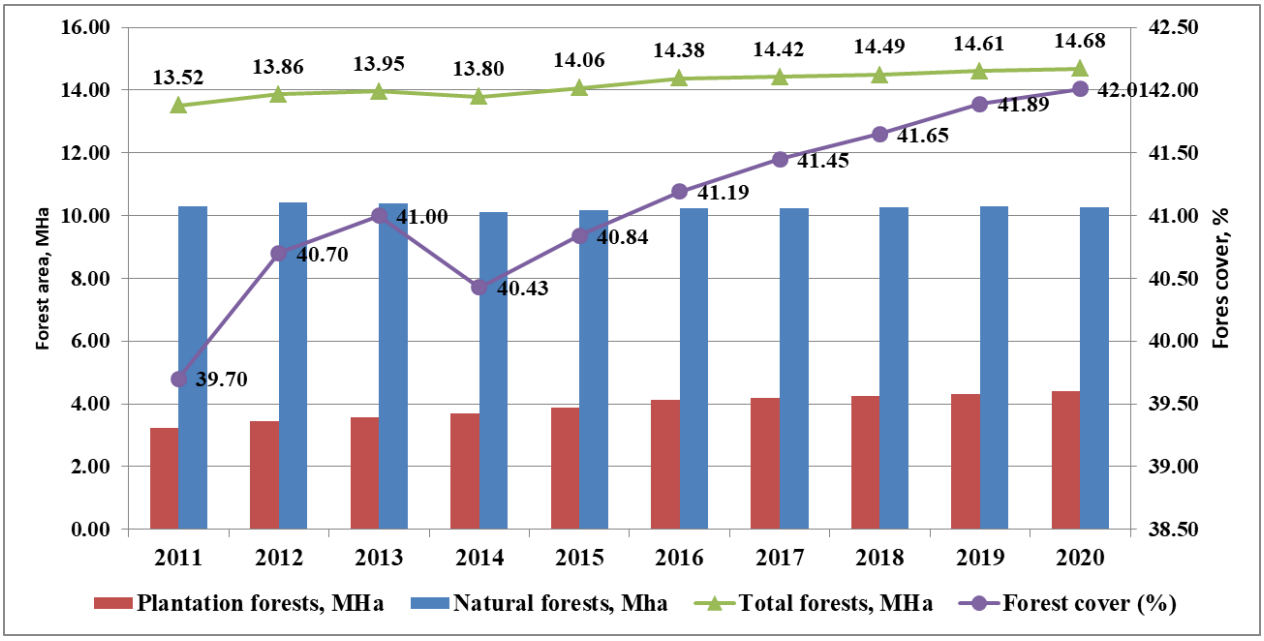

Figure 1: Forest cover and trend in Vietnam from 2011 to 2020 (Sources from MARD)

Although planted forests have continuoued to increase in recent years, naturals forest slightly decreased between 2019 and 2020 to 13,249ha due to over exploitation (estimated account for 50%), conversion forestry land into agricultural land (estimated account for 20%); nomadic practices and poverty (estimated account for 20%); forest fires and natural disasters (estimated account for 10%). To conserve natural forests, Vietnam issued the Decree No.83/ND-CP, dated 15/7/2020 on amendment and supplement of some articles of Decree No.156/ND-CP dated 16/11/2018 on detailed guidance to enforce some articles in the Forestry Law. This policy was formulated with very strictly regulations on natural forest conversion into other utilization purpose.

3.4. Forest and forestry landowners in Vietnam

There are 9 forest owners in Vietnam including: the Forest Management Board, economic organizations, Communities, People committee at the Commune level, households and individuals. Please see the table below for detailed information on forest owner:

Table 6: Forest ownership in Vietnam

Unit: 1,000 ha

N0	Items	Total	Forest areas			Land without forests	Prop (%)
			Sum	Natural forests	Planted forests		
	Total	**17,995.5**	**13,919.6**	**10,279.2**	**3,640.4**	**4,076.0**	**100**
1	Specially used forest management board	2,377.5	2,171.5	2,086.8	84.7	206.0	13.2
2	Protection forest management board	3,591.7	2,962.4	2,515.5	446.9	629.2	20.0
3	Economic organizations	1,985.1	1,635.5	1,101.0	534.6	349.6	11.0
4	Armed forces	260.0	180.6	124.4	56.3	79.4	1.4
5	Science and technology, education and training organizations	288.1	222.9	105.9	117.0	65.3	1.6
6	Households and individuals	3,718.6	2,848.5	1,318.5	1,530.0	870.1	20.7
7	Residential Communities	1,479.3	1,152.5	1,095.3	57.1	326.8	8.2
8	Foreign investment enterprises	26.4	17.5	8.1	9.4	8.9	0.1
9	Commune people's committee	4,268.8	2,728.1	1,923.7	804.4	1,540.7	23.7

(Sources from MARD, 2021)

Based on the data in the table above, households and individuals own the largest forest areas, 3,718.6 thousand ha, accounting for 20.7% of total forest lands, comprising of 2,848.5 ha of land with forests, 1,318.5 ha of natural forests, 1,530.0 thousand ha of plantation forest, and 870.1 thousand ha of lands without forests. If efficiently utilized, this forest area has the potential capacity and resources to significantly reduce poverty in remote areas.

• Forests tenure and ownership

Land tenure and land use rights, including for the establishment and ownership of plantations are set through the Land Policy and the Land Law. Between 1997 and 2007, the National Assembly passed laws on land use and a number of significant policy statements were made with respect to land and forest. Approved by the National Assembly in 2003, the Land Law reaffirms land as the property of the State that could be allocated for specified land uses to public or private entities, for periods of between 20 and 50 years with rights set out in Land Use Right Certificates (Red Books). The Land Law states that forests are attached to land in the allocation process, and regarded as connected property (To and Nghi, 2014).

3.5. Biodiversity conservation

In 1995, the first Biodiversity Action Plan (BAP1995) was issued after Vietnam became a member of the Convention on Biological Diversity (CBD) in 1994. BAP1995 became the guideline for biodiversity conservation in Vietnam from 1995 to 2005. In 2005, the Ministry of Natural Resources and Environment (MONRE) adopted the "Biodiversity Action Plan to 2010 with Vision to 2020" which was revised in 2011 to become the National Biodiversity Strategy to 2020, Vision for 2030. This strategy includes programs for Payments for Ecosystem Services (PES) including for reforestation projects and introduces the concept of economic valuation of ecosystems for comprehensive assessment of trade-offs between conservation and development (MONRE, 2011). The strategy identifies the need for better consideration of biodiversity in reforestation projects and the need to incorporate greater species diversity into planting programs, particularly local species (Hilary et. al 2017).

According to decision No.1976/QD-TTg dated 30/10/2014, issued by the Prime Minister on approval of the master plans on national specially used forest system to 2020, vision for 2030, Vietnam will have 34 national parks with 1,166,462.43 ha, and 58 areas for nature reserves with 1,108,635 ha, 14 areas for natural species and habitat conservation with 81,126.21 ha, 61 areas for landscape conservation with 95,530.53ha, and 9 forest areas for scientific purpose with 10,838.16ha. In 2020, Vietnam planned and established 164 areas for forest conservation including 33 national parks and 57 areas for nature reserves, 12 areas for natural species and habitat conservation, 53 areas for landscape conservation and 9 areas for scientific purpose with total all 2.4 million ha. From 2021 to 2025, the forest conservation systems will increase to 2.4 million ha with 176 areas including 34 national parks, 72 areas for natural reserves, 14 areas for natural species and habitats conservation, 61 areas for landscape conservation and 9 areas for scientific purposes (MARD, 2021).

3.6. Forestry administration systems

Vietnam has a forest protection and management system from national level to local level as follow:

• National level

MARD is responsible for managing the forestry sector; VINAFOREST works under MARD and is the responsible for monitoring and enforcing implementation of the forest law and other forest-related regulations of forest protection and development.

• Local level

- At the provincial level, the Department of Agricultural and Rural Development (DARD) has sub-departments of forestry development charged with monitoring managing and developing the forestry aspect at the province level.

- At the district level, the Division of Agricultural and Rural Development is responsible for managing agriculture and forestry development. However, , forest protection station located in districts belonged to sub-department of forest protection at the province level and are responsible for forest management and protection in the district.

- At the commune level, one specialized staff undertakes monitoring and management of all forestry aspects.

Further, all national parks and conservation and protection forest areas have forest ranger stations that are responsible for protecting their allocated forest areas.

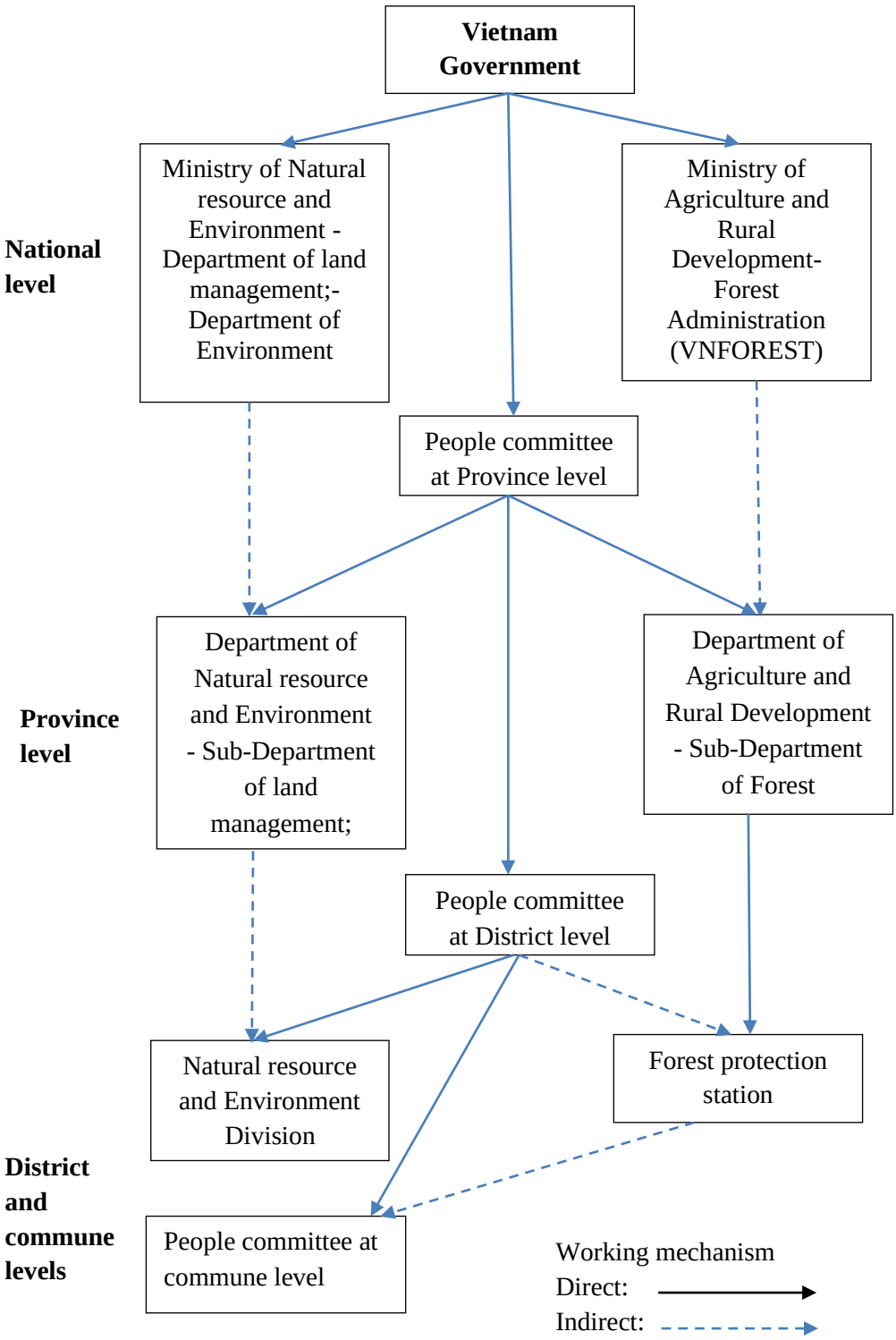

Figure 2: Structure of forest administrative authorities in Vietnam

Chapter 4: State Policies on Forest

4.1. Forestry law and other related policies

The Government of Vietnam issued the first Forest Protection and Development Law in 1991 and revised it in 2004 and 2016. In 2017, the new Forestry Law was adopted by Vietnamese National Assembly. The law went into effect on 1/1/2019. The new law consists of 7 chapters and 92 articles and focuses on SFM regulations, protection, development, and utilization forest; processing and trading forest products. It emphasizes on management of forest based on principle sustainability, socialization of forestry activities, ensuring government supporting fund for protection of the specially used forest and protection forest areas. To implement the Forestry Law, the government has issued 6 decrees and MARD has issued 12 circulars as showed in appendix 1.

4.2. Recent significant policy influencing on forest and forestry development in Vietnam

4.2.1. Forestry law

The Forest Protection and Development Law adopted in 1991 was revised in 2004 and 2016 with the following new policies:

- Created the chain of forestry activities from management, protection, utilization, and business, processing and trading forest products.
- Regulated a clear ownership of forest by government and households and individuals, community.
- Identified processing and trading forest products is one advantage of forest value chain.
- SFM is a cross principle of forestry activities, forests are sustainably protected both forest areas and quality of forests, ensuring the harmony in development of economy, society, national security, biodiversity conservation, upgrading value of PES, and combating climate change.
- Set up strict regulations on conversion of natural forests into other purposes except implementing the national important project, national security project, and other important projects designed by the government.
- Regulated on benefits from outside harvesting forest products as PES to meet demand of economic development and life of peoples.
- Renewed organization and management of forestry sector from national to local level.
- Renewed forestry policy, no issued regulation on forest allocation with paying fees of using forest instead of renting forests with paying fee.

4.2.2. Payment of environmental services (PES)

Vietnam has issued the two important decrees related to FES. Decree No.99/ND-CP, dated 24/8/2010 on PES policies, active from 1/1/2011 and Decree No.05/ND-CP, dated 14/01/2008 on foundation of Vietnam forest protection and development fund. This was the first time Vietnam legalized the relationship between the seller and buyer environment services. PES were regulated in Forestry Law in 2017 and instruction in Decree No.156/ND-CP, dated

16/11/2018. Following the instructions, the following six organizations have to pay money for utilizing environment services: (1) hydroelectric plants; (2) water companies that supply pure water; (3) industrial producing water companies; (4) organizations and individuals doing business eco-tourism; (5) Aquaculture companies; (6) organizations and individuals doing business with large greenhouse emission. However, there were only 4 of 6 organizations that paid money for PES in 2020 (VNFOREST, 2020). According to the report from Vietnam forest protection and development fund, in 2020, the total funds collected from 4 organizations was VND 2,818 million as follows:

- Hydroelectric plants: paid VND 2,697 million, accounted for 95.6% of total fund
- Supplying pure water companies: VND 99 million, accounted for 3.5% of total fund
- Organizations and individuals doing business eco-tourism: paid VND 16 million, accounted for 0.6% of total fund
- Industrial producing water companies: paid VND 7 million accounted for 0.3% of total fund.

These funds are important additional contributions to the state budget for forestry development in Vietnam. Recently, Vietnam Government is promoting the enlarging application of PES to relevant organizations using environmental services.

4.2.3. Vietnam Forestry Strategy Development period 2021-2030 and vision for 2050

According to Vietnam Forestry Strategy Development period 2021-2030 and vision 2050 issued by government in 2021:

- Forestry economy plays an important role in the national economy and forestry development is expected to make significant contributions to economic growth, poverty reduction and environmental protection.
- Synchronous forestry development in terms of management, protection, development, proper use of forest resources, plantation improvement, forest product processing, environmental services and eco-tourism.
- Sustainable management, utilization and development of forests are the main key for forestry development.
- Forestry development is to be based on speeding up and deepening policy related to socialization of forestry activities, and attracting investment for forest protection and development.
- Forestry development contributes to combat climate change, biodiversity conservation, providing diverse environment services, creating job and income for local people, ensuring national security, and contribution to sustainable development.

The objectives of the Vietnam Forestry Development Strategy for the period 2021-2030 and vision for 2050 are:

For forestry economy development

- The average of forestry economic growth from 5.0% to 5.5%/year.

• The value of exporting forestry products and NTFPs expected to increase from USD 18 billion in 2015 to USD 23 billion by 2030; while the value of domestic consumption increases to USD 5 billion by 2025 and over USD 6 billion by2030.

• Annual plantation of production forest approximately 340,000 ha/year in 2030.

• Annual plantation of production forest and specially used forest with valuable native tree species: 4,000 - 6,000 ha/year.

• Restoration of protection forest and specially used forest: 15,000 ha/ year.

• by 2025, the total volume of wood harvested from plantation forest reaches 35 million cubic meters and 50 million cubic meters by 2030.

• Development of PES mechanisms with total of revenue annually increases 5%/year.

• Increasing quality of natural forest, productivity of plantation forest and systems of agroforestry, the area forests with SFM certification reach over 0.5 million ha period 2021- 2025, and 1 million ha in period 2026-2030.

• by 2025, the income from plantation forest increase by 1.5 times and doubles times/unit area of plantation forest by 2030 compared to 2020.

For society development

• The proportion of trained labor working in forestry sector reaches 45% in 2025 and 50% in 2030 with gender equality.

• 50% to 2025 and 80% of households living in mountainous areas and ethnic minority people living in forest zone areas with having forest will participate in forestry commodity production.

• by 2025, the average income of ethnic minority people working in forestry increases twofold compared with 2020, contributing to annual poverty reduction for poor households with 3%/year; and by 2030 the average annual income of ethnic minority people is equal to half of the income of national average.

For environmental protection

• National forest cover stable from 42% to 43%, effective contribution to implement the national commitment convention of voluntary reduction in greenhouse emissions, building green Vietnam.

• by 2030, 100% of forest standing areas owned by organizations will be sustainably managed; for the period 2021-2025 with 10% and period 2026-2030 with 20% of natural forest is upgraded quality; enhanced effective biodiversity conservation and capacity of environment protection of forests; reduction in illegal forest protection; and ensuring environmental protection.

Vision for 2050

• For economic: Sustainable forestry management, international integration, promoting the potential effectiveness and benefits of tropical forest resources, making the country one of the leading centers of forestry producing, processing and trading forest products in the world with modern technology, contributing to national economic development.

- For society: Making an important contribution to building the country Vietnam with safe and prosperous, new countryside with wealthy, beautiful and civilized based on improving livelihoods, developing a green economy associated with forest resources, preserving traditional cultural and living spaces of ethnic minorities, firmly ensuring national security.
- For environment: Sustainable Forest management, long-term conservation of natural resources and biodiversity; ensuring environmental security, water source security, combating land degradation, minimizing negative impacts of natural disasters; proactively combating to climate change, providing PES; actively participating with high responsibly and fully implementing the international commitments signed to participate.

4.2.4. Forestry reconstructing project

Forestry reconstructing project was approved by decision No.1565/QĐ-BNN-TCLN dated 08/7/2013, issued by Minister of Ministry of Agricultural and Rural Development. The objectives of this project aimed at sustainable development of the forestry sector including economic, social and environmental aspects. In a step-by-step approach, changing the model of forestry development moving towards enhancing quality, efficiency and building business capacity competition. This includes plans to increase the forest areas to 16.2 -16.5 million ha, increasing added values of forestry products, and adjustment of frame forest management systems.

4.2.5. Coastal forestry development project

To combat climate change, Vietnam has issued the Decision No.1662QD-TTg dated 4/10/2021 for protection and development of coastal forest responding to climate change and promoting green growth period 2021-2030. The overall objective of this project was to promote the coastal forest functions on combating climate change, sea wave rising, mitigation natural disasters, protection of sea dike systems and infrastructure, protection of biodiversity as well as contribution to economic development and ensuring national security. The detail objectives were to afforest 20,000 ha of new forest; enrich and restore degraded forests with 15,000 ha. In addition, promoting capacity building and livelihood development for communities and local people participate in protection and development of forests in coastal areas.

4.2.6. National action program on REDD$^+$

It was estimated that the value of carbon stored in natural forests of Vietnam is VND35-77 million/ha and the value of CO_2 absorption is VND 5-13 million/ha/year. With respect to plantation forests, the value of CO_2 absorption is estimated at VND 1 to 7 million/ha/year (Vu Tan Phuong, 2007). For promoting REDD$^+$ development, the national action program on REDD$^+$ was approved by the Decision No.79/TTg, dated 27/6/2012 issued by the prime minister and that was renewed by Decision No.419/TTg, dated 5/4/2017. To enforce the decision, MARD has issued the decision No.5264/QD-BNN-TCLN dated 28/12/2018 for planning implementation of REDD$^+$ period 2018-2020. MARD has signed an agreement on 22/10/2020 with the Forest Carbon Partnership Fund through the World Bank. Under the Emission Reduction Payment

Agreement, Vietnam is expected to reduce emissions of 10.3 million tons of CO_2 in the six in the Northern Central provinces of Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri and Thua Thien Hue and thereby received US$ 51.5 million from Forest Carbon Partnership Fund.

4.3. Budget investment for forestry development

Total budget investment for forestry development for the period 2011 to 2020 was estimated VND 90,402 billion including VND 36,066 billion invested for period 2011-2015 (accounted for 39.9% of total budget) and VND 54,336 billion for period 2016-2020 (accounted for 60.1% of total budget). The total budget is classified as follow:

- Budget from government: VND 17,560 billion, accounted for 19.4%
- Budget from PES: VND 16,759 billion, accounted for 18.5%
- Budget from compensation[2] of conversion forest used for reforestation: 1,984 billion VND, accounted for 2.2%
- Budget from ODA: VND 7,673 billion, accounted for 8.5%
- Other sources: VND 46,426 billion, accounted for 51.4%

Table 7: Total budget investment for forestry sector period 2011-2020

Unit: billion VND

Periods	Total all of budget	Budget from state				PES	Reforestation	ODA	Other sources
		Total budget of Gov.	Central Gov.	Local Gov.	Science				
2011-2015	36.066	8.040	6.879	1.053	108	5.226	609	4.588	17.603
2016-2020	54.336	9.520	7.927	1.442	151	11.533	1.375	3.085	28.823
Total	90.402	17.560	14.806	2.495	259	16.759	1.984	7.673	46.426

(Sources from MARD, 2021)

The other sources from private companies, individuals and other organizations have significantly increased in period 2016-2020 indicated that forest decentralization and socialization have strongly taken place that trends is in line with the government policies on mobilizing all social resources to invest for sustainable forest development.

Chapter 5: Identifying gaps and monitoring framework

5.1. Identifying gaps

5.1.1. For biodiversity conservation

Vietnam issued Decision No.45/TTg, dated 08/1/2014 on approval the national master plans of biodiversity conservation to 2020 and vision for 2030 and Decision N0.24/QD-TTg dated 1/6/2012 on approval policies on investment of specially used forest in the period 2011-2020, and Decision No.38/QD-TTg dated 14/9/2016 on approval policies on protection, development forest and investment on infrastructure, public benefit assignment to agricultural

[2] In Vietnam, the companies who allow converting forests into other lands have to pay money for reforestation with the same forest areas they removed.

and forestry companies. However, those policies were issued before the Forestry Law promulgated in 2019, that was reviewed, and the following gap were identified.

a) Biodiversity index

The biodiversity indexes were only presented in some sporadic research that were not presented in official reports on biodiversity conservation at the national level. The quantitative analysis of species diversity indices such as Importance Value Index (IVI), Shannon - Weiner Index (H), Simpson's Index (Cd), Sorensen's Index (SI) are essential and integral for any research activity of biodiversity and vegetation analysis. The quantitative analysis acts as an important basis for biodiversity conservation and sustainable development. It has been widely applied in many research projects that explore the biodiversity potentials and constraints, developing biodiversity databases of natural resources and ecological impact assessment (exotic fast growing species plantations, obnoxious invasive species, development activities)

b. Rate of biodiversity loss: No data available on the rate of biodiversity loss. This indicator should be identified to take account in formation policies of biodiversity conservation.

5.1.2. Financial inflow for biodiversity conservation

• For biodiversity conservation in specially used forests and protected areas

In Vietnam, biodiversity conservation was mainly nested in specially used forests and protected areas including national parks, conserved and protected areas. Vietnam issued the decision No.24/2012/QD-TTg dated 1/6/2012 for investment of specially used forest, however this policy was lacking in budget inflow for biodiversity conservation activities such as (1) for forest information management and database on forests, (2) for collecting sample of fauna and flora species; (3) for research and training on biodiversity conservation techniques, (4) for forest allocation and setting up landmark,(5) for monitoring, evaluating and securing endangered wild animals and plant species, (6) For buying equipment to rescue endangered wild animals and plant species, (7) For tending and raising endangered wild animals and plant species, (8) For studying to use remote sensing, information technology and biotechnology on conservation biodiversity, (9) For forest inventory and monitoring for creating database on forests.

• For protection forest

There was no financial investment (1) for activities of Management Board of protected areas, (2) for monitoring and inventorying of forests and biodiversity, (3) for management of forest information and data base, (4) for research and education and forestry extension, (5) for disseminating and educating on forestry law and other regulation on protection forest, (6) For inspecting, preventing and handling the illegal forest protection, (7) for making a plans and implementing of SFM, (8) Forest allocation and setting landmark, (9) for buying equipment for forest protection, fire prevention, and disease control, (10) for construction and improvement infrastructure for forest protection and development, (11) for inventory and monitoring forest and database.

• For production forest

There was lack of financial investment for (1) Seedling propagation by tissue and cell techniques and other modern techniques on seedling propagation, (2) Research and apply the machine- based, automation, biotechnology and new material for saving energy on high quality Seedling production and afforestation and tending forest, (3) Research and apply the remote sensing technology, information technology, and biotechnology on protection and management of forest, (4) research and apply the modern techniques of wood harvesting and forest products and inventory and monitoring forest resources

• For processing and trading of forest product

There was a gap of assistance financial support for (1) researching and applying the high technology on processing and storing of wood and forest products, (2) assistance companies making cooperation, joint venture and association with forest owners to create a large raw material area and trading products, (3) developing for supporting industry on processing forest products, (4) for creating trademark, trading and development forest product market.

5.1.3. For forest monitoring quality

Vietnam issued: Decision No.57/2012/QD-TTg dated 9/1/2012 approving plans for forest protection and development for the period 2011-2020 in which upgrading degraded natural forest with average 35,000ha/year; and Decision No.886/QD-TTg dated 16/6/2017approving the target program of sustainable forestry development period 2016-2020 in which identified that at least 15% of total degraded natural forests was restored and conserved. However, there are no indicators on forest degradation. The number of areas for enrichment of degraded natural forests by assisted natural regeneration is available but information on areas for restoration forest throughadditional planting of valuable native trees species is still lack.

5.1.4. Poverty reduction and livelihood options

By 2019, close ot 1.2 million households with nearly 5 million employees participated in forest management and protection activities, production and forestry business. Approximately 0.5 million employees work in wood processing enterprises nationwide in 2018 (MARD, 2021). Decision No.886/QD-TTg dated 16/6/2017 approved the target program of sustainable forestry development period for the 2016-2020 indicated that the target program would create 25 million jobs and contribute to poverty reduction and improve livelihood of people living based on forest work. In addition, according to MARD, Vietnam has 1,548.2 thousand households with 5 million of labors used 3,718.6 thousand hectares of forestry land, accounting for 20.7% of the forestry land in the country in which forest land is 2,848.5 thousand ha (natural forest 1,318.5 thousand ha, planted forest 1,530.0 thousand ha) and bare land is 870.1 thousand ha (MARD, 2021). The community manages 1,479.3 thousand hectares, accounting for 8.2% of the forestry land in the country, including 1,152.5 thousand hectares of forest land and 326.8 thousand hectares of bare land (MARD, 2021). This illustrates the critical role forests play in poverty alleviation. However, there is no indication of assessment of the number of forest dependent people in the country

contributed to poverty reduction. Neither has here been any means to measure the number of people who derived their livelihood or income from the forest goods and services.

5.1.5. Indicators for improvement quality of degraded natural forest

The improvement quality of degraded natural forests has appeared in many policies but there were no indicators to assess the quality forest improved, only the forest areas are restored by conservation and protection.

5.1.6. The gaps of policies for sustainable forestry development

To enforce the new forestry law in 2017, Vietnam has issued 6 decrees that related to detailed instructions to implement each article of the law, and MARD has issued 12 decrees to implement the law. However, gaps exist in some aspects of SFM including:

• Lack of policies for large timber plantation. In Vietnam, the main planted species for production forest are acacia and eucalyptus, accounted for 59% of total area of plantation forest and they are harvested after only 4 to 5 years planted for pulp, chip and veneer industry. Therefore, the profit from plantation forest is not high. Meanwhile, if that is still tended more 4 to 5 years, they will become large timber material for processing furniture industry with higher profit then that when they were cut small. The reasons for that are most of afforestation households who are poor and live in mountainous areas, they cannot afford to maintain their plantation forest even though they still know that it only takes a few more years can sell wood at higher the price of wood chips. In addition, the government is still lack of financial supporting for farmers to large timber plantation.

• Lack of policies for domestic consumption market development for wooden product. Vietnam exports wood products to 140 countries and territories and the value of export is annually growing from 12 to 20% in recent years with over 10 billion USD (VNFOREST, 2020). However, the domestic market with 97.58 million persons is a large and potential market, the policies for development of this market and policies for encouraging and promoting of design wooden products with Vietnamese brand and building a Vietnamese wood brand are still identified as a gap.

• Lack of national strategy for wood processing industry and adaptation with technology 4.0. There is still lack of policy to encourage the development of processing technology, especially modern technology in processing, designing, and promotion of wood and NTFPs processing, innovation ecosystems and lack of policy to develop supporting industry.

• VPA-FLEGT: The European and the Government of Vietnam adopted a trade agreement on Forest Law Enforcement, Governance and Trade that focused on regulating timber products. The aim is to provide legal framework for ensuring all export of wood from Vietnam into European market are sourced from sustainably managed forest. This agreement was implemented on 1/6/2019. Based on this agreement, Vietnam issued Decree No. 102/2020/ND-CP dated 1/9/2020 on regulations of ensuring legal wood system in Vietnam. Currently, Vietnam imports wood from more than 100 countries and territories, but the set of criteria for identifying the

species and geographic areas risk were not constructed. Thus, this policy lacks the criteria for identifying species and risk geographic areas risk for importing wood from other countries into Vietnam.

5.2. Monitoring framework

Table 8: Data demand for monitoring towards GFGs

Global Forest Goal 1: Reserve the loss of forest cover worldwide through SFM, including protection, restoration, afforestation and reforestation, and increase efforts to prevent forest degradation and contribute to the global effort of addressing climate change.		
Target	Indicators for monitoring in Vietnam	Remarks
1.1. Forest area is increased by 3% worldwide	- Forest cover (%)	- The data can gain from annual reports of MARD. Vietnam tends to maintain forest cover from 42-43% in next periods.
1.2. The world's forest carbon stocks are maintained or enhanced	- The increasing forest areas (both afforestation and restoration forests) - Increasing forest growing stock	- The data can gain from annual reports of MARD - Forest inventory one every 4 years to investigate the forest growing stock. The data of stock forest can gain from Forest Inventory and Planning Institute
1.3. By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.	a) Increasing forest areas are sustainably managed - Reducing forest illegal (time/year) - Reducing forest destroyed by illegal activities (ha/year) - Reducing forest fire and harm forest areas (ha/year) b) Increasing restoration -oriented protection of forest areas (ha) - Increasing forest areas protected (ha/year) c) Increasing afforestation area (ha) - Increasing plantation of specially used forest (ha) - Increasing plantation of protected forest (ha) - Increasing plantation of production forest (ha)	- The data can gain from annual reports of MARD
1.4. The resilience and	- Increasing protection forest area (both nature and plantation forest) (ha)	

adaptive capacity of all types of forests to natural disasters and impacts of climate change is significantly strengthened worldwide.	- Increasing coastal afforestation (ha) - Increasing mango forest plantation (ha) - Increasing scatter tree plantation (trees)	
Global Forest Goal 2: Enhance forest-based economic, social and environmental benefits, including by improving the livelihood of forest dependent people.		
2.1. Extreme poverty for all forest dependent people is eradicated.	- The rate of poverty reduction in rural and mountainous areas - The rate of poverty reduction for forest dependent (gap data). - Income of people living based on forest work.	- The data is not available in annual report of MARD but it is available in annual report of GSO. - Gap of data on poverty reduction rate of forest dependent people (only data of that of whole the country does not distinguish of forest dependent people)
2.2. Increase the access of small –scale forest enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.	- Number of small - scale forest enterprises with a loan	- The data is not available in MARD reports but can gather from other sources such as NGO's report or assessment policy report.
2.3. The contribution of forests and trees to food security is significantly increased.	- Harvesting non-timber forest products - Increasing area of agroforestry	- The data gained annual report of MARD but agroforestry is not available in MARD report but can gather from other

		sources such as NGO's report or assessment policy report.
2.4. The contribution of forests industry, other forest-based enterprises and forest ecosystem services to social economic and environmental development, among others, is significantly increased.	a) Increasing value of forest products - Increasing value of export forest products - Increasing value of domestic consumption of forest products b) Increasing value of PES - Increasing payers of PES - Increasing forest areas getting PES - Increasing receivers of PES	- The data can gain from annual reports of MARD - The value of domestic consumption is not available in MARD but can gather from NGO report and some researches
2.5. The contribution of all types of forests to biodiversity conservation and climate change mitigation and adaptation is enhanced, taking into account the mandates and ongoing work of relevant conventions and instruments.	a) Increasing nature forest area protected - Number of national parks - Number of reservation areas - Number of landscape conservation b) Enlarging protected areas - The total of specially used forest enlarged c) Biodiversity index (gap data) d) Rate of loss of biodiversity (gap, no data available)	- The data can gain from annual reports of MARD
Global Forest Goal 3: Increase significantly the area of protected forest worldwide and other areas of sustainably managed forests as well as the proportion of forest productions form sustainably managed forests.		
3.1. The areas of forest worldwide designated as protected areas or conserved through other effective area-based conservation measures is significantly increased.	a) Increasing specially used forest - New established national parks, reservation areas landscape and habitat conservation. b) Increasing protected forest areas c) Number of endangered fauna and flora species conserved	- The data can gain from annual reports of MARD
3.2. The area of forest under	a) Increasing the forest areas approved the plan of SFM	

long-term forest management plans is significantly increased.	b) Increasing the production forest with FSC and VFCS[3] c) Total number of protected area staffs	
3.3. The proportion of forest products from sustainably managed forests is significantly increased.	a) Increasing the production forest with FSC and VFCS b) Reducing in illegal logging from nature forest - The number of illegal logging - The total volume of illegal wood logging	- The data can gain from annual reports of MARD
Global Forest Goal 4: Mobilize significantly increased, new and additional financial resources from all sources for the implementation of SFM and strengthen scientific and technical cooperation and partnerships.		
4.1. Mobilize significant resources from all sources and at all levels to finance sustainable for forest management and provide adequate incentive to developing countries to advance such management, including for conservation and reforestation.	a) Increasing fund from central government and ODA b) Increasing PES c) Increasing fund from enterprises and companies d) Increasing fund from REED^{+}	- Annual reports from MARD has showed funds from government, ODA, PES, REED^{+} but not from enterprises and companies however that can obtain from NGO's reports or research subject.
4.2. Forest - related financing from all sources at all levels, including public (national, bilateral, multilateral and	a) Increasing fund from central government and ODA and other sources b) Increasing PES - Number agencies provide PES - Number agencies pay for PES	

[3] VFCS is Vietnam Forest Certification Scheme that was established and operated under Vietnam Administration of Forestry of MARD and approved by PEFC. Until 2019 Vietnam issued certification FSC for 266,974 ha of forests and 300,000 ha with VFSC in 2020. Vietnam towards to apply sustainable forest management certificate for all forest currently managed by specially used forest management board, protection forest management board and other organization with 7,216,889 ha as in decision No.1288QD-TTg, dated 01/10/2018.

triangular), private and philanthropic financing is significantly increased.	c) Increasing fund from enterprises both Vietnamese and international enterprises d) Increasing fund from REED^{+}	
4.3. North- South, South-North, North-North and triangular cooperation and public- private partnership on science, technology and innovation in the forest sector are significantly enhanced and increased.	a) Increasing number of forest industry zones applied high technology on processing of forest products in the country b) Increasing investment from international organization such as JICA, FAO.	- The data can be sourced from annual reports of MARD and NGO's reports.
4.4. The number of countries which have developed and implemented forest financing strategies and have access to financing from all sources is significantly.	a) Increasing the financial policies for forest development - Develop or implemented forest financing policies and their time frame	- The data can be sourced from annual reports of MARD
4.5. The collection availability and accessibility of forest-related information is improved through, for example, multi-disciplinary scientific assessments.	a) Reports from MARD b) Reports from provincial levels c) Reports from research institutes	- Reports posted in website of MARD and others from Government, research institutes. - Reports from GSO.
Global Forest Goal 5: Promote governance frameworks to implement SFM, including through the UN Forest Instrument, and enhance the contribution of forests to the 2030 Agenda.		
5.1. Number of countries which have integrated forests	a) Forestry development strategy period 2021-2030, vision for 2030. b) National target program on poverty reduction strategy	- The data can be sourced from annual reports of MARD and

into their national sustainable development plans and/or poverty reduction strategies is significantly increased.	c) National forest sustainable development program period 2021-2025.	the Government on poverty reduction strategy - From GSO.
5.2. Forest law enforcement and governance are enhanced, including through significantly strengthening national and subnational forest authorities, and illegal logging and associated trade is significantly reduced worldwide.	a) Reducing in illegal forest extraction and conversion - Reducing in number of illegal logging/year - Reducing in conversion natural forests into other purposes/year - Reducing in area of forest removal/year b) Reducing in forest fire - Reducing in number of forest fire/year - Reducing in areas forest damaged by fire/year c) Reducing in criminal handling in Forestry Law implementation	- The data can be sourced from annual reports of MARD
5.3. National and subnational forest- related policies and programs are coherent, coordinated and complementary across ministries, departments and authorities, consistent with national laws, and engage relevant stakeholders, local communities and indigenous peoples, fully recognizing the UN Declaration on the Rights of Indigenous Peoples.	- Number of policies issued by MARD in which mention in the right of indigenous people in SFM implementation. - Mechanisms to involve stakeholders including local communities and indigenous peoples in SFM policy formulation, planning and implementation.	- The data can be sourced from annual reports of MARD
5.4. Forest-related issues and the forest sector are fully integrated into decision-	- The right of forest land use - Forest land allocation to households, communities and other organizations	- The data can be sourced from annual reports of MARD and other NGOs

making processes of land use planning and development.	- The forest areas managed by community (community forests) - Certification of ownership forest and forest land	
Global Forest Goal 6: Enhance cooperation, coordinator, coherence and synergies on forest - related issues at all levels, including within the UN system and across CPF member organization, as well as across sectors and relevant stakeholders.		
6.1. Forest - related programmers within the UN system are coherent and complementary and integrate the Global Forest Goal and targets where appropriate.	- The number of policies related to SFM - The number of forest areas getting FSC and VFCS - The number of organization, agencies and privates getting FSC and VFCS	-The data can be sourced from annual reports of MARD.
6.2. Forest – related programmers across CPF member organization are coherent and complementary and together encompass the multiple contributions of forest and the forest sector to the 2030 Agenda for Sustainable Development.	- Number of cross-policies of MARD with other Ministries such as Ministry of Finance, Ministry of Natural Resources and Environment for guidance investment for forest development.	- The data can be sourced from annual reports of MARD
6.3. Cross - sectoral coordination and cooperation to promote SFM and halt deforestation and forest degradation is significantly enhance at all levels.	a) Increasing in the areas of forests managed with SFM - Increasing in number of forest ownerships make plans of SFM and approved by government. b) Number of cross policies of MARD with other Ministries such as Ministry of Financial, Ministry of Natural Resources and Environment for guidance investment for forest development.	- The data can be sourced from annual reports of MARD
6.4. A great common understanding of concept of SFM is achieved and an associated set of indicators is	- The set of national criteria for SFM has formulated and implemented	- The data can gain be sourced from annual reports of MARD

identified.		
6.5. The input and involvement of major groups and other relevant stakeholders in the implementation of UNSPF and in the work of the Forum, including intercessional work, is strengthened.	- The action taken by the Government to involve major groups and other relevant stakeholders in the implementation of the forest strategic plan. - Number of households, forestry farms, communities, forest cooperative and forest companies participate in SFM.	- The data can be sourced from annual reports of MARD.

Chapter 6: Conclusions and recommendations

6.1. Conclusions

In generally, Vietnam has issued many policies that are directly related to SFM and tended to achieve the GFGs. Most data sets are available in the official reports from government offices and other NGOs. However, gaps still exist in the following areas:

- Biodiversity index
- Rate of biodiversity loss
- Forest degradation index
- Poverty rate of forest dependent people
- Financial flow for biodiversity conservation in specially used forest, protected areas, and production forests.
- Policies for large timber plantation, and domestic consumption market development for wooden product, national strategy for wood processing industry and adaptation with technology 4.0 and setting up criteria for identifying risk species and risk geographic areas for importing wood from other countries.

6.2. Recommendations

6.2.1. For data statistics

a) For Biodiversity index

It is necessary to invest in research to determine the biodiversity index, especially in specially used forests and protection areas based on that formulating investment policy for species conservation, landscape conservation and habitats in each forest areas.

b) Rate of biodiversity loss

It is necessary to invest in additional research on indicators of biodiversity loss in specially used forests and other conservation areas in order to identify the causes of biodiversity loss and develop appropriate solutions to prevent biodiversity loss.

c) Forest degradation index

It is necessary to study and put indicators for natural forest degradation so that there can be solutions for forest restoration. Statistics on forest restoration areas should separate the area of zoning for natural restoration by natural regeneration and zoning for restoration with additional planting of valuable native trees in order to determine the level of investment and conservation policy.

d) Poverty rate of forest dependent people

Currently, statistic data on poor households and poverty reduction rates nationwide do not separate the poor households and poverty reduction rates of households related to forestry work. It is therefore necessary to have statistical data on the number of people whose livelihoods are depended on forestry work such as afforestation, forest protection, forest product processing, and medicinal herbs, from which to calculate the contribution rate of the forestry sector in national poverty reduction.

6.2.2. For policies related to SFM

a. Renew existing policies

Policies issued before the forestry law should be renewed in order to be consistant with the 2017 forestry law. Decision No. 24/2012/QD-TTg dated 1/6/2012 on investment and development of specially used forests in the period 2011-2020 needs to supplement contents for biodiversity conservation activities. Decision 38/206/QD-TTg dated 14/9/2026 needs to be updated and supplement biodiversity conservation activities in protection forests and some items as mentioned in the above section (5.1.2).

Regarding processing and trading forest products, it is necessary to supplement investment for research and application of modern technology in processing and preservation of forest products, supporting enterprises to cooperate in joint ventures and association with forest owners to create a large forest areas to produce raw materials, product consumption, development of supporting industries in forest product processing, human resource training, brand building and trading promotion, and forest product market development. Supplement policies on strategy domestic wood market development.
Further in order to be in line with FTA-FLEGT regulations, there, a set of criteria to identify species and geographical areas of risk should be developed.

b. Renew policies towards SFM and vision to 2030

(1) Project on sustainable forestry development program for the period 2021-2025 and vision for 2030. Vietnam has issued the decision No.886/QD-TTg dated 16/6/2017 on approval of the target program development of sustainable forest management in the period 2016-2020. The policy should be renewed for period 2021-2025.

(2) Project on development of agricultural and forestry economy association with forest protection and raising income for farmer period 2021-2025. The Decree No. 75/2015/ND-CP dated 9/9/2015 on policies and mechanisms for forest protection and development linked with rapid and sustainable poverty reduction for ethnic minority period 2015-2020 should also be renewed and updated.

(3) New project on developing concentrated raw material areas associated with processing technology and trading of forest products following the value chain.

(4) New project on development of NTFPs and medicinal plants.

(5) New project on development of forest ecosystem services linking with PES.

(6) New project on developing large timber plantations, transiting from small timber plantation to large timber plantation.

(7) New project on forest infrastructure development including fire-fighting runways, forestry road, and forest fire prevention facilities.

(8) New project on conservation, sustainable use and development of genetic resources of forest trees, management of specially used forests and protection forests, promoting capacity building of specially used forest and protection forest systems.

(9) New project on allocation of forests associated with land and granting forest land use right certificates.

References

1.General Statistics Office of Vietnam, 2020. Statistical Yearbook of Vietnam 2020 (in Vietnamese, summary by English)

2. Hilary Smith, Keith Barney, Neil Byron, Dai Nghia Tran, Rodney Keenan, Vu Tan Phuong and Thu Ba Huynh, 2017. Tree plantations in Vietnam: A policy framework. Project working paper 2.

3. MONRE, 2011. Biodiversity Strategy to 2020, vision for 2030, 176 pp (in Vietnamese).

4. MARD, 2011-2020. The decision of announcement of national forest status 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019 and 2020 (in Vietnamese).

5. MARD, 2021. Draft of master planning national forestry (in Vietnamese), online at http://tongcuclamnghiep.gov.vn/LamNghiep/Index/bo-nong-nghiep-va-phat-trien-nong-thon-co-cong-van-so-5541bnn-tcln-ngay-0192021-ve-viec-de-nghi-tham-gia-y-kien-quy-hoach-lam-nghiep-quoc-g-4404**),** assessed 10/9/2021.

6. Pham Hoang Ho (1991-1003): Vegetation of Vietnam, volume 1,2, Young Publishing House, Ho Chi Minh city (in Vietnamese).

7. To, P .X. and Nghi, T. H., 2014. Forest Land Allocation in the Context of Forestry Sector Restructuring: Opportunities for Forestry Development and Upland Livelihood Improvement. Tropenbos International Vietnam (in Vietnamese).

8. UNDP, 2020. Multidimensional Poverty in Vietnam period 2016-2020 (in Vietnamese)

9. UNDP, 2017. Livelihood improvement linked to forest protection and development: Practices and policy recommendations.

10. VNFOREST, 2020. Report on results of executive direction in 2020 and implement the mission 2021 (in Vietnamese).

11. Vietnam Assembly, 2017. Forestry Law (in Vietnamese)

12. Vu Tan Phuong. 2007. Final Report of the Project: Research on evaluation of economic, environment and environmental services for main forest types in Vietnam. Forest Science Institute of Vietnam, Hanoi (in Vietnamese).

Appendix

1. Decrees of Vietnam government

To implement the Forestry Law, Vietnam government has issued 5 decrees as follows.

• Decree No.156/ND-CP dated 16/11/2018, issued by Vietnam government on detail guidance to enforce some articles of Forestry Law.

• Decree No.06/ND-CP dated 22/1/2019, issued by Vietnam government on management of threatens, precious and rare of flora and fauna species and enforcement of international convention of trading endangered wild animals and plants.

• Decree No.01/ND-CP dated 1/11/2019, issued by Vietnam government on forest ranger and specialized forces for forest protection.

• Decree No.27/ND-CP dated 25/3/2021, issued by Vietnam government on management of forest seedlings.

• Decree No.83/ND-CP dated 15/7/2020, issued by Vietnam government on amendment and supplement of some articles of Decree No.156/ND-CP dated 16/11/2018 on detail guidance to enforce some articles of Forestry Law.

• Decree No.35/ND-CP dated 25/4/2019, issued by Vietnam government on regulations on penalties for administrative illegal in the field of forestry.

2. Circulars from MARD

To enforce the Forestry Law and Decrees, Ministry of Agricultural and Rural Development (MARD) has issued 12 circulars as follows:

• Circular No.29/2018/TT-BNN-PTNT dated 31/12/2019, issued by the Ministry of Agricultural and Rural Development on regulations of handling wild forest animal's exhibit and wild forest animals from organizations and individuals hand over to the government.

• Circular No.27/2018/TT-BNN-PTNT, dated 16/11/2018, issued by the Ministry of Agricultural and Rural Development on regulations of management and traceability of forestry products.

• Circular No.28/2018/TT-BNN-PTNT dated 16/11/2018, issued by the Ministry of Agricultural and Rural Development on regulations of sustainable forest management.

• Circular No.29/2018/TT-BNN-PTNT dated 16/11/2018, issued by the Ministry of Agricultural and Rural Development on regulations of silvicultural techniques.

• Circular No.30/2018/TT-BNN-PTNT dated 16/11/2018, issued by the Ministry of Agricultural and Rural Development on the list of main forestry species for plantation, forestry variety and source recognition and management of main forestry variety sources.

• Circular No.31/2018/TT-BNN-PTNT dated 16/11/2018, issued by the Ministry of Agricultural and Rural Development on regulations of identification the boundary of forest area.

• Circular No.32/2018/TT-BNN-PTNT, dated 16/11/2018, issued by the Ministry of Agricultural and Rural Development on regulations of method of forest valuation and forest price bracket.

• Circular No.33/2018/TT-BNN-PTNT dated 16/11/2018, issued by the Ministry of Agricultural and Rural Development on regulations of inventory and monitoring forest.

• Circular No.12/2019/TT-BNN-PTNT dated 25/10/2019, issued by the Ministry of Agricultural and Rural Development on statistical regulations in the forestry field.

• Circular No.13/2019/TT-BNN-PTNT dated 25/10/2019, issued by the Ministry of Agricultural and Rural Development on regulations of afforestation when converting forests to other purpose.

• Circular No.15/2019/TT-BNN-PTNT dated 30/10/2019, issued by the Ministry of Agricultural and Rural Development on regulations of guidance on some contents of sivicultural investment management.

• Circular No.15/2019/TT-BNN-PTNT dated 30/10/2019, issued by the Ministry of Agricultural and Rural Development on regulations of forest fire prevention and fighting forest fire.

3. Other policies related forestry development

Beside the decrees and circulars for enforcing new forestry law, Vietnam government has issued some decision and resolution in relation with forestry development and management as follows:

• Decision No.1662QD-TTg dated 4/10/2021, issued by the Prime Minister on approval of the project for protection and development coastal forest responding to climate change and promoting green growth period 2021-2030.

• Decision No.523/QD-TTg dated 01/4/2021, issued by the Prime Minister on approval of the Vietnam's forestry development strategy for the period 2021-2030, vision for 2050.

• Decision No.524/QD-TTg dated 01/4/2021, issued by the Prime Minister on approval of the project plantation of 1 billion green trees in the period 2021-2025.

• Government Resolution No.84/NQ-CP dated 5/8/2021, issued by the Prime Minister on approval the budget investment for sustainable forest development program in the period 2021-2025.

• Decision No.157/QD-TTg dated 01/2/2021, issued by the Prime Minister on issuing national product program to 2030.

• Decision No.1288QD-TTg, dated 01/10/2018, issued by the Prime Minister on approval of the project for sustainable forest management and forest certification.

• Decision No.886/QD-TTg dated 16/6/2017, issued by the Prime Minister on approval of the target program development of sustainable forest management in the period 2016-2020.

• Decision No.419/QD-TTg dated 05/4/2017, issued by the Prime Minister on approval of the national program of reduction in greenhouse emission through reduction in forest destruction and degradation; conservation and increasing carbon stock and sustainable conservation forest to 2030.

• Decision No.38/QD-TTg dated 14/9/2016, issued by the Prime Minister on promulgation of some policies on protection, development forest and investment on infrastructure, public benefit assignment to agricultural and forestry companies.

• Decision No.45/QD-TTg dated 08/1/2014, issued by the Prime Minister on approval of the master plan on national biodiversity conservation to 2020, vision for 2030.

• Decision No.1976/QD-TTg dated 30/10/2014, issued by the Prime Minister on approval of the master plan on national special used forest system to 2020, vision for 2030.

• Decision No.24/QD-TTg dated 01/6/2012 issued by the Prime Minister on policies of development investment of specially used forest in the period 2011-2020.

• Decision No.124/QD-TTg dated 02/2/2012, issued by the Prime Minister on approval of master plan on agricultural development and production to 2020 and vision for 2030.

• Decision No.626/QD-TTg dated 10/5/2017, issued by the Prime Minister on approval of the project to strengthen the management capacity of the protected area system to 2025 vision for 2030.

4. International commitment

• International convention Ramsar, signed in 1971, for sustainable utilization of wetlands. Vietnam joined in 1989.

• Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), signed in 1973. Vietnam joined in 1994.

• International convention Vienna, signed in 1985, agreement on ozone layer protection.

• United Nations Framework Convention on Climate Change (UNFCCC) signed in 1992.

• Convention on Biological Diversity, signed in 1993, Vietnam joined in 16/11/1994.

• Paris Climate Agreement/ Conference of Parties (COP21) signed in 2015.

• Voluntary Partnership Agreement (VPA) and Forest Law Enforcement, Governance and Trade (FLEGT), active 1/6/2019.

• United Nations Convention to Combat Desertification (UNCCD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES))

• The UK - Vietnam Free Trade Agreement (UKVFTA).

• Convention on Regional Comprehensive Economic Partnership (RCEP), and United Nations Forum on Forest (UNFF), Asia and Pacific Forestry Commission (APFC).

• Programs UN-REDD of United Nations; the International Topical Timber Organization (ITTO), and Asian Forest Cooperation Organization (AFoCO).

• Agreement VPA-FLEG: Voluntary Partnership Agreement – Forest Law Enforcement Governance and Trade.