

Forest Management Meeting the Requirements for Sustainable Development in Vietnam

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Received: September 4, 2020 Accepted: September 26, 2020 Online Published: October 13, 2020

doi:10.5539/par.v9n2p15

URL: <http://dx.doi.org/10.5539/par.v9n2p15>

Abstract

The state uses legal tools to manage forest resources, as forests play a particularly important role in human survival and development. This paper focuses on forest management meeting the requirements for sustainable development in Vietnam. By using two main research methods: documental analysis method and secondary data analysis, we have clarified the current situation of the forest management meeting the requirements for sustainable development in Vietnam in recent years. In addition, we point out the actual situation of Vietnam's forest resources. On that basis, we give some recommendations for forest management meeting the requirements for sustainable development in Vietnam in the coming time.

Keywords: forestry, forest resources, forests, state management of forest resources, forest protection and development, sustainable forest development

1. Introduction

Forest resources are a part of natural resources, belonging to the type of renewable resources. But if used incorrectly, forest resources may become degraded and cannot be regenerated. Forest resources play an important role in the atmosphere, soil, and crops, providing rare plant and animal genetic resources and many other benefits. Forests help regulate temperature, water and air. People can use this resource to exploit and use it to create products that serve the needs of life. Therefore, the question arises: need to protect and develop forests in a sustainable way.

Sustainable development of forest resources requires development that not only meets current needs but does not jeopardize the ability of future generations to meet those needs on the basis of close coordination, harmonize economic growth, ensure social progress and protect the environment. Sustainable development must be evaluated in a process of historical development, present as well as development strategies in the coming period.

The proportion of forested land in each country can represent an important indicator of environmental quality. The optimal area of forest land for an optimal country must be 45%. However, the forest resources of the world are seriously destroyed and more than 30% are being degraded. This situation results from the people's limited awareness of protecting these resources, the lack of strong sanctions; and because of the fact that one billion poor people still rely heavily on forest resources for their life.

2. Literature Review

Blomley and Ramadhani (2005) pointed out that Participatory Forest Management (PFM) is a strategy to help achieve sustainable forest development. It is a way to encourage the management and co-ordination of government agencies on forests, forest land and all those living in the forest. In their study on the importance of identifying forest owners, Gobeze et al. (2009) have shown that for decades, forests in Ethiopia were unmanaged and heavily damaged due to unidentified forest owners. Studying the limitations and challenges of applying PFM model, Polansky (2003) concludes that there are two aspects to consider: how to plan and intervene to achieve the benefits of PFM and monitor implementation.

In his study on the principles of a common forest management model, Balooni (2009) has shown that India's general forest management model is based on a number of principles such as: The principle of co-management

and the “give and take” relationship between the two main actors involved in forest management: Community villages and state management agencies on forests and may be intermediaries with non-governmental organizations (NGOs); principles of harmonious and equal benefit sharing between communities and state agencies; the principle that people are equally involved in all processes and areas of forest policy formulation. At the same time, in this model, there is a regime of empowering individuals to manage forests for a long time and the state only plays a role of supervising and promoting.

Food and Agriculture Organization of the United Nations - FAO’s studies on PFM focus on some major topics, namely: approach to maximize benefits for the related party; ways to increase rights related to: ownership, control, responsibility of localities and communities in forest management; encourage multi-faceted support of stakeholders in FPD; creating a flatter mechanism and structure for forest management. FAO has been gradually successful with a number of support models in FPD management. Specifically, FAO has supported to increase the contribution of forests in poverty reduction strategies. In particular, building the “Community - based Forest Enterprise” model has been seen as an important initiative to create sustainable forest management practices with the participation of stakeholders on the principle of mutual benefit for all parties.

In a study on sustainable forest development, the European Union (EU) research group (2003) conducted a survey of 15 countries in the Union and pointed out EU strategies and policies on forests and forest-related production sectors at three strategic levels, EU policies on forests: global, regional and national levels. The six contents approved by the EU Ministerial Meeting can be referred to as: responsibility for forest policy belongs to each member country; realizing international commitments; integrating and supporting national forest programs; forests and rural areas are linked together and rural development is also basically linked to forest development; forest is associated with biodiversity.

Research on forest tenure by Gerhard, Ivana and Bernhard (2012) shows that private land ownership, especially private forest ownership, is a challenging issue in forest management. At the same time, this study identifies challenges that countries must consider when assessing private ownership structures in forests and policies. In particular, if policies of forest land allocation to local people are implemented, the issues of “private” forest management must be deeply concerned. This is also an unresolved issue in European countries as well as in Vietnam.

Concerning decentralization of forest management, Seki et al. (2007) conduct a study on forest management issues in seven Asian countries: India, Nepal, Cambodia, Philippines, Thailand, Vietnam and China. The study shows that the forest management model changes from traditional to modern, according to the effective governance model and gradually to the community forest model. In addition, extent and scope of impacts of limited and differentiated powers among countries are due to lack of stability in policies. Incomplete decentralization has made the community forest model inefficient; and decentralization has created specific conflicts between interest groups.

Banerjee (1997) pointed out the contents of decentralization in forest management in India as well as in some Asian countries. The central forest management model increases deforestation, environmental destruction and law violation. This traditional model does not manage the transfer of forest land and forest exploitation for commercial purposes. Therefore, it is necessary to authorize the forest management.

Ha Cong Tuan (2005) has studied the theoretical basis of State management on forest protection, confirming the important and indispensable role of the legal tool for State management on forest protection. He points out the contents of the state management method by law. Also, he assesses achievements and limitations in the implementation of forest protection management by law, thereby proposing recommendations for state management by law in the forest protection in Vietnam. However, forest management is a complex issue, that requires to apply a variety of management methods and tools simultaneously.

On the aspect of state administrative management on forest protection and development, Nguyen Huy Hoang (2009) has focused on the theory of state administration on sustainable forest protection and development, limited analysis and challenges in sustainable forest protection and development in the Central Highlands and propose state administrative management solutions to protect and develop Central Highlands forests. However, sustainable forest management for forest protection and development must not only be implemented through administrative solutions but also must be implemented simultaneously with the participation of stakeholders in society.

Concerning land and forest allocation, Dinh Huu Hoang and Dang Kim Son (2008) analyze the world trend of decentralization of the forestry sector. Besides, they research Vietnam’s perspectives and policies on land and forest allocation. Then, they summarize the achieved results, limitations, and challenges of implementing the forest land allocation policy. On that basis, they propose some recommendations on land and forest allocation for improving agricultural land policy.

3. Methodology

This study uses two main research methods: documental analysis method and secondary data analysis. We aggregate data from documents such as books, magazines, domestic and international researches related to forest management meeting the requirements for sustainable development in Vietnam. The documents focus on some main contents such as Participatory Forest Management strategy; principles of forest management model; forest tenure; decentralization of forest management; state administrative management on forest protection and development; etc.

In addition, we also collect secondary data through the statistical yearbooks of the provincial statistics offices in Vietnam to clarify the current situation of forest management meeting the requirements for sustainable development in Vietnam. Some reports from organizations such as the Vietnam Forest Inventory and Planning Institute, the Vietnam Ministry of Agriculture and Rural Development, Nghe An Forest Protection Department... are also important secondary documents for this study. In addition, we refer to legal documents such as The 2004 Vietnam Forest Protection and Development Law; The 2017 Vietnam Forestry Law ...

Data has been carefully collected and synthesized by specific content related to forest management meeting the requirements for sustainable development in Vietnam in recent years. As for the unclear data, we make every effort to search through the various sources to clarify the research problem. When we have enough data, we classify, sort and process it. For statistical data, we synthesize into tables to easily compare and evaluate the forest management meeting the requirements for sustainable development in Vietnam.

4. Research Results

4.1 Actual Situation of Vietnam's Forest Resources

In Vietnam, the 2017 Forestry Law replaces the 2004 Forest Protection and Development Law and Decree 156/2018/ND-CP dated November 16, 2018 guiding the implementation of the 2017 Forest Law: Regulations on Management, protection, development and use of forests; rights and obligations of forest owners and users to domestic agencies, organizations, households and individuals, Vietnamese residing overseas, foreign organizations and individuals involved in the protection of forests. Forest protection and development in Vietnam. In cases where the international treaties which Vietnam has signed or acceded to contain provisions different from those of the Law on Forest Protection and Development, the provisions of such international treaties shall apply.

Forest protection and development activities must ensure sustainable economic, social, environmental, defense and security development; in line with socio-economic development strategies and forestry development strategies; comply with national and local forest protection and development plans; follow the rules of forest management.

The protection and development of forests must conform to land use plans. The allocation, lease, recovery and change of forest and land use purpose must comply with the provisions of the Law on Forest Protection and Development, the Land Law and other relevant laws, ensuring stability. long-term orientation towards socialization of forestry.

Ensuring the harmony of interests between the State and forest owners; between the economic benefits of forests and social benefits, environmental protection and nature conservation; between immediate benefits and long-term benefits; to ensure that foresters mainly live by forestry jobs.

Forest owners shall exercise their rights and perform their obligations within the forest use duration according to the provisions of law and other provisions of law, without prejudice to the legitimate interests of other forest owners.

Vietnam's forests are unevenly distributed. The Central Highlands, the Northeast and the North Central Region have over 2 million hectares of forests. The Southeast region and the Central Coast region have from 1 to 1.5 million hectares of forests. The Northwest, the Mekong River Delta and the Red River Delta are the regions with less than 1 million ha of forests.

According to the Vietnam Forest Inventory and Planning Institute, the area of planted forests has increased rapidly since 1999 but still does not reach the target of greening 43% of the whole country by 2015. Specifically, the total forest area nationwide recorded in 1995 was 14.3 million hectares. However, by 1995, natural forests had been encroached, changed the purpose of use and overexploited, so the area was only 8.25 million hectares.

The forest area has been cut down, the area of natural forest has been reduced to the above concern, the Government has declared "closed" to the natural forest, and has asked localities to increase additional afforestation. Thanks to that, the area of forests nationwide, especially planted forests, has increased significantly. Typically, in 2005, the national forest area increased to 12.70 million hectares; in 2009 increased by 13.20 million hectares. Especially,

by 2015, the total forest area of the whole country has increased to 14.06 million hectares. However, the area of natural forests has not been restored. According to experts, there are two main reasons for the decrease of forest area, the change of forest land use purpose, especially over-exploitation of forest products, especially in the Central Highlands region and Central coastal region.

According to the Vietnam Ministry of Agriculture and Rural Development, by the end of 2016, forest cover was more than 41%. The problem now is that the percentage of rich forests is still very low, while poor and exhausted forests account for 40% of the total forest area. In addition, it is necessary to increase the proportion of planted forests to increase the quality and coverage.

Accordingly, the process of implementing the survey was conducted on 6,427 communes in 60 provinces and cities with forests and land planned for forestry. Authentic results show that by the end of 2016, the whole country had 14,377,682 hectares of forests. In which natural forest is 10,242,141ha and plantation forest is 4,135,541ha. If compared with the total national natural area of 33,095,250ha, the current coverage rate is 41.19%; the largest coverage area is the North Central Coast with 56.46% and the Northeast with 54.58%. Behind are South Central, Central Highlands and Northwest. Southwest only reached 4.36% and was also the lowest. However, the Northeast region has the largest area of forest. Out of more than 10 million hectares of natural forests, there are 8,839,154 hectares of wood forests, 241,610 hectares of pure bamboo forest and 1,156,589 hectares of mixed timber and bamboo forests, 4,787 hectares of coconut trees. However, out of 8,839,154 ha of natural forest, only 8.7% is rich forest. The Minister of MARD affirmed that the target of increasing forest cover to 42% and above by 2020 is to cover 14,415,381 hectares nationwide; in which, natural forest has 10,236,415 ha; plantation forest of 178,966 ha. The area of forests eligible for national coverage is 13,717,981 ha, the corresponding coverage is: 41.4%.

4.2 Forest Management Meeting the Requirements for Sustainable Development in Vietnam

The Vietnam Prime Minister approved the forest protection and development plan for the period of 2011-2020. Specifically, forest protection and development focus on good protection of the existing forest area; efficient and sustainable use of forest resources and land resources for forestry. In addition, Vietnam will increase forest cover to 42-43% by 2015 and 44-45% by 2020; and increase productivity, quality and value of forests. Also, Vietnam will restructure the industry towards increasing value added; and meet basically the demand for timber and forest products for domestic consumption and export. Also, the forest protection and development plan in Vietnam pays attention to creating more jobs, raising incomes for people living with forestry jobs, contributing to hunger eradication and poverty alleviation, security and national defense.

Vietnam will strengthen forest protection by enhancing responsibilities of People's Committees at all levels for forested areas. Some important policies will be given more attention, such as: policy on forest co-management; policies for grassroots forest protection forces; and policies to improve the capacity and efficiency of forest ranger forces.

In addition, Vietnam will focus on establishing a system of organizational structure to perform the task of protecting and developing forest resources, *firstly* the Forest Ranger. The specialized organizational system of forest protection and development from the central to grassroots level is the forest protection force in Vietnam: Central Forest Protection (Forest Protection Department); Forest Protection of provinces and central cities (Branch of Forest Protection Department); Forest Protection of districts, towns, provincial cities (Forest Protection County).

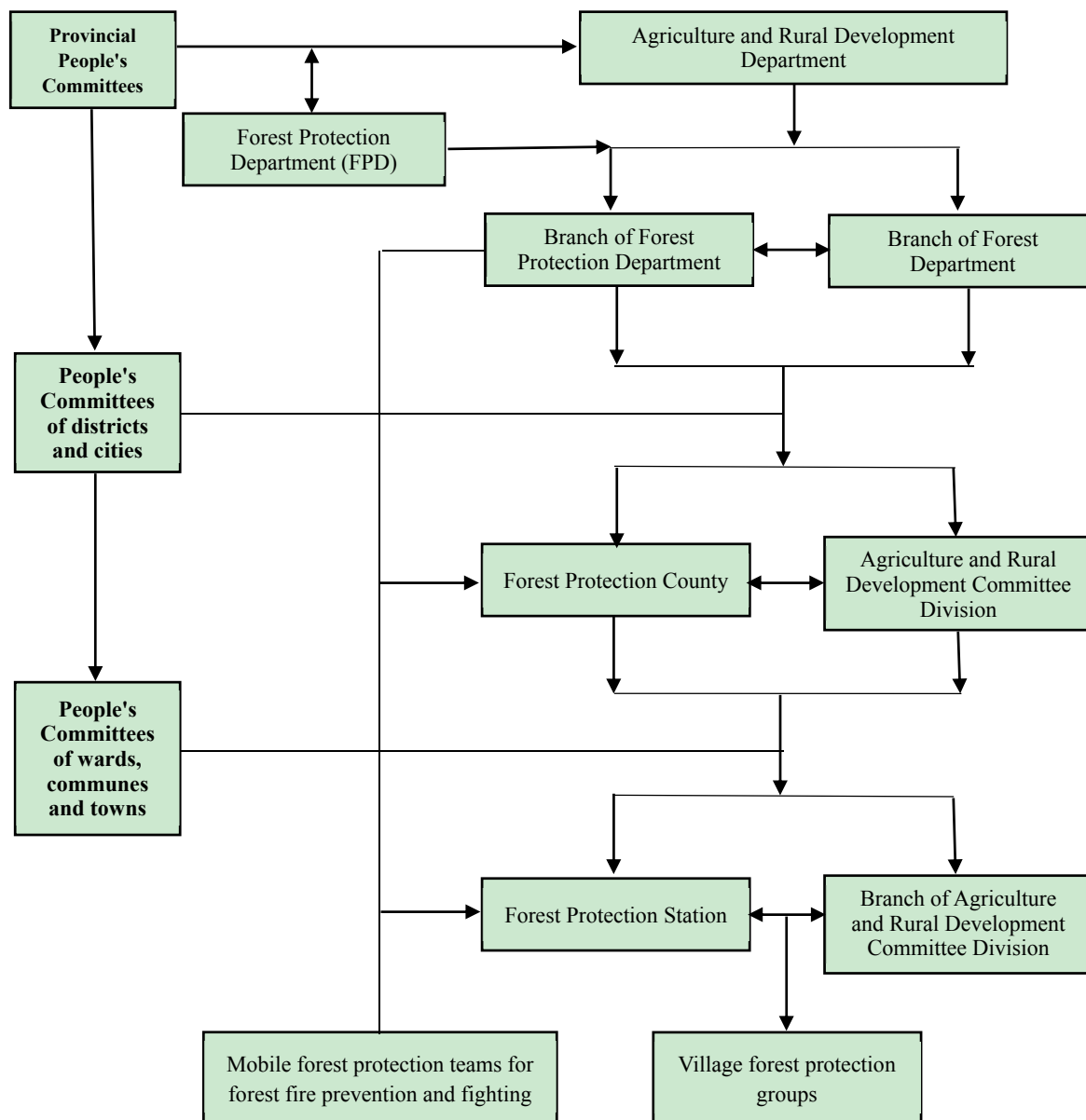


Figure 1. Organizational chart of forest management apparatus in Vietnam

Forest protection is a specialized force of the State, organizing and staffing forest rangers by 2015, on average nationwide, there will be one forest protection staff for every 1,000 ha of forest area (from 2011 to 2015, about 3,000 additional staff will be added)). Forest rangers are tasked with protecting forests, assisting the Minister of Agriculture and Rural Development and presidents of People’s Committees at all levels in performing the state management of forest protection, ensuring the observance of the legislation on protection and forest development.

In the process of forest resource management, there are some determinants as follows:

Objectively, every year, due to climate change, environment changes, creating the phenomenon of thunderstorms, flash floods and floods have destroyed many special-use forests, protection forests and production forests. and great damage to forest resources. The state management of forest resources faces many difficulties.

Subjectively, policies on forest protection and development are not yet coherent and synchronized with other socio-economic policies, giving priority to investment in infrastructure construction, human resource development, and sedentary farming, stabilizing and improving the life of people in mountainous areas. Invest in special-use forests, protection forests and national breeding forests; protect and develop endangered, precious and rare forest plants and animals; research and apply results of scientific research, technological development and human resource training for forest protection and development; developing a modern forest management system, forest statistics,

forest inventory and monitoring forest resource developments; building forest fire fighting force; investing in material and technical foundations and providing equipment in service of forest fire fighting and prevention of organisms harmful to forests.

People are an important and direct component. Through surveys, people are still indifferent to the phenomenon of illegal logging by loggers and the protection of forest management and protection forces. If the local people's role is well promoted, local authorities will minimize the difficulties in state management of forest resource protection.

- Deforestation, illegal forest exploitation; Illegally hunting, shooting, catching, trapping, trapping and slaughtering forest animals; Illegally collecting specimens in the forest; Illegally destroying forest resources and forest ecosystems.
- Violating regulations on forest fire prevention and fighting; Violating regulations on prevention and elimination of organisms harmful to forests; Illegally occupying, occupying and changing the purpose of forest use; Illegally exploiting landscape, environment and forestry services; Transporting, processing, advertising, trading, using, consuming and storing; export and import forest plants and animals in contravention of law provisions.
- Abusing positions and powers to act against regulations on forest management, protection and development.
- Grazing cattle in strictly protected sections of special-use forests, newly planted forests, young forests; Raising, planting and dropping into special-use forests of animals and plants of non-native origin without permission of competent state agencies; Illegally exploiting biological resources, mineral resources and other natural resources; change the natural landscape, natural evolution of the forest; adversely affecting the natural life of forest species; illegally carrying toxic chemicals, explosives and inflammables into forests.
- Allocating, leasing, converting, transferring, inheriting, donating, mortgaging, guaranteeing or contributing capital with the value of forest use rights and the value of planted production forests being illegal; Destroying works in service of forest protection and development.
- Other acts of infringing upon forest resources and forest ecosystems.

Competent state agencies to carry out inspection, supervision and handling of violations are ineffective, also due to the fact that when accessing forests in high mountainous areas, officials are not really enthusiastic about their tasks. delivered, not yet imposed strict sanctions.

A fact in the Central Region (Nghe An Province) shows that, from 2002 to now, the province has implemented a survey program to monitor changes in forest resources in the area, data on area, Forest status and forest status are monitored and updated. This is also an important database in the process of planning and developing forestry plans and organizing the forest management system in a reasonable manner. The area of forests and forestry land as of December 31, 2012 divided into three forest types is summarized as follows.

Table 1. Area of three forest types by use functions

Forest functions	Area (ha)	Proportion in the area of forest land (%)	Proportion in the area of total natural area (%)
Special-use forests	169,948.60	14.5	10.3
Protection forests	394,221.95	33.6	23.9
Production forests	610,579.00	51.9	37.0
Total	1,174,749.55	100	71.2

Source: *Nghe An Statistical Yearbook, 2015*

Table 2. Investment in project programs

	Unit: ha					
	Total	2011	2012	2013	2014	2015
Budget capital	27,791	5,115	6,423.4	10,931.7	4,634.2	686.7
Households' self-cultivation	19,856.55	1,736.2	4,947.95	4,500		8,672.4
Total	47,647.55	6,851.2	11,371.35	15,431.7	4,634.2	9,359.1

Source: Nghe An Statistical Yearbook, 2015

Table 3. Forestry production value in the period of 2011-2015

No	Indicator	Unit	2011	2012	2013	2014	2015
1	Forestry production value						
	At current prices	Million VND	1,036,933	1,091,748	1,371,181	1,746,441	2,052,242
	At constant prices	Million VND	555,014	565,194	1,371,181	1,412,193	1,468,553
1.1	Afforestation and forest zoning and protection						
	At current prices	Million VND	214,464	224,882	125,502	153,136	173,193
	At constant prices	Million VND	125,319	129,078	125,502	121,536	126,130
1.2	Forest exploitation						
	At current prices	Million VND	702,128	752,120	1,147,215	1,464,287	1,737,080
	At constant prices	Million VND	383,694	397,046	1,147,215	1,187,143	1,236,293
1.3	Forestry services						
	At current prices	Million VND	120,341	114,747	98,464	129,018	141,969
	At constant prices	Million VND	46,001	39,070	98,464	103,514	106,130
2	Forestry growth rate	%	0.88	1.83	8.48	2.99	3.99

Source: Report of Nghe An Forest Protection Department in 2015

Table 4. Results of forest protection and development in the period of 2013-2015

No	Indicator	Unit	Total	Specially		
				2013	2014	2015
I	Silviculture					
1	Forest protection	Ha	2,652,884.50	875,009.50	888,695.00	889,180.00
2	Forest zoning	Ha	203,280.00	63,000.00	55,000.00	85,280.00
3	Afforestation	Ha	41,939.00	11,319.00	15,620.00	15,000.00
-	<i>Special-use forests</i>	Ha	80.00		50.00	30.00
-	<i>Protection forests</i>	Ha	1,742.70	722.70	450.00	570.00
-	<i>Production forests</i>	Ha	40,116.30	10,596.30	15,120.00	14,400.00
4	Forest care	Ha	60,111.73	18,021.83	20,197.00	21,892.90
-	<i>Special-use forests</i>	Ha	489.00		219.50	269.50
-	<i>Protection forests</i>	Ha	7,209.34	2,701.83	2,583.89	1,923.62
-	<i>Production forests</i>	Ha	52,413.39	15,320.00	17,393.61	19,699.78
5	Rehabilitation of poor and exhausted forests	Ha	313.70	313.70		
6	Scatter plantations	Million	14.50	5.70	3.80	5.00
II	Seed production					
1	Planting seed forests	Ha	100.60	25.00	37.00	38.60
2	Planting seed gardens	Ha	0.00	0.00	0.00	0.00
3	Plant the original seed gardens	Ha	7.00	4.00	2.00	1.00
4	Seedling production	Million	84.83	21.79	30.35	32.69
III	Silvicultural infrastructure					
1	Forest protection house	Unit	1.00	0.00	1.00	0.00
2	Nursery		6.00	3.00	1.00	2.00
-	<i>Temporary nursery</i>	Unit	4.00	1.00	1.00	2.00
-	<i>Permanent nursery</i>	Unit	2.00	2.00		
4	Fire watchtower	Unit	0.00	0.00	0.00	0.00
5	Forest protection boards	Unit	0.00	0.00	0.00	0.00
6	Local forestry road	Km	37.20	12.20	10.00	15.00

Source: Report of Nghe An Forest Protection Department in 2015

Table 5. Forest protection and development in the period of 2014-2015

No	Indicator	Unit	Total	Specially	
				2014	2015
I	Silviculture				
1	Forest protection	Ha	1,805,951.6	899,120.0	906,831.6
2	Forest zoning	Ha	158,060.0	82,439.0	75,621.0
3	Afforestation	Ha	33,518.3	15,810.0	16,631.0
-	Special-use forests	Ha	100.0	50.0	50.0
-	Protection forests	Ha	3,534.6	960.0	1,497.3
+	Budget capital	Ha	1,077.3	500.0	577.3
+	Funding capital	Ha	1,380.0	460.0	920.0
-	Production forests	Ha	29,883.7	14,800.0	15,083.7
4	Forest care	Ha	51,103.4	21,778.0	29,325.4
-	Special-use forests	Ha	442.5	223.0	219.5
-	Protection forests	Ha	4,060.9	1,555.0	2,505.9
-	Production forests	Ha	46,600.0	20,000.0	26,600.0
5	Rehabilitation of poor and exhausted forests	Ha	2,447.0	1,017.0	1,430.0
6	Scatter plantations	Million	9.5	5.0	4.5
II	Seed production				
1	Planting seed forests	Ha	30.0	15.0	15.0
2	Planting seed gardens	Ha	20.0	10.0	10.0
3	Plant the original seed gardens	Ha	2.0		2.0
4	Seedling production	Million	64	31	33
III	Silvicultural infrastructure		0.0		
1	Forest protection house	Unit	30.0	15.0	15.0
2	Nursery	Unit	4.0	3.0	1.0
-	Temporary nursery	Unit	5.0	3.0	2.0
-	Permanent nursery	Unit	5.0	2.0	3.0
4	Fire watchtower	Unit	8.0	3.0	5.0
5	Forest protection boards	Unit	200.0	100.0	100.0
6	Local forestry road	Km	28.0	15.0	13.0

Source: Report of Nghe An Forest Protection Department in 2015

5. Implications of the Results

5.1 Orientation of Forest Management and Development towards Sustainability in Vietnam

Concerning forest development: Based on the planned land fund after reviewing the planning of 3 types of forests and fluctuations in production practices, making reasonable adjustments and completing the work of setting up boundary markers of 3 types of forests; It is necessary to study and re-evaluate all forest management, protection and development planning up to now and develop appropriate processes and procedures to reorganize protection planning and planning. and developing forests in the new era.

Concerning forest protection: Innovating methods of propagating legislation on forest protection and development, linking legal education with raising awareness about responsibilities and benefits of each family and local community. Review the assignment and decentralization between authorities and authorities at all levels, especially

the role of commune authorities to ensure their rights and resources commensurate with their responsibilities in protection and management. Forest. Strengthen effective coordination between village communities and forest owners, commune authorities and forest protection agencies in forest protection. Focus on sharing responsibilities and interests between the State, communities and forest owners in the process of detecting, preventing and suppressing loggers.

Strictly protect and put an end to illegal timber and forest product exploitation, forest fires for special-use forests, preserve biodiversity of special-use forests in the province. : Protection of protection forests in forests mainly used to protect water sources, protect land, prevent erosion, desertification, limit natural disasters, regulate climate and protect the environment. high risk of encroachment. Protection of production forests: Protection of natural forests which are rich, medium-sized production forests are closing forests.

Concerning the organization of exploitation of forest resources: It is allowed to exploit economic benefits from natural production forests on the principle of sustainability, using forest revenues to protect, develop forests and enrich them from Forest. Encourage and support organizations and individuals to plant forests, modernize exploitation and processing technologies in order to raise the value of forest products, attaching importance to developing non-timber forest products.

Concerning training and improving capacity of forest protection staff: Develop and implement a training and capacity building strategy for forestry staff at all levels, especially at commune and remote areas to meet the requirements of industry innovation and international integration.

5.2 Policy Recommendations

Vietnam should strengthen forest protection and forest development, the state provides a policy and solution to enhance the effectiveness of forest protection, promote socialization, attract economic sectors, social organizations and people participate in protecting forests, creating jobs, increasing incomes, contributing to hunger elimination and poverty alleviation, raising people's living standards and contributing to maintaining national security and defense.

It is necessary to stipulate sanctions on types of crimes violating forest protection and development laws such as: (i) *direct crimes*: forest fires, forest destruction, illegal forest exploitation, hunting, shooting, catching, trapping and rearing illegal slaughtering forest animals; trading, trading, illegally transporting forest products, not denouncing forest crimes ...; and (ii) *crime of management*: abusing positions and powers to violate regulations of law on forest allocation, giving lease forests, recover forests, change forest use purposes, permit forest use and exploit forest products; lack of responsibility or taking advantage of positions and powers to enforce the law on forest protection and development; cover for violators of the forest protection and development law or commit other violations. Vietnam needs to specify the responsibilities of the leaders.

The Vietnam central ministries should enhance the coordination and prompt and timely coordination in forest protection, development and management. Also, they need to promote the responsibility, the spirit of forest protection, denounce crimes of people living inside, outside and near forests and national parks. It is necessary to strengthen the regime of commendation and reward worthy. At the same time, the Vietnam central ministries should attach the responsibilities of the local governments in accordance with the provisions of the Government.

In addition, Vietnam should strengthen the direction and close monitoring of the locality, together with the coordinated coordination of departments, agencies, authorities, forest rangers and forest owners, businesses in the area, with programs and plans for sustainable forest management, protection and development. Furthermore, Chairpersons of People's Committees at all levels are responsible for forest fires, deforestation or forest loss caused by law violations in the field of forest management and protection within their management domains and areas.

Responsibilities of the Province-level People's Committees:

The Provincial People's Committees should promulgate or submit to competent state agencies for promulgation of legal regulations on forestry, decide on sustainable forestry development programs and projects in the locality; To organize the implementation of legal documents on forestry, forestry development strategies, national forestry planning, forestry development programs, projects and plans in localities.

Also, the Provincial People's Committees should organize forest classification and demarcation according to its authority; forest allocation, lease, conversion of forest use purpose to another purpose, recovery of forests from organizations; organize replacement afforestation; organize forest investigation, forest inventory, monitoring local forest changes; update forest database, make local forest management records.

In addition, the Provincial People's Committees should organize forest protection; conservation of forest

biodiversity; forest fire prevention and fighting; prevention and elimination of organisms harmful to forests; forest development; forest use; processing and marketing of local forest products; decide on forest price brackets in the province; organize advanced scientific and technological research and application in forestry in the locality; propagating, disseminating and educating about forestry legislation in localities. Besides, the Provincial People's Committees should mobilize forces, supplies, means and equipment of organizations, households and individuals in the locality to respond to forest fire emergencies within their competence; inspecting, examining and handling law violations; settle disputes, complaints and denunciations in the forestry sector in accordance with the law.

Responsibilities of the District-level People's Committees:

The District People's Committees should promulgate or submit to competent state agencies to promulgate legal documents on forestry, decide on sustainable forestry development programs and projects in the locality; organize the implementation of legal documents on forestry, sustainable forestry development programs, projects in the locality; organize the classification of forests and demarcation of local forests in accordance with the law.

Moreover, the District People's Committees need to focus on forest allocation, lease, conversion of forest use purpose to another purpose, recovery of forests for households, individuals and communities; forest management records; organizing replacement afforestation; organizing forest investigation, forest inventory, monitoring local forest changes; organizing forest management, protection, conservation of forest biodiversity, forest fire prevention and fighting.

In addition, the District People's Committees should propagate, disseminate and educate about forestry legislation in localities; direct commune-level People's Committees to formulate projects on land and forest allocation for unallocated or leased forests according to law provisions; inspect, examine and handle law violations; settle local disputes, complaints and denunciations in the forestry sector in accordance with the law.

Responsibilities of the Commune-level People's Committees:

The Commune-level People's Committees should promulgate according to its competence or submit to competent state agencies to promulgate legal documents on forestry, decide on programs and projects on sustainable forestry development, forestry, agriculture and fishery production. consolidation, shifting cultivation and implementation in the locality; manage forest area and boundaries; certify dossiers of application for forest assignment or lease to organizations, households, individuals and communities according to the provisions of law.

Moreover, the Commune-level People's Committees need to organize the management and protection of areas of forests that the State has not yet allocated or leased; and organize implementation of local forest inventory; guide the community to develop and implement village regulations and regulations on forest protection and development in accordance with the law. In addition, the Commune-level People's Committees should organize forest fire prevention and fighting activities; preventing and fighting against forestry law violations in the area; handle law violations, settle disputes, complaints and denunciations in the local forestry domain according to the provisions of law.

Functions and powers of the Forest Rangers:

Forest rangers are organizations with the function of managing and protecting forests and ensuring the observance of forestry legislation; is a specialized force in forest fire prevention and fighting. Forest rangers should focus on developing forest protection programs and plans, plans to prevent and combat violations of legislation on forestry, forest fire prevention and fighting; protection of special-use forests and protection forests; coordinating with concerned agencies in organizing the protection of forest under the ownership of the whole people not yet assigned or leased.

Also, forest rangers should organize warning and forecast of forest fire risk; organize specialized forest fire prevention and fighting forces, monitor annual forest changes; organize the prevention, control, control and handling of violations of forest protection, exploitation, forest use, transportation, trading, storage and processing of forest products in accordance with the law. the law.

It is necessary to guide forest owners to formulate and implement forest fire prevention and fighting plans. In addition, forest rangers should pay attention to fostering and training forest protection operations, forest fire prevention and fighting for forest owners; propagating and mobilizing the people to protect and develop forests; organizing mass forces to protect forests at grassroots levels; and performing other duties assigned by competent state agencies in accordance with law.

Besides, forest rangers should request relevant agencies, organizations and individuals to provide information and documents in the performance of official duties as prescribed; sanction administrative violations and apply

measures to prevent administrative violations; prosecute, investigate violations of forestry law in accordance with the law; use specialized equipment, equipment, weapons, support tools and outfits as prescribed by law.

For forest owners and businesses

For state forest owners:

State forest owners should strictly implement forest protection and development planning, detailed land use planning, widely propagate the law on forest protection and development, and associate legal education with awareness of responsibilities and rights. benefit to the community. Also, they need to strictly protect forests at the root, stop illegal logging, forest products, forest fires for forest areas under management.

For non-state forest owners:

Non-state forest owners need to strictly implement the plan of using forestry land allocated or leased. In addition, they should proactively apply advanced breeding technologies to produce and supply plant varieties and plant and care for forests.

For households and individuals:

Households and individuals should participate in well implementing the work of forest protection and development, good production and business of allocated forest land according to local planning and plans.

For businesses:

Businesses should proactively innovate and invest in advanced equipment and technology in the field of processing wood and non-timber forest products, in order to save raw materials and create valuable products for meeting local and export demand. Moreover, they need to manage forest resources to meet sustainable development is a global problem in general and in our country in particular. This is not a new issue, there have been a system of legal documents issued for decades, but the effectiveness of management and management on forest protection and development has not been achieved as expected.

6. Conclusion

This empirical study focuses on forest management meeting the requirements for sustainable development in Vietnam. The objective of the study is to analyze the current situation of forest management meeting the requirements for sustainable development in Vietnam, thereby give some implications of the results. In order to achieve the research objective, we first systematize the literature review on forest management meeting the requirements for sustainable development. Some theoretical issues are concerned such as Participatory Forest Management strategy; principles of forest management model; forest tenure; decentralization of forest management; state administrative management on forest protection and development; etc.

By using two main research methods, namely: documental analysis method and secondary data analysis, we have clarified the current situation of the forest management meeting the requirements for sustainable development in Vietnam in recent years. At the same time, we pointed out the actual situation of Vietnam's forest resources. Hence, we give some implications for forest management meeting the requirements for sustainable development in Vietnam. By clearly defining orientation of forest management and development towards sustainability in Vietnam, we propose some policy recommendations; at the same time clearly point out the responsibilities of the Province-level People's Committee, the District-level People's Committee, the Commune-level People's Committee, the Forest Rangers, and forest owners and businesses.

With the characteristics and role of forests, the Vietnam State should have short-term and long-term management policies on forest protection and development. At the same time, the Vietnam State should have sanctions to strictly handle violations of the law on forest resources. Protection and sustainable development of forest resources are the responsibility of the entire community and need international cooperation with countries in the region.

Despite our best efforts, our research still has certain limitations due to various objective and subjective reasons. The limited research time made us unable to study in-depth some theoretical and practical issues related to forest management meeting the requirements for sustainable development in Vietnam. In addition, due to our lack of research knowledge and experience, some of the reviews given are still subjective, partially affecting the recommendation possibility. We hope that future studies will overcome these limitations to have more theoretical and practical contributions.

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