

Opportunities and challenges in mobilizing finance to implement Vietnam's Forestry Development Strategy for 2006–2020

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Abbreviations

CIFOR Center for International Forestry Research

ER-P Emission Reduction Program

FPD Forest Protection and Development

FDI Foreign Direct Investment

FCPF Forest Carbon Partnership Facility
FFI Fauna & Flora International

FPDF Forest Protection and Development Fund

FLEGT Forest Law Enforcement, Governance and Trade

GDP Gross Domestic Product GCF Green Climate Fund

INDCs Intended Nationally Determined Contributions

JICA Japan International Cooperation Agency

MARD Ministry of Agriculture and Rural Development
MONRE Ministry of Natural Resources and Environment
NORAD Norwegian Agency for Development Cooperation

NGOs Non-governmental organizations NRAP National REDD+ Action Plan

NDC Nationally Determined Contribution
ODA Official Development Assistance

PFES Payments for Forest Environmental Services

PRAP Provincial REDD+ Action Plan

REDD+ Reducing Emissions from Deforestation and forest Degradation

SNV Netherlands Development Organization

SuF Special use forest

SFMD Sustainable Forest Management Development

UNFCCC United Nations Framework Convention on Climate Change

UN-REDD United Nations Collaborative Programme on Reducing Emissions from Deforestation and

Forest Degradation in Developing Countries

VARHS Vietnam Access to Resources Household Survey

VBARD Vietnam Bank for Agriculture and Rural Development

VBSP Vietnam Bank for Social Policies
VFDS Vietnam Forest Development Strategy
VNForest Vietnam Forestry Administration
VNUF Vietnam National University of Forestry

VNFF Vietnam Forest Protection and Development Fund

VND Vietnamese Dong

WWF World Wildlife Fund for Nature

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Executive summary

Of all of Vietnam's economic sectors, the forestry sector currently manages the largest land area. Land dedicated to forestry is distributed across the country; home to a mainly ethnic minority population with limited access to education and slow development. Although forest area has increased in the last 20 years, the quality and biodiversity of these forests continue to decrease, and neither production and protection requirements have been met. The current growth rate within the forestry sector is unsustainable, with low productivity, profitability and competitiveness.

On 5 February 2007, the Prime Minister approved the Vietnam Forest Development Strategy (VFDS) for 2006-2020 under Decision No.18/2007/ QD-TTg. This strategy seeks to increase forest cover, protect native forests and ensure the wide participation of all socio-economic sectors and organizations in forestry development. The strategy is also expected to contribute further to biodiversity preservation and ecosystem service provision, poverty reduction, improved living standards for rural mountainous people, and national security. To achieve ambitious objectives requires significant financial resources. However, financial mobilization for implementation of the VFDS has always been limited. Investment into forest protection and development, especially for special use forests and protection forests, has to date been minimal, with state allocations insufficient to meet requirements. The potential contribution of the forestry sector in increasing national GDP has not been fully recognized by policy makers and therefore has not yet been maximized. There is also no data collected and analyzed to date on the forestry finance as well as the opportunities and challenges for mobilizing financial resources for forestry sector in Vietnam. This research was thus conducted to assess the current situation, analyzing both the opportunities and challenges of financial mobilization, both for implementation of the strategy as well as for

forestry sector investment. A literature review was carried out by a study team and interviews were conducted with financial experts, state management officials at both central and provincial level, and donor representatives. A national workshop was also organized in Hanoi with 66 participants to obtain stakeholders' feedback about the report findings.

Our findings show that the total budget projection for implementation of the Forest Development Strategy between 2006 and 2020 is VND 111,387,443 million. Between 2006 and 2010, VND 36,228.64 billion was mobilized, accomplishing 107% of the strategy's target for that period. Between 2011 and 2016, total mobilized finance was VND 43,351.88 billion, meeting 88% of the strategic target set. As a result of this finance being mobilized, after ten years of VFDS implementation, the forestry sector has seen many achievements contributing towards environmental protection, gradually moving the sector from self-sufficiency to commodity production. Our analysis shows that almost all of the strategic environmental, social and economic objectives and targets had either been met or surpassed by 2016. For example, between 2011 and 2016, forestry production growth nearly doubled in value compared to growth between 2005 and 2010, reaching an average of 6% per year and exceeding the 2020 target of 3.5–4% per year. The export value of timber and forest products increased from USD 2.8 billion/year in 2006–2010 to USD 6.52 billion/year in 2012–2015. However, certain major environmental targets, such as certified forest area, have not been met.

Our study also shows that data on forestry finance is scattered, inconsistent and not systematically collected over time, which causes significant challenges for presenting a comprehensive picture about forestry finance in Vietnam. Anticipated investment and actual expenditure relating to some key sources of forestry sector finance, such as

private sector investment, research and education activities, are not collected by the government, thus unavailable. Likewise, available statistical data and government reports combine agriculture, forestry and fishery into one monitoring category; this causes difficulties in providing accurate estimations for forestry alone. These information gaps need to be addressed in future by a national forestry finance tracking system, with adequate funding and human resources devoted to this. A transparent and accountable forestry finance system will help policy makers by improving financial planning for the forestry sector, as well target financial resources for greater returns.

With available data, our analysis shows that although state budget allocated for forestry sector has increased since 2006, the state budget mobilized has not met planned investment targets. In contrast, budget from non-state sources has constantly surpassed planned investment targets since 2006 and is projected to increase over time. Payment for Forest Environmental Services (PFES), a new financial incentive mechanism to provide incentives for forest users to better protect and develop forest, and investments from communities, individuals and enterprises is the main contributors responsible for increases in the budget from non-state sources. PFES accounts for 22% of the total forestry budget and plays significant role in covering the costs of protection fees for more than 5 million hectares of forestland in Vietnam. Although REDD+ was implemented in Vietnam in 2009, with more than 44 REDD+ projects now underway, most REDD+ activities have remained at the readiness phase, therefore no data is available on REDD+'s actual contribution to financing the forestry sector. Official

Development Assistance (ODA) and Foreign Direct Investment (FDI) have been increasing the least and have been on a downward trend in recent years. Mobilized private sector investment and credit have been much lower than expected.

Finance was mobilized for various activities, including afforestation, technology transfer, and forestry extension and infrastructure investment. During 2006–2010, investment into afforestation was VND 18,689.77 billion, accounting for 52%, and investment in activities other than afforestation was VND 17,538.9 billion, accounting for 48%. Financial investment into afforestation by households, individuals and communities was significant (accounting for almost 52% of total investment in afforestation), demonstrating that the policy of socialization around forestry has had initial success. The effectiveness and efficiency of current investment into the forestry sector is low and fragmented, with inadequate investment into enhancing forest quality and research.

Demand for finance to achieve the strategy's goals continues to increase, requiring the forestry sector to increase financial mobilization to match budget targets, use existing budget in a more efficient way, and maintain the same rate of investment from the state. Funding must be mobilized from various state and non-state budget sources, including contributions from local organizations, households and individuals, REDD+ and PFES. Finding new sources of finance to complement existing ones is essential. The forestry sector also needs to continue to improve its legal mechanisms and policies and create a favorable legal environment to mobilize the maximum possible financial resources for forest protection and development.

Introduction

The forestry sector plays an important role in environmental protection, biodiversity conservation and poverty reduction, as well as contributes to social stability and national security in Vietnam. The forestry sector also manages most of the natural land area in Vietnam. In 2016, forest coverage spanned 41.45% of Vietnam at 14.38 million ha, 10.24 million ha of which was native forest and 4.14 million ha was planted (MARD 2017a). In the last five years, Vietnam's forestry sector has seen many achievements: forest area has increased significantly (from 38% in 2006 to 41.19% in 2016 to about 41.45% in 2017); the export value of timber and forest products has more than doubled, from USD 2.8 billion in 2006–2010 to USD 6.52 billion in 2012–2015; annual average revenue from PFES is now VND 1,200–1,300 billion, contributing to the protection and development of more than 5.8 million ha of forestland and increasing forest owners' income (MARD 2017b). Production activities within the forestry sector are shifting dramatically from state

forestry with centralized planning, to social forestry with a multi-sectoral economic structure operating focused on commodity production. However, the forestry sector has equally faced many challenges including slow, unsustainable growth; inefficient businesses and low competitiveness; forest area increasing, but forest quality remaining low; and lack of infrastructure for the timber processing industry. As such, the sector's contribution to the economy has been limited compared with its potential (MARD 2017c).

On 5 February 2007, the Prime Minister issued Decision No.18/2007/QD-TTg approving the Vietnam Forest Development Strategy (VFDS) for 2006–2020, with a simultaneous focus on the management, protection, development and use of natural resources. VFDS also aims to accelerate and ensure the wide participation of all socio-economic sectors and organizations in forestry development and attract investment for forest protection and development (Figure 1).

Economic

- Forestry sector production value (including forest product processing and environmental services) to grow from 3.5% to 4%/year, so that 2020 forestry GDP is 2–3% of national GDP.
- Production forest to cover 8.4 million ha; protection forest to cover 5.68 million ha and special use forest to cover 2.16 million ha.
- 2.5 million more hectares of forest to be planted; 0.3 million ha/year to be replanted after timber harvesting; 200 million trees/year to be planted through dispersive plantation.
- Domestic timber production to reach 20–24 million m³/year.
- Export of forest products to reach over USD 7.8 billion.
- PFES to reach USD 2 billion.

Environmental

- Forest protection and biodiversity conservation are enhanced.
- Forest coverage rate to increase to 42–43% by 2010 and 47% by 2020.
- 0.25 million ha of protection forests and special use forests to be planted by 2010.
- Violations of the Forestry Law to be minimized.

Social

- To create more employment (including jobs in timber processing, non-timber forest products and handicrafts).
- To increase income, improve livelihoods and reduce poverty.
- To complete the allocation and leasing of forest and forestry land.
- To increase the number of trained forestry employees to 50%.

Figure 1. Specific objectives of the Forest Development Strategy 2006–2020

Source: Government of Vietnam 2007

Implementation of the strategy requires the mobilization of significant funding from diversified sources. Despite this, to date there has been no research on sector financing. This research was therefore conducted to address this

information gap by assessing the current funding situation, analyzing both the opportunities and challenges of financial mobilization for strategy implementation and general investment in the forestry sector.

1 Conceptual framework and methods

1.1 Conceptual framework

In this paper we compare high level budget estimations with the planned budgets and actual expenditure of specific sectoral needs and activities, explaining and discussing the reasons behind any differences between them (Figure 2). We break down budgets and expenditure into state and non-state budget sources – the two major categories used by the Government of Vietnam (Figure 3).

1.2 Methods

Data collection was carried out using different research methods.

Literature reviews. Government reports and statistics, research studies and donor reports, on the current status of VFDS implementation and forestry sector finance, were collected and reviewed.

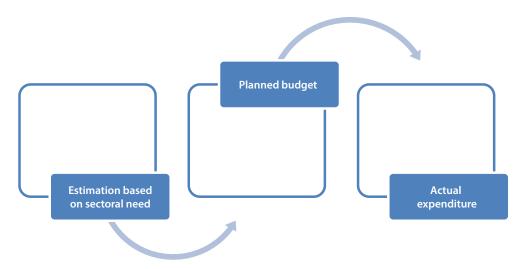


Figure 2. Forestry Finance Assessment Framework

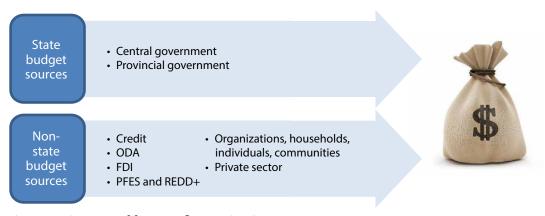


Figure 3. Sources of forestry finance in Vietnam

In-depth interviews were conducted with 30 forestry sector officials (both at central and provincial level). These interviews aimed to capture opportunities and constraints in mobilizing finance for forestry sector and VFDS, as well as analyze policy recommendations to overcome these challenges.

A national consultation workshop was organized in Hanoi with 66 participants (both state and non-state actors) from inside and outside the sector, and from central and provincial government, to obtain feedback on preliminary results.

Limitations of study. Our study shows that data on forestry finance is scattered, inconsistent and not systematically collected over time; this causes significant challenges for presenting a comprehensive picture regarding forestry finance in Vietnam. Anticipated and actual expenditure relating to key sources of forestry sector finance,

such as the private sector, are not collected and are thus available. Likewise, available statistical data and government reports combine agriculture, forestry and fishery into one monitoring category; this causes difficulties in providing accurate estimations for forestry alone. These information gaps need to be addressed in future by a national forestry finance tracking system, with adequate funding and human resources devoted to this.

This report is structured in five sections. Following the introduction and an explanation of the conceptual framework/methodology, Section 2 presents the overall status of anticipated and mobilized finance for Vietnam's forestry sector, before the overall pattern of actual expenditure of mobilized finance is presented in Section 3. Section 4 discusses in detail the current and future trends of each financial source, and presents recommendations for future fundraising for the forestry sector, before conclusions are drawn in Section 5.

2 Mobilization of finance for implementation of the forest development strategy (VFDS) 2006–2020

VFDS is structured and financed through five major programs (Table 1).

Table 1. Finance requirements for implementation of the Forest Development Strategy 2006–2020 (in billion VND)

		2006 2020	Including		
Program	Objectives	2006–2020 target	2006–2010 target	2011–2020 target	
Total		106,759.06	33,885.34	72,873.72	
Investment		100,359.80	31,946.17	68,413.63	
Program 1. Sustainable forest management and development program	 Establish a sustainable national forestry sector for three forest types. At least 30% of production forest to be certified. Sustainable timber production to reach 20–24 million m³/year by 2020. All forests and forestry land to be allocated or leased before 2010. 	44,435.35 (44.3% of total investment required)	16,214.55	28,220.80	
Program 2. Forest protection, biodiversity conservation and development of environmental services program	 16.24 million ha of forest and forestry land to be protected. Investment in infrastructure and equipment for forest protection to be increased. PFES to be developed. 	14,133.60 (14% of total investment required)	3,871.00	10,262.60	
Program 3. Forest product processing and trade program	 Non-timber forest products to become the main production sector, accounting for 20% of forestry production value. Harvested timber to reach 6 million m³/year; particle board to reach 320,000 m³ per year; MDF board to reach 220,000 m³ per year. Value of timber and non-wood forest products to reach USD 7.8 billion. 	37,090.57 (36.95% total investment required)	10,428.07	26,662.50	
Program 4. Research, education, training and forestry extension program	 Focus on biotechnology and forest product processing. Train 5,000 students annually; with 1–2 schools meeting international standards. Strengthen vocational training for officers and farmers, forestry extension. 	1,395.80 (1.35% of total investment required)	546.98	848.82	

continued on next page

Table 1. Continued

		2006 2020	Including		
Program	Objectives	2006–2020 target	2006–2010 target	2011–2020 target	
Program 5. Policy reform, planning and monitoring program	 Formulate mechanisms and policies to increase commodity production and socialization of forestry. Encourage other economic sectors to participate in forestry. Improve state capacity to manage forestry. 	3,304.48 (3.29% of total investment required)	885.57	2,418.91	
Ongoing expenditure		6,399.26	1,939.17	4,460.09	

Source: Government of Vietnam 2017

Of the five programs, the first three demand over 95% of the total investment required for implementation of the strategy. Figure 4 also shows that amongst the five national programs, the Sustainable Forest Management and Development Program was expected to receive the highest levels of state budget investment, along with other diverse sources of funding. Program 3, focused on forest product processing and trade, received no state budget support and was expected to be funded primarily through foreign direct investment (FDI) and investment from domestic enterprises and cooperatives.

In fact, the state budget invested in Program 1 accounts for 56% of the total finance invested over the whole period.

After completing the nationwide 5 million hectares reforestation program in 2006, the forestry sector is now continuing to implement the National Forest Protection and Development Plan with a budget requirement of VND 49,317 billion (VND 14,067 billion, from state budget and VND 35,250 billion from non-state budget. An average investment from state budget is VND 1,406 billion per year and VND 3,525 billion per year from non-state budget

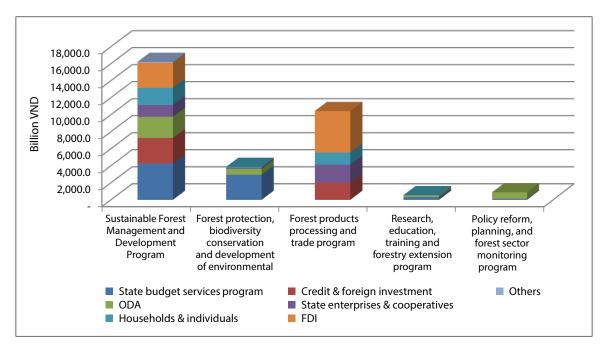


Figure 4. Expected sources of investment between 2006–2010, by program

Source: Government of Vietnam 2007

are required to invest mainly for production forest and forest protection.

Table 2 presents results of finance mobilization for implementation of the Forest Development Strategy 2006–2016. Between 2006 and 2016, mobilized finance totaled VND 79,580.51 billion, exceeding the expected target by a third. For 2011–2016, total mobilized finance hit VND 43,351.88 billion, 88% of the 2020 target, non-state budget reached 94%, with four years remaining.

2.1 State budget (central and provincial government)

State budget, comprising of both central and provincial budget, contributes only 21.5% to overall mobilized finance and meets just 97% of original

government financial targets. Central budget includes revenue from: taxes, fees and charges; the national economy; cash contributions from organizations and individuals; funds for development assistance; and other revenue. State treasury expenditure includes: socio-economic development; national security and defense; operation of the state administration system; paying off state debt for development assistance; and other expenditures. The provincial budget is used to contribute and complement the central budget. Provincial government budget includes: collections from taxes and fees (on land, houses, natural resources, etc.); central budget allocations; donations; and contributions from national and international organizations.

Although the mobilized state budget did not meet its original target, the increase in state budget over time (Figure 5) still reflects increasing government attention and support to the forestry sector.

Table 2. Mobilized finance for strategy implementation (2006–2016)

No	Financial source	Target Implementation					Rate		
		2006- 2010	2011– 2015	Total (1)	%	Accumulation to 2010	Accumulation to 2016 (2)	(%)	(2)/ (1)
	Total	33,885.34	24,562.00	58,447.34	100	36,228.64	79,580.51	100	1.36
1	State budget	9,588.53	8,062.00	17,650.53	30.2	6,820.69	17,119.29	21.5	0.97
2	Non-state budget	24,296.81	16,500.00	40,796.81	69.8	29,407.95	62,490.23	78.5	1.53

Unit: Billion VND

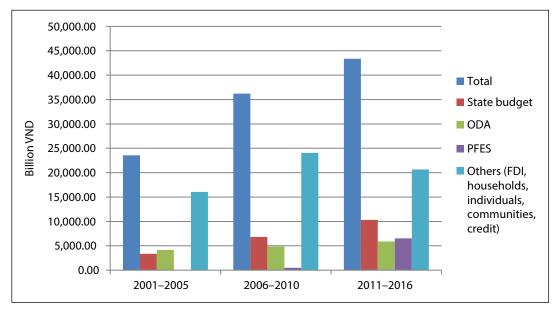


Figure 5. Financial mobilization by period

Sources: MARD 2017b

The state budget mobilized, although not meeting its target (Table 3), still plays a dominant and important role in many poor provinces, such as Ha Giang where non-state budget mobilization is minimal (Table 4).

Table 5 also demonstrates that state budget allocated for afforestation activities, which are considered as strategic and important sectoral finance activities, are mainly derived from the central government budget, with very limited contribution from the provincial budget.

Table 3. Estimated budgets for planned forestry activities against actual funding mobilized in 2016

	Investment required	Funding actually mobilized	% of funding requirement met
Total = 1 + 2	11,360 billion (100%)	9,495 billion (100%)	83.6%
1. State-	3,000 billion (26.4%) comprises of:	1,184 billion (12.5%)	39%
budget	 Investment in development: VND 1,900 billion invested in planting protection forests and special use forests; to support the planting of production forests, the building of roads for harvesting, conservation and forest fire prevention and control. 	364 billion (3.83%)	19%
	 Investment in economic development and public administration: VND 1,100 billion, focusing on forest protection contracts and forest restoration. 	820 billion VND (8.63%)	75%
2. Non- state budget	8,360 billion (73.6%) mainly used to improve the quality of production forests and protect allocated forests.	8,311 billion VND (87.53%)	99%

Sources: Government of Vietnam 2016

Table 4. Mobilized finance to implement the local forest protection and development plan 2011–2015 in Ha Giang and Ha Tinh (billion VND)

No	Funding courses	Ha Tinh p	rovince	Ha Giang province		
NO	Funding sources	Mobilized finance	Proportion (%)	Mobilized finance	Proportion (%)	
1	State budget	153.963	28.86	447.819	90.94	
2	Non-state sources	379.576	71.14	44.591	9.06	
Tota	al .	533.539	100	492.41	100	

Source: Provincial People's Committee in Ha Tinh and Ha Giang provinces 2015

Table 5. Mobilized funding for afforestation activities between 2006 and 2016

NI.	Sa.,,,,,	2006–20	10	2011–2	016
No	Source	billion VND	%	billion VND	%
Tot	al	18,689.77	100.00	43,351.88	100.00
1	State budget	4,854.17	25.97	10,298.60	23.76
	- Central budget	4,221.71	22.59	8,995.00	20.75
	- Provincial budget	545.91	2.92	1,303.60	3.01
	- Other (e.g. resource tax)	86.55	0.46		
2	Non-state budget sources	13,835.60	74.03		76.24

Source: MARD 2005 and MARD 2017b

In-depth interviews with Ha Giang and Ha Tinh provincial authorities reveal that state budget contributions only meet 40% of actual provincial demand, thus limiting the expansion of planted forest areas as well as improvements to the quality of forests. These government agencies also assert that central state budget allocations for protected forest and special use forest protection are only sufficient to cover 30% of the province's existing forest area. At the same time, provincial budget investment remains low, and district and commune budget contributions are almost nonexistent.

Mobilized state budget contributions are not meeting anticipated targets for many reasons. First, the overall state budget deficit ratio (% GDP) has increased to 6.99% in 2009 (UNDP et al. 2010) and the government budget is constrained by increasing foreign debt (31% GDP in 2010) (Nguyen 2018). In 2016, the budget deficit was around 5% of GDP (ADB 2017). This resulted in limited opportunity to increase budget allocations to the forestry sector. Secondly, the low efficiency of public investment is mainly due to lack of planning; scattered and dispersed investment; decision decentralization; and investment capital not being used with monitoring, quality and investment efficiency controls (UNDP et al. 2010).

2.2 Non-state budget

Budget mobilized from non-state sources is 1.53 times higher than anticipated, contributing 78.5% to total sectoral investment. FDI, followed by organization, household, individual and community contributions, made up most of the investment from non-state sources. All funding from non-state sources exceeded anticipated targets, with the exception of credit which did not meet its target (Table 6).

The increase in investment from non-state sources reflects that the forestry sector is gradually shifting from its traditional management structure, in which the state directly manages, administers and implements social forestry with the participation of many non-state actors. Implementation of various forestry policies has contributed to increases in investment from organizations, individuals and communities. These policies include the allocation of forests and land for forestry purposes to organizations, communities, households and individuals; the leasing of forestry land to non-state economic sectors; the privatization of state forestry enterprises; the contracting of forest protection to households and community living near the forest; PFES; and comanagement between community and special use forest management boards. Some examples of this are Decree No. 05/2010/ND-CP establishing the Forest Protection and Development Fund; Decree No. 99/2010/ND-CP regarding PFES; Decree No. 118/2014/ND-CP on renovating and improving the efficiency of agro-forestry companies; Decree No. 75/2015/ND-CP on mechanisms and policies for forest protection and development, sustainable poverty reduction and support for ethnic minorities in 2015–2020; Prime Minister's Decision No. 57/QD-TTg on FPD Plan for 2011–2020; Prime Minister's Decision No. 07/2012/ND-CP on various forest protection policies; and Prime Minister's Decision No. 24/2012/QD-TTg on policies for development of special use forests.

When it comes to attracting Foreign Direct Investment (FDI) Vietnam has many advantages including stable politics, abundant natural and human resources and remarkable market growth. Between 1998 and 2016, Vietnam's agriculture, forestry and fishery sectors attracted 522 internationally funded projects with finance totaling USD 3,576.8 million (accounting for 1.22% of total registered FDI).

Table 6. Results of non-state budget mobilization for implementation of the strategy (billion VND)

Financial	Target	Implementation			
Financial source	2006–2010	Accumulation to 2010	Accumulation to 2016		
Credit	4,986.32		1,092.42		
ODA	4,169.28	4,845.67	10,733.37		
Organizations, households, individuals, communities	7,203.61	10,950.49	31,634.48		
FDI	7,822.82		12,026.00		
PFES	114.78	493.37	7,003.97		

Source: MARD 2017a

3 Management and use of finance for implementation of the forest development strategy 2006–2020

State budget has been invested into forestry according to the approved Forest Protection and Development Plan, focusing on the objectives of: afforestation, protection and regeneration of protected forests and special use forests, support for the plantation of production forests and investment into difficult areas, infrastructure for state management agencies and transport, support to improve the livelihoods of rural people in mountainous regions, improvements to forest seedlings, training and capacity building for staff. Due to the numerous focal points, the level of investment available for each activity resulted in minimal support; according to most government agencies interviewed, finance is mainly prioritized and used for contracting forest protection and forest maintenance (Table 7).

Due to data availability, we are only able to focus on three principal activities implemented under the Forest Development Strategy: forest protection and development; forest product processing and trade; and scientific research, education, training and forestry extension.

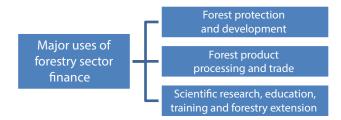


Figure 6. Major uses of forestry funding and investments

Table 7. Forestry sector investment by use, purpose and funding source (in millions of VND)

	No.		ltem	Per	riod	Total for	(0/)
	INC).	item	2001–2005	2006–2010	2001–2010	(%)
1			Investment in tree plantations	10,030,085	18,196,394	28,719,815	48.03
	1.1		National budget	2,662,998	4,854,170	7,517,168	12.57
		1.1.1	Central government budget	2,045,356	4,221,714	6,267,070	10.48
		1.1.2	Local government budget	471,713	545,910	1,017,623	1.70
		1.1.3	Other (natural resource tax)	145,929	86,546	232,475	0.39
	1.2		Credit	821,666	1,092,417	1,914,083	3.20
	1.3		ODA	1,410,776	1,091,138	2,501,914	4.18
	1.4		FDI	246,400	208,180	454,580	0.76
	1.5		Non-state organizations	525,469	1,312,867	1,838,336	3.07
	1.6		Households, individuals, communities	4,362,776	9,637,622	14,000,398	23.41
	1.7		Others: PFES, carbon credits	0	493,336	493,336	0.82
2			Non-tree plantation investment	13,542,992	17,538,900	31,081,892	52.41
	2.1		Infrastructure construction	595,950	1,762,215	2,358,165	3.94
	2.2		ODA	2,775,754	3,754,556	6,510,310	10.89
	2.3		Science and technology	113,630	204,309	317,939	0.53
	2.4		FDI (wood processing)	10,077,658	11,817,820	21,895,478	36.61
Tota	al			23,573,077	35,735,294	59,801,707	100

Source: MARD 2012; Le et al. 2015

3.1 Forest protection and development mainly through afforestation

The limited resources of the state budget available for forest protection and development are allocated to support a wide range of activities, with a focus on contracting people for forest protection, support for protection forests and special use forests, and infrastructure. Between 2011 and 2016, the state increased its contributions for forest protection and development activities with an investment of VND 10,298.6 billion, a much higher amount than allocated in previous periods. Over the 2011–2016 period, the state mainly invested in special use forests and protected forests, with state contributions accounting for 25% of total investment in forest protection and development, and the remaining 75% coming from non-state budget sources (Figure 7).

From 2008–2014, funds for the management and protection of special use forests (SuFs) came from the state budget and PFES revenues (Table 8). State financial support for conservation mostly covers the operation of national parks and protected areas. Investment into national park development is based upon the activity and medium-term plans (5–10 years) of parks and protected areas. Funding is also often required for unanticipated activities, such as costs incurred through forest protection, fire protection, and price inflation relating to infrastructure construction costs. Irregular investment such as this is dependent on finance available from the Ministry for Agriculture and Rural Development (MARD), the provinces, and proposed national budget. Analysis shows that for three of the six MARD-managed national parks, 80% of the budget was state-funded; for 14 of the 20 provincially-managed national parks and 22 of the 23 nature reserves, state contributions covered 90% of the budget (Le and Vu 2012).

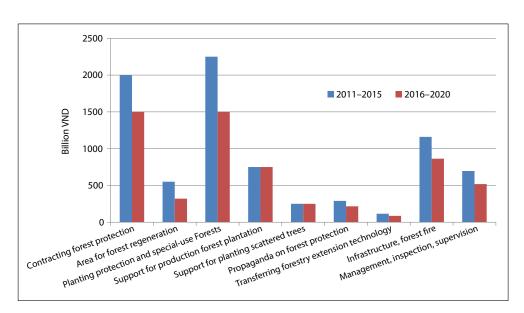


Figure 7. Allocation of state budget for forest protection (2011–2020)

Source: MARD 2011

Table 8. Finance for nature conservation in Vietnam (in billion VND)

Financial source/year	2008	2009	2010	2011	2012	2013	2014
1. State budget	1,508	1,826	2,166	2,360	2,742	2,809	2,976
2. Self-mobilized finance	48	50	53	55	59	62	64
3. PFES		209	116	310	1190	1091	1183
4. International support	243	256	266	588	774	845	760
Total	1,799	2,341	2,601	3,313	4,765	4,806	4,983

Source: MARD 2017a

State budget funding for nature conservation is directly allocated annually from the central or local level budget, and balanced between the two sources. However, this budget only covers the operating expenses of management or if invested, is used to build infrastructure; funding for conservation activities is negligible (Figure 8).

Table 9 also shows that state support for afforestation has increased between 1998 and 2016, mainly to support the planting of protected forests and special use forests, while the private sector is the primary funding source for the planting of production forests.

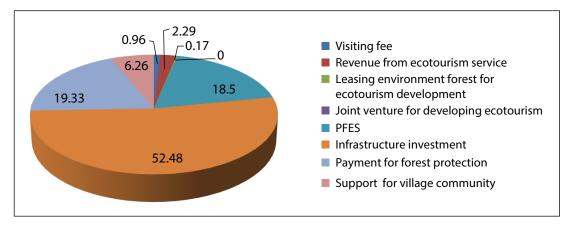


Figure 8. Revenue sources from 33 national parks in 2017

Source: MARD 2017b

Table 9. State support for afforestation (2006–2016) (million VND/ha)

Na	Pariod	Planting of protection forests and special use forests Period		Planting of production forests				
No	Period	Actual investment	State support	Local contribution	Actual investment	Private investment	State support	Local contribution
1	1998–2002	6.5	2.5	4	8	5		3
2	2003-2005	8	4	4	8	5		3
3	2006-2007	10	6	4	15	8	2	5
4	2008-2010	14	10	4	15	8	2	5
5	2011–2016	20	15		20		3 for small- scale plantations and 4.5 for large- scale plantations	
6	2016–2020 (anticipated)	N/A	30	If more than 30 million of state support received, must be self- supplemented by local community	N/A	If more than 30 million of state support received, must be self- supplemented by local community	30	If more than 30 million of state support received, must be self- supplemented by local community

Source: MARD 2011

An estimated 70% of finance for production-focused afforestation between 2011 and 2020 will be generated from loans and other external sources (MARD 2017b).

3.2 Forest product processing and trade

Table 10 shows the increasing number of business enterprises in the timber processing sub-sector in Vietnam. Besides the number of formal (registered) enterprises, there are also thousands of timber processing and trading companies functioning at a household level, especially in craft villages or geographical areas associated with raw materials (timber harvesting and non-timber forest products). According to the Vietnam Forest Products Association and Forest Protection Department (2016), there were 11,549 household-level timber businesses in 2016. In 2015, 93% of these enterprises were small or micro enterprises, 5.5% were medium enterprises and only 1.2% were large enterprises. Five percent were stateowned enterprises and 95% were private enterprises. Foreign-funded enterprises comprised 30% of large enterprises. Eighty-two percent were private enterprises, foreign-invested enterprises accounted for 14%, and the rest were state-owned enterprises (4.3%) (VCCI 2014). Vietnam's 340 craft villages are home to tens of thousands of households and timber processing establishments, which consume nearly 1 million m³ of raw timber annually to make products, mostly for the domestic market (FPD 2016).

The scale of timber processing and production is expanding, however most timber processing enterprises are still small in scale. In 2016, the average

funds invested by timber processing enterprises was VND 5,988 billion (Table 10).

In 2006, the export turnover of Vietnamese furniture was approximately USD 2 billion; this reached USD 2.8 billion by 2008. In 2013, this turnover had reached over USD 5.59 billion, an increase of 21.78% since 2012. During 2005–2013, the growth rate of industry exports continued to be relatively high, with average annual growth of 23.93% despite the 2008–2009 financial crisis. In 2010–2015, timber and wood product export turnover increased sharply with an average growth rate of 17.89%, increasing the sector's export turnover from USD 3.44 billion in 2010 to USD 6.9 billion in 2015, up 10.71% from 2014, accounting for 4.3% of the global market, making Vietnam the sixth biggest exporter in the world.

In 2016, export of timber products reached USD 5.13 billion, an increase of 7% compared to 2015, accounting for 73.6% of the total export value of timber and wood products. According to MARD data, in 2017 exports of timber and wood products increased by over 10% compared to 2016, to the value of USD 8 billion. Although foreign-funded enterprises make up just 20% of enterprises, the export value of these enterprises is extremely significant, accounting for 50% of the total national export turnover for timber and non-timber forest products (To, Nguyen TTT and Nguyen TD, 2016). In fact, about 55–60% of the timber sector's export turnover came from foreign-funded enterprises. Yet according to the Timber Association, domestic business exports overtook foreign business exports in 2013, accounting for 60% of total exports (VCCI 2014). In 2017, these domestic enterprise exports accounted for 50% of the market share (VNForest 2017).

Table 10. Investment into forest product processing

		2005	2010	2016
1	Timber processing companies	1,710	3,098	3,880
2	Wood product businesses	N/A^a	N/A	11,549
3	Trade villages	N/A	N/A	340
4	Average funds invested by timber processing enterprises (billion VND)	N/A	N/A	5,988
5	Average investment finance of foreign-invested timber processing enterprises (million USD)	N/A	N/A	1,318
6	Average trade village finance (billion VND)	N/A	N/A	1-2
	tal finance for timber/wood product household enterprises and sinesses (billion VND)	N/A	N/A	40,556

a Where N/A is written, data has not been available for this year Source: VCCI 2014

In 2017, timber processing enterprises with foreign investment, mainly producing for export, received average investments of USD 1,317,900. Financial investment also came from household funds, with minimal loans taken out. The scale of company investment in craft villages is much larger than that of households, with an average company investing approximately VND 32.5 billion (To et al. 2018). However, when it comes to technological advances, the lack of finance available for timber processing enterprises is a great challenge. Likewise, Vietnamese enterprises are mostly small in scale, making it difficult to compete with foreign-invested enterprises exporting forest products.

According to MARD experts interviewed, with the development of the processing industry, especially that of private and foreign enterprises, the forestry sector has made a significant financial contribution to national economy. However, these MARD interviewees also asserted that the added value of the wood processing industry and trade has not yet been included in the gross value of the forestry sector. Likewise, investment into processing enterprises, processing units and craft villages has not been accurately identified, so this source of investment in the forestry sector has not yet been calculated fully.

3.3 Scientific research, education, training and forestry extension

State investments into science, education and training, including in the forestry sector, decreased from 8.5% in 2000 to 5.1% in 2009 (UNDP et al. 2010). Total investment into forestry research between 2001 and 2010 was approximately

VND 318 billion, accounting for 0.53% of total investment into forestry in that period (Trung et al. 2015). Average funding per forestry research topic has increased over time (Table 11) and students and lecturers' scientific research activities were also allocated a proportion of the annual budget, to the value of about VND 100–200 million/year.

Table 11. Average funding per topic research (VND billion/year)

2005	2006	2009
289	738	1,300

Sources: interviews with MARD leaders 2018

However, according to most interviewees, the budget provided still does not meet requirements in reality. Consequently, the application of scientific knowledge and advanced technology (to improve the productivity and quality of plantations) faces a number of limitations and challenges, such as the quality of seeds and poor silvicultural measures and management (Trung et al. 2015).

State budget for education, training, science and technology was about VND 1,700 billion/ year between 2015 and 2017; about 15% of the total MARD budget (Table 12). According to our information, investment into the forestry sector is approximately 5–6% of investment into agriculture and rural development overall; as such, we are able to estimate that investment into forestry sector education, training, science and technology was about VND 80–90 billion/year between 2015–2017.

Table 12. Ministry of Agriculture and Rural Development (MARD) budget for education, training, science and technology (in billion VND)

	Education and training	Science and technology	Total	% of overall MARD budget	Overall MARD budget
2015 cost estimate	928	744	1,671	22.15%	7,544
2015 final settlement	961	724	1,686	14.43%	11,681
2016 cost estimate	910	702	1,612	14.18%	11,367
2017 cost estimate	974	769	1,743	16.82%	10,363

Sources: Authors's data collection from Ministry of Finance of Vietnam (Public data of State budget on Ministry of Finance at website: http://www.mof.gov.vn/)

4 Current status and trends of different funding sources

4.1 State budget

In order to perform the tasks established by the strategy, many provinces have exceeded their normal budget requirements (usually approximately 8–10% of total invested finance). State budget allocated to implement the National Target Program frequently appears to be lower than the budget required. In 2017, the budget allocated to ministries, sectors, and provinces was VND 364,247 billion which only met 20% of the average required investment (MARD 2018a). Figure 9 also shows that financial requirements for implementation of the Vietnam Forest Development Strategy for 2016–2020 are increasing, but state support does not match this trajectory.

MARD and Vietnam Forestry University experts interviewed claimed that there is a mismatch between the actual investment required for each hectare of planted (VND 20 million excluding labor) and the amount with which government is currently supporting (maximum VND 15 million/ha according to Decision No. 60/2010/QĐ-TTg)

(Vietnam Farmer Association, 2016). Interviews with Ha Giang and Ha Tinh government authorities also show that finance available for support met just 30–40% of budget requirements.

Vietnam also faces substantial challenges in efficiently allocating public finances, largely because of shortcomings in its planning and budgeting processes (ADB 2017). Forestry sectorial programs are not well aligned with the government's Socio-Economic Development Plan, 2016–2020. As planning and resource allocation is limited to the annual budget, multi-year programs such as Vietnam Forestry Development Strategy often commence without sufficient funds to complete them and with little assurance that future funding will be available (ADB 2017).

Likewise, although the state budget consists of central and provincial budget, revenue and expenditure assignments between levels of government are not clearly defined. According to ADB (2017), Vietnam is constrained by its inadequate system for identifying and managing fiscal risks. Low reliability of the state budget remains

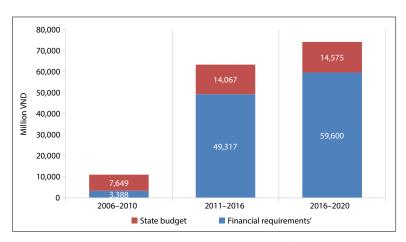


Figure 9. State investment throughout the different phases

Source: MARD 2017c

a major issue, with large deviations between approved and actual expenditure and a significant proportion of government expenditure not integrated into central budgeting systems. Total capital expenditure exceeded total budget plans for all sectors by an average of 29.2% between 2011 and 2015 (ADB 2017). ADB (2017) also asserted that although more than 30 non-state and state projects and programs at both central and provincial level were established under different laws and government decisions, there is no consolidated data on the revenue and expenditure of these funds. This limits the ability of the bureaucratic and other stakeholders to adequately monitor the implementation and effectiveness of these funds, and lowers the overall reliability of budgetary reporting (ADB 2017). Yang et al. (2015) also show that the decentralization process has also been associated with certain shortcomings, including the weakening of implementation due to a lack of financial and labor resources, despite the increased responsibilities and mandates given to lower levels of government. Additionally, the decentralization process needs to pay more attention to the authority of local governments to decide on the appropriate resources for implementing the assigned tasks and responsibilities. It is crucial for decentralization to clarify both the powers and resources required for leaders and individuals in lower-level governments, in order to implement policies effectively at the local level.

While meeting required investment for forestry sector is still a challenge, the government is also under pressure to fulfill its commitments, by mobilizing and securing its domestic resources to implement new key policies, such as Decision No. 120/QD-

TTg dated 21 January 2015, approving the Forest Protection Plan that aims to protect an existing 310,694 ha of mangroves and plant an additional 29,500 ha of mangroves; Decision No. 774/ QD-BNN-TCLN approving a Plan of Action to improve the productivity, quality and value of planted forests between 2014-2020; and Decision No. 886/QD-TTg dated 16 June 2017, approving the SFMD Program for 2016–2020, including the task of planting and replanting 1,025,000 ha of forest (MARD 2017b). Vietnam's Nationally Determined Contribution (NDC) also requires that by 2030 Vietnam will reduce greenhouse gas emissions by 8% compared to business-asusual with domestic finance, or by 25% with international support. The Vietnamese NDC has proposed 45 opportunities to reduce greenhouse gases, focusing on four areas: energy (including energy used in transport and construction); waste; agriculture; and land use, land use change and forestry (LULUCF). To reduce voluntary national emissions by 8%, USD 3.2 billion is required from domestic sources by 2030; of which the LULUCF sector needs USD 132 million.

4.2 ODA

During 2006–2010, ODA finance totaled VND 4,845,694 billion, accounting for 13.56% of total forestry sector investment, making ODA the fourth largest source of finance. Between 2006 and 2010, non-refundable aid funding made up a higher proportion than preferential loans, which came from the World Bank, ADB and KFW.

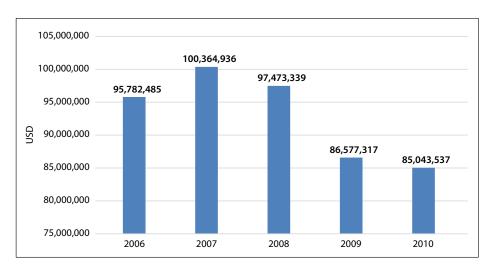


Figure 10. ODA finance and international assistance during 2006–2010 (USD)

Source: MARD 2017a

Total ODA for the forestry sector rose rapidly and peaked in 2007 (USD 100.3 million), before gradually reducing to USD 85 million in 2010 (Figure 10). This was due to sponsors gradually reducing their ODA support to Vietnam after the country achieved certain economic development objectives and began transitioning from a lowincome to a middle-income country.

ODA was mainly provided to support the Sustainable Forest Management Program (Figure 11).

Vietnam also received about USD 64 million of ODA for biodiversity conservation during 2006–2010 (Interviews conducted with MONRE leaders). However, such support is infrequently provided and unevenly distributed, mainly focusing on a few national parks or reserves, with little attention paid to small and medium conservation areas (of less than 15,000 ha). ODA support for the forestry sector during 2006–2010

was also unevenly distributed across geographical areas, with 27% of ODA being allocated to the South-Central Coast, 22% to the Central Highlands, 18% to the North Central, 14% to the North East, 9% to the Mekong Delta, 6% to the North West and 2% to the Red River Delta (Figure 12).

Between 2011 and 2015, total ODA commitments for the forestry sector increased significantly compared to previous years, with new project commitments over this period reaching USD 247 million, of which non-refundable finance amounted to USD 144 million. The Forest Protection and Development Plan estimates average annual ODA of approximately VND 600–700 billion (with direct investment in forest protection and development activities amounting to VND 250–400 billion). However, weak government controls over ODA mobilization and utilization create challenges for budget reliability (ADB 2017).

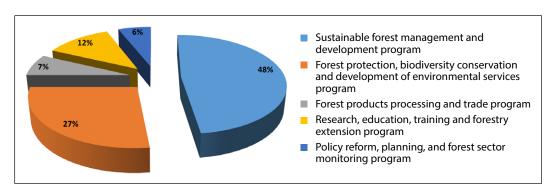


Figure 11. Allocation of ODA support to the forestry sector under the five programs of the Forest Development Strategy 2006–2020

Source: MARD 2017a

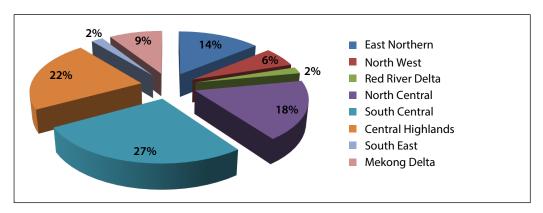


Figure 12. Allocation of ODA support to forestry sector by region (2006–2010)

Source: MARD 2017a

Looking at the 2016–2020 period, Prime Minister's Decision No. 886/QĐ-TTg (dated 16 June 2017) approved the Sustainable Forest Management and Development Program, which required approximately VND 6,800 billion of ODA support to implement (to cover 11.4% of the total budget). According to the forestry restructuring project approved by MARD during 2013–2020, ODA capital for the forestry industry was expected to account for 18-20% of total funding (about VND 700–800 billion per year). Of this, direct investment into forest protection and development amounted to an estimated VND 250–400 billion. According to MARD, VND 40 trillion would be required by the forest industry in order to plant three million hectares of forests. According to the forestry restructuring project, central state budget investment would only focus on: large-scale protective forest projects; district projects under Resolution No. 30a/2008/NQ-CP on the rapid and sustainable poverty reduction program for 61 impoverished districts in the North-West region and the Central Highlands; and investment into equipment and advanced technology and to protect special use forests.

As ODA support covers a significant proportion of the total budget, it makes a significant contribution to the implementation of programs under the Forest Development Strategy for 2006–2020. However, this source of funding is likely to decline in the coming years, requiring Vietnam's forestry sector to seek other financial sources in the next phase of strategy implementation, as well as to look to access ODA support through other international initiatives.

4.3 Foreign Direct Investment funding (FDI)

Table 13 shows that FDI investment in agriculture, forestry and fisheries only accounts for 1.22% of total FDI in Vietnam between 1988–2016.

Factors affecting the business climate for private investment and FDI in the agriculture and forestry sector include: difficulty acquiring land for production; poor and inadequate infrastructure; limited access to credit; unstable sources of materials; and low-skilled labor (Nguyen TDN, no date). FDI into the forestry sector mostly focuses on forest product processing, afforestation and paper production. Policies relating to forestry investment are not attractive or clearly defined enough to ensure the interests of investors. Statistics show that income per hectare of planted forests is minimal, reaching only VND 7–8 million/hectare/year, resulting in low living standards for forest workers, with forest-related income accounting for only 25% of farmers' total income. According to a government report on ten years of implementing the strategy (released in 2017), as of June 2015, FDI investment into forest product processing accounted for 12% of total FDI investment.

Foreign direct investment (FDI) has tended to decrease over time, except for an increase in processing sector investment (investment into afforestation accounts for just 2% of total investment in processing). This reflects the fact that processing is one of the most valuable inputs in the forest product value chain and is thus attractive to foreign investors.

4.4 Credit and loans

The credit and loan system is expected to provide a significant source of finance for forestry sector in future. According to the State Bank of Vietnam (2006), credit provided by four Vietnamese banks (Agribank, Viettinbank, BIDV and Social Policy Bank) contributed to the financing of 15,683 ha of forest, including 11,123 ha of production forest. Despite this, as an earlier section pointed out, the amount of credit mobilized in reality did not meet its anticipated target.

Table 13. FDI by economic sector (1988–2016)

No	Sector	No. of projects	Total registered funding (million USD)	Ratio (%)
1	Agriculture, forestry and fisheries	522	3,574	1.22
2	Industry and construction	13,312	199,782	68.02
3	Services	8,760	90,345	30.76

Source: General Statistics Office 2016

Results from the Vietnam Access to Resources Household Survey (VARHS), administered every two years across approximately 2,600 rural households in 12 provinces of Vietnam, show that credit access since 2014 has decreased; there are a fewer number of households with loans. At the same time however, the size of loans has increased since 2014. In regards to key trends, there has been an increase in the percent of households from the poorest income quintiles with formal credit, and a decrease in the number of households with loans whose head of household cannot read or write. From analyzing the loan characteristics, we see that the two main sources of credit are from state Vietnam Bank for Social Policies (VBSP) and Vietnam Bank for Agriculture and Rural Development (VBARD), followed by credit from family or friends. In addition, while a significant proportion of households ask for credit for farm-related activities, less than half of these households use the credit for farm-related activities (UNU-WIDER, 2017). VARHS data also shows that only 38% of forestry farmers can access credit; of those, only 37% can access credit through formal channels (the banking system) and 63% still rely on informal channels (e.g. brokers, relatives) (Tuyen Quang Newspaper, 2016). In the third quarter of 2015, data released by State Bank of Vietnam showed that less than 10% of credit was invested into agriculture and forestry (Le and Chu, 2016). This is consistent with studies conducted by Nguyen and Berg (2014) and Moeliono et al. (2016) which confirm the dominant role the informal network plays in providing credit for local people for agriculture and forestry activities. Results of the Vietnam Household Living Standard surveys undertaken during 2002–2012 also revealed that around 55–59% of communities nationwide face difficulties in accessing the formal credit market (Le and Chu, 2016).

Government agencies interviewed also pointed out major challenges for farmers and enterprises in accessing credit; loans require collateral and land use right certificates, which most farmers and forest enterprises do not have. Similarly, approximately 97% of Vietnam's domestic private enterprises are of small and medium size, and 70% of these enterprises face challenges in securing credit from formal financial institutions (Le and Chu, 2016).

To date, Sikor (2011) is the only study conducted in Vietnam that can provide comparative analysis of the credit system for forestry with a special focus on households and communities; this provided insightful recommendations on what works. Sikor's work (2011) analyses five key finance programs that have been applied in the forestry sector: 1) grants-in-kind supplied by the 661 Program; 2) reforestation loans offered under the Forest Sector Development Project funded by the World Bank (FSDP); 3) grants-in-kind and savings accounts, used by the Project on Forest Rehabilitation and Sustainable Forest Management, funded by Kreditanstalt für Wiederaufbau (PFDSFM); 4) general loans available from the Bank for Social Policies (BSP); and 5) loans offered by the Vietnam Bank for Agriculture and Rural Development (Agribank) (Table 14).

These five programs are compared and analyzed based on seven criteria (Box 1) for three types of households, differentiating households by their investment rationales (investment, surplus and survival) (Box 2).

Sikor (2011) concluded that no finance credit system can meet all objectives equally nor meet the finance requirements of all farm households equally, but rather will serve the needs of one type best. He also pointed out three critical trade-offs faced in the design of finance mechanisms:

- Financial sustainability and the goal to provide accessible, affordable and low-risk support to households.
- The goals to make finance available to many households in many places, and to match external finance with farm households' finance requirements in terms of overall amount and timing.
- Leakage and financial sustainability.

Based on a set of comparative studies, Sikor (2011) also draws out important recommendations on how to enhance the effectiveness of a loan-based approach to providing external finance to households for commercial tree plantations (Box 2). Any policy that policymakers seek to promote should have four key elements: it should take a loan-based approach; it should require that commercial interest rates are charged; it should require loan recipients to form small groups; and should require it to operate through the Bank for Social Policies.

Table 14. Overview of finance programs and comparison of finance mechanisms (Sikor 2011)

	661 Program	FSDP	PFRSFM	BSP	Agribank
Туре	Grant	Loan	Grant	Loan	Loan
Amount (VND million)	1.5/ha	10–15/ha	4–6/ha	10–30	10–30
In kind or cash?	In kind	Cash	In kind and cash	Cash	Cash
Duration (years)	n/a	7–15	6	4	4
Disbursement	Once	3 times	6 times	Once	Once
Inspection of plots	3 times	n/a	Annual	No	No
Interest rate (%/month)	0	0.65	n/a	0.65	1.25
Repayment	n/a	End	n/a	Yearly	End
Collateral	n/a	Land certificate	n/a	None	Land certificate
Group formation	No	Yes	No	Yes	No
Availability	Widespread, small amounts	4 provinces, large amounts	5 provinces, medium amounts	Widespread, small amounts	Widespread, large amounts
Sustainability	No	No	No	Not yet	Achieved
Leakage	None	Some	None	High	High
Household access	Easy	Medium	Not available	Easy	Difficult
Direct cost to households	None	Medium	High opportunity costs	Low	High
Risk	Project and none for households	Household	Project and low for household	Household	High for Households
Match	Surplus	Investment	Surplus	Surplus	None
Annual budget (USD)	5.7 million	6.7 million	n/a	n/a	n/a
Annual area (ha)	52,000	16,500	n/a	n/a	n/a

Box 1. Assessment criteria for five finance and credits system applied in Vietnam (Sikor 2011)

- 1. **Availability**. The amount of finance available to households as determined by the overall amount and spatial distribution of funding.
- 2. **Sustainability**. The ability of the finance mechanism to generate the returns required to maintain its capital stock.
- 3. **Leakage**. The use of support for productive activities other than reforestation.
- 4. Household access. Households' ability to apply for and receive support.
- 5. **Cost to households**. The costs accruing to households that accept support.
- 6. **Risk to households**. The risks incurred by households that accept support.
- 7. **Match with finance requirements.** The relationship between support and requirements regarding amount and timing.

Box 2. Recommendations for a future loan-based approach providing incentives for commercial tree plantation (Sikor 2011)

- 1. Loans should have a term of seven years to match the finance requirements of medium-rotation plantations and be charged the applicable commercial interest rate for the sake of financial sustainability.
- 2. The Bank for Social Policies may be in the best position to manage the loans because of its extensive network of branches and transaction points, and because of the savings and loans groups that it operates. The groups help to reduce transaction costs and can perform an important function in monitoring the appropriate use of loans to avoid leakage to other productive activities.
- 3. The loan-based approach should include three distinct components tailored to the financial needs of different types of households managing commercial tree plantations. One component would offer loans of large amounts (roughly VND 15 million/ha) to investment-oriented households in selected areas; such loans would be repaid in one payment at the end of the loan term, and households would carry all the investment risk. The second component would offer medium-sized loans (VND 7 million/ha) to surplus-oriented households in selected areas, encouraging repayment of the principal in annual instalments and putting the investment risk on households. The third component would assist survival-oriented households to establish commercial tree plantations by giving them access to small loans (VND 3 million/ha), encouraging repayment in annual instalments and building in an insurance element that distributes the investment risk between household and program.
- 4. The provision of finance for long-rotation plantations would target investment-oriented households. It would seek to support them in a gradual shift from medium to long rotations by inducing them to diversify management and to retain a share of their plantations for 12–15 years. The inducement would come through an extension of the loan duration.

4.5 Payments for Forest Environmental Services (PFES)

On 2 November 2016, the Government issued Decree No. 147/ND-CP amending and supplementing some articles of Decree No. 99/2010/ND-CP dated 24 September 2010 on PFES. Accordingly, from 1 January 2017, the unit price of electricity for hydropower plants increased from VND 20/kWh to VND 36/kWh for commercial electricity, and VND 40/m³ to VND 52/m³ for clean water supply plants. As such, PFES revenue after the price adjustment will increase to about 2,000 billion per year.

Between 2011 and 2016, total revenue from PFES amounted to VND 6,511 billion. PFES income in recent years has tended to be stable. In 2011, VND 282 billion was collected, rising to VND 1.2 billion in 2012, triple that received in 2011, but in 2013, the amount generated from PFES was lower than that received in 2012. Some hydropower companies

are still owing their PFES contributions. In 2014 and 2016, annual revenue from PFES amounted to VND 1,300 billion.

Between 2011–2015, PFES contributed about 20% of total investment in the forestry sector (Figure 13).

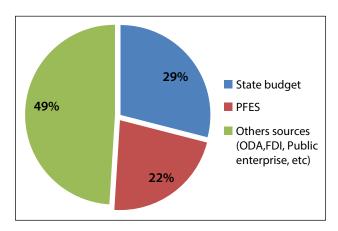


Figure 13. PFES contribution to total forestry sector investment in 2015

Source: VNFF 2015

By the end of 2016, total accumulated PFES revenues amounted to VND 6,510.7 billion. Of this total, 77.17% (VND 5,024 billion) was used to pay forest owners for forest protection. The remainder was spent on central fund management (0.5%), provincial fund management (10%), redundancy (5%) and other purposes approved by the Prime Minister (VND 370.57 billion).

In 2017, national PFES revenues in Vietnam amounted to VND 1,709.2 billion, of which VND 1,600.8 billion came from hydropower. After eight years of operation, 336 hydropower companies, 88 clean water companies and 57 companies have signed contracts to pay PFES to either the central or provincial fund, to the value of VND 8,887,168 billion. By 2016 73.2% had been collected by the central fund (VND 4,768.5 billion), with the provincial fund collecting the remaining 26.8% (VND 1,742.2 billion).

Financial requirements for the forestry sector, under the Forestry Sector Restructuring Plan approved in 2013, were VND 49,317 billion, an average of VND 4,931.7 billion annually. Revenue from PFES met 22% of these total financial requirements (approximately the same as contributions received from the state budget) (Table 15).

On 15 November 2017, the National Assembly passed the Forest Law. Article 63 specifies that organizations and individuals engaged in large-scale greenhouse gas emission production and business activities must pay for forest carbon sequestration and storage services and other objects, in accordance with law. Thus, with the amendment, the increased level of payment for environmental services due from hydropower and clean water facilities, as stipulated in the Government's Decree No. 147/2016/ND-CP, increased to about VND

2,000–2,500 billion/year. However, as there is no sanctioning mechanism for businesses not paying their contributions, numerous organizations refuse to pay, and the ongoing evasion of payments could threaten sustainability of the program.

In 2018, annual revenue to be collected at central level is projected at VND 1,161 billion (a 40% increase compared with 2017) and VND 651 billion at provincial (30% increase compared with 2017) (VNFF 2018).

4.6 REDD+

Between 2009 and 2014, 44 REDD+ projects were funded by international organizations. REDD+ projects in Vietnam primarily focused on support activities to prepare Vietnam for REDD+ implementation. Of the 44 projects, three directly reduced emissions (WWF's Carbi Project, SNV's LEAF project and FFI's Community Carbon Fund Development project), and 39 projects (making up 88% of total funding) committed to implement REDD+ readiness and related projects (Table 16). Despite figures being available for each of the 44 REDD+ projects, there are no actual figures and analysis to date on the contribution of REDD+ as a whole to financing forestry sector in Vietnam.

Significant funding has been generated from UN-REDD, USAID, BMUB, FCPF and JICA, but the amounts of funding committed to REDD+projects in Vietnam fluctuated annually.

In 2009–2014, total finance committed was USD 84.312 million. Out of the 44 funded projects, three projects focused on directly reducing greenhouse gas emissions (with

Table 15. Contribution of PFES to the Forestry Sector Restructuring Plan

No	Source of finance	Amount (in billion VND)	Proportion (%)
1	Total finance required for the forestry sector in 2011-2020	49,317	
2	Annual finance required	4,931.7	100
	- State budget finance	1,430.2	29
	- Revenue from PFES	1,085.1	22
	- Other sources (ODA, FDI, individuals, others)	2,416.4	49

Source: MARD 2016

Table 16. Commitments and disbursements for REDD+ projects in Vietnam during 2009–2014 (million USD)

No	Projects	No. of projects	Total project cost (1)	Commitment to REDD+ (2)	Proportion (%) (3) = (1)/(2)	Amount of finance disbursed (4)	Proportion (%) (5) = (4)/(2)
1	Directly reduce emissions	3	11.829	11.826	100	5.107	43
2	Support for REDD+ implementation	39	86.466	72.280	84	32.563	45
3	Projects related to REDD+	2	24.850	0.205	1	0.105	51
Tota	al	44	123.142	84.312	68		45

Source: Le et al., 2015

Table 17. Total finance committed and disbursed to projects (2009–2014) (million USD)

Project status	Number of projects	Total committed finance	Total disbursement	Disbursement rate (%)	
Total number of projects	44	84.312	37.776	44.80	
1. According to implementation progress					
- Completed project	24	18.649	18.191	97.54	
- Operating project	20	65.663	19.585	29.83	
2. According to financial source	44	84.312	37.776	44.80	
- International funding		78.71	36.06	45.82	
- Reciprocal finance and co-financing		5.6	1.71	30.53	

Source: Le et al. 2015

USD 11.826 million in funding support) and nine projects focused on preparing for REDD+ implementation (a total of USD 72.28 million). The most funding was pledged in 2012 (USD 48.4 million), with the lowest amount received in 2014 (USD 0.8 million); the other four years saw an average of USD 8.8 million of funding support annually. The amount of finance actually disbursed increased over the years, with the lowest amount disbursed in 2009 (USD 2.5 million), reaching USD 4.4 million annually by 2010 (Table 17).

By the end of 2014, a total of USD 36.06 million had been disbursed, accounting for 45.82% of the committed amount. Including counterpart funding and co-financing, Vietnam has disbursed USD 37.78 million (44.8%) to 24 completed projects, and 20 projects which are still operating (Table 16).

Although Figure 14 shows the type of REDD+ activities that have been invested in across the

44 projects, there is no available data on the actual investment amounts.

Figure 15 also shows that while REDD+ finance was significant for Vietnam, multilateral implementing agents and international NGOs absorbed most of the investment, followed by the Government of Vietnam. Vietnamese NGOs and academia least benefitted from REDD+ finance.

Our analysis shows that newly-implemented REDD+ activities have no stable source of income, and that REDD+ funding mainly comes from investment commitments from developed countries. The amount committed is not guaranteed and can be changed in future depending on the economic situation of the committed countries. REDD+ is a new and complex area for Vietnam, with many technical issues still under negotiation. There is a lack of knowledge and technical capacity to implement REDD+, especially in terms of MRV for forest carbon stocks and other REDD+ activities.



Figure 14. REDD+ activities invested in Vietnam

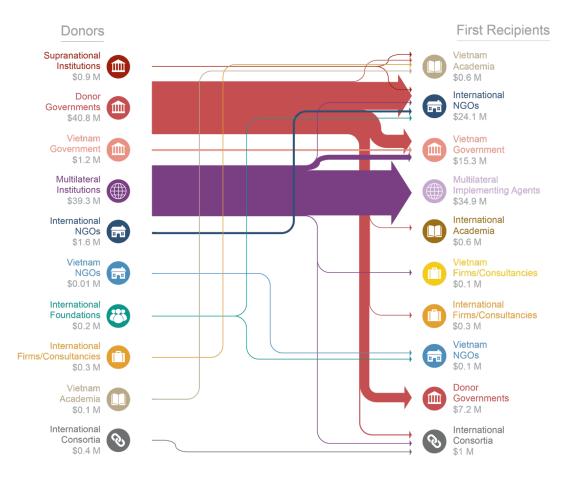


Figure 15. Flows of REDD+ finance between donors and first recipients Source: Nguyen and Dang, 2013

In addition, REDD financing requires higher governance of forests. Many of the benefits of REDD+ may not be competitive with other types of land use. In order to obtain financial support for comprehensive implementation of REDD+,

Vietnam should be prepared to be able to compete with other developing countries. Preparing for REDD+, however, is a long-term process and requires substantial investment, while REDD+ funding is limited, and largely international.

4.7 Household, community and individual investments

Vietnam's forestry sector is seeing dramatic changes from being a state-managed sector to one in which various non-state entities participate. As such, policies continue to be improved in order to attract non-state investment in forestry. Some examples of this are Decree No. 05/2010/ND-CP establishing the Forest Protection and Development Fund; Decree No. 99/2010/ND-CP regarding PFES; Decree No. 118/2014/ND-CP on renovating and improving the efficiency of agro-forestry companies; Decree No. 75/2015/ND-CP on mechanisms and policies for forest protection and development, sustainable poverty reduction and support for ethnic minorities between 2015 and 2020; and Prime Minister's Decision No. 57/QD-TTg on FPD Plan for 2011–2020.

These policies have resulted in the allocation of forestland to organizations, communities, households and individuals for forestry purposes; the leasing of forestland to non-state actors in other economic sectors; privatization of state forestry enterprises; forest protection and management responsibilities being undertaken by households and communities living near forests; and the state and local communities comanaging special use forests and protected forests.

In terms of forestland allocation, as of 31 December 2016, 11,218,730 ha (nearly 80% of forest area nationwide) had been allocated, in accordance with Decision No. 1819/QD-BNN-TCLN. Forestland was

allocated to management boards (35%), state-owned enterprises (11.2%), other economic organizations (0.6%), the armed forces (1.3%), households (20.4%), the community (7.9%) and the Commune People's Committee (21.8%). At present, management boards and state-owned enterprises still play a key role in forest use management. Forestland allocated to households and individuals only accounts for about 30% of total land area. Allocating forestland to households and individuals has effectively contributed to livelihood improvements, increased forest cover and reduced the need for state investment. However, the state still directly manages about 72% of total forestland area, with other economic sectors managing only 28%; this has a direct impact on the potential to mobilize finance from sources outside the state budget (Table 18).

Over time, the Vietnamese government issued various policies and measures to encourage organizations and individuals to invest in afforestation, as well as in the processing and trading of forest-sourced products. Between 2006 and 2010, finance raised from organizations, individuals and households accounted for VND 10,950 billion (over 30% of total finance raised), whereas in 2011-2016, this figure nearly doubled to VND 20,684 billion, representing 48% of forestry sector finance, and significant reductions in the need for state investment. However, average income generated from newly afforested land remains at about VND 9-10 million/hectare/year and the majority of people working in forestry are from low economic backgrounds; a combination which hinders household and individual investment in forestry.

Table 18. Allocation of forestland to 2018

Forest owner	Area (ha)	Ratio (%)	Natural forest (ha)	Plantation forest (ha)
1. SuF management boards	2,047,502	14.2	1,963,159	84,344
2. Protected forest management boards	2,983,455	20.7	2,496,177	487,278
3. Businesses	1,700,683	11.8	1,173,228	527,455
 Science and technology focused forestry organizations/enterprises 	115,329	0.8	52,446	62,883
5. Foreign-financed enterprises	68,538	0.5	33,731	34,807
6. Households and individuals	2,942,110	20.4	1,409,911	1,532,199
7. Community	1,145,601	7.9	1,048,765	96,836
8. Armed forces	194,159	1.3	65,659	128,500
9. Other organizations	107,223	0.7	60,423	46,800
10. Commune People's Committee	3,110,781	21.6	1,932,916	1,177,865
Total forest area	14,415,381	100	10,236,415	4,178,966

Source: MARD 2018b

5 Discussion and conclusions

Our findings show that Vietnam has not been able to raise adequate public funds for the forest sector, and re-investment of revenues into forest management has been minimal. Factors affecting finance for forestry include: the forest ownership structure; the extent and quality of forest cover; and the designated functions of forests.

Obstacles to the mobilization of forestry finance also include: a deficit in the overall state budget; inadequate enabling conditions for non-state actors, such as communities and the private sector, to invest in forestry; and insecure tenure. Likewise, inefficient use of existing resources has further exacerbated the issue of financial mobilization. That said, new and emerging forest-related financing mechanisms such as PFES have provided significant resources that are linked mainly to climate change.

Being location specific. The unique nature of the forestry sector within each locality greatly affects both the mobilization and use of financial sources for forestry development; this points to the need for the state to pay attention to the unique needs of each province when allocating state budget.

Diversification of funding sources. Given the significant amount of finance required, the forestry sector should focus on the diversification of financial sources, stable state investment and maximizing foreign and private investment. National forestry financing strategies should target raising additional finance and more efficient use of resources, as well as connecting relevant sectors and program objectives within the forest sector. The mobilization and use of both state and nonstate finance should be encouraged to support forest protection and development until 2020. Forest beneficiaries should be encouraged to contribute to the sector depending on their level of use, and sanctions should be made compulsory, especially for those forest beneficiaries who generate greenhouse gas emissions. Likewise, responsibility

for international economic commitments should be taken, to help the country to access international funding schemes and markets. Partnerships should be actively built, based on the advantages of each international and national organization, along with encouraging organizations to attract aid, technology and foreign investment.

Improving the legal framework on the management and use of state budget investments and credit to: (i) ensure consistent, efficient and coordinated use of finance within the forestry sector for effective development; (ii) strengthen domestic mediumand large-sized enterprises and attract more foreign investment; and (iii) mobilize the general public to protect, manage, develop and effectively optimize their use of forests. For example, it is important to create the right conditions for all socio-economic sectors to invest, build and protect forests through the allocation and leasing of forests to organizations, communities, households and individuals. Likewise, the benefit sharing policy should be revised to encourage and attract people to develop and protect forests in a way that facilitates the utilization of forest benefits, including access to carbon services.

Improving the efficient use of finance by (i) integrating forest protection and development resources, plans, programs and projects into other socio-economic development plans and programs; (ii) prioritizing key strategic sectoral activities, rather than diffusing financial investment across all activities. Strategic activities include improving the quality of forests, sustainable forest management, and investments into forestry infrastructure, science and technology. As the state budget remains an important financial source for the planting and protection of SuFs and protected forests, the state must ensure that the rate of investment is reasonable, realistic and sufficient to motivate afforestation and the protection of forest resources. The state also needs to change the way forests are managed, improving the autonomy of SuF and protected forest management boards,

enabling them to generate income through ecotourism development and PFES.

The monitoring of public fund use should be strengthened to ensure the transparency and accountability of public finance. Estimating forestry investments is a challenging task, as up-to-date information on the issue is scarce or unavailable.

Improving investment and credit systems. Vietnam faces similar forestry investment challenges to

Latin America countries where, for the private sector and local communities, access to finance and credit are difficult due to the impossibility of using land as collateral without clear land tenure; lending policies favor short-term loans with low risks; and interest rates and transaction costs are often higher than growth in terms of forest value (Boscolo et al, 2008). Strengthening microfinance institutions and legal frameworks is essential, to broaden the choice of financing options on offer.

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CIFOR Occasional Papers contain research results that are significant to tropical forest issues. This content has been peer reviewed internally and externally.

This CIFOR Occasional Paper assessed opportunities and challenges in mobilizing finance to implement the Vietnam Forestry Development Strategy (VFDS) for 2006–2020. After 10 years of VFDS implementation, the forestry sector has witnessed many achievements contributing to the development of the country. However, financial mobilization for implementation of the VFDS has always been limited.

Investment into forest protection and development, especially for special use forests and protected forests, has to date been minimal, with state allocations insufficient to meet requirements. The potential contribution of the forestry sector in increasing national GDP has not been fully recognized by policymakers and therefore has not yet been maximized. In addition, no data have yet been collected and analyzed on forestry finance and nor have the opportunities and challenges for mobilizing financial resources for the forestry sector in Vietnam. This research was thus conducted to assess the current situation, analyzing both the opportunities and challenges of financial mobilization, both for implementation of the strategy as well as for forestry sector investment.

Funding for VFDS already stems from ODA, FDI and the private sector. Payment for Forest Environmental Services (PFES) is a new financial incentive mechanism that provides incentives for forest users to better protect and develop forests, where investments from communities, individuals and enterprises are the main contributors responsible for increases in the budget from non-state sources.

A transparent and accountable forestry finance system will help policymakers by improving financial planning for the forestry sector, as well as targeting financial resources for greater returns. Finding new sources of finance to complement existing ones is essential. The forestry sector also needs to continue to improve its legal mechanisms and policies and create a favorable legal environment to mobilize the maximum possible financial resources for forest protection and development.



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