WORLD BANK GROUP

Country Forest Note

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EXECUTIVE SUMMARY

This Country Forest Note (CFN) provides an upstream analysis of the status of forests and of investments and policies relevant to the forest sector in Vietnam. It looks at forests in a programmatic and cross-sectoral manner to strategically position the World Bank Group (WBG) to support the country in delivering on forest-smart interventions. More specifically, it outlines current trends and challenges in the forest and land use sectors; builds on the ongoing dialogue and reviews past investments; identifies major challenges and investment and policy gaps; and makes recommendations on key policy changes and sectoral investments needed.

Vietnam's forest cover continues to expand while supporting economic growth, job creation, and poverty alleviation. Between 1943 and 1993, the country's forest cover declined from 43 to 28 percent. In the late 1980s, the government of Vietnam initiated major policy reforms and ambitious forest and replanting programs. Vietnam's commitment to the forest sector is enshrined in the national constitution and has the full support of the Communist Party and the Prime Minister. It has been mainstreamed in national development plans and is manifested through multiple action plans, decisions, and policies of key ministries. In 2017, total forest cover was 14,415,381 ha, covering 41.6 percent of the country, and it seems on track to reach the targets set out in the 2016–20 Target Program on Sustainable Forest Development.

The forest sector contributes significantly to the country's economy. The export of wood and timber products amounted to $8 billion in 2017, nearly 4 percent of gross domestic product (GDP). Vietnam is also one of the world's leading countries in operationalizing a payment for forest environmental services (PFES) system. Since 2008, its PFES program has generated nearly $400 million. In addition, the forest provides a myriad of goods and services that support local livelihoods and the economy as a whole. Given the topography of the country, forests play a particularly critical role in watershed and coastal protection.

Despite great economic progress and decreasing deforestation rates, the forest sector faces challenges from competing land uses, overexploitation of resources, mounting risks of supply shortages, and insufficient capacity for forest governance and management. As a result, deforestation and forest degradation rates continue in parts of the country, such as the Central Highlands, and the overall quality of the natural forest continues its downward trend. While two-thirds of Vietnam's natural forests are deemed in poor condition or regenerating, rich and closed-canopy forest constitutes only five percent of the total. There is also the growing threat from climate change, in particular to the country's mangroves.

This report presents some of the major trends and challenges facing forests in Vietnam and highlights recommendations to meet its forest-related national targets, sustain its economic growth, and alleviate poverty. The CFN highlights key areas where Vietnam could benefit from further support from the WBG and other partners, based on their comparative advantages and ongoing partnership.

Major trends and recommendations

The forest industry has been a major source of economic growth and poverty alleviation in the country. Their total export value of wood products amounted to $8 billion in 2017, representing nearly 4 percent of GDP. The country emerged to become the second largest furniture exporter of Asia, and the fifth largest worldwide. The industry is highly dependent on imported wood, with the one exception being forest plantations for woodchip production. In 2011, Vietnam became the world's largest woodchip supplier and the area for forest plantations has grown to over 4,000,000 ha, with over 1.7 million ha being managed by small farmers with a 1–3 ha plot. Forest plantations have effectively contributed to economic growth, improved people's livelihoods, and alleviated poverty. Given an increasing international supply gap,

especially for woodchips, is expected in the future, the forest industry could continue to drive growth and jobs in Vietnam.

However, the outlook is more uncertain. Vietnam today faces a growing challenge of securing a large enough supply of raw wood that meets the international standards for sawnwood and furniture-importing countries. Importers of Vietnam's wood products increasingly want proof of the wood's (legal) origin. To respond to this trend requires restructuring of the wood products industry. In particular this requires:

- Acceleration of the ratification and implementation of the Vietnam-EU Voluntary Partnership Agreement under the EU Forest Law Enforcement, Governance and Trade (FLEGT) Initiative. This requires that all wood products on the agreed list be legal (along the entire value chain), either planted or from natural stands. As demonstrated in other countries, this is a complex process that will need further support. Vietnam will also need to cooperate more with other neighboring countries to guarantee legal sourcing of imported woods.
- Closing the supply gap. This could be achieved, at least partially, by increasing the domestic production of raw materials for wood products. While the area for future plantation expansion is limited, there is considerable potential for raising productivity and the economic value of existing plantations by investing in improved production, more efficient processing activities and diversifying the range of plantation products. Doing so could also bring significant economic, ecological, and social benefits.[1]

In Vietnam the main driver of deforestation and forest degradation is from competing land uses; in particular from agricultural expansion, which is facilitated by the expansion of rural infrastructure. Global trends indicate rubber prices are likely to remain low, while coffee prices are expected to increase in the future (even though they are currently low). This is likely to continue to exert pressure to acquire and use land for coffee (and other crop) production. The country needs to transition to a more sustainable agriculture and rural development through the following efforts:

- Support intensified and more sustainable farming methods. To improve coffee production, the ageing crops need to be replanted, which provides the opportunity to introduce better-quality, higher-yielding varieties and more sustainable practices, such as shade-grown coffee and agroforestry practices. There are also possibilities to introduce more sustainable (deforestation-free) models through certification—particularly for the shrimp aquaculture sector, but also for coffee, rubber, and timber.
- More integrated and transparent planning process, including the inspection and supervision of the appraisal, approval, and implementation processes for agribusiness projects on "degraded" and other forest land. The new Planning Law and Law on Access to Information, as well as Decision 13, offer a legal blueprint for more integrated and transparent decision making.
- National and international funds supporting the agriculture sector should more effectively integrate the objectives of sustainable and deforestation-free production. Fiscal incentives for sustainable production objectives into national target programs and planning processes (and subsequent expenditure allocation) should be incorporated from an early stage.

When examining the impacts of commercial agriculture, it is also important to understand the *indirect* impact of displacement. As corporate interests drive the acquisition of land (legally or illegally) in particular for industrial crop production intended for export, the poorest populations are increasingly displaced, in

[1] World Bank. 2017. *Harnessing the Potential of Productive Forests and Timber Supply Chains for Climate Change Mitigation and Green Growth: Opportunities for Private Sector Engagement*. Washington, DC: World Bank.

some cases further into forested areas. Unless changes are made to the overall governance structure of the forests then this trend is likely to continue and the quality of the forest will continue to deteriorate. The poorest, particularly the ethnic minority groups, are the most dependent for their income and livelihood on forest resources. Any attempt to support the poorest must strengthen their rights over land and forest areas through more collaborative forest management approaches; as well as support alternative livelihoods that can help lift such households "out of poverty". Priority efforts should include:

- Establishing Adaptive Collaborative Management Approaches with local communities and Forest Management Units (FMUs) – in particular Special Use Forests (SUFs) and Protection Forests (PF). Such approaches will provide greater clarity and agreement on forest boundaries, forest and land use and rights, the sharing of benefits from protection forests such as forest carbon and forest ecologicial services and to allow investments in livelihood activities. The government has been supporting collaborative management approaches, most recently through the new 2017 Law on Forestry.
- Supporting the ongoing program of forest land allocation (FLA) and issuance of more formal access rights to households. The FLA process in Vietnam has also highlighted that legal rights must be complemented with efforts to support improved livelihood activities.

Across the country the majority of natural production forests are too depleted to immediately serve for timber production purposes, while natural protection forests continue to be under threat. The volume of timber harvested in natural forests has steadily declined and has all but halted following a nationwide logging ban in natural forests. At the same time the majority of State Forest Companies (SFCs) operating in natural forests is being re-organized away from "timber production" to "public service production" due to the poor quality of their forests (Decree 118/2014). There is a need for active management measures to rehabilitate natural forests and protect them from conversion, illegal logging and agricultural encroachment. This requires the following support:

- Improving law enforcement and forest protection against encroachment, illegal logging and illegal forest conversion. This again highlights the need for more collaborative forest governance approaches in and around FMUs.
- Technical assistance to improve the technical and management capacity in pilot forest enterprises; this includes assistance on forest management and assistance to improve business viability (for both timber production and public service provision). Support will be needed to help timber businesses understand how to meet requirements under certification and/or FLEG-T. Such assistance will help forest enterprises to be "bankable" for private investors.
- It also requires a more effective use of financing for forest protection/service provision. The PFES scheme needs to be revised so that it starts providing more performance-based incentives; and additional funds should be sought by operationalizing the PFES carbon window and combining payments with other social funding programs.

World Bank Group support to a forest-smart program in Vietnam

WBG support in Vietnam can build on a long-standing engagement in the forest sector and there is demand for further support along the above-mentioned recommendations. However, in particular two themes should become priority if the forest sector wants to further deliver economic growth, poverty alleviation and forest protection: (i) a more efficient, sustainable, and diverse plantation sector; and (ii) support to deliver more effective Forest Management Units.

The suggested focus areas cannot be considered in isolation—any intervention should be supported by efforts to respond to the other challenges and opportunities highlighted above. This will ensure delivery of a cross-sectoral, programmatic, forest-smart approach. Some of the suggested activities for the priority themes are outlined below. We also list some of the perceived knowledge gaps to support the priority themes. These may be supported by the World Bank, as well as by other groups.

➢ *Support for the transformation of the plantation sector toward higher productivity*

- *Pilot collaborative forest production models*. Forming forestry cooperatives and/or forest associations can facilitate farmers' access to information, better clonal material, business development services, and finance, and strengthen their bargaining position along the supply chain.
- *Provide business development support services* for: (i) forest cooperatives/associations; (ii) state forest companies and (iii) wood processing SMEs. Business development support services should include technical support and training on business planning, market intelligence, access to finance, and insurance; support for business plan development; and guidance on complying with FLEGT and/or certification standards. At the same time the sector would benefit from better enabling and regulatory environment (finance, licensing, incentives), especially for wood processing SMEs.
- *Establish forestry insurance schemes.* A barrier for farmers to switch to longer rotation periods which would allow them to achieve higher yields, is the perceived weather-related risks. Introducing risk mitigation programs for farmers, such as insurance schemes, could allay those concerns.
- *Broker access to finance*. Preferential credit should be provided to households and SME forestry companies/cooperatives, so they can cultivate and improve the quality (and duration) of their plantations.
- *Help support a more conducive investment climate for FMUs (in particular SFCs and the plantation sector, but also forest services providers)*. Options include combining funds from a development finance institution, such as the International Finance Corporation (IFC) and an international or domestic commercial bank providing capital through loans (with attached risk guarantees from IFC). It may also be possible to establish a private sector financing window operating via, for instance, through IFC—to provide equity and guarantee products in addition to debts and grants.
- *Regional coordination*. Given its technological, processing, and market leadership, Vietnam has an opportunity to increase its regional engagement and leadership on forest legality. Through closer engagement with neighboring countries on legal sourcing standards, private sector cooperation, and technology exchange and dialogue, Vietnam can drive a thriving forest economy and help the sourcing of legal forest products across the region.

➢ *Support to deliver more effective Forest Management Units.*

- *Adopt ACMAs***.** Under more collaborative forest governance arrangements such as ACMAs, FMUs can collaborate with forest-dependent communities, legal community entities, and small farmers on the implementation of activities in a more participatory and sustainable manner. This approach supports, among other things, participatory boundary demarcation and formal agreement on land use and on types of (targeted) sustainable livelihood improvement activities.
- *Accelerate forest land allocation.* An area of over three million ha has been identified for providing land use right certificates (LURCs) for Commune People's Committee (CPC) land. While approximately one million ha has already been allocated, this process needs continuous support. There has been a request for support to this process for an area of around 800,000ha. Experience has shown FLA must be accompanied by livelihood support.
- *Support to livelihood improvement activities*. This should include the promotion of sustainable use of NTFPs**,** diversifying job opportunities and incentivizing sustainable agricultural and forestry

activities by building and enhancing links between the value chain actors and small farmers/communities. It is necessary to support forest-dwelling groups, particularly the youth and marginalized groups, in finding jobs. Thousands of jobs, including vocational jobs in nearby towns and cities, could be created by increasing the production and processing activities of plantations as well as of the non-forestry sector. For all livelihood support activities particular attention should be provided to support female entrepreneurs.

- *Enhance the use and effectiveness of PFES resources***.** To catalyze change the payments offered need to be raised significantly, better targeted, and/or combined with other livelihood support programs. It is particularly important to pilot and introduce more inclusive disbursement models (e.g., through ACMA); more efficiently target disbursed funds; and increase available funding by operationalizing the PFES carbon window and/or combining payments with other social funding programs.
- *Technical assistance to improve effectiveness of pilot FMUs*; this includes assistance on forest management and improving business viability (for both timber production and public service provision). Such assistance will help forest enterprises to be "bankable" for private investors.
- *Access to finance for poorer households;* this requires targeted FLA and support for suitable micro finance approaches.

Knowledge gaps[2]

- More clarity is needed on the socioeconomic and environmental viability of the 800,000 ha of 'forest' land identified as available for forest land allocation. It is necessary to better understand and document the status of this land; identify viable areas for subsequent allocation and investment; and address environmental safeguard requirements.
- Access further information on the current assessment and auditing process of SFCs. This process should be completed and the resulting information accessible. This information can be used to determine which SFCs (if any), efforts should focus on. If some of this information is missing, follow-up assessments of SFCs will be required.
- There is a need for further designing and assessing viable financial products supported internationally or domestically (or both) that could be introduced under a future program. This should address how to improve access to finance for poorer households (in particular women) engaged in forest and agricultural products; how an insurance scheme could be established to mitigate the risk from moving to longer-rotation plantations; and how to mitigate risk for potential investors.
- There is a lack of knowledge on forest production models that bring together farmers and support cooperation along the value chain. Different forest cooperative models should be examined. Possible areas for introducing pilot collaborative forest production models should be identified and scoped out.
- Low productivity of plantations can be partially addressed by more effective public-private research on clone development, germplasm, and the establishment of seed orchards. This would be carried out by local forest institutions and Universities.
- There is a need for more insights into the future of rubberwood in the country. There will be a considerable area and supply of rubberwood, and thus it is vital that the country will have access to different markets. Investing in sustainable rubber production practices today could yield considerable benefits in the future. However, more information on market dynamics and production practices and technologies is required.

[2] Perceived knowledge gaps for further analytical work to be undertaken by DPs, Government or private entities.

ACRONYMS AND ABBREVIATIONS

ACMA	adaptive collaborative management approach
AEZ	agroecological zone
BSP	Bank for Social Policies
CEMA	Committee for Ethnic Minority Affairs
CFM	community forest management
CFN	country forest note
CPC	Commune People's Committee
CSO	civil society organization
DARD	Department of Agriculture and Rural Development (at the Province)
DOF	Department of Finance
DONRE	Department of Natural Resources and Environment
DOST	Department of Science and Technology
DPC	District People's Committee
DPI	Department of Planning and Investment
EIA	environmental impact assessment
ERP	emission reductions program
EU	European Union
FAP	forest action plan
FCPF	Forest Carbon Partnership Facility
FIPI	Forest Inventory and Planning Institute
FLA	forest land allocation
FLEGT	Forest Law Enforcement Governance and Trade
FMB	forest management board
FMU	forest management unit
FORMIS	Management Information System for the Forestry Sector
FPD	Forest Protection Department
FSC	Forest Stewardship Council
FSDP	Forest Sector Development Project (World Bank)
GCF	Green Climate Fund
GDP	gross domestic product
GIZ	Gesellschaft für Internationale Zusammenarbeit
GSO	General Statistics Office
ha	hectare
HWP	harvested wood product
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IPSARD	Institute of Policy and Strategy for Agriculture and Rural Development
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt für Wiederaufbau (German development bank)
LULUCF	land use, land use change and forestry
LURC	land use right certificate ("red book" in Vietnam)
M&E	monitoring and evaluation
MARD	Ministry of Agriculture and Rural Development

MB	management board
MDB	multilateral development bank
MOF	Ministry of Finance
MONRE	Ministry of Natural Resources and Environment
MOU	memorandum of understanding
MPI	Ministry of Planning and Investment
MRV	measurement, reporting and verification
NDC	nationally determined contribution
NGO	nongovernmental organization
NRAP	National REDD+ Action Plan
NTFP	nontimber forest product
PA	protected area (SUF in Vietnam)
PFES	payment forest environment services
PFMB	protection forest management board
PFRSFM	Project on Forest Rehabilitation and Sustainable Forest Management
PPC	People's Provincial Committee
REDD+	Reduced Emissions from Deforestation, Forest Degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
SEDP	socioeconomic development plan
SFE	state forest enterprise
SMEs	small and medium-sized enterprises
SOE	state-owned enterprise
SFC	state forest company
SFM	sustainable forest management
SUF	special-use forest
tCO_2e	(metric) tons of carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
VAFS	Vietnamese Academy of Forest Sciences
VBARD	Vietnam Bank for Agricultural and Rural Development
VBSP	Vietnam Bank for Social Policies
VCF	Vietnam Conservation Fund
VGGS	Vietnam's/National Green Growth Strategy
VHLSS	Vietnam Household Living Standards Survey
VIFORES	Vietnam Timber and Forest Product Association
VNFF	Vietnam Forest Protection and Development Fund
VNFOREST	Vietnam Administration of Forestry
VnSAT	Vietnam – Sustainable Agriculture Transformation
VNTLAS	Vietnam Timber Legality Assurance System
VPA	voluntary partnership agreement
WBG	World Bank Group

All dollar amounts are U.S. dollars unless otherwise indicated.

1 BACKGROUND AND RATIONALE FOR THE COUNTRY FOREST NOTE

Country Forest Notes (CFNs) are an operational centerpiece of the Forest Action Plan (FAP) of the World Bank Group (WBG). Through the FAP, the WBG aims to boost the potential of forests to lift people out of poverty and generate lasting social, economic, and environmental returns. The approach taken not only focuses on sustainable management of forests, but also on the role of other sectors and the win-win outcomes if these sectors opt to be *forest-smart*.

The FAP reflects a new business model that aims to move away from the project-by-project, instrument-driven approach that has shaped the forest portfolio in recent years, to a more *programmatic* approach that strategically positions the WBG to support countries delivering on forest-smart interventions.

As part of the FAP's operationalization, CFNs are prepared to enable an integrated upstream analysis of the status of forests and of investments and policies relevant to the forest sector. CFNs are expected to feed into strategic diagnosis exercises and dialogues in-country, thereby informing and programmatically organizing the WBG's engagement. In addition, they should help raise the prominence of the forest sector in the dialogue with governments, donors, and other in-country partners and stakeholders.

CFNs should also help country teams go deeper into key forest sector and related cross sectoral issues and guide the dialogue with the government and stakeholders, including donors, civil society, and private entities. More specifically, it should facilitate the preparation of action plans and suggest interventions to address analytical and investment gaps over time. CFNs are "living documents"—they can be updated to reflect the evolving needs that arise from the dialogue and engagement with relevant counterparts.

In short, CFNs make it easier to:

- Understand and put forward suggestions to address challenges the forestry sector faces with respect to sustainable development and economic growth, including institutional capacity, and governance and policy issues;
- Analyze investment gaps; assess current and potential engagements and investment operations of the WBG and partners; and
- Propose a programmatic umbrella of possible actions and interventions to advance the country's engagement on forests.

Suggestions are closely aligned with and supportive of the government of Vietnam's priorities as set out in various economic and forest policies and plans, including the nationally determined contribution (NDC), the Socio-Economic Development Strategy 2011–20 and the Socio-Economic Development Plan 2015–20, as well as the new 2017 Forestry Law. The proposed programs are also aligned with the World Bank's Country Strategy—Pillar 3 of the Country Partnership Strategy for FY2018–22, which emphasizes support for sustainable management of natural resources.

This CFN is structured as follows. *Chapter 1* provides a snapshot of forest cover trends and the current state of the forests in Vietnam, including a summary of national plans and strategies (current and upcoming) related to and affecting forests. *Chapter 2* explores forests' contribution to sustainable development, including their importance for livelihoods, and for the broader economic and sustainable well-being of the country. *Chapter 3* provides more details on the drivers of land and forest use changes in the country and the responses these have elicited, as well as major challenges and gaps. *Chapter 4* discusses the fiscal and other kinds of incentives affecting forests and land use. *Chapter 5* outlines the WBG's current approach to

forests in the country and proposes interventions that would support a vision for forest-smart development. While the note discusses the broader trends and responses, including those related to government and other agencies, its purpose is to determine which gaps are best filled by the WBG, building on that institution's strengths and past work in the country.

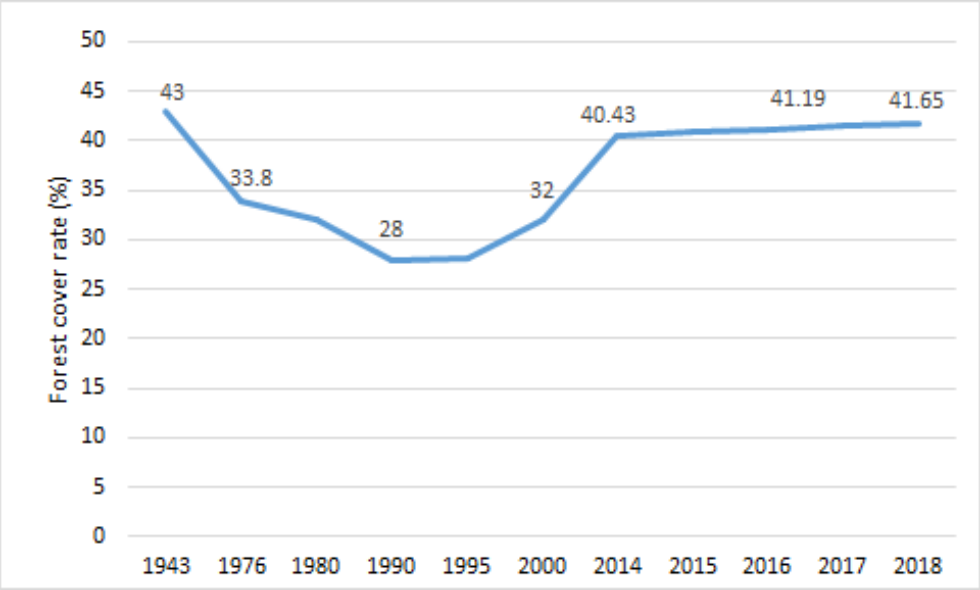
Country Forest Notes undertake an upstream analysis of the status of forests and of investments and policies relevant to the forest sector. They provide links to existing and potential future engagement areas of the WBG, thereby informing and programmatically organizing WBG engagement.

2 STATE OF VIETNAM'S FORESTS

2.1 FOREST COVER CHANGE IN VIETNAM

Vietnam's forest cover increase over the last 20 year is remarkable, but the quality of its natural forests has suffered. Between 1943 and 1993, forest cover in Vietnam declined from an estimated 43 percent to 28 percent.[3] Since 1993, thanks so a raft of policy reforms and forest programs (box 1), forest cover has increased again—to 14,415,381 ha (in December 2017), which covers 41.65 percent of the country (figure 1). Natural forests account for 10,236,415 ha and plantations account for 4,178,966 ha.[4].

FIGURE 1. FOREST COVER CHANGE 1943–2017



Source: FPD (Forest Protection Department). Data on forest changes. (http://www.kiemlam.org.vn/Desktop.aspx/List/So-lieu-dien-bien-rung-hang-nam/).

In the late 1980s, the government of Vietnam initiated major policy reforms and ambitious forest and replanting programs. By 2017, total forest cover reached again 14,415,381 ha, covering 41.6 percent of the country, supporting economic growth, job creation, and poverty alleviation.

While the forest cover continues to increase due largely to the expansion of forest plantations, the quality of native forests continues to deteriorate. This is also reflected in the forest reference emission levels Vietnam submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in

[3] Vo, Q. and T.C. Le. 1994. "Conservation of Forest Resources and the Greater Biodiversity of Vietnam." *Asian Journal of Environmental Management* 2(2): 55–59.

[4] Forest status 2016: http://www.kiemlam.org.vn/Desktop.aspx/List/So-lieu-dien-bien-rung-hang-nam/2016; Forest status 2017: http://kiemlamvung1.org.vn/bv/quyet-dinh-c25/cong-bo-hien-trang-rung-toan-quoc-nam-2017-p579; MARD. 2018. Decision No. 1187/QD-BNN-TCLN dated 3 April 2018 on publication of national forest status as of December 2017.

2016 which estimated that over two-thirds of Vietnam's natural forests are in poor condition or regenerating, while rich and closed-canopy forest constitutes only 5 percent of the total[5] (figure 2).

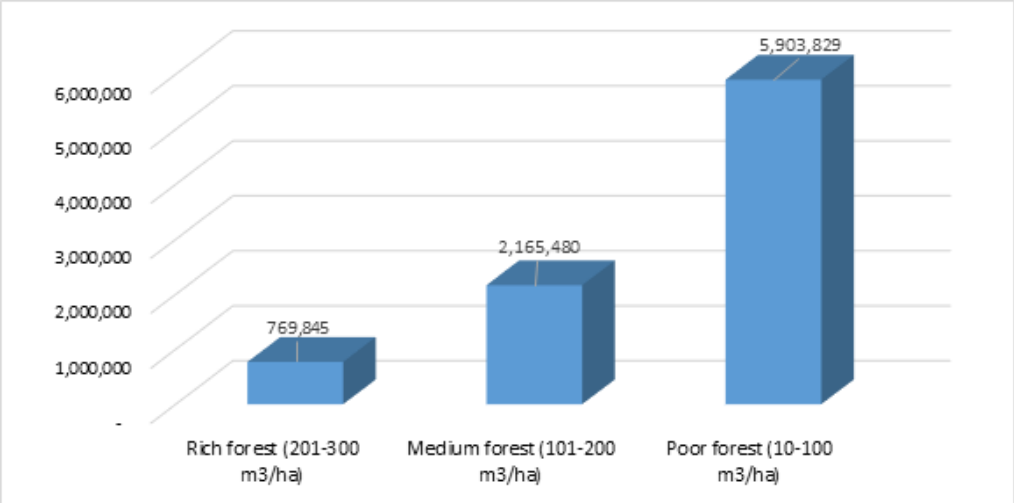
BOX 1. HISTORY OF POLICY REFORM AND FOREST COVER CHANGE IN VIETNAM

Between 1976 and 1980, forest resources were managed through a system of state forest enterprises (SFEs), which harvested and planted forests according to detailed planning norms issued by the central government. The exploitation of the forest for fuel, timber, and other forest products, along with the agricultural expansion supported through government resettlement programs in the post-war rebuilding period, led to a major loss of forests. In response to the rapidly dwindling forest area, a slew of policies and programs were introduced in the late 1980s and early 1990s to reverse these forest losses.

Several push-and-pull factors worked together to bring about the change and recovery of Vietnam's forests. Paramount among these were the land reforms of the *Doi Moi* (renovation) policies in 1986, in particular the forest and agriculture land allocation policy, as well as zoning policies derived from the Forest Protection and Development Code; the partial logging ban; changes in the responsibilities of SFEs; and large-scale reforestation programs such as the "Greening the Barren Hills Program" ("Program 327") and the "5 Million Hectare Reforestation Program" ("661 Program").

Since the late 1990s, the state has made significant strides in forest policy reform. In the early 2000s, the concept of sustainable forest management was introduced in Vietnam with the recognition that forests not only provide timber but also other goods and services. Since 2010, the government has given more attention to the ecological services provided by forests, which culminated in the adoption of the PFES policy (in 2010) and a National REDD+ strategy (2012 and 2017).

FIGURE 3. QUALITY OF COUNTRY'S FORESTS



Source: VNFOREST. 2016. *Final Report on National Forest Inventory for the Period 2013–16.*

While the overall forest area has been increasing, the quality of the forest continues to deteriorate. Today two-thirds of Vietnam's natural forests are considered in poor condition or regenerating, while rich and closed-canopy forest constitutes only 5 percent.

[5] MARD. 2016. *Viet Nam's Submission on Reference Levels for REDD+ Results Based Payments under the UNFCCC.*

2.2 National Policies and Programs for the Forest Sector

Vietnam's commitment to the forest sector is enshrined in the national constitution and has the full support of the Communist Party and the Prime Minister. It has been mainstreamed in national development plans and is manifested through action plans and decisions of key ministries. The new Forestry Law and Planning Law are expected to further contribute to strengthening the forest sector and cross sectoral integration of forestry. The main policies and programs are presented in box 2 and elaborated in appendix A.

Box 21. Key Policies and Programs

Overall 2020 targets for the forest sector were established under *Prime Minister Decision No 886/2017* and include targets for the forestry production value (an increase from 5.5 to 6.0 percent per year) and the national forest cover (an increase to 42 percent, representing a total forest area of 14.4 million ha).

The new *Forestry Law* (2017) sets out the future vision for the country's forest sector. It supports: (1) strict management of the conversion of natural forests; (2) logging in natural forests only allowed if there is sustainable forest management (SFM); (3) greater focus on forestry for environmental services; (4) promotion of forestry business, including equitization of SFEs; (5) improved forest tenure to clearly identify forest owners/users; (6) national forestry planning; and (7) control of forest products through Vietnam's Voluntary Partnership Arrangement (VPA).

The new *Planning Law* (2017) provides the blueprint for more integrated and sustainable planning. It mandates the integration of climate change and environmental considerations into future planning and will help remove the current overlap of planning activities in many sectors, creating a close connection in planning between the central and grass-roots levels and bringing greater transparency to the overall planning process.

The bilateral VPA negotiation with the EU formally started in 2010. The Vietnam-EU Voluntary Partnership Agreement-Forest Law Enforcement, Governance and Trade (VPA-FLEGT) was signed on October 19, 2018, with the aim of tightening controls on forest governance; fighting illegal logging; and promoting trade in verified legal timber products from Vietnam to the EU and other markets. Under the VPA, the Vietnamese government is also committed to developing the Vietnam Timber Legality Assurance System (VNTLAS).

The *Vietnam Payment for Forest Environmental Services* (PFES) scheme has been operational since 2010 and is now the main source of finance. The PFES system is implemented by provinces, which have some flexibility in defining how it is carried out.

Vietnam's *Nationally Determined Contribution* (NDC) estimated that forestland would be a major sink for carbon, accounting for 22.5 million tons of carbon dioxide equivalent (CO_2e) reductions in 2010, 50.4 million tons of CO_2e reductions in 2020, and 53.1 million tons of CO_2e reductions in 2030.

Decision 419/2017 on *National REDD+ Action Plan* (Phase 2) was approved by the Prime Minister in April 2017. The Decision identified 11 work packages covering forest and nonforest interventions to address the key elements of REDD+.

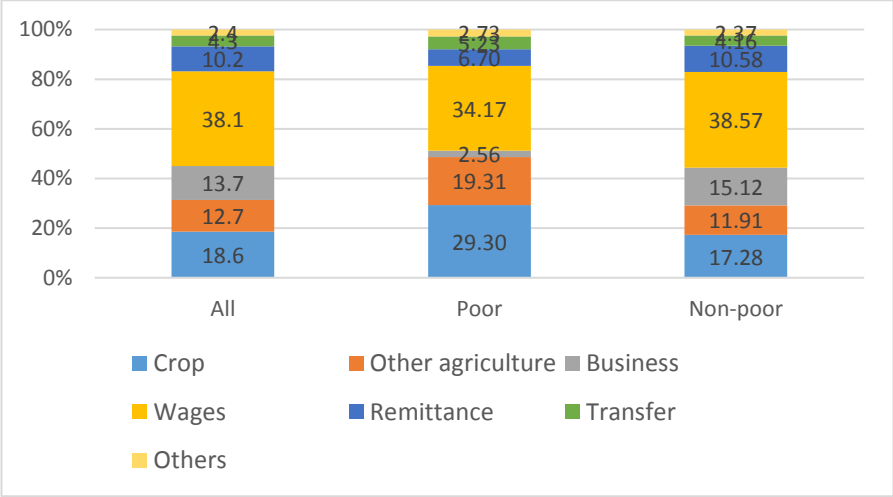
Directive 13, issued in 2017, strengthens the mechanisms to manage and closely monitor projects on conversion of forest use purposes, including hydropower development and rubber plantations.

3 Forest Contribution to Livelihoods and Sustainable Development

3.1 Livelihoods and Poverty Relevance of Forests

There is a clear link between poor and ethnic mionority groups and forests. Although, Vietnam has made significant progress in alleviating poverty over the last decade, 9.8 percent of its population still remains poor (2016).[6] Poor people disproportionately reside in rural areas (95%) and mountainous areas. Vietnam's 2010, 2012, 2014 and 2016 Household Living Standard Surveys (VHLSS)s[7] show that in 2016, agriculture contributed 31 percent to total household income in rural areas, and up to 49 percent among poor households[8] (figure 3). Within agriculture, forestry contributes only 2.9 percent of total income among rural households but 10 percent among poor households. About 68 percent of the poor and 73 percent of the ethnic minorities are engaged in forestry activities, compared to just 19 percent of the nonpoor and 13 percent of the Kinh—the majority ethnic group.

Figure 3. Contributions of Various Income Streams to Household Income by Socioeconomic Group



Source: Narloch, U. 2015. *The Varying Income Effects of Weather Variation: Initial Insights from Rural Vietnam.* Sustainable Development Practice Group. Washington, DC: World Bank.
Note: Based on data collected through Vietnam's 2010, 2012, 2014 and 2016 Household Living Standard Surveys.

Accompanying data shows that the average per capita income values are consistently lower for the forest category compared to the other categories; for example, agricultural wages and nonagricultural wages (unskilled) translate into considerably higher incomes for the lowest quintile.[9] Richer households depend less on forest resources and more on wage employment in skilled occupations and businesses, which provide considerably higher per capita incomes.

[6] World Bank. 2018. *Climbing the Ladder: Poverty Reduction and Shared Prosperity in Vietnam.* Update Report. Hanoi. Washington, DC: World Bank.
[7] These surveys are conducted by the General Statistics Office (GSO), with technical support from the World Bank. They are nationally representative and contain detailed information on individuals, households, and communes. In total, about 9,400 households nationwide were included in each round.
[8] Narloch, U. 2015. *The Varying Income Effects of Weather Variation: Initial Insights from Rural Vietnam.* Sustainable Development Practice Group. Washington, DC: World Bank.
[9] These data can be seen in annex table A1 of a 2015 study by Narloch, U.

Ethnic minorities, poverty, and forests

Although ethnic minorities make up just 15 percent of the total population, they represented 73 percent of the poor in 2016. The patterns of socioeconomic development seen in Vietnam have tended to concentrate poor people and remaining stands of natural forests in roughly the same geographical areas, with a few exceptions.[10] Map 1 shows the incidence of poverty across the country and in forest areas. Inhabitants of these remote areas disproportionately represent ethnic minorities that have lived in these upland forested areas for centuries. Poverty rates here are far above the national average.[11] In all, 75 percent of Vietnam's minority populations live in only two regions, the Northern Mountains and the Central Highlands. Ethnic minority groups face structural barriers, including limited or reduced market access and mobility; limited access to financial services; lower education levels than in the rest of the country; and relatively low productivity, exacerbated by limited access to land or high-quality land.[12] Poor people in these remote rural areas tend to have a relatively high level of dependence on nontimber forest products (NTFPs) and environmental services from natural forests for their sustenance.

NTFPs are critical for an estimated 24 million people living in and around forest areas and are particularly important for the 8.5 million ethnic minority people living in the uplands.[13] NTFPs contribute significantly to food and nutrition, fuelwood, fodder, medicines, construction materials as well as to the household economy (through the sale of high-value products). Ethnic minorities tend to specialize in an array of NTFPs that are specific to the ecoregions they inhabit. While NTFPs represent an important safety net through direct consumption and sales, in most cases they may not be adequate for helping people rise out of poverty. However, as shown in the next section, there is a growing market for some NTFPs.

The poorest groups, in particular ethnic minority groups, are the most dependent on forest resources for their income and livelihood. Forest resources often help such groups avoid sinking deeper into poverty. Yet a better understanding of how the use of forests and other alternatives can help people escape the poverty trap is critical.

Gender and forests

Women are frequently disadvantaged, for a range of interrelated cultural, socio-economic and institutional reasons, in their access to and control over forest resources and in the availability of economic opportunities[14]. Women tend to play specific roles and have specific responsibilities in many forestry value chains which are important for well-being and food and energy security of their households. While Vietnam has developed various Laws and policies[15] to promote women's rights, surveys reveal that the poor and women are still

[10] These data can be seen in annex table A1 of a 2015 study by Narloch, U.

[11] World Bank. 2009. *Country Social Analysis Ethnicity and Development in Vietnam*. Summary report. Washington, DC: World Bank.

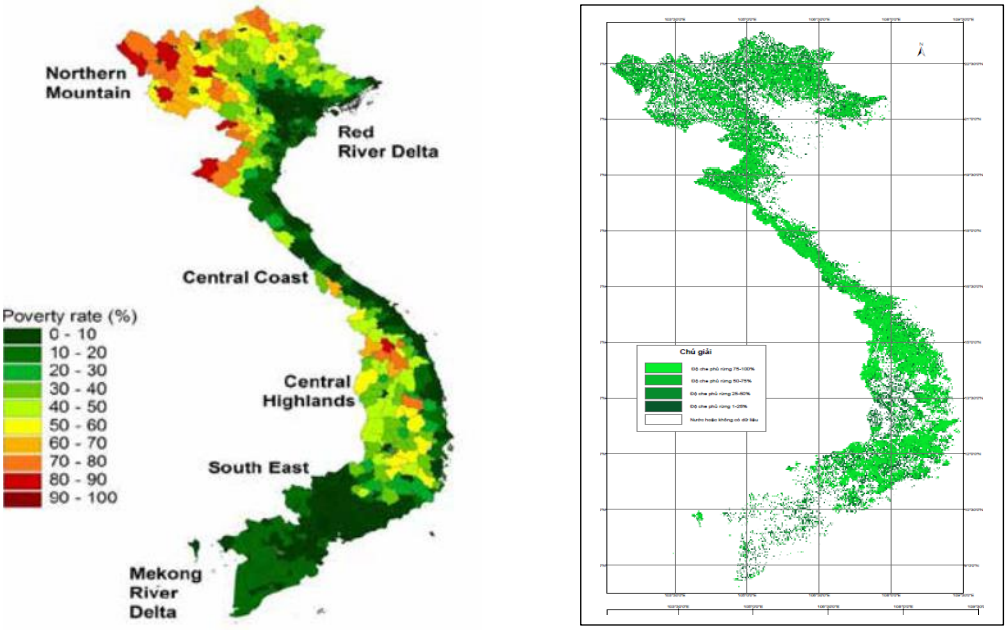
[12] Ibid.

[13] Sunderlin, W. and T.B. Huynh. 2005. *Poverty Alleviation and Forests in Vietnam.*

[14] FAO.2013. Forests, food security and gender: linkages, disparities and priorities for action1 Background paper for the International Conference on Forests for Food Security and Nutrition, FAO, Rome, 13–15 May, 2013

[15] These include the 2013 Constitution of Vietnam (Civil Code 2013) which upholds women's equality; 2006 Law on Gender Equality; and as of 2013 the Land Law required that women's names also be included on Red Books rather than simply "head of household." Additionally, there are national and provincial strategies to 2020 to promote women's rights.

MAP 1. INCIDENCE OF FORESTS AND POVERTY ACROSS THE COUNTRY



Source: The poverty map (left panel) was taken from Pimhidzai (2016) while the forest cover map (right panel) was taken from https://opendata.vn/sites/default/files/e030100_do_phu_rung_2000_130116.pdf.

structurally disadvantaged in that they have less access to land and information, and most probably formal credit[16]. Rural women's concerns continue to not be addressed adequately in areas that greatly impact their livelihoods: land, agriculture and forestry.

Women's rights over (forest) land remain less than men's due to the Vietnamese system of household registration requiring a "household head'' which has resulted in men automatically being named the "head" of the household except where there are women-headed households (generally through widowhood, abandonment and/or divorce). Although the law requires that Land Use Right Certificates, including forest land, bear the names of both husband and wife, decision on the use of land is often made by men.

Among the mass organizations, the Vietnam Women's Union (VWU) promotes gender equality and women's participation in development. Despite this, however, gender equality has not yet been mainstreamed. However, women's roles in forestry value chains are generally poorly supported by policy-makers and service providers.[17] Targeted support in order to empower women in the forest sector is needed in order to create significant development opportunities.

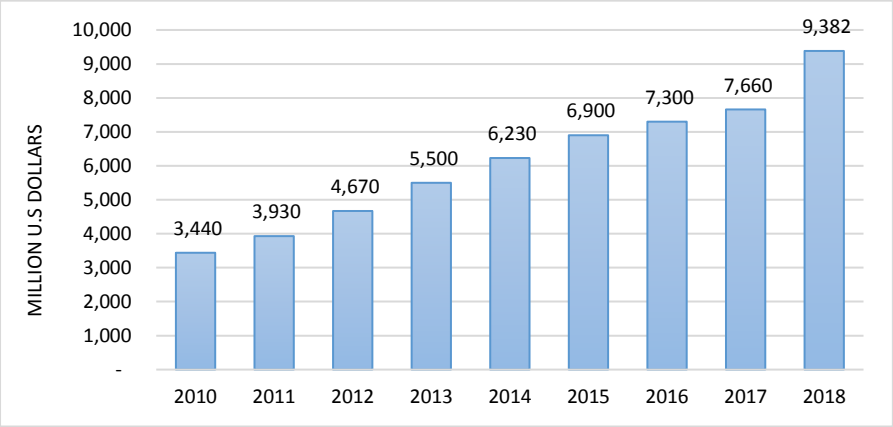
[16] Gender Action Plan for Vietnam's ERPD
[17] Ibid

3.2 Economy: Job and Wealth Creation

Wood and timber products

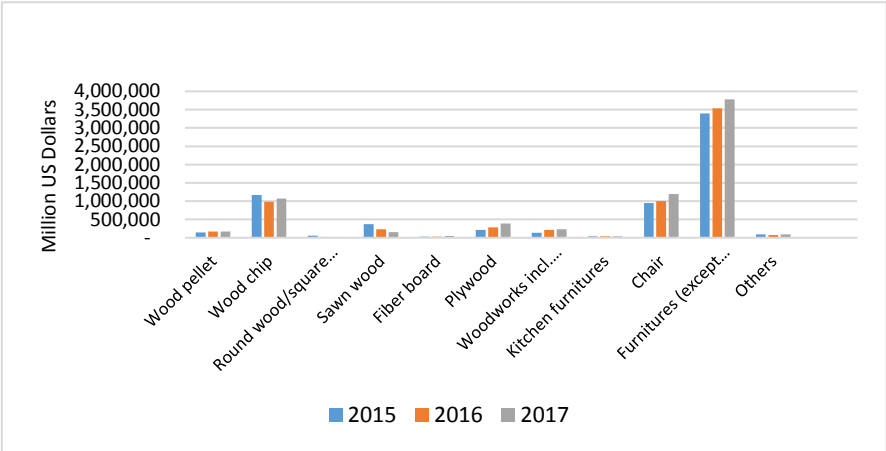
Vietnam has become major exporter of wood and timber products, whose export value amounted to $9.4 billion in 2018, as shown in figure 4. The wood and timber products sectors represent nearly 4 percent of GDP. While the sector's outlook is somewhat uncertain, it will continue to be vital to the country's economic growth.

Figure 4. Forest Products Export Turnover by Year (2010–18)



Source: Forum on wood processing and export industry in 2018 – success, experience; Breakthrough solutions for 2019, held in Hà Nội on February 22, 2019.

Figure 5. Wood Products Export Turnover by Product Category (2015–17)



Vietnam is the second largest furniture exporter in Asia and the Pacific and the fifth largest worldwide, with a revenue of over $7 billion in 2016.[18] Furniture, particle boards, artificial wood boards, melamine-faced chipboards, and wood pellets were Vietnam's main wood product exports between 2015 and 2017 (figure 5). While furniture production initially involved mostly *outdoor* furniture, in recent years the focus has shifted to *indoor* furniture products. The furniture industry in Vietnam comprises about 1,500

[18] https://www.worldfurnitureonline.com/research-market/furniture-industry-vietnam-0058553.html.

exporters, of which some 450 constitute foreign direct investment companies that account for over 45 percent of furniture exports.[19]

The booming woodchip industry

The industry is still highly dependent on imported wood except for the production of woodchips. Vietnam's woodchip industry has grown rapidly to meet the huge demand from China for paper and particle board production, and in 2011 Vietnam became the world's largest woodchip supplier. Acacia plantations (which are used for the production of woodchips) have emerged as an important resource for supporting the rural economy and generating income for rural households. Plantation development rapidly accelerated after 1995, from about 1 million ha in 2000 to 3.6 million ha in 2014,[20] and approximately 4.18 million ha in 2017.[21]

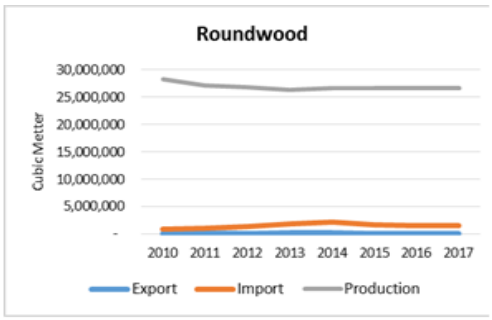
In parallel with the increase in plantation forest area, woodchip industries have continuously expanded. The number of woodchip-processing facilities has increased rapidly—from 47 plants in 2009 to 130 plants in 2016.[22] The total value of woodchip exports also increased: from $796 million in 2012 to $958 million in 2014.[23] In 2015, it reached almost $1.2 billion, equivalent to over 17 percent of total export turnover of wood products[24] (figure 6). China, Japan, and the Republic of Korea are the three largest consumer markets for Vietnam's woodchips. Recent Chinese direct investments in pulp industry in neighboring Lao PDR will most like further fuel the demand for fast growing species from Vietnam, especially for Eucalyptus which is the preferred species for the rapidely growing demand for the garment industry thank to the longer fibres than Acacia.

The relatively low cost of the labor force and the favorable environment for foreign investment are some of the main competitive advantages of the Vietnamese industry. Trade statistics for other types of wood products—roundwood, sawnwood, veneer, and plywood—are shown in figure 6. Wood exports have been growing to key markets such as the United States, Japan, the European Union (EU), China, and Korea, together representing nearly 90 per cent of the country's total exports.[25] Wood pellets have become a secondary strategic wood product because they are made from industrial waste from the milling of lumber, the manufacture of wood products and furniture, and the construction sector. Demand for wood pellets is also likely to increase due to their use as biofuel and their high combustion efficiency.

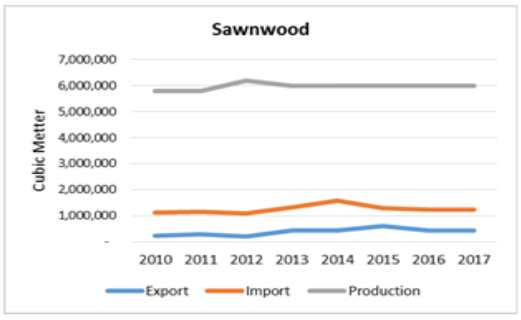
Vietnam is the largest woodchip producer in the world, providing income to over 2 million small farmers. Farmers have considerable opportunities to enhance efficiency and sustainability along the supply chain and further benefit from the growing global demand.

[19] This information was found at https://www.worldfurnitureonline.com/research-market/furniture-industry-vietnam-0058553.html, based on a market assessment of the furniture industry in Vietnam.
[20] Vietnam Ministry of Agriculture and Rural Development (MARD) Decision No. 3135/QD-BNN-TCLN, dated August 6, 2015, on publication of forest status area as of December 2014.
[21] MARD. 2018. Decision No. 1187/QD-BNN-TCLN dated on 3 April 2018 on publication of national forest status as of December 2017.
[22] Phuc, X. T. *Woodchip Export Report 2016* (in Vietnamese).
[23] Phuc, X.T., Dang V.Q., Tran L.H., and T.C. Cao. 2016. *Export of Wood Chips in Vietnam: Policy, Market and Livelihood of Smallholder Plantation* (in Vietnamese).
[24] Workshop on Vietnam's exports of woodchips: new challenges, Hanoi, July 15, 2016. Dang, V.Q. Forest Trends.
[25] http://vietfores.org/en/tin-tuc/timber-product-exports-hit-8-billion/.

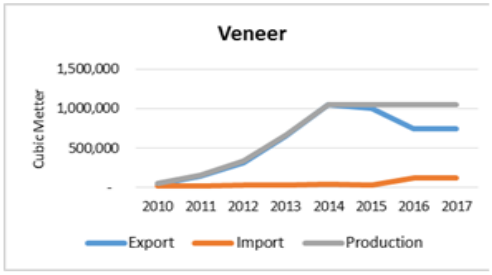
FIGURE 6. TRADE STATISTICS FOR KEY TYPES OF TIMBER PRODUCTS



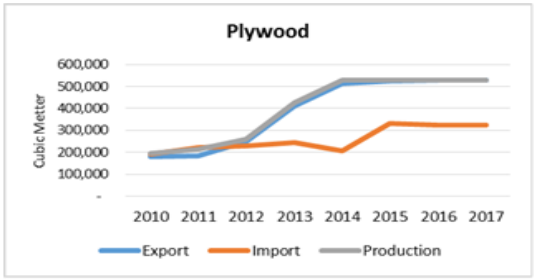
Source: FAOSTAT



Source: FAOSTAT



Source: FAOSTAT



Source: FAOSTAT

By 2018, about 4,500 enterprises were engaged in the wood and forestry products processing industry—3,900 domestic enterprises and 600 foreign direct investment enterprises with more than 500,000 employees.[26] Vietnam also has more than 300 traditional carpentry villages, where tens of thousands of households and hundreds of thousands of workers are directly involved in the process of producing, processing, and supplying wood products for export and domestic markets.[27] Yet the forest industry does not only have a direct impact—through job creation—but also has indirect employment impacts. The latter include local multiplier effects (e.g., local employment and income opportunities related to the forest industries) and the trickle-down effect of timber-generated revenues for the treasury, which are spent locally for development purposes. The woodchip industry has been particularly important for income and job creation in the rural area, as woodchips are produced locally.

Outlook of the wood and timber products industry

Despite the growing global demand, the outlook for the forest industry is more uncertain due to the requirement of timber legality for imported wood. As a result of the depletion of the country's natural forests and the imposed logging ban, Vietnam is facing raw wood supply shortages and imports a significant amount of timber products. The largest share of wood materials is imported from Cameroon, followed by the United States, Papua New Guinea, Belgium, and the Republic of Congo.[28] Not only are more and more countries imposing restrictions on the export of their raw wood but many of Vietnam's major wood and wood product importers, such as the United States, Australia, Korea, Japan, and the EU are demanding to

[26] http://enternews.vn/nut-that-cua-nganh-che-bien-go-134565.html.

[27] To, X.P., Dang, V.Q., Nguyn, T.Q. and T.C. Cao. 2018. *Timber Processing Village in the Context of Integration: Situations and Options for Sustainable Development.*

[28] Source: Calculations by VIFORES, FPA Binh Dinh, HAWA, BIFA, and Forest Trends, based on statistics of the General Department of Customs, 2019.

know the legal origin of the wood. This requires that the wood comes from forests grown under Sustainable Forest Management practices and be internationally certified (for instance, by the Forest Stewardship Council (FSC))—thus, imported from risk-free sources (or produced domestically). The fact that Vietnam imports wood from some countries which are high-risk in terms of illegal logging, will threaten its ability to sell on to the aforementioned markets, unless a clear legality chain of custody can be proved.[29]

In response to the changing market requirements, Vietnam in May 2017 concluded the Vietnam-EU Voluntary Partnership Agreement (VPA) on the EU Forest Law Enforcement, Governance and Trade (FLEGT). Box 3 describes the current status of FLEGT in Vietnam. This requiring all wood products on the agreed list to be legally sourced, from both domestic and international operators. Another response is to increasingly legally source raw wood from Vietnam and rely less on imports and replace tropical hardwood with other wood sources for furniture production. Reports indicate this is already happening; in 2018 total materials used for wood processing imported into the country had fallen to 26 percent.[30] Filling this gap by increasing the *domestic* supply of wood materials offers a major opportunity for job creation and economic growth. A report commissioned by the World Bank estimated that the establishment of productive forests and the management and operation of additional processing facilities could add 244,000 jobs by 2040 and $5 billion to the Vietnamese GDP, as well as sequestering the equivalent of 70 million tons of carbon dioxide.[31]

The export of wood products reached a value of $8 billion in 2017, representing nearly 4 percent of GDP. However, given the stricter requirements imposed by importing countries on proving the legality of sourced wood, Vietnam's domestic forest industry needs to reckon with a more uncertain future.

BOX 22. FLEGT IN VIETNAM

Vietnam concluded its Voluntary Partnership Agreement (VPA) negotiations with the EU on May 11, 2017 and signed the VPA on October 19, 2018. Introducing and implementing the Vietnam Timber Legality Assurance System (VNTLAS) are a priority for the country. On December 10, 2018, MARD issued Decision No. 4852/QDD-BNN-TCLN on the promulgation of a plan to implement the VPA and FLEGT over the period 2018–20. This plan identified strategic tasks, including:

(i) VPA ratification (the government had hoped to do so in April 2019); (ii) development of legal documents and technical manuals, drafting and approving a decree on VNTLAS; and developing a set of technical manuals on enterprise classification, a timber supply chain control system, timber import control, and verification for timber and wood products export; (iii) development of the technical infrastructure (technical software) and operating environment of VNLTAS; (iv) capacity building for relevant stakeholders; and activities to connect and promote regional and international VPA-FLEGT implementation. In addition, efforts are ongoing to contribute to building synergies between the TLAS and certification in Vietnam.

3.3 CONTRIBUTION OF FORESTS TO OTHER SECTORS

Vietnam's Government and society increasingly recognizes its forests for its ecological functions and services and for its other direct use values. Exploitation of NTFPs is important for the rural poor and

[29] https://www.iucn.org/news/viet-nam/201807/how-increase-value-vietnam%E2%80%99s-forestry-sector.

[30] Report to VNFOREST in Forum on wood processing and export industry in 2018 - success, experience; Breakthrough solutions for 2019;
held in Hà Nội on February 22, 2019 by Nguyen Ton Quyen, Vietnam Timber and Forest Product Association (VIFORES)

[31] World Bank. 2017. *Harnessing the Potential of Productive Forests and Timber Supply Chains for Climate Change Mitigation and Green Growth: Opportunities for Private Sector Engagement.* Washington, DC: World Bank.

generates income where alternative livelihood activities are scarce. Forests also help regulate local and global climate, especially through the hydrological cycle; protect watersheds and their vegetation, and water flows and soils; and store vast amounts of genetic information. Mangrove forests are particularly important in protecting coastlines by reducing exposure to flooding and erosion. Forests are also critical in enhancing landscape resilience to climate change.[32] Vietnam is also one of the very few countries that has established a Payment for Environmental Services scheme for hydropower that recognizes services from forests to the maintenance of watersheds. Table 1 summarizes the importance of forests in Vietnam, described in more detail in appendix B.

TABLE 1. FOREST GOODS AND SERVICES IN VIETNAM

Nontimber forest products (NTFPs)	Bamboo and rattan play an important role in the economic development of mountainous provinces and traditional handicraft villages. According to the MARD, in 2017, the total area of bamboo was 240,925 ha (1.67% of total national forest area) and the total area of mixed bamboo and wood forest was 1,152,864 ha (8% of total national forest area). Annual production of bamboo and rattan in Vietnam is estimated at about 250,000 tons and in 2014 the country annually exported over $100 million worth of bamboo and rattan products[a], mainly bamboo and rattan basketwork and bamboo and rattan furniture. Other economically important NTFPs in Vietnam are cardamom, cinnamon, and pine resin.
Watershed protection	Vietnam includes flat deltas and low coastal belts, which lead up into mountainous areas in the country's central regions. Given the topography, forests are critical to watershed protection. Vietnam has introduced various forest rehabilitation schemes (such as the 661 Program) and, more recently, the Payment for Forest Environmental Services (PFES) Scheme, which has been operational since 2010. The latter has created and developed a state-led mechanism for services and goods in forestry, where sellers are forest owners in basins and buyers are hydropower plants, water supply companies, and other companies. Annual revenue collected from users of forest environmental services in 2018 exceeded $125 million.[b]
Carbon payments from the LULUCF	A report that assessed the role of land use, land use change and forestry (LULUCF)—as part of Vietnam's nationally determined contribution (NDC)—highlights the critical role of forests in this context.[c] It estimates that, given current efforts and rates of deforestation and reforestation, the country's total forest area can reach 14.5 million hectares (Mha) by 2030. If the national targets are met, annual average greenhouse gas (GHG) mitigation for 2021–30 is estimated at 8.22 $MtCO_2e$ which is equivalent to a 21% reduction compared to the business-as-usual (BAU) LULUCF scenario. With international support, the reduction in GHG emissions could increase to 15.67 $MtCO_2e$ per year equivalent to 39% of the LULUCF BAU scenario.
Coastal protection	Vietnam's 3,400 kilometers of coastline, diverse topography, and variable climate contribute to it being one of the most climate hazard–prone countries in the world.[d] This exposure is compounded by the fact that a significant share of the country's population and economic assets are located in the vulnerable coastal lowlands and deltas. Mangroves act as natural defenses that protect people, land, and property from flooding.[e] According to Vo et al., the value of mangrove ecosystem services in Vietnam is $600 million/year for 187,533 ha (about $3,000/ha/year).[f] However, this is only a partial estimate, as it does not consider other services (tourism, biodiversity, and cultural and social value).
Tourism and recreational activities	According to one source, 61 out of 164 special-use forests (SUFs) were involved in ecotourism in 2016.[g] About 2 million people visited national parks and nature reserves for recreational purposes and the total turnover of SUFs on ecotourism-related business reached over 114 billion

[32] Minang, P., Noordwijk, M., Freeman, O.E., Mbow, C., Leeuw, J., and D. Catacutan. 2015. *Climate-Smart Landscapes: Multifunctionality in Practice.* ICRAF.

	Vietnamese dong ($4.9 million). While there is no consensus on what constitutes ecotourism, no one doubts its economic value.
Agroforestry and intercropping	Agroforestry in its various forms is widely practiced by farmers and companies. Almost all households have traditional mixed home gardens in rural areas and in the highland mountainous areas for timber, foods, feeds, medicinal herbs, and firewood for household use. Beyond household consumption, agroforestry is not being applied at scale. Efforts have been stepped up to encourage agroforestry (or intercropping) practices in some of the agricultural sectors that have historically been the most damaging to the country's forests—coffee and shrimp production. Given the risks inherent in monoculture (such as coffee), as well as the need for replanting a strong case can be made for intercropping.

Note: a. Source: https://www.gso.gov.vn/default_en.aspx?tabid=626&ItemID=15704

b. http://www.vnff.vn/tin-tuc/tin-trung-uong/2019/1/thu-tien-dich-vu-moi-truong-rung-ca-nuoc-nam-2018-dat-hon-2-900-ty-dong.

c. Technical report: *Review and Update the Nationally Determined Contribution for the Land Use, Land Use Change and Forestry 2010-2030.* Vu T.P, Merger E., and C.T. Luu.

d. Garschagen, M., Hagenlocher, M., Comes, M., Dubbert, M., Sabelfeld, R., Lee, J., Grunewald, L., Lanzendörfer, M., Mucke, P., Neuschäfer, O., Pott, S., Post, J., Schramm, S., Schumann-Bölsche, D., Vandemeulebroecke, B., Welle, T., and J. Birkmann. 2016. *World Risk Report 2016.* World Risk Report. Bündnis Entwicklung Hilft and UNU-EHS.

e. Beck, M.W., Narayan, S., Trespalacios, D., Pfliegner, K., Losada, I. J., Menéndez, P., Espejo, A., Torres, S., Díaz-Simal, P., Fernández, F., Abad, S., Mucke, P., and L. Kirch. 2018. *The Global Value of Mangroves for Risk Reduction.* Summary report. The Nature Conservancy, Berlin.

f. Vo, T.C., Kuenzer, C., and N. Oppelt. 2015. "How Remote Sensing Supports Mangrove Ecosystem Service Valuation: A Case Study in Ca Mau province, Vietnam." *Ecosystem Services* 14 (2015): 67–75.

g. Le Van Lanh. 2016. *Eco-tourism at SUFs – Potential, Challenges and Solutions*

Forest ecosystems are critical to mitigate negative impacts from climate change.[33] In particular, Vietnam is highly vulnerable to sea level rise and storms/typhoons along the coast, highlighting, the critical importance of mangrove and coastal forests. The Vietnamese government is prioritising coastal forests for enhancing climate resilience.[34] Climate change also poses a growing threat, fuelling forest fires, due to a combination of temperature increases and the reduced quality of the forested areas. Vietnam has more than 6 million ha of 'easy-to-burn forest'; and with the weather situation increasingly unpredictable due to more extreme events, including droughts, linked to climate change, the potential risk of forest fires is becoming more serious[35]. The threat of fires and strong winds also increase the risk for plantation forests. As a result, farmers prefer shorter harvesting cycles which reduce profitability.

The impacts of climate change have the greatest impact on the poorest forest-dependent communities, as these communities lack adaptive capacity because of poverty, marginalisation, and more inaccessible location. Improved forest management and expanding tree cover, will help deliver a range of livelihood and environmental benefits that assist both people and ecosystems adapt to climate change.

Improved forest management, and expanding tree cover, will also help deliver a range of livelihood and environmental benefits that assist both people and ecosystems adapt to climate change.

[34] These include Decision No. 120/2015 and Decree 119 /2016

[35] FAO. 2009b. Asia Pacific forestry sector outlook study II, Working Paper No. APFSOS II/WP/2009/09.

4 FOREST AND LAND USE CHANGE

Vietnam is going through a period of stabilization of its forest area. Over the past decade, large areas of forest have suffered degradation and removals have risen sharply, driven largely by natural forest regrowth and particularly plantations becoming established on land that was previously bushes or grasslands. There is also localized deforestation in areas such as the Central Highlands. This chapter examines more deeply what has been driving forest and land use changes within the country as the basis for recommendations on the kinds of interventions required to promote sustainable forest and land use. The chapter first examines the institutional and management arrangements within the forest sector.

4.1 INSTITUTIONAL AND MANAGEMENT ARRANGEMENTS

Forest sector authority is arranged from the central down to provincial and district levels. These different levels of authority are described in box 4:

Box 4 – Institutional arrangements:

***Central level*:** The government retains the authority for overall central/state management of forest protection and development, with the Ministry of Agriculture and Rural Development (MARD) accountable to the government. In January 2010, MARD established the Vietnam Forestry Administration (VNFOREST), tasked with advising and supporting the minister in managing the country's forests.

Provincial level: The Provincial People's Committee (PPCs) undertakes state management of forest development and protection in their localities. PPC chairpersons are accountable to the Prime Minister in relation to the management of all state forest resources in their localities (provinces and cities). Provincial units of MARD, are District Agriculture and Rural Development (DARD) contain a forestry section to assist the PPCs in carrying out their duties.

***District level*:** District People's Committees (DPCs) undertake state management of forest development and protection in their localities/ districts. DPC chairpersons are accountable to the PPCs for cases of forest damage or loss in their localities. DPCs appoint Divisions of Agriculture to carry out their tasks. Each division is allowed to employ one or two forest staff members responsible for monitoring forestry activities**.**

***Commune level*:** Commune People's Committees (CPCs) undertake state management of forest development and protection in their localities/communes. CPC chairpersons are responsible to the DPCs for any mismanagement of forest causing damage or loss of forest cover. Communes appoint special forest staff to carry out their tasks. Below the commune is the informal system led by the heads of the villages. Heads of villages are important intermediaries between national laws and any existing customary law.

While there is a clear apparatus for forest authority, the multiple tiers of management can and have created conflict and differing interpretation and implementation of policies. In particular, there may be conflicting interpretation and implementation of national polices and plans at the local levels. In order to further strengthen vertical integration in the forest sector Directive 13 from the Prime Minister in 2017 highlighted the need to ''strengthen the effective coordination between central and local levels among ministries/sectors to drastically and effectively carry out the examination, inspection, supervision and timely and strictly legal acts of violation of laws''.

As well as improved vertical integration there is also the need for better horizontal integration across Ministries with a mandate which impacts forest areas. In this respect the key Ministries are:

- The *Ministry of Natural Resources and the Environment* (MONRE); this has the primary responsibility for the oversight and facilitation of environmental quality standards, land administration and sustainable natural resources use and conservation, including land use planning.
- The *Ministry of Planning and Investment (*MPI); supports the mainstreaming of sustainable development and climate change into the preparation, appraisal, and approval of investment programs formulated under the five-year Socio-Economic Development Plans (SEDP). It leads and coordinates with other Ministries to allocate province budget to forest protection and socio-economic development.

Forest management

Forests in Vietnam are classified into three types according to management purposes. They are: i) Production Forests that are designated for timber supply; ii) Protection Forests (PF) that are designated for protection functions, such as watershed and coastal areas; and iii) Special Use Forests (SUF) which are for biodiversity conservation such as national parks, protected area, biosphere etc. As can be seen in table 2, there has been a tendency to increase the share of *production* forest area and reduce the *protection* forest area, leaving the *special-use forest* (SUF) largely unchanged, consistent with the orientation of Vietnam's Forestry Development Strategy 2006–20 and the restructuring objectives for the forestry sector. The production forest area has increased from 4,442,907 ha (37.7% of the national forest area) in 2002 to 7,748,958 ha (53.47% of national forest area) by 2018. A significant proportion of this area is now covered by plantations. While most of the forest is evergreen broadleaf, these figures also include mangrove forests.

TABLE 2. COUNTRY'S THREE FOREST TYPES AND RESPECTIVE TOTAL AREAS

Year	National forest area	Types of forest					
		Special-use forest		Protection forest		Production forest	
2005	12,616,700	1,958,320	*15.52%*	6,172,062	*48.92%*	4,486,318	*35.56%*
2006	12,873,850	2,202,888	*17.11%*	5,268,789	*40.93%*	5,402,172	*41.96%*
2008	13,118,773	2,061,675	*15.72%*	4,739,236	*36.13%*	6,199,294	*47.26%*
2010	13,388,075	2,002,276	*14.96%*	4,846,196	*36.20%*	6,373,491	*47.61%*
2012	13,862,043	2,021,995	*14.59%*	4,675,404	*33.73%*	6,964,415	*50.24%*
2014	13,796,506	2,085,132	*15.11%*	4,564,537	*33.08%*	6,751,923	*48.94%*
2016	14,377,682	2,137,332	*14.87%*	4,537,852	*31.56%*	6,672,056	*46.41%*
2017	14,415,381	2,141,324	*14.85%*	4,567,106	*31.68%*	6,765,936	*46.94%*
2018	14,491,295	2,155,178	*14.87%*	4,588,059	*31.66%*	7,748,058	*53.47%*

Source: http://www.kiemlam.org.vn/Desktop.aspx/List/So-lieu-dien-bien-rung-hang-nam/.

The actual management of the forests are largely through state entities such as Special Use and Protection Forest Management Boards (FMBs) and State Forest Companies (SFC), which in 2017 jointly managed approximately 46.7 percent of the total forest area.[36] All special-use and protection forests, as well as most of the natural forests on production forest land, are managed by these state entities. Since 1995, SFCs and FMBs have been allowed to subcontract forest lands to local households for forest protection and planting. The contracts do require FMBs to pay forest protection or planting fees to households. Of the remaining forest areas most are managed by households for production (plantation) purposes. We examine production forests in more details in sections 4.3 and 4.4.

[36] Decision No. 1187 QD/BNN-TCLN dated 03/4/2018 on publication of national forest status for 2017.

Vietnam's Protected Areas

While Vietnam has a number of protected areas in IUCN categories I to IV, there are no protected areas in category V (Protected Landscapes/Seascapes) or VI (Managed Resource Use Areas), both of which would allow sustainable use of protected area resources. However, in practice, people live legally or illegally inside the boundaries of most protected areas in Vietnam. In 2017, there were 164 Special Use Forests (SUFs) (33 National Parks; 57 Nature Reserves; 12 Species and Habitat protection; 53 Landscape protection and 9 Scientific Research) managing 2.057.932 ha of natural forest.[37] Although there have been many policies, plans and efforts to bolster conservation of the country's best remaining forests and their biodiversity, there are a number of barriers to effective conservation management. These can be loosely divided into: limitations in the institutional capacity to manage SUFs, lack of engagement with nearby communities and ineffective and limited financing for conservation[38]. With poor communities dependent upon natural resources in the country, especially in the remote mountainous, the relationship between SUFs and communities is crucial to both poverty alleviation and conservation.

Protection also exists under Protection Forests, which have less strict rules and regulations on forest access and use. Typically, such forests are on steep slopes of key watersheds, and while management restrictions apply, they are not considered to be part of the protected area system, though they may contain important areas of biodiversity. Currently, there are 229 PFMBs managing 4.567.106ha of forest and forestlands[39]. Besides protection forests, many small-sized protection forests are being managed by other forest holders, including State Forest Companies (SFC).

4.2 FOREST LOSS

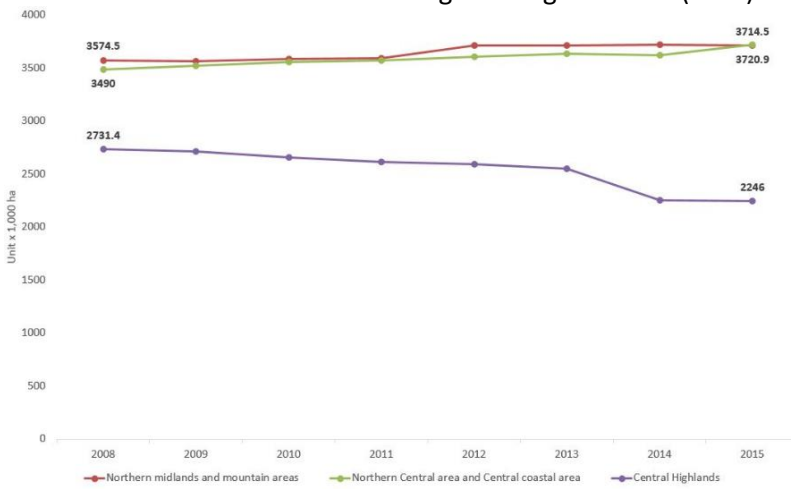
While the overall forest area continues showing a slight increase, "localized deforestation" is still happening, especially in the Central Highlands. Although substantive gains have been made in increasing forest cover, the forestry sector continues facing major challenges related to competing land uses, overexploitation of resources, and insufficient capacity for forest governance and management. Since 2008, the Central Highlands is the region that has recorded the highest gross emissions, a trend that has persisted to this day (figure 7).

[37] Decision No. 1187/QĐ-BNN-TCLN dated April 3rd 2018 on publication of nationwide forest status

[38] McNally, R.H.G, Vu, T.P, Nguyen, T.C, Pham, X.P, Nguyen, V.D, 2017. Issues and Options: support for the revision of Vietnams National REDD+ Action Programme (NRAP) 2016-2020

[39] VNFOREST 2018. Report on the results of management of special-use and protection forests in 2018 and key tasks in 2019

Figure 7. Natural Forest Cover across Different Agroecological Zones (AEZs)



Note: Vietnam has six AEZs but most of the forest areas are part of the three forest areas highlighted in this figure.

Competing uses of land and their impact on forests

Vietnam is one of the world's largest exporters of rice, rubber, coffee, pepper, cashew nuts, wood products, and shrimps which compete to some extent with forests. To date, the focus has been on competing on price and, hence, generally lower-quality production, based on the exploitation of natural resources applying basic technologies. This has resulted in a large-scale conversion of natural forests over the past 30 years. Major commodity booms occurred in the 1990s and early 2000s, most notably in the coffee and shrimp sectors. Between 1990 and 2017, the area of coffee plantations increased from 50,000 ha to 645,400 ha[40]; by 2011, sea and brackish water aquaculture had expanded to cover an area of 730,000 ha, causing a major loss of mangroves[41]. While the production of these and other commodities continues to rise, the expansion into natural forest areas has diminished since the 1990/2000s peak.

Between 2006 and 2014, conversion of 386,290 ha of forests to other land uses were recorded by the Action Plan on Replantation as Compensation from Forest Conversion (in accordance with Decision 829/2014), caused by a total of 2,991 projects (table 3). It should be noted that the area of forest conversion reported in this decision does not represent total deforestation[42]. They omit and underrepresent the impact of small-scale encroachment of agriculture and illegal deforestation and forest degradation (for example, as a result of illegal logging), which anecdotal evidence indicates is considerable in Vietnam.[43]

[40] General Statistics Office 2018

[41] See McEwin, A and McNally, R, 2014.Organic Shrimp Certification and Carbon Financing: An Assessment for the Mangroves and Markets Project in Ca Mau Province, Vietnam, SNV, Hanoi

[42] These data were only declared and approved in environmental impact assessment (EIA) reports of provincial development projects collected by MARD to enforce regulations requiring project investors to replant lost forest areas in accordance with Circular 24/2013.

[43] McNally, R.H.G., Vu, T.P., Nguyen, T.C., Pham, X.P., and V.D. Nguyen. *Support for the Revision of the Vietnam National REDD+ Action Program (NRAP) 2016–20.*

TABLE 1. FOREST CONVERSION BETWEEN 2006 AND 2014

			Forest type		
Type of conversion	**No. of projects**	**Total area (ha)**	**Special-use**	**Protection**	**Production**
Hydropower	237	29,562	4,094	15,534	9,954
Mineral mining	545	15,330	19	7,696	7,615
Rubber	460	327,205			327,205
Agriculture	211	61,964	304	7,720	53,940
Resettlement	57	5,244		1,238	4,006
National security and defense	99	4,228	80	1,839	2,309
Industry and ports	73	3,895	87	2,779	1,029
Tourism and services	122	4,603	4,067	332	204
Irrigation	80	5,199	33	596	4,570
Rural infrastructure (roads, electricity, etc.)	1,107	19,190	174	9,634	9,382

Coffee renewal remains to be a risk for deforestation. An assessment of the future risks of commodity development indicates that coffee planations might represent the highest risk for continued direct and indirect deforestation, as recent evidence of encroachment demonstrates.[44] The sector faces the need to renew coffee plantations while international demand for coffee remains strong[45]. Soluitons of shade grown coffee and agroforestry systems are increasingly implemented to mitigate the risk of deforestation. The impact of other crops such as rubber, which was the main driver of deforestation in the past decade, is expected to be much lower due to a number of factors, including international demand and prices.[46] Timber plantations are also expected to grow and also pose a threat to forested areas, given the increasing demand for paper and pulp and other wood-based products. The small-scale, gradual, and often illegal conversion of forests to crop production by local communities will also continue to push forest degradation.

Infrastructure development might cause further forest conversion of High Conservation Value Forests. While the actual land and forest converted may be relatively small, the development often occurs in some of the best remaining upland forested areas, opening up areas for other drivers of land conversion. Whereas hydropower expansion has practically stopped and will no longer drive salvage logging, road construction continues to pose a risk.

Illegal logging associated with conversion forests remains a threat. It is not possible to know the exact extent of illegal logging associated with infrastructure development, but illegal activity probably has been a major factor in a worrisome trend witnessed in Vietnam—the gradual degradation of forests leading to their ultimate conversion (normally through agriculture). Illegal logging is worst in areas of rich natural protected forests, easily accessible areas, border areas, and regions with many grassroots, small-scale timber processing facilities.

[44] SNV. 2018. Background report on the agricultural sector and forest risk commodities; as input into the GCF proposal Achieving emission reductions in the Central Highlands of Viet Nam to support National REDD+ Action Program goals.

[45] It should be noted that while demand is strong there has also be bumper global production keeping prices down. However, the long-term trend is high demand and less supply likely to push prices up in the longer term.

[46] Ibid.

Each of the main causes of forest conversion are examined in more detail in appendix C. Table 3 does not capture conversion from natural forests to plantation forests. Give the importance of plantation forests in Vietnam, they are likewise elaborated in appendix C. The next section further examines some of the underlying causes of deforestation and forest degradation, as a basis to determine priority areas for support.

As a result of competing land uses, pockets of deforestation are still found in the country. Agriculture continues to be the main direct cause of forest loss in Vietnam, its expansion being facilitated by the extension of rural infrastructure, particularly roads.

Underlying causes of deforestation and forest degradation and barriers to forest conservation

Competition for land is a defining issue in many parts of Vietnam, putting the use of land for forest protection in direct competition with other land uses. To date, much of the loss of poor natural forests (for example, to hydropower and/or rubber plantations) is due to the planned expansion of sectors that are supported by national and/or provincial planning. For example, over the past decade, large areas of "degraded" natural forest have been sacrificed to make way for rubber expansion. This has now been tackled with a raft of new policeis and plans (e.g. Directive 13) and due to a major drop in price. There is a need for more integrated and transparent decision making at all levels of government, but especially at the provincial level. The new Planning Law[47] and the Law on Access to Information is expected to help remove the current overlap of planning activities in many sectors, more closely connecting planning between the central and grass-roots levels and making the overall planning process more transparent and integrated. This would ensure more inspection and supervision of the appraisal, approval, and implementation processes for agribusiness projects on "degraded" and other forest lands.

To curb the expansion of agriculture into forested areas, intensification and more sustainable production should be encouraged, as well as the need for more integrated and transparent planning process. The new Planning Law and Law on Access to Information provides such a legal blueprint.

Another underlying cause of forest and land use change is "access to productive land" with indirect impacts on encroachment on forests. As investors acquire more land for commercial production (often industrial crop production for export), the population, invariably the poorest, can become displaced, sometimes into forested areas.[48] The Central Highlands have seen the expansion of the coffee production—coffee crops expanding mainly at the expense of existing agricultural (subsistence) areas, rather than into forests, while displacing annual crops further away from the population and economic centers, and toward marginal lands.[49] This marginalization has created a dualization between capital-endowed farmers and traders involved in commodity crops and poor, small subsistence farmers, primarily from ethnic groups forced to rely on increasingly marginal land, including forests. It has also led to the gradual encroachment into FMUs. This pressure will only intensify with population growth and the continued displacement of poorer groups in the competition for land. It is clear that strengthening their rights over land and forest areas will be central to any program targeting the poorest households and forest protection.

[47] The Law took effect on January 1, 2019,

[48] Meyfroidt, P., Vu, T.P., and V.A. Hoang. 2013. "Trajectories of Deforestation, Coffee Expansion and Displacement of Shifting Cultivation in the Central Highlands of Vietnam." *Global Environmental Change* 23(5): 1187–1198.

[49] Ibid.

Various other social, economic, political, and cultural factors influence resource-use decisions at the national and local levels. In addition to above mentioned issues related to competing land uses multiple underlying, often interrelated, causes need to be highlighted: (i) the lack of rights and secure access to productive land and resources for forest-dwelling communities; and (ii) weak forest governance[50].

The importance of community rights to use and sell forest resources in reducing poverty remains a critical point. The solution thus lies in enabling the poorest groups to acquire more land and raise their income, primarily through improved access to productive land, alternative income sources, and/or higher income from forest protection (while ensuring the remaining forest is better protected). Achieving this requires more collaborative governance of forest areas—that is, adaptive collaborative management approaches (ACMAs). See Box 4.

As land is increasingly being acquired for industrial crop production for export, the poorest population often ends up being displaced, in some cases further into forested areas. Therefore, any initiatives to support the poorest groups need to strengthen their rights over land and forest areas through more collaborative forest management approaches.

BOX 5. ADAPTIVE COLLABORATVE MANAGEMENT APPROACH (ACMA)

ACMA is a participatory, collaborative approach to sustainable forest management and conservation involving SUFs, PFMBs and SFCs. Under this approach, SUFs, SFCs, and PFMBs work with forest-dependent communities, legal community entities, and small farmers in the implementation of activities in a participatory and sustainable manner. This approach was successfully implemented in SUFs from 2006–13 as part of the World Bank Forest Sector Development Project (FSDP) to promote collaborative management approaches in SUFs. This approach supported, among other things, participatory boundary demarcation, formal agreements on land use and on types and sustainable rates for the collection of NTFPs together with focused livelihood improvement. The experience with the FSDP indicated that the introduction of the adaptive collaborative management approach had increased local ownership of forest resources, reduced illegal logging, and improved the delineation of forest boundaries and effective participation of local communities in the protection of forests. A key feature of the ACMA is that the participatory approach involves communities and forest management entities to improve community access to land and forest resources and to ensure that communities benefit from and can retain their investments and have incentives to sustainably manage the forest resources. This is achieved through agreements between the communities and forest management entities.[a]

a. https://www.forestcarbonpartnership.org/vietnam (chapter 15, ERPD).

Overall poor forest governance is an important factor in the country's deforestation and forest degradation (box 5).[51]. It was noted in its 2016–20 Socio-Economic Development Plan (SEDP) that key challenges in the forestry sector are the policy inconsistencies, conflicting governance aspects and the lax monitoring and enforcement of regulations.[52] One approach to improve local forest governance is through devolving more rights and ownership to local actors; for example, through ACMA.

[50] McNally, R.H.G. and C.T. Nguyen. 2016. *A Review of Viet Nam's National REDD+ Action Programme and its Implementation*. Hanoi, Vietnam.

[51] Adapted from João S. de Queiroz, Daniel Griswold, Duc Tu Nguyen, and Patrick Hall. 2013. *Vietnam Tropical Forest and Biodiversity Assessment*. USAID.

[52] McNally, R.H.G., Vu, T.P., Nguyen, T.C., Pham, X.P., and V.D. Nguyen. *Issues and Options: Support for the Revision of Vietnam's National REDD+ Action Programme (NRAP) 2016-2020.*

BOX 6. PRINCIPAL CAUSES OF VIETNAM'S POOR ENVIRONMENTAL GOVERNANCE

- Confusing, conflicting, and overlapping institutional and legal frameworks
- Lack of coordination among agencies of policies that affect the environment
- Inadequate enforcement of existing environmental laws and regulations
- Lack of appreciation by decision makers of the importance of biodiversity and environmental services
- Weak implementation, monitoring, and enforcement of environmental impact assessment (EIA) regulations
- Inadequate capacity to implement conservation strategies and plans
- Lack of mechanisms to engage local communities in the conservation of biodiversity and tropical forests
- Weak environmentally oriented civil society organizations.
- Weak border controls and illegal trade in endangered species
- Lack of decentralization of forest and biodiversity conservation responsibilities
- Ineffective protection of public forestlands (i.e., protected areas).

4.3 SUSTAINABLE FOREST MANAGEMENT OF NATURAL FORESTS

Production forests cover nearly half of the forest area in the country, of which 4 million ha are natural forests and 3 million ha are plantations.[53] Production forests are primarily used to provide timber and nontimber forest products for domestic and export markets. However, the volume of timber harvested in natural forests has steadily declined, with commercial timber exploitation in natural forests all but halted following the introduction of a nationwide logging ban in natural forests (Prime Minister Decision 2242 of December 2014[54]). Internationally certified natural forests are theoretically exempt from this logging ban but, so far, only three FMUs have been certified[55] (covering a total area of 64,790 ha). The scope for further certification of natural production forests (and thus exploitation in the near future) is also limited. The majority of natural production forests are too depleted to immediately serve for timber production purposes – and there is rather a need for active management measures to rehabilitate these forests and protect them from conversion and agricultural encroachment. 73% of natural production forests are considered "poor" (i.e. degraded). Their rehabilitation requires significant investments as well as improvement in the technical and managerial capacities of forest owners. There is a need for active management measures to rehabilitate these forests and protect them from conversion and agricultural encroachment.[56]

[53] According to Decision 83/QD-BNN-VNFOREST.

[54] Prime Minister Decision 2242 on approving the scheme for strengthening the management of exploitation of timber of natural forests for the period 2014–20 (December 2014).

[55] Dak To in Kon Tum Province (2014), Truong Son/Long Dai in Quang Binh Province (2014), and Dai Thanh in Dak Nong Province (2015).

[56] McNally, R.H.G., Vu, T.P., Nguyen, T.C., Pham, X.P., and V.D. Nguyen. *Issues and Options: Support for the Revision of the Vietnam National REDD+ Action Programme (NRAP) 2016–20* (see model 6 on sustainable natural forest management).

TABLE 2. TOTAL AREA OF PRODUCTION FOREST AND FOREST USERS

Forest owner	Total area production forest (ha)	Natural production forests (ha)		Forest plantations for production (ha)	
State forest companies	1,690,934	1,324,554	31.89%	366,380	12.24%
Households	3,281,093	1,496,980	36.04%	1,784,113	59.60%
Communities	458,224	441,421	10.63%	16,803	0.56%
Other organizations	1,716,586	890,288	21.44%	826,298	27.60%
Total area	**7,146,837**	**4,153,243**	**100.00%**	**2,993,594**	**100.00%**

Source: MARD. 2014. Decision No. 3135/QD-BNN-TCLN, dated August 6, 2015, on publication of national forest status as of December 2014.

State Forest Company reform

SFCs which manage nearly one-third of natural production forests will need urgent reform to address the ineffective land use and low economic performance and persisting land conflicts with local communities. Numerous reform policies[57, 58, 59] have introduced to restructure SFCs to improve their economic performance and reduce their dependency on public budgets. In general, SFCs lack capital and equipment, as well as competence in planning, financial management, and forest protection.[60] Their operations are further hindered by pressures on timber and land resources from other users and by administrative procedures, such as the centralized distribution of logging quotas and standing charges.[61] It is estimated that at least 30 to 40 percent of the country's SFCs perform far below their potential,[62] though the figure could be considerably higher.

The majority of SFCs operating in natural forests are being re-organized away from "timber production" to "public service production" due to the poor quality of their forests (Decree 118/2014). Adequate management and financing mechanisms for these forests are yet to be defined to ensure their regeneration and protection from conversion, illegal logging and agricultural encroachment and to promote certification for the few remaining areas with potential for sustainable forest management.

Companies undergoing restructuring are struggling with issues such as land measurement and mapping, brand valuation, and resolving bad debts. State-owned companies or companies with majority state-ownership are facing difficulties in sourcing capital, often lacking assets to use as collateral for bank loans.[63] A thorough audit of all state-owned agroforestry businesses will be carried out in 2019 will provide a further window for reform. Experience has shown that where sound forestry and management practices

[57] Decree No. 388/1991/HDBT on the regulations for setting up and closing down state owned enterprises.
[58] Decree No. 200/2004/ND-CP on reorganization, renewal, and development of state forest enterprises.
[59] Decree No. 25/2010/ND-CP on transformation of state companies into one-member limited liability companies and management of state-owned one-member limited liability companies.
[60] McNally, R.H.G., Vu, T.P., Nguyen, T.C., Pham, X.P., and V.D. Nguyen. *Issues and Options: Support for the Revision of the Vietnam National REDD+ Action Programme (NRAP) 2016–20* (see Model 6 on sustainable natural forest management).
[61] Le, D. 2014. Development of State Forest Enterprises in Vietnam, University of Dresden.
[62] World Bank. 2016. State Forest Company Reform: Draft: February 15, 2016. R. Davis.
[63] World Bank. 2016. State Forest Company reform. Draft of February 15, 2016 (with a few amended bullet points). R Davis.

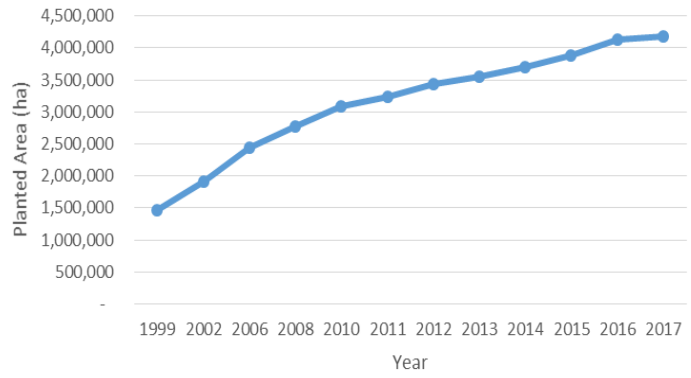
are used, forestry can be a good business proposition. The fact that each SFC is unique and has its own set of challenges calls for tailor-made plans. A World Bank–commissioned report gives some general recommendations to address the shortcomings within pilot SFCs.[64] However, it also highlights the enormity of the task to restructure SFCs into business entities.

The majority of natural production forests are too depleted to serve for timber production purposeson the short run. State forest companies continue to face a number of policy uncertainties and persisting challenges in restructuring. This highlights the considerable challenge in developing sustainable forest management in natural forests in the country.

4.4 Sustainable Forest Management of Plantations

The area of forest plantations has grown to 4 million ha generating significant benefits for smallhoders (figure 8). As acacias and Eucalyptus are easy to grow and manage, even for small farmers with limited financial and technical resources, around 1.7 million ha are owned by small farming households and individuals—an average plot size of 1–3 ha per household. Though households' plantation size is small, in many areas plantations significantly contribute to livelihoods.[65]

Figure 8. Total Forest Plantation Area



Northwest	*171,830*
Northeast	1,519,902
Red River Delta	37,280
North Central Coast	872,498
South Central Coast	854,565
Central Highland	330,127
Southeast	229,327
Southwest	204,933

While the major growth in the plantation sector has already brough considerable benefits, there are still possibility for growth. The current low productivity of plantations in Vietnam relates primarily to technical issues (site suitability assessment, silvicultural practices, germplasm), but also capacity (lack of skills, equipment, access to good practices); and market aspects (quality of products, market demand, processing capacity, lack of knowledge of higher-value markets) represent areas for improvement. As a result of these factors, most forest growers manage their tree plantations on short rotations and seek to minimize the costs of externally purchased inputs, leading to productivity levels below the global average.[66]

This low quality is good enough to supply raw materials for paper and particle board production but insufficient to meet the requirements of the domestic wood industry. Supporting a more efficient,

[64] Ibid.
[65] MARD. Decision No. 3135/QD-BNN-TCLN, dated August 6, 2015 on publication of national forest status as of December 2014.
[66] FAO. 2010. *Global Forest Resource Assessment for 2010.* Vietnam Country Report. FRA2010/229, Rome, 2010.

sustainable and diversified plantation sector would bring significant economic and other benefits, including access to the growing domestic and international markets for wood products. Key interventions needed to support longer-rotation plantations include: [67]

- **Improved technical and managerial capacities** for organizing nurseries and high-quality seedlings and properly managing plantation activities (planting, weeding, thinning, pruning, harvesting). This could include the development of a code of practices for forest business and management (forest business plan preparation, silvicultural practices for forest management, suitability assessment for species selection, seedling production, germplasm etc).
- **Efforts to reduce risks from longer-rotation species.** This will require conducting risks and disease mapping, establishing warning system for plantations, and providing insurance for plantation owners.
- **Establishing cooperation and links along the value chain**—for example, by forming forestry cooperatives or forest associations, thus increasing farmers' collective negotiation power. Business support services and access to finance could be provided to such groups.
- **Improved access to credit**. Current financing to planters do not fit the financing requirements when investing in long-term rotations. However, as illustrated in box 6, the World Bank Forest Sector Development Program demonstrated how the liquidity gaps can be overcome.

BOX 7. WORLD BANK FOREST SECTOR DEVELOPMENT PROJECT (FSDP)

As timber planting, harvesting, and processing entail a long-term capital and technology-intensive investment, it first requires secure tenure. To this end, the FSDP accelerated the process for issuing land use rights. This was necessary to allow small farmers to acquire land use certificates, which enabled them to invest long term and access credit. The Vietnam Bank for Social Policies (VBSP) established a revolving fund of $37 million using accumulated resources from the project to continue to support small farmers' forestry through investments. Low-interest credit products for three different forest investment types (short-rotation woodchip production, long-rotation sawn log production, and transition of short-rotation to long-rotation) were available under the revolving fund and defined by a credit manual. This was critical for farmer uptake in the scheme. Farmers who used high-quality seedlings and applyed specified sustainable management practices were also given access to the credit. To help improve productivity, the FSDP produced technical guidance manuals (accessible through VNFOREST) and gave training support.

There is considerable potential for improving plantation productivity and raising its economic value if good plantation business practices are applied; processing activities are made more efficient; and the range of plantation products is diversified.

Forest SMEs are believed to constitute 80–90 percent of enterprises in the forest sector. However, they suffer from limited access to business and financial services; lack of support for raising their competitiveness; regulatory measures that constrain their ability to operate in a "legal" space or that create perverse incentives; and limited access to markets. The World Bank is providing programmatic advisory services and analytics to increase the government's and markets' ability to reverse constraints that prevent forest SMEs from being competitive and sustainable, and acting as engines for job creation and domestic growth. There is considerable potential to enhance the contribution of forest SMEs to poverty reduction, jobs, and growth.

[67] Vu, V.T., Nguyen, T.H., Huvio, T., and N. Simola. 2018. Workshop report on enhancing smallholder forestry toward sustainable and profitable forest management in Vietnam. Hue city. VAFS, FFD.

5 Role of Fiscal and Other Incentives driving Forests and Land Use

The prioritization of certain sectors and practices is reinforced through the provision of financial and other incentives, in particular at the subnational level. It is therefore critical to understand land use finance and other incentives and their effect on sustainable or unsustainable land use practices. The first part of this chapter examines planned public investments related to forest and land use sectors and provides some recommendations on needed re-orientation of public spending. The second part of the chapter looks at current grant and credit systems for those sectors driving forest and land use change and provides recommendations on how to make these more effective.

5.1 Public Expenditure in the Forest and Land Use Sectors

A study exploring planned public investments related to land use in the Central Highlands showed that there are insufficient public investments in forest and land management[68] The study identified the main sources of finance[69] and spending patterns related to land use and forests, quantified the contribution of public investment spending toward the achievement of REDD+ objectives and of those investments potentially driving land use change and forest loss. While there are some clear limitations to the findings it provides,[70] it is the first of its kind analysis of public investments related to land use in Vietnam.

Total expenditure on land use was estimated at 23.4 trillion Vietnamese dong or $1.03 billion (equivalent to 4.69 trillion Vietnamese dong per year) by 2020, which equals about 50 percent of the total public investments in the Central Highlands (Figure 9 gives an overview of planned expenditures in land use in the Central Highlands between 2016 and 2020).

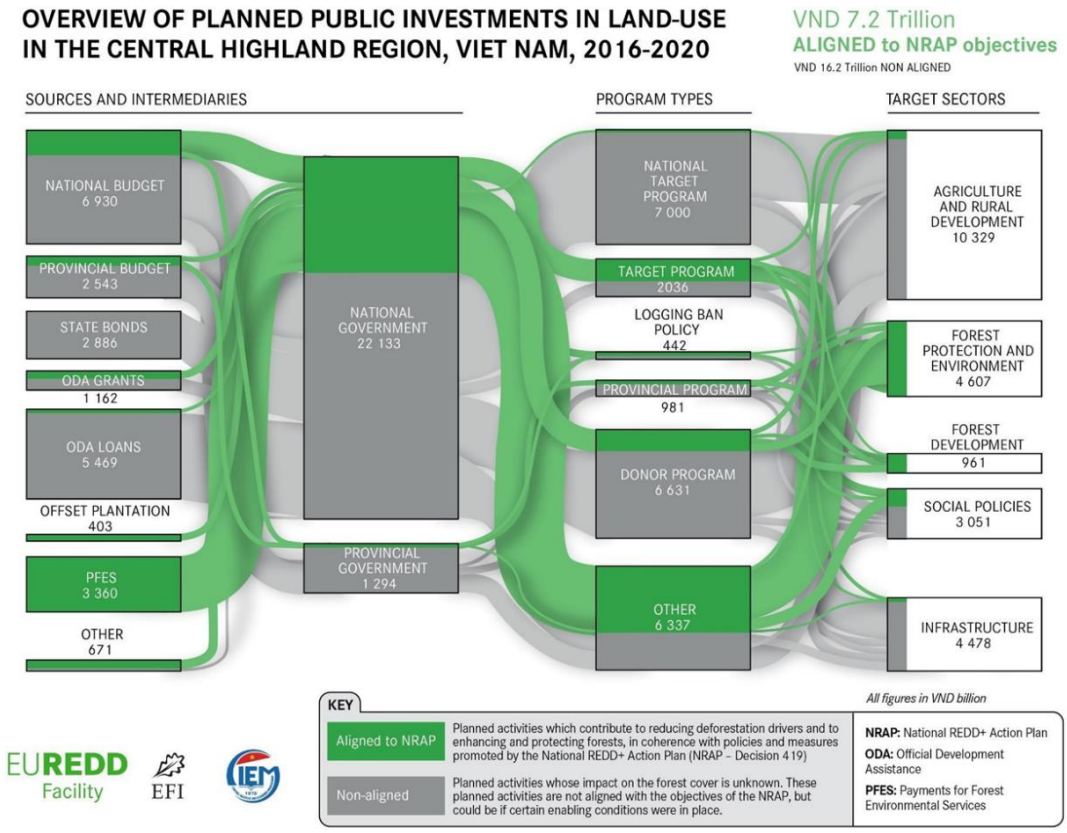
The assessment found that about two-thirds of the planned investments in land use activities (16.2 trillion Vietnamese dong or $711 million over 5 years) are not linked to activities aimed at reducing pressure on forests and could potentially drive deforestation in the future as defined in the national REDD+ Action Plan (NRAP). This highlighted the need for national and international funding to better integrate the objectives of REDD+ in national plans and policies.

[68] EFI and CIEM. 2018. Overview of planned public investments related to land use change in the Central Highlands region of Vietnam 2016-2020, EFI and CIEM, Hanoi.

[69] This includes provincial investment data, national investment data, international development partners' data, and PFES payments.

[70] The study focuses only on investment data and not on recurrent expenditures, although the latter represent the largest share of spending. For a more comprehensive analysis, recurrent expenditures should be included. Limitations and challenges in collecting and assigning financial data are highlighted on page 24 of the report.

FIGURE 9. OVERVIEW OF PLANNED PUBLIC INVESTMENTS IN LAND USE IN CENTRAL HIGHLANDS (2016–20)

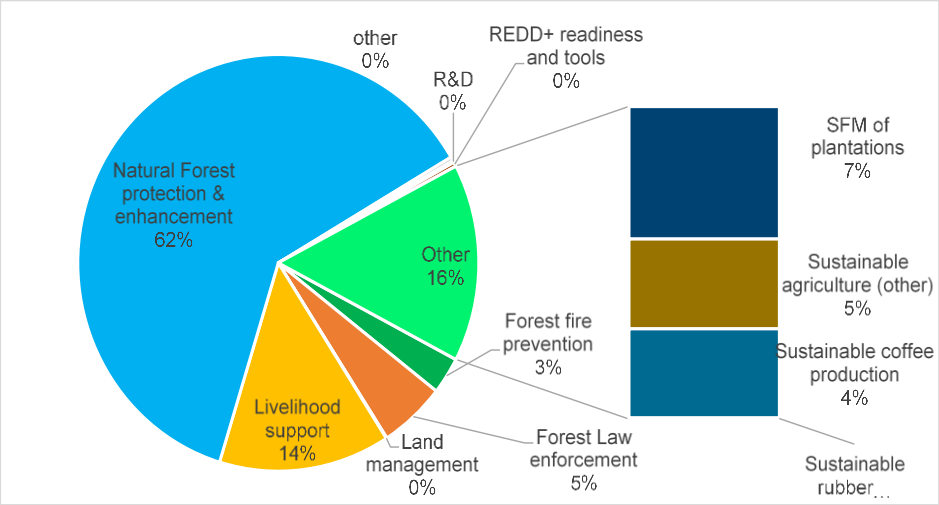


The study showed that there is insufficient financing to address some of the NRAP work packages—for instance, sustainable agriculture production, forest fire prevention, SFM, and forest law enforcement.[71] It also highlights the need for expenditure on forests to align with ongoing government social programs; as well as the need for the integration of NRAP objectives into national target programs and planning processes (and subsequent expenditure allocation) from an early stage.

Only one third of planned investments in the Central Highlands are consistent with NRAP objectives. Additional support, particularly for sustainable agricultural production, is needed to promote the Central Highlands' transition to sustainable development.

[71] This may partially be the result of not including recurrent expenditures in the calculations, which include costs for the state administration and staff salaries.

FIGURE 10. PLANNED LAND USE INVESTMENTS ALIGNED WITH NRAP OBJECTIVES IN CENTRAL HIGHLANDS



Investmenting in sustainable agriculture

While almost half of planned land use investments for 2016-2020 in the Central Highlands are related to agriculture and rural development only 5.3% of planned agricultural investments are consistent with NRAP objectives. Current and future finance needs to be invested into the transition to sustainable commodity production and align planned investments with forest protection and development objectives. **Given the already limited arable land available for further expansion of agricultural production, there is the need to encourage intensification** and boost value added value in the agriculture sectors—by supporting the implementation of Decision No.124 to focus on quality and promoting more profitable, sustainable sectors. To produce more in a smaller area requires increasing yields. Productivity can be increased by using higher-yielding varieties and technologies that lead to a more sustainable production which becomes necessary in the case of the renewal of aging coffee plantations. In fact, the World Bank–supported Vietnam Sustainable Agriculture Transformation (VnSAT) Project (2015–20) already invests in the next generation of coffee plantations, thereby supporting the gradual adoption by Vietnam's coffee sector of more sustainable practices through the introduction of advanced technologies and sustainable cultivation.

Certification is another option for certain crops, for example for the shrimp aquaculture sector. Given the historical use of extensive shrimp practices in the mangrove areas, certification is a financially viable opportunity for farmers in these areas to demonstrate legality and sustainability. There are also possibilities for further certification in coffee, rubber, timber, etc. In cases where certification standards lack traceability systems to show that production is deforestation-free, additional investments will be needed to correct this.

Integration of NRAP objectives into planning process

New Planning Law will promote more efficient land use planning, but will need implementation support. National and particularly provincial planning processes (and expenditure) have tended to prioritise economic growth over forest protection. Land use plans will in turn influence investments in complementary institutions and public services, as public and private sector financing is determined by provincial and district requests as outlined in the Socioeconomic Development Plans, and other plans, such as the land use plan. The new Planning Law intends to bring greater transparency and integration to the overall planning process and help ensure NRAP objectives are better embedded into national target

programs and planning processes (and subsequent expenditure allocation) from an early stage. The Ministry of Planning and Investment (MPI) is leading the development and implementation of the Planning Law. MPI has formulated a plan for implementation – which was approved as a resolution by the government in early February 2018[72]. International support has been requested for both supporting a methodology for integrated land use planning and its piloting, to provide a blueprint for the country. It is critical, for example, that deeper analysis is carried out to inform the planning process in order to understand optimal ways to use the land and to meet targets across sectors, as well as ensure public expenditure supports sustainable practices. This gap in knowledge could be filled though supporting interventions.

Alignment with social support programs

Most planned social investments in and around forest areas relate to the resettlement of unplanned migrants and the creation/improvement of livelihood opportunities for ethnic minorities. Considerable support is already provided through a number of government social programs (for example Decision 1722; Decree No.75; Decision 24; Resolution 30a) to improve the livelihoods of poor farmers and ethnic minority groups in and around forest areas. However, these could have unintended negative impacts on forests. It is therefore paramount, when designing these support programs, to avoid unwanted deforestation impacts—among others, by conducting EIAs or promoting collaborative management approaches, accurate land use planning, and consultation processes. This would ensure that current and future social support programs align with NRAP objectives and support sustainable development.

5.2 Grant and Credit Systems in the Forest and Agriculture Sectors

Farmers need grants and credit to buy inputs and services to increase their productivity and efficiency. This section looks at some of the different credit schemes for forest protection and development and for agriculture—primarily for those sectors likely to drive forest and land use change.

Credit and grant systems in the forestry sector

A recent study on finance in the forest sector[73] shows that smallholders's needs could not been suffiently addressed. This is based on the assessment of six forest finance programs:

- 661 Program (and now PFES),
- the Forest Sector Development Project (FSDP),
- the Project on Forest Rehabilitation and Sustainable Forest Management (PFRSFM),
- the German Kreditanstalt fuer Wiederaufbau (KfW),
- the Bank for Social Policies (BSP); and
- the Vietnam Bank for Agriculture and Rural Development (Agribank).

[72] Resolution 11 of the GoV dated 5 February 2018

[73] See Sikor, T. 2011. "Financing Household Tree Plantations in Vietnam: Current Programmes and Future Options." Working Paper 69. Bogor: Center for International Forestry Research.

This study and others provided important policy implications for the future structuring of finance for forests.[74]

Box 8: Key findings from the study on smallholders and finance included:

There is a trade-off between financial sustainability and the goal of providing accessible, affordable and low-risk financial support to households. Schemes such as the 661 Program (and now the PFES program) are able to reach many (poorer) households and carry no cost in terms of the need for repayment. However, they are simply not sustainable and they do not provide the necessary incentives to change the beneficiaries' behavior.

While government policy to date has created the preconditions for the large-scale expansion of small farmers' tree plantations, **finance for forests has predominately benefited those groups who have accumulated land** and are better able to access finance (thus, the richer groups). The poorest groups can only benefit if they are given the chance to access land and other productive resources on a level playing field. This requires targeted FLA and supporting suitable microfinance approaches.[1]

For plantations support should be loan-based (using commercial interest rates), as this ensures that the capital stock is maintained, thus enabling continued support to tree plantations into the future. **Organizing loan recipients into small groups improves household access to loans and simultaneously helps to reduce transaction costs** and the monitoring of the use of loans.

A mix of financial mechanisms is necessary to match households' varied finance requirements and practices (poor, medium, and richer households). The key differences between mechanisms would be the amount of finance offered, the modalities used for repaying the principal, and the distribution of investment risk between the finance program and the households.

The provision of finance for long-rotation plantations would target investment-oriented (that is, richer) households, as only they are capable of raising the necessary capital and assuming the associated risks. The poorest households would benefit from small reforestation loans to be able to finance the purchase of key inputs (e.g., high-quality seedlings and fertilizer) along with technical advice. Their loans would need to incorporate elements that reduce the amount of investment risk they carry.

The current financial mechanisms are not sustainable. To be financially sustainable, the provision of finance for household tree plantations will need to diversify the sources of capital. The current reliance on central government and international donor funding is unlikely to generate the required capital in the future. Potential alternative sources of finance include overseas and domestic private investment funds as well as carbon finance.

Source: Sikor, T., and J.A., Baggio. 2014. "Can Smallholders Engage in Tree Plantations? An Entitlements Analysis from Vietnam." *World Development Vol.* 64: S101–S112.

The poorest households can only benefit from finance for forest schemes if they are given the chance to access land and other productive resources on a level playing field. This requires targeted FLA and support for suitable micro finance approaches.

[74] Sikor, T., and J.A., Baggio. 2014. "Can Smallholders Engage in Tree Plantations? An Entitlements Analysis from Vietnam." *World Development Vol.* 64: S101–S112.

Improving the effectivenss of Payment for Forest Ecosystem Services (PFES)

While the the establishment of PFES is highly successful there is still room for improvement. After eight years of PFES policy implementation, 37 out of 41 participating provinces with forest area have established forest funds at the provincial level, collecting payments from buyers and delivering these to forest owners. The Vietnam Forest Development and Protection Fund (FDPF) was established at the central and provincial levels to collect and distribute payments. At the provincial level, the FPDF is responsible for signing contracts with buyers and collecting payments, preparing payment plans, monitoring and disbursing payments to service suppliers, and reporting to the Vietnam Forest Fund. While the scheme is considered highly successful in raising funds for forest protection and establishing transfer mechanisms, there are concerns regarding the payment schemes and incentives structures, which have been examined in various studies.[75] Common weaknesses highlighted by these studies are the following:

- While these contracts have provided clear benefits to local communities, often through improved access to and use of forest areas, the low amounts paid to individuals only provide a small contribution to household income for most rural people. The payment amounts and the way they are distributed do not significantly reduce poverty.
- Payments are not linked to performance and are often made to forest owners, regardless of whether or not the forest has been protected.[76.]
- Payments are not directly linked to the actual provision of services, which, in turn are not quantified. This reduces the willingness of buyers to pay for the service because they don't understand the value of the service they are paying for.
- Payments are mainly made through FMUs, based on yearly contracts. This is the same mechanism that was applied for the 661 Program, which has drawn major concerns regarding its effectiveness. The main concerns are that the planning, budgeting, and control provisions are weak. Once activities have been approved, there are few checks on their implementation; on the contrary, there actually is an incentive *not* to report failures, as that would lead to a reduction in funds allocated.[77]
- The current PFES program is limited to areas that have forested watersheds above hydroelectric power generation facilities, meaning other critical forest ecosystems are unable to benefit from it.

The PFES scheme is generating significant funds for forest protection. However, concerns remain that these payments are not necessarily creating sufficient incentives for behavioral change, both because of the modest amounts paid and the way they are distributed.

[75] Doa, H.T., Phuong Vu, P.T., Nguyen, T.V. and D. Catacutana. 2018. "Payment for Forest Environmental Services in Vietnam: An Analysis of Buyers' Perspectives and Willingness." *Ecosystem Services* 32 (2018): 134–143; Pham, T.T., Bennet, K., Vu, T.P., Brunner, J., Le, N.D., and L. Lasse. 2015. "Monitoring and Evaluation of Payment for Forest Environmental Services in Vietnam: From Myth to Reality." *Ecosystem Services 16* (2015): 220–229; Pham, T.T., Bennet, K., Vu, T.P., Brunner, J., Le, N.D., Nguyen, D.T., 2013. "Payments for Forest Environmental Services in Vietnam: From Policy to Practice. Occasional Paper 93." Bogor, Indonesia: CIFOR.

[76] Decree 147/2016/ND-CP dated November 2, 2016, on revising several articles of Decree 99/2010/ND-CP regulated that the PFES for hydropower is 36 Vietnamese dong /KWH and the PFES for fresh water supply is 52 Vietnamese dong per m^3. This payment scheme is not based on the quantity and quality of the forest in the watershed.

[77] World Bank. 2010. *Forest Law Enforcement and Governance.* World Bank East Asia and the Pacific Region Sustainable Development Department. Washington, DC: Washington.

In order to be more effective, it is suggested that the available funds be used in a more targeted manner to try and bring about incentives for change, for those groups most in need, in order to support poverty elimination in areas most at risk of deforestation. Rather than using direct payments, it is recommended that a more collaborative approach to payments be introduced and that overall payments be increased— either through bundling with carbon payments or through other social support schemes. Developed in tandem, this could provide an incentive structure that will more effectively support local livelihoods and forest protection.

Another major source of forest finance comes from the forest offset plantation scheme to compensate for salvage logging. Development projects such as hydropower, infrastructure, and irrigation that have converted forests to nonforestry purposes are required to invest in new plantations to replace the converted forest areas.[78] According to this Circular24/2013 if the project owner is unable to plant a replacement forest, he/she must pay the compensation amount in cash to the FPDF.[79] To date, most compensation, if any, has been given in cash. The accumulated funds received through June 30, 2016, amounted to 705 billion Vietnamese dong ($30.6 million), of which only about 31 percent were disbursed.[80] The provinces are in charge of investing revenues from this scheme in forest plantation. In practice, however, provinces often face challenges in implementing and spending the funds on plantations.[81]. Clearly, a more coherent management approach is needed to effectively use those resources.

5.3 Credit Systems to Support Agricultural Producers

Farmers need credit to invest into their agricultural systems to increase efficiency and profitability. This section draws heavily from a report by the International Fund for Agricultural Development (IFAD) on coffee financing in the Central Highlands,[82] given the importance of this sector and impact on forests.

Formal and semiformal financing

A large segment of farmers still cannot access rural creditss because of issues related to collateral and procedural requirements. The Vietnam Bank for Agricultural and Rural Development (VBARD) is the largest credit provider for farmers and agricultural enterprises nationwide, representing about 56 percent of the rural financial markets in Vietnam.[83] It is both a profit-making commercial bank and a development bank, as it implements policies for rural development or for preferential rural credit conditions. In the Central Highlands, VBARD is also coordinating a coffee rejuvenation program, providing free coffee seedlings and preferential loans so that households can replant their coffee. While most farmers are aware of the VBARD,

[78] Project developers to whom land is allocated or leased, when changing forest use, must plant replacement forests with either an area *equal* to the area of forests subject to the change (in the case of *plantation* forests) or with an area *three times larger* than the area of forests subject to change (in the case of *natural* forests). If they do not conduct offset planting themselves, they will have to pay the offset planting funds into the provincial Forest Protection and Development Fund (FPDF), article 21.

[79] Article 6- Circular No. 24/2013/TT-BNNPTNT.

[80] Pham Hong Luong, VNFOREST- Policies review and results of replacement forest plantation of development projects when changing forest use purposes, 2016.

[81] Report on assessment of replacement forest plantation on other land use change areas and solutions to be implemented in the coming time (in Vietnamese) – presented at an online conference on replacement forest plantation situation, held on October 12, 2015.

[82] IFAD. 2015. Field Report Rural Finance of Coffee Smallholders in Vietnam – Case Study in Dak Nong Province, Hanoi. October.

[83] Tam, L.T. 2011. "Vietnam Rural Financial Market – Fact Diagnostics and the Policy Implications for Rural Development of Vietnam." *Journal of Economics and Development* 13 (1): 57 – 73.

many farmers cannot access VBARD loans because of issues related to collateral and procedural requirements (basically the same barrier for all agricultural credit in Vietnam).[84] Many farmers, especially the poor, have no red book certificates for their farm land, which restricts their access to formal finance. It has been estimated that in Dak Nong Province, in the Central Highlands, only 20 percent of farmers have access to credit from local banks.[85] Even specific government programs that aim to support poor farmers by relaxing the collateral requirements to access credit (through a fund for loans to Joint Liability Groups of poor farmers) has failed.[86]

Another financial provider is Vietnam Bank for Social Policies - VBSP. It turned out that poorer households tended not to be able to secure a VBSP loan for upgrading agricultural practices because they normally would have already used up that loan for consumption or to cover the initiation costs of agricultural production.[87] Elsewhere it has been highlighted that the overall effectiveness of VBSP is questionable and that the subsidy program imposes a heavy fiscal burden on the government.[88]

There are also various semiformal networks with effective microfinancing mechanisms. In Dak Nong, for example, the Provincial Women's Union has established a social fund, called the Women's Economic Opportunity Fund. The fund lends microcredit to households through established savings and credit groups at the village level. Collateral is not required, and interest rates are 10 percent per year.[89] The easy- to-access loans means they are in high demand. The fund has taken advantage of the existing Women's Union network and established women's groups to create the required loan security, replacing traditional collateral requirements.[90] Such semiformal financing groups could provide an inclusive model for the further expansion of credit for agricultural farmers.

Informal financing: small-scale local traders

Despite increasing supply of formal credit, the main source of credit for the small farmers in Vietnam stems from informal providers with higher costs for farmers. These informal credits tend to be either loans given by friends and relatives and/or loans by input traders. Nearly all coffee farmers accept in-kind credit from traders, in the form of required fertilizers and pesticides.[91] An advance for the farmers' purchase of fertilizers/pesticides is provided by the input dealer, to be repaid with interest during the harvest season. Farmers often sell their products to the very same trader they received the input advance from, with loan amounts being deducted from the sales price. The better-off farmers only need to take out such loans for mid- and end-cycle harvest investments and thus are not forced to pay the higher interest rates charged for borrowing at the early stages, contrary to the poorer households.[92]

While these informal loans are critical to farmers' operations, they are also problematic due to the lack of control mechanisms for interest rate fluctuation and for practices to enforce repayment.[93] Large

[84] Ibid.
[85] IFAD. 2015. Field Report Rural Finance of Coffee Smallholders in Vietnam – Case Study in Dak Nong Province, Hanoi. October.
[86] Ibid.
[87] IFAD. 2015. Field Report Rural Finance of Coffee Smallholders in Vietnam – Case Study in Dak Nong Province, Hanoi. October.
[88] World Bank. 2014. *Financial Sector Assessment Vietnam.* World Bank Group, Washington, DC: World Bank.
[89] IFAD. 2015. Field Report Rural Finance of Coffee Smallholders in Vietnam – Case Study in Dak Nong Province, Hanoi. October.
[90] Ibid
[91] Ibid.
[92] The IFAD field report indicated loan periods of 10–12 months and interest payments of up to 45 percent apply to the early-season investments.
[93] IFAD. 2015. Field Report Rural Finance of Coffee Smallholders in Vietnam – Case Study in Dak Nong

loans and high-interest payments, absent proper financial planning by the farmer households, entails the risk of investment failure for both farmers and investors. Many poor farmers are indebted to traders for multiple consecutive farming seasons and have limited opportunities to negotiate loan conditions.[94] In addition, traders have little concern about the sustainability of the production, their immediate concern being the repayment of the loan.

Given the limited formal and semiformal financing market, it is clear that informal financing continues to drive agricultural development in the country, especially for the poor. According to the IFC, the informal financial sector still largely serves the poorer households.[95] It would be beneficial for the poorer farmers to get access to more formal types of finance. However, as pointed out above, it is impossible to secure a loan without a collateral (in the form of a red book), which poor farmers often do not have. Even when preferential loans are available, they usually have already taken out one for other purposes (as explained above) or other restrictions exist that make these types of loan inaccessible to them.

To increase farm household access to formal financing, provincial governments have been doing land use planning for the issuance of new red books. This could be done as part of more collaborative management approaches. Furthermore, the authorities are working with the banks to establish special loan procedures that do not require a collateral, such as accepting deals with Joint Liability Groups.[96] However, these procedures remain complex. Semiformal financial organizations able to provide collateral-free loans with alternative loan security mechanisms are also being established. It is clear that the establishment of local groups enables broad- based negotiations on standard loan conditions and repayment practices, reducing the risks for the farmers and for the informal financiers.[97] The WBG is currently exploring issues around access to finance in the forest sector. The results of this work may help orient and propose options to facilitate access to finance for forestry and sustainable land use practices.

There is an ongoing program for Forest Land Allocation and the issuance of more formal access rights for households. While these processes merit continued support, there also is a need to facilitate access to finance for forestry and sustainable land use practices, particularly by the poorest groups.

Province, Hanoi. October.

[94] Ibid.

[95] https://www.ifc.org/wps/wcm/connect/62dc148045270d65b271bec66d9c728b/ IFC+Responsible+Finance+Diagno stic_FINAL.pdf?MOD=AJPERES

[96] A *Joint Liability Group* is a group of 4–10 people of the same village/locality, of homogenous nature and of the same socioeconomic background, who come together to form a group for the purpose of availing a loan from a bank without any collateral.

[97] IFAD. 2015. Field Report Rural Finance of Coffee Smallholders in Vietnam – Case Study in Dak Nong Province, Hanoi. October.

6 CURRENT WBG PROGRAM SUPPORT IN VIETNAM AND OPPORTUNITIES FOR ENGAGEMENT

This chapter outlines proposed future engagements of the WBG in the forest sector in Vietnam. It first examines the current and past programs supported by the World Bank so that future initiatives can build on past work and the particular expertise of the WBG in Vietnam. The chapter then introduces priority program interventions, as well as the proposed coordination mechanisms and knowledge gaps. As the WBG cannot cover all the knowledge gaps requiring support in the country, the suggestions made will build on the strengths and past programs of the WBG and the request of the government of Vietnam.

6.1 CURRENT AND PAST WORLD BANK PROGRAMS

The relevant current and past World Bank programs are outlined below.

Forest Sector Development Project, 2004–15

The objective of this project was to achieve sustainable management of plantation forests and the conservation of biodiversity in SUFs. It initially covered four provinces (Quang Nam, Quang Ngai, Binh Dinh, and Thua Thien Hue) and, with additional financing, added the provinces of Thanh Hoa and Nghe An. To reach the project's objective required that small farmers be given land use right certificates, credit, and technical assistance to establish and manage plantations. By the end of the project, the total area planted across six provinces was 76,571 ha (compared to the target of 66,000 ha). According to the project performance assessment report,[98] the project design had provided adequate incentives for small farmers to establish plantations. Key interventions included: supporting small farmers in obtaining land use rights certificates; supporting low-interest rate loans through BSP; and providing a package of extension services, including advice on tree spacing, thinning, seedlings and use of fertilizer. BSP established a revolving fund of $37 million using accumulated resources from the project to continue to support small farmers' forestry through investments. As part of the project, substantive training and guidance manuals on forest plantations were produced.

Support for the REDD+ Readiness Preparation in Vietnam – Phase 2

The project objective is to support organizational and technical capacity building for the relevant agencies at the central level and in six provinces under the emission reductions program (ERP) in the North Central Coast region (Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri, and Thua Thien Hue). Phase 2 components include the development and implementation of the ERP of the NCC. One of the components focuses on providing technical assistance to reform SFCs and FMBs for REDD+ service provision and to engage the private sector and support FLEGT.
The Project was granted $5 million by the FCPF to continue REDD+ readiness preparation from 11/2016 to 12/2019.

Emission Reductions Program (ERP) in the North Central Coastal region (2018–25)

The expected outcomes of the ERP are the improved management of the existing 917,232 ha forests (of which 33,017 ha are coastal forests), the establishment of 65,265 ha of large timber plantations, rehabilitation and improved quality of 105,703 ha of poor natural degraded forest across the six North

[98] World Bank. 2018. *Vietnam – Forest Sector Development Project.* Independent Evaluation Group. Project Performance Assessment Report 123895. Washington, DC: World Bank.

Central Coastal provinces. The WBG has pledged to pay $51 million for 10 million tons of CO_2 emissions. The program has three core components: (i) strengthening the enabling conditions for emission reductions; (ii) promoting sustainable management of forests and carbon stock enhancement; and (iii) promoting climate-smart agriculture and sustainable livelihoods for forest-dependent people. A central element of this is applying ACMA, whereby SUFs, SFCs, and PFMBs will work with forest-dependent communities, legal community entities, and small farmers in the implementation of ER programs in a participatory and sustainable manner.

Forest Sector Modernization and Coastal Resilience Enhancement Project (2017–23)

The objective of this project is to improve coastal forest management and increase the resilience of coastal communes to climate change from sea level rise and extreme weather events in six coastal provinces (Quang Ninh, Hai Phong, Thanh Hoa, Nghe AN, Ha Tinh, Quang Binh, Quang Tri, and Thua Thien Hue). The project aims to contribute to the planting of over 9,000 ha of forest, restoring 10,000 ha of degraded forests, and protecting 50,000 ha of coastal forests through forest protection contracts with households and communities for long-term management according to benefit-sharing mechanism. It expects to work with around 900 communities and expects that at least 27,000 households will benefit directly from the mechanisms to encourage participation in the protection, planting, and rehabilitation of coastal forests. The WBG provides a $150 million loan to support this project, which started in 2018.

Vietnam – Sustainable Agriculture Transformation (VnSAT) Project (2015–20)

The project objective is to improve farming practices and value chains (mainly coffee) in target provinces, while supporting institutional strengthening of relevant public agencies to effectively support implementation of agricultural sector restructuring in the Mekong Delta (rice component) and Central Highland regions (coffee component). A loan of $238 million is provided. The project supports the transformation of Vietnam's coffee sector to move toward sustainable practices through the introduction of advanced technologies and sustainable cultivation practices for 69,000 ha of coffee covering 63,000 households in the Central Highland provinces. This includes the provision of matching grants to encourage farmers to adopt good farming practices (i.e., water-saving technologies, improved fertilizer management, etc.), and support for sustainable coffee rejuvenation, where suitable, by providing medium-term credit via commercial banks. VnSAT provides a loan of approximately $50 million for coffee rejuvenation activities in the Central Highlands.

Mekong Delta Integrated Climate Resilience and Sustain Livelihoods Project (2016–22)

The project's development objectives are to enhance tools for climate-smart planning and improve climate resilience of land and water management practices in selected provinces of the Mekong Delta in Vietnam. Vietnam's vulnerability to climate change from sea level rise and storms/typhoons highlights the critical need for the country to prioritize measures to adapt and augment resilience to climate change, particularly in the Delta areas. The WBG is providing a $310 million loan for this project. This project has an important component on mangrove rehabilitation and supporting integrated mangrove-shrimp models.

Reform of State Forest Companies (Analytical Support)

The government has been trying to reform SFCs since the 1980s but this has not delivered the necessary results due to a multitude of factors, including the complex regulatory framework, high costs of compliance, a poor appreciation of private-sector forestry within the government, and a lack of responsiveness by the companies themselves. The WBG has been asked to support this process. As part of the renewed emphasis on SFC reform in 2014 and 2015, the government enlisted the technical expertise of

the World Bank and the Program on Forests (PROFOR) to analyze the situation and provide insights that might help to speed up necessary reforms. One study examined two SFCs to better understand their challenges in reaching commercial viability.[99] The report proposed some general recommendations to address the shortcomings within the SFCs. It recognizes that increasing the SFCs' profitability and commercial viability will entail three avenues of focus—combining improvements in business and forest-management practices and in the investment climate.[100] Another related report highlighted the immense potential for domestically producing HWPs from local plantations.[101]

Assessment of enabling environment of Forest Sector SMEs (Analytical Support)

Forest sector SMEs, like SMEs more generally, can hardly compete with larger enterprises, as they suffer from a number of regulatory constraints, including limited access to business and financial services; lack of support to enhance their competitiveness; regulatory measures that constrain their ability to operate in a "legal" space or that create perverse incentives; and limited access to markets. Key opportunities and constraints for SMEs in the forest sector will be assessed to generate growth and employment, recommend policies and investments that would be needed to unlock opportunities, and provide prioritized inputs for an action plan. The focus will be on access to finance and the need for business development services.

6.2 OPPORTUNITIES FOR ENGAGEMENT

This section highlights key entry points and opportunities for further support to the government of Vietnam, building on ongoing dialogue and investments. We also list some of the perceived knowledge gaps to support the priority themes. These may be supported by the World Bank, as well as by other groups.

6.2.1 Transformation of the Plantation Sector in Vietnam

Promote a more efficient and sustainable plantation sector along the entire wood value chain, from producer to processor to market. As an increasing number of countries are imposing restrictions on the export of their raw materials and wood product importers are demanding to know the legal origin of the wood, Vietnam is facing a potentially growing supply gap for raw wood and HWPs that meet international sustainable forest management standards.[102] Currently, a significant proportion of wood is imported from high-risk countries, some of which are neighboring countries of Vietnam. In response to the changing market requirements, in May 2017 Vietnam initiated the Vietnam-EU VAP under the EU FLEGT Initiative. This agreement requires that all wood products on the agreed list be legal, which demands a fundamental change for Vietnam's wood and timber products sector.

Given that the present quality of timber produced from plantations is not sufficient to meet the requirements of much of the domestic wood-processing industry, part of the supply gap can be met by transforming a portion of the approximately 4 million hectares of acacia short-rotation plantations, used predominantly for low-value woodchip production, toward longer-rotation acacia plantations for sawnwood production and high-value native tree species, where appropriate. Increasing domestic production could have a major socioeconomic impact in terms of job creation. It has been estimated that

[99] World Bank. 2016. State Forest Company Reform: Draft. February 15, 2016. R. Davis.
[100] World Bank. 2016. State Forest Company Reform: Draft. February 15, 2016. R. Davis.
[101] World Bank. 2017. *Harnessing the Potential of Productive Forests and Timber Supply Chains for Climate Change Mitigation and Green Growth: Opportunities for Private Sector Engagement.* Washington, DC: World Bank.
[102] New Forests. 2010. *Vietnam: A Forest Investment Opportunity: Market Outlook 2010.* New Forests.

the establishment of productive forests and the management and operation of additional processing facilities could add another 244,000 jobs by 2040 and $5 billion to the Vietnamese GDP, as well as sequester the equivalent of 70 million tons CO_2 by 2040.[103] However, this would require major efficiency and sustainability improvements along the wood value chain, from producer to processor to market. Reports indicate this is already happening; in 2018 total materials used for wood processing imported into the country had fallen to 26 percent.[104] However, there still remains considerable potential to transform the existing plantation practices.

Given economies of scale, such a transformation could most easily be implemented by larger owners of plantation forests such as SFCs and private sector actors investing in SFCs, as well as households with larger plantation areas or associations/cooperatives of small farmers grouped together. Such plantation models must meet the requirements of Vietnam's VPA agreement and adhere to legality and certification standards. This would imply the need to make progress on key issues such as historical land conflicts, land demarcation, and sustainable management practices, which may require more collaborative approaches to forest governance and management. In addition to the wood-based products, derived from acacia and acacia and native species, there is a growing market for rubberwood, the area of which has grown significantly over the past decade. The industry expects a fourfold increase in rubberwood production in the mid-2020s.[105] To be able to tap into this growth market, it is important that producers implement sustainable and legal practices now in rubber wood and rubber wood products, both of which are consumer-facing industries with high levels of consumption in Europe and North America.[106] To fill the supply gap for sustainable and legally sourced timber for the Vietnamese wood products industry and respond to future markets trends the following programs of work are suggested:

- ***Support efficiencies along the tree plantation supply chain***. The low productivity of plantations in particular highlights the possible scope to increase timber output from the current production area. To improve efficiencies requires further support along the tree supply chain, including technical (e.g., site suitability assessment, silvicultural practices, intercompany research cooperation, clone development, and germplasm), capacity (e.g., skills, equipment, and access to good practices), and market aspects (e.g., quality of products, market demand, and processing capacity). All of this requires effective information-sharing platforms to support forestry-related stakeholders along the supply chain (small farmers, enterprises, wood industries, etc.).
- ***Pilot collaborative forest production models***. Based on best practice in other countries, forestry production methods should be introduced that bring together small farmers and encourage cooperation and links along the value chain—for example, by forming forestry cooperatives or forest associations. This would facilitate farmers' access to information and business development services (including finance), thereby strengthening their bargaining position along the supply chain.
- ***Provide business development support services for forest cooperatives/associations and/or SFCs and other SMEs.*** Business development support services could include technical advice and training on business planning, market intelligence, access to finance, insurance, business plan

[103] World Bank. 2017. *Harnessing the Potential of Productive Forests and Timber Supply Chains for Climate Change Mitigation and Green Growth: Opportunities for Private Sector Engagement.* Washington, DC: World Bank.
[104] Report to VNFOREST in Forum on wood processing and export industry in 2018 - success, experience; Breakthrough solutions for 2019;
held in Hà Nội on February 22, 2019 by Nguyen Ton Quyen, Vietnam Timber and Forest Product Association (VIFORES)
[105] Vietnam Rubber Association. 2017*. Vietnam Rubber Review 2017.*
[106] Ibid.

development, supporting adherence to FLEGT and certification requirements, reorganizing management configurations, etc. This would help targeted forest entities become "bankable" for private investors. Key opportunities and constraints for SMEs in the forest sector should be assessed to generate growth and employment, and to recommend policies and investments that would be needed to unlock opportunities.

- ***Broker access to finance.*** Banks may not want to lend to single households, given the high transaction costs. Forming farmer cooperatives could facilitate access to finance. In addition, there is a need to provide preferential credit for households and for SME forestry companies/cooperatives to cultivate, improve, and enhance the quality of plantations. This could be achieved through support for the provision of low-interest loans (and/or longer tenor loans) through the Vietnam Bank of Social Policies or other financial institutions. Lessons can be taken from the World Bank Forest Sector Development Program.
- ***Introduce demonstration models in selected areas to showcase sustainable and profitable small farmers' forestry business and management***. This should include the key elements highlighted above: cooperative/association management, seedling production, insurance, access to finance, business development services, and improved forest management practices to meet certification and FLEGT requirements, diversifications, etc.
- ***Support a more conducive investment climate for SFCs and the plantation sector***. Various modalities to encourage investment into plantation development in SFCs need to be introduced. These include a combination of a development finance institution, such as the IFC and/or the Asian Development Bank, and an international or domestic commercial bank providing capital through loans (with attached risk guarantees from the IFC). It may also be possible to establish a private sector financing window operating via MDBs, for instance, through the IFC, to provide equity and guarantee products in addition to debt and grants. The government must provide further support for a conducive investment climate.
- ***Establish forestry insurance schemes.*** A major reason that farmers will not switch to longer rotation is the perceived risks, in particular weather-related risks. It will therefore be necessary to introduce a risk mitigation program to support this shift. To facilitate long rotation, an insurance scheme will have to be set up to help overcome risks such as storm, fire, pests and disease, etc.
- ***Strengthen law enforcement and forest protection against encroachment.*** Addressing illegal logging and illegal forest conversion and historical land conflicts will be critical to deliver a legal supply of timber. For this to work, a more inclusive and collaborative governance approach is necessary (see ACMA below).

Vietnam depends on legally imported timber sources and shoudl increase its regional engagement and leadership on forest legality. The country continues to source a considerable amount of its raw timber from neighboring countries, in particular Lao PDR and Cambodia. Furniture and wood product companies need legally sourced timber, while countries such as Lao PDR and Cambodia can continue to fill the growing supply gap, if they meet legality standards. Through closer engagement, Vietnam can help drive the reduction of illegal logging by supporting the sourcing of legal forest products across the region.

6.2.2 *Support to deliver more effective Forest Management Units.*

Across the country the majority of natural production forests are too depleted to immediately serve for timber production purposes, while natural protection forests continue to be under threat. There is a need for active management measures to rehabilitate natural forests and protect them from conversion, illegal logging and agricultural encroachment. When examining the impacts of agriculture on forests, it is

necessary to recognise the indirect impact of displacement. As corporate interests drive the acquisition of land (legally or illegally) in particular for industrial crop production intended for export, the poorest populations are increasingly displaced, in some cases further into forested areas. Unless changes are made to the overall governance structure of the forests then this trend is likely to continue and the quality of the forest will continue to deteriorate. This highlights the need for more collaborative forest governance approaches in and around FMUs (SFCs, SUFs and PFMBs) as well as support for alternative livelihoods that can help lift such households "out of poverty". This could be attained by providing households more access to productive land, alternative income sources, and/or higher earnings from forest protection—in exchange for ensuring the remaining forest is better protected through improved governance arrangements. This need is already recognized by the government, which has been supporting more collaborative management approaches, most recently through the new Forestry Law. A key element of this effort will be to accelerate Forest Land Allocation.

It also requires a more effective use of financing for forest protection/service provision. The PFES scheme needs to be revised so that it starts providing more performance-based incentives; and additional funds should be sought by operationalizing the PFES carbon window and combining payments with other social funding programs. To serve as a pathway out of poverty, payments would need to be significantly higher and/or combined with other activities supporting livelihood. The following work programs are suggested to deliver more effective Forest Management Units delivering poverty alleviation and forest protection.

- ***Adopt Adaptive Collaborative Management Approaches (ACMA)**:* Under more collaborative governance arrangements such as ACMA, FMUs work with forest-dependent communities, legal community entities, and small farmers on the implementation of activities in a more participatory and sustainable manner. This approach supports participatory boundary demarcation, formal agreements on land use and on types and sustainable rates for the collection of NTFPs, and targeted sustainable livelihood improvement activities.
- ***Accelerate Forest Land Allocation***. Households, especially the poor, that have no red book certificates, have limited land access and land use as well as restricted access to formal finance. The Forestry Law mandates the acceleration of FLA. An area of over 3 million ha has been identified for providing LURCs to CPC land. While approximately 1 million ha has already been allocated, this allocation process needs continued support. A streamlined approach could facilitate the process—identify CPC land, assess and map the land (to help demarcate boundaries), and develop a forest management plan. These steps need to be complemented with efforts to support improved livelihood activities.
- ***Incentivize sustainable agricultural and forestry activities***. To increase incomes support should be provided to better integrate small farmers into markets to which they have to date been excluded, or, at best, only participate in under unfavorable conditions; and/or providing vocational training to some of these groups to access jobs in the growing plantation sector. This can be achieved by building and enhancing links between the value chain (processors, traders, exporters, and farmers' organizations) and small farmers, and strengthening the supply capacity (ability to produce higher volumes of goods or services with particular attributes). That kind of support will give farmers better access to information, more bargaining power, a better connection to supply chains, and access to markets, resulting in higher incomes.
- ***Promote sustainable use and development of NTFPs in the forest areas*.** The demand for NTFPs is increasing not only in local markets, but also in international markets. Therefore, the further development of NTFPs' potential in the forest areas can be a further source of income, benefiting forest-dwelling communities. Interventions needed to boost this subsector include identifying

potential species having good market value and conducting research on their ecology and sustainable harvest levels; analyzing trends and challenges in marketing and management; conducting value chain analyses, and doing capacity building around sustainable management of NTFPs. While a lot of research has already been carried out under various international projects, the program plans to scale this up. Women entreprenheurs should be a target of such a program.

- ***Diversify sustainable livelihood improvement activities***. There is an ongoing need to create employment opportunities and address underemployment among forest-dwelling communities, in particular the youth and marginalized groups (including women). Thousands of jobs—including vocational jobs in nearby towns and cities—could in principle be created though the growth in the production and processing of plantations, as well as in the nonforestry sector. More targeted employment support needs to be provided early on to target potential groups, including marginalized ethnic minority groups, youth, and women to take advantage of such job opportunities.
- ***Enhance the use and effectiveness of PFES resources*.** PFES payments are currently spread too thin and are too small to have any discernible impact on behavior. To provide sufficient incentives for behavioral change, payments should be raised significantly, be better targeted, and/or combined with other livelihood support programs and interventions, and be based on a more inclusive payment disbursement mechanism. While reforms are underway, they need to be accelerated. It is especially important to pilot and introduce more inclusive disbursement models (e.g., through ACMA), more efficiently target the funds, and increase funds disbursed by operationalizing the PFES carbon window and combining payments with other social funding programs.
- ***Technical assistance to improve effectiveness of pilot FMUs***; this includes assistance on forest management and improving business viability (for both timber production and public service provision). Such assistance will help forest enterprises to become more "bankable" for private investors (both for timber and ecological services).
- ***Facilitate access to finance for poor households***. Many poor households cannot access credit because of the banks' collateral and procedural requirements. One option, that has been successful in Vietnam, is the establishment of more semiformal financial organizations that are able to provide collateral-free loans with alternative loan security mechanisms. These semiformal finance arrangements enable broad-based negotiations on standard loan conditions and repayment practices, thereby reducing risks for both the farmers and informal financiers. Such schemes should be introduced.

6.3 Coordination Mechanisms

Landscape programs will require cross-sectoral coordination. The Steering Committee for the National Program on Sustainable Forestry Development/REDD+ (NSFDR) is chaired by the Vice Prime Minister, and its members are leaders of the relevant ministries—among others, MARD, MONRE, the Ministry of Finance, the Ministry of Planning and Investment, and the Ministry of Industry. The group oversees and monitors the implementation of the NRAP/Decision 13 and other forest programs, as well as cross-sectoral policies and programs that affect forest areas. It also plays an important role in the formulation of new policies addressing threats to forest areas' survival. Transforming the plantation sector also requires better cooperation among the farmers' organizations (CA, FU, VIFORA) so that a common agenda can be advanced. Synergies and collaborative opportunities for common approaches and responses should be identified, especially to promote small farmers' access to markets, finance, and insurance.

The coordination mechanisms at the site level will be the key to the success of this program. These must be both multisectoral and involve the different stakeholders affected. Activities on site will mainly be implemented through the FMUs (primarily SFCs), and/or community groups or associations, already existing or established under the program. These groups will work directly with forest-dependent communities, legal community entities, and small farmers. Committees will have to be created and should include representatives of the forest management entity, the District People's Committee (DPC), the CPC, members of the forest management entity, and newly established community entities. To ensure cross-sectoral collaboration, the DPC's involvement will be critical, as the forest management entities themselves do not have legal jurisdiction over most of the agricultural land. Moreover, only the DPC, which acts on behalf of MONRE, has the legal authority to issue forest LURCs to individuals, households, and communities. Mass organizations—especially the Vietnam Women's Union and the Fatherland Front—and an Ethnic Affairs Officer should be involved in the coordination mechanisms. Establishing such arrangements will be critical to ensuring broad stakeholder engagement and cross-sectoral implementation.

6.4 KNOWLEDGE GAPS

- **There is a need for more clarity on the socioeconomic and environmental viability of the 800,000 ha identified as available for land allocation**. While this area is currently designated as 'forest land' under the ownership of the Commune Peoples Committees and/or FMUs, in reality, much of this land already has already seen some agricultural use and/or some level of encroachment from local populations. Furthermore, much of this is marginal, degraded land, resulting from a long-time lack of management. It is therefore essential to better understand the status of this land and to identify viable areas for subsequent allocation and investment. The specific areas that could be used for different livelihood practices and/or approaches should be identified. It would be worthwhile to conduct a follow-up study in this context on selected provinces.
- **Information on the current assessment and auditing process of SFCs**. This process should be completed, and the resulting information be accessible so that it can be used to determine which SFCs (if any) efforts should focus on. If some of this information is missing, follow-up assessments of SFCs may be required.
- There is a need for further **designing and assessing viable financial products** supported internationally and/or domestically that could be introduced under a forest development/protection program. This should address how to improve access to finance for poorer households engaged in forest and agricultural products; how an insurance scheme could be established to mitigate the risk from moving to longer-rotation plantations; and how to mitigate risk for potential investors. It is therefore recommended that a separate study of possible financial products be undertaken.
- With forest plantations, there is a lack of knowledge on **forest production models that bring together small farmers and encourage their cooperation along the value chain as well as on the major barriers to such cooperation**. Different cooperative models should be examined, both in Vietnam and internationally, aimed at reaching consensus on the most appropriate models for the country. Lastly, possible areas for introducing pilot collaborative forest production models should be identified.
- There is a need for more **insight into the future of rubberwood in the country**. There will be a considerable future supply of rubberwood, and it is vital that the country will have access to different markets. This implies that the country will have to adhere to the production practices stipulated in international agreements when importing into these markets. Investing in rubber

production practices today could yield considerable benefits in the future. However, more information on market dynamics and production practices and technologies is required.

APPENDIX A: SUMMARY OF KEY GOVERNMENT POLICIES AND PLANS

The main policies and programs affecting forests can be clustered under the following categories: FLA and land use planning; policies to promote sustainable forest management; policies to support forest rehabilitation (forest ecosystem services); and support to the transformation of plantations. Policies and plans which are specifically responding to climate change/REDD+ are further examined in the next section.

Forest Land Allocation FLA and land use planning

Most of the Vietnam's forests are still managed by state entities such as forest management boards (FMBs)[107] and state forest companies (SFCs), which jointly manage approximately 46.7 percent of the total forest area in 2017.[108] All special-use and protection forests, and most of the natural forests on production forest land is still managed by these state entities. Since 1995, SFCs and FMBs are allowed to subcontract forest lands to local households for forest protection and planting. The contracts require FMBs to provide forest protection or planting fees to households. The contract is normally for one-year and is renewable. The agencies pay forest protection fees to the households in exchange for labor spent on forest protection. However, such contracts have arguably not proven fully effective in providing an incentive for forest protection and there is growing support for more "collaborative" approaches, and more forest land allocated to households and communities. There were 1,102,451 forest management owners of Group 1, including: households, individuals, communities, and household groups. The total forest area of this Group was 4,058,155 ha, accounting for 28.2 percent of the forest land (according to Report No. 10073 /BC-BNN-TCLN dated on December 4, 2017 on Completion of the National Forest Inventory and Statistics Program from 2013–16 by the Ministry of Agriculture and Rural Development.

A new Planning Law[109] was approved by the National Assembly on November 24, 2017, and marks an institutional transformation aimed at synchronizing and unifying the current planning regulations. It provides the blueprint for more integrated planning. Under the revised law, environmental protection is one of the key principles of planning-related activities and all national sectoral plans will be required to take account of environmental protection, biodiversity conservation and climate change adaptation. The new law is expected to help remove the current overlap of planning activities in many sectors, creating a close connection in planning between the central and grass-roots levels and bringing greater transparency to the overall planning process. This Law took effect on January 1, 2019.

Policies to support forest certification/FLEGT

Since 2014, most harvesting of natural forests is banned. The only exceptions are for areas that have approved forest management plans and international certificates for sustainable management, and salvage harvesting in production forests. Although the total area certified is low, certification has increased in the last few years. Government policy and concerns about accessing environmentally sensitive markets are encouraging third-party sustainable forest management and chain of custody certification. In December 2018, the area with FSC SFM certificates totaled 228,899 ha, showing a steep increase from only 9,755 ha in 2006.[110] Similarly, the total number of CoC certificates increased from 191 in 2009 to 495 in 2016. Most of the certified areas are plantations, with natural forests accounting for around one quarter of the area. At the same time Vietnam is developing a national certification scheme which is expected to be recognized by

[107] FMBs consist of special-use forest management boards (SUFMBs or SUFs) and protection forest management boards (PFMBs).
[108] Decision No. 1187 QD/BNN-TCLN dated 03/4/2018 on publication of national forest status for 2017.
[109] Law no. 21/2017.
[110] http://info.fsc.org/certificate.php.

the Program for the Endorsement of Forest Certification (PEFC). While there are a number of forward-looking policies, major challenges remain in meeting sustainable forest management of natural forests in the country.[111] In all, 73 percent of natural production forests are considered "poor" (i.e., degraded) and their rehabilitation (in order to meet certification standards) requires significant investments and general improvements in the technical and managerial capacities of forest owners and an improved enabling environment for companies to operate.[112]

Vietnam's wood processing industry is facing the challenge of adapting to market changes, especially as a result of the United States Lacey Act and the EU FLEGT. Given that nearly 80 percent of the total materials used for the wood processing sector for export are imported implies this will have a far-reaching impact on the Vietnams export industry. Being aware of this situation, the Vietnamese government has a strong commitment to address illegal exploitation and trade issues related to wood products. The Voluntary Partnership Agreement (VPA) bilateral negotiation with the EU formally started in 2010. The VPA-FLEGT was signed on October 19, 2018, aimed at tightening controls on forest governance, fight illegal logging, and promote trade in verified legal timber products from Vietnam to the EU, and other markets. Under the VPA, the Vietnamese government is also committed to develop the Vietnam Timber Legality Assurance System (VNTLAS) with the following elements: (i) legality definition; (ii) verifier of legal compliance; (iii) supply chain controls; (iv) verification of compliance; (v) FLEGT licensing; (vi) Internal inspection and feedback mechanism; and vii) independent evaluation.

Forest rehabilitation and payments for forest environmental services

Following the major decline in natural forests during the 20th century—from 14.3 million ha in 1943 to about 9.1 million ha in 1990—the government made significant efforts to restore them. Over the past 20 years, about 2 million ha of natural forests have been rehabilitated through national programs on forest rehabilitation, especially the 5 Million Hectares Program (or 661 Program).[113]

With the 661 Program ending in 2010 this reduced the main source of financing for forest rehabilitation. The Vietnam Payment for Forest Environmental Services (PFES) scheme has been operational since 2010 and is now the main source of finance. The policy has created and developed a state led mechanism for services and goods in forestry where sellers are forest owners in watersheds and buyers are hydropower plants, water supply companies and tourism companies. Since 2008, the national PFES legal framework, institutional settings, organizational arrangements, and contractual and financial management regimes have been refined, with 20 legal instruments issued at different levels. Of the total, five documents provide legal guidance on the establishment, organization and management of Forest Protection and Development Funds at national and provincial levels, and 11 documents provide general guidance on implementing PFES.[114]

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[111] The National SFM Action Plan 2016 – 2020 approved by MARD requires that at least an additional 500,000 ha of forests shall be certified by 2020 (comprised of 350,000 ha plantations, and 150,000 ha natural forests); equivalent to about 7% of production forests nationally

[112] Issues raised in include: a better understanding of SFM and certification, certainty about the duration and scope of the logging ban; regulations to manage forests based on SFM plans rather than quotas; managerial independence to manage forests and reinvest profits; and financial incentives such as concessional long-term loans with low interest rates and tax incentives. See Section 4: model 6 McNally, R.H.G, Vu, T.P, Nguyen, T.C, Pham, X.P, Nguyen, V.D, 2017. Issues and Options: support for the revision of Vietnams National REDD+ Action Programme (NRAP) 2016-2020

[113] Report No. 243/BC-CP dated October 26, 2011 on implementation of the 661 Program.

[114] See annex 1 of Pham T.T., Bennet K., Vu T.P., Brunner J., Le, N.D., and D.T. Nguyen. 2013. "Payments for Forest Environmental Services in Vietnam: From Policy to Practice." Occasional Paper 93. Bogor, Indonesia: CIFOR.

The PFES system is implemented by provinces, which have some flexibility in defining how it is carried out. So far, the vast majority of payments have come from hydropower. Payments are collected at the provincial level and distributed according to the forest area in the watershed. The PFES amount per ha depends on the size and number of the hydropower plants and its catchment areas; therefore, it is different among PFES provinces. Average annual revenue collected from users of forest environmental services for the period of 2011–17 was around $383 million.[115] The PFES revenue increased considerably in 2018 due to the application of a new payment rate set out in the Decree 147.[116] While payments in 2018 had been expected to be about 2,500 billion Vietnamese dong (about $108 million),[117] they actually amounted to 2,937.9 billion Vietnamese dong.

Policies to promote the transformation of plantations

Vietnam's 2006–20 Forestry Development Strategy encourages reforestation through, among other measures, encouraging foreign investment in forest plantations, allocating forest land rights to households and communities, providing technical support for tree planting, and offering loans at preferential terms for tree planting activities. Plantation development started in the 1960s and accelerated rapidly after 1995, from about 1 million ha in 2000 to 3.6 million ha by 2014[118] and approximately 4.18 million ha by 2017. Vietnam has a long-standing policy to reduce the reliance on timber imports and to encourage national value-added processing of timber, through supporting timber plantation establishment. Recent policies have been introduced to improve the productivity and quality of existing plantations while also increasing plantation areas for saw-log supply. Plantation policies are increasingly geared toward longer rotation plantations and to plantations using native species.[119] However, some barriers have to be overcome to support that process.[120]

The National REDD+ Action Plan (Phase 1 and 2)

The National REDD+ Action Plan (NRAP) 2012–15 was approved under Prime Minister Decision 799/2012. A review[121] of the NRAP identified and prioritized a preliminary set of 'policies and measures', linking them to a detailed analysis of the drivers of deforestation and forest degradation and the barriers to achieving the ''+'' in REDD+.[122] Based on this analysis a new Decision 419/2017 on NRAP Phase 2, including the list of PaMs, was approved by the Prime Minister in April 2017. The Decision identified eleven work packages covering forest and nonforest interventions (box 7).

[115] MARD 2018, Report on Summarizing 10 years of organization and activities of the Forest Protection and Development Fund for the period of 2008–18.

[116] Decree 147/2016/ND-CP dated on November 2, 2016 on revising several articles of Decree 99/2010/ND-CP

[117] https://baomoi.com/het-nam-2018-co-the-thu-duoc-2-500-ty-dong-tien-dich-vu-moi-truong-rung/c/28246572.epi.

[118] MARD's Decision No. 3135/QD-BNN-TCLN dated on 6 August 2015 on publication of forest status area as of Dec. 2014.

[119] For example, Decision No. 1565/ 2013, Decision No. 774/2014, Decision No. 38/2016.

[120] McNally, R.H.G, Vu, T.P, Nguyen, T.C, Pham, X.P, Nguyen, V.D.2017. Issues and Options: support for the revision of Vietnams National REDD+ Action Programme (NRAP) 2016-2020. See chapter on plantations.

[121] McNally, R.H.G, and Nguyen, C.T. 2016. *A Review of Viet Nam's National REDD+ Action Programme and its Implementation.* Hanoi, Vietnam.

[122] McNally, R.H.G., Vu, T.P., Nguyen, T.C., Pham, X.P., and V.D. Nguyen. 2017. *Issues and Options: Support for the Revision of the Vietnam National REDD+ Action Programme (NRAP) 2016–20.*

BOX 9. NRAP II WORK PACKAGES

1) Review and adjust master land use planning and land use plans to ensure the target of 16.24 million ha of forest land in 2020.
2) Promote sustainable and deforestation-free agriculture and aquaculture.
3) Improve forest governance and livelihoods for people living in and around forests.
4) Strengthen law enforcement.
5) Evaluate and replicate enhanced forest production through longer rotations and more diversified business models.
6) Evaluate and replicate sustainable models for natural forest enhancement, protection and conservation.
7) Enhanced economic and financial environment for forests.
8) Finalize and upgrade the core REDD+ instruments, in accordance with step-wise principle, and in compliance with UNFCCC's provisions.
9) Set up and implement financial management mechanisms for REDD+.
10) Strengthen international and regional cooperation and mitigate risks of displacement.
11) Effectively coordinate, communicate, build capacities and monitor NRAP implementation.

Based on the NRAP 2017–30, the Prime Minister assigned additional tasks on REDD+ supervision to the National Steering Committee on Forest Protection and Development and REDD+. The Vietnam REDD+ Office is tasked with the function of connecting and coordinating activities among the parties to implement NRAP phase 2. The Provincial REDD+ Action Plans (PRAPs) operationalize the NRAP at the province level.

Directive 13

The Prime Minister has shown high-level, political commitment to addressing the issue of deforestation. After taking office in 2016, one of his first engagements was to visit the Central Highlands region to show he was serious about addressing the illegal conversion of natural forests. On January 12, 2017, Directive 13 on forest management, protection, and development was issued. It specifically highlights the need ''to strengthen mechanisms to manage and closely monitor projects on conversion of forest use purposes, especially for hydropower development projects, mineral exploitation, construction of industrial parks, services and tourism; as well as the need to review and re-assess projects leading to the conversion of forest to rubber plantation." Resolution 17 details the provinces' requirements and tasks regarding the implementation of Directive No. 13. The provinces must report to the Politburo in 2018 to show what they plan to do to immediately halt the deforestation in their jurisdiction.

Climate change adaptation and mangroves

Vietnam's vulnerability to climate change—especially to sea level rise and storms/typhoons—highlights the need to prioritize measures to adapt and increase its resilience to climate change. Forests are a means for delivering adaptation measures, and coastal forests can deliver on adaptation and economic benefits, provided those forests are well planned and protected. The Vietnam government's focus on developing coastal forests for enhancing climate resilience and meeting development needs is supported by a number of coastal development policies.[123] Vietnam has adopted several measures to bolster the resilience of coastal communities. MARD prepared the investment Forest Sector Modernization and Coastal Resilience Project, aimed at improving coastal forest management in selected provinces. The World Bank supports this project, which started in 2018, with a $150 million loan. In addition, the WBG provided a $310 million loan for the Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project. The latter has an important component on mangrove rehabilitation and support for integrated mangrove-shrimp models.

[123] These include Decision No. 120/2015 and Decree 119 /2016.

APPENDIX B: GOODS AND SERVICES PROVIDED BY FORESTS IN VIETNAM

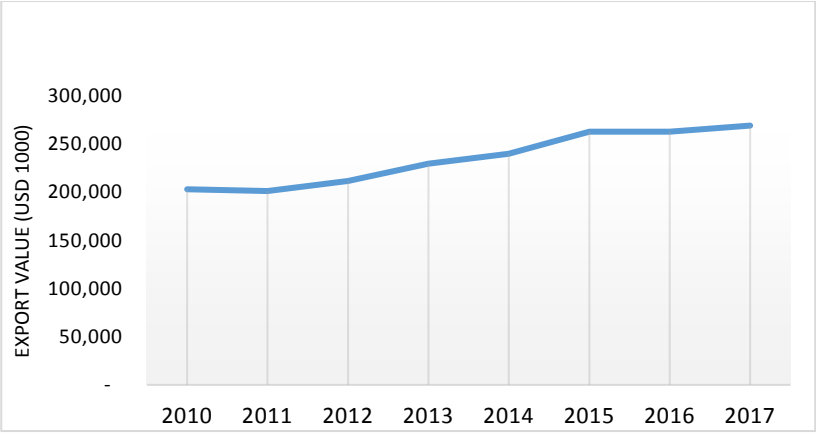
Nontimber forest products

Particular NTFPs are identified with specific provinces; for example, cardamom with Lao Cai, Yen Bai, Lai Chau, and Ha Giang; bamboo with Thanh Hoa and Nghe An; cinnamon with Yen Bai, Nghe An, and Quang Nam; pine resin with Quang Ninh, Lang Son, Nghe An, Ha Tinh, Quang Binh, Lam Dong, Gia Lai, and Kon Tum; Ginseng with Quang Nam and Kon Tum, etc. While NTFPs offer an important safety net through direct consumption, a number of NTFPs also provide significant income and job opportunities.

Bamboo and rattan cover the largest area in Vietnam. According to MARD,[124] the total area of bamboo crops was 240,925 ha (1.67% of total national forest area) while the mixed bamboo and wood forest area was 1,152,864 ha (8% of total national forest area) in 2017. Bamboo and rattan play an important role in the economic development of mountainous provinces and traditional handicraft villages and is believed to employ, exclusively or partially, large numbers of people in the country. Vietnam has three high-density production regions: the Northwest, North Central, and South Central regions. Thanh Hoa Province has the largest area of Luong bamboo (Dendrocalamus Barbatus) in Vietnam, with over 80,000 hectares of natural bamboo and 71,000 ha of planted bamboo, largely under household management, in the wake of the province's successful forestland allocation.

The global market for bamboo is expanding rapidly. Bamboo is increasingly being used for furniture, building materials and other consumer goods as a sustainable alternative to wood. Its relatively high growth rate, high carbon sequestration potential, and resilience to extreme weather events make bamboo an ideal crop for small farmers and businesses alike. The estimated yearly bamboo production in Vietnam is about 250,000 tons, and in 2014 the country exported over $100 million worth of bamboo products per year,[125] mainly bamboo and rattan basketwork and bamboo and rattan furniture (figure 11). The Prime Minister issued, Decision No. 11/2011 on policies to encourage the development of the bamboo and rattan sector. On issue with the growth in this sector has been the unsustainable production and depletion of forests in which rattan and bamboo grow. There is a growing awareness amongst producers to develop a more sustainable subsector to ensure its long-term viability.

FIGURE 4. EXPORT OF BAMBOO, RATTAN, AND RUSH PRODUCTS



Source: https://www.gso.gov.vn/default_en.aspx?tabid=626&ItemID=15704.

[124] Decision No. 1187/QD-BNN-TCLN dated 03/4/2018 on publication of national forest status for 2017.
[125] INBAR- https://www.inbar.int/country/vietnam/#2

Other important NTFPs in Vietnam include: cardamom, cinnamon, pine resin and star Anise. There are approximately 22,000 ha[126] of Cardamom from two main species: Amomum aromaticum and Amomum T-sao, distributed in the Northern Provinces of Vietnam.[127] Lao Cai Province has the largest harvesting area, reaching 8,832 ha in 2011, next is Yen Bai 7,800 ha.[128] Owing to the high income generated from the small production volume, cardamom is a vital livelihood source for the people living in mountainous area where transportation of agricultural output is difficult. For example, cardamom accounts for nearly 60 percent of total household income in the districts of Bat Xat, Sapa, and Van Ban.[129]

Cinnamon is grown for commercial purposes in a number of provinces. Yen Bai Province is at the center of cinnamon production with the total cultivation area reaching 68,575.9 ha in 2017.[130] The majority of cinnamon oil produced is consumed in China. According to MARD, 2017, the export value of cinnamon is increasing at an average rate of 109–130 percent per year.[131] The total area of natural pine forest is about 300,000 ha, mainly concentrated in the provinces of Quang Ninh, Lang Son, Nghe An, Ha Tinh, Quang Binh, Lam Dong, Gia Lai, and Kon Tum.[132] In Loc Binh district, Lang Son Province, 27,000 ha of pure pine plantations are being harvested by local people. It is estimated that annual resin production is about 3,000 tons per year. Pine resin provides a large source of income for thousands of households in Loc Binh District. Star anise is also one of the very valuable NTFPs in Vietnam. This species planted mainly in Lang Son, Quang Ninh, Cao Bang and Bac Kan provinces, contributing significantly to improve the local livelihood. Lang Son, for example, has about 33,500 ha of Star anise, accounting for 70 percent of the total Star anise in the country and earning 200–300 billion Vietnamese dong per year, benefiting over 15,000 households.[133]

The demand for NTFPs is increasing not only in local markets, but also in international markets. Therefore, the further development of NTFPs in the forested areas can be a further source of income. NTFP cultivation can also bring environmental, economic and social benefits if harvested sustainably. Recognition of the important contribution of NTFPs to the livelihood improvement to local communities, MARD had developed the strategy on conservation and development of NTFPs for the period 2006–20.[134] According to VNForest, the export value of forest products in 2017 was around $8 billion, of which NTFPs is $330 million (4.12%)[135] and the forecast of the export value of forest products in 2018 is estimated at $9.2 billion, of which NTFPs are estimated at $500 million (5.56%).[136]

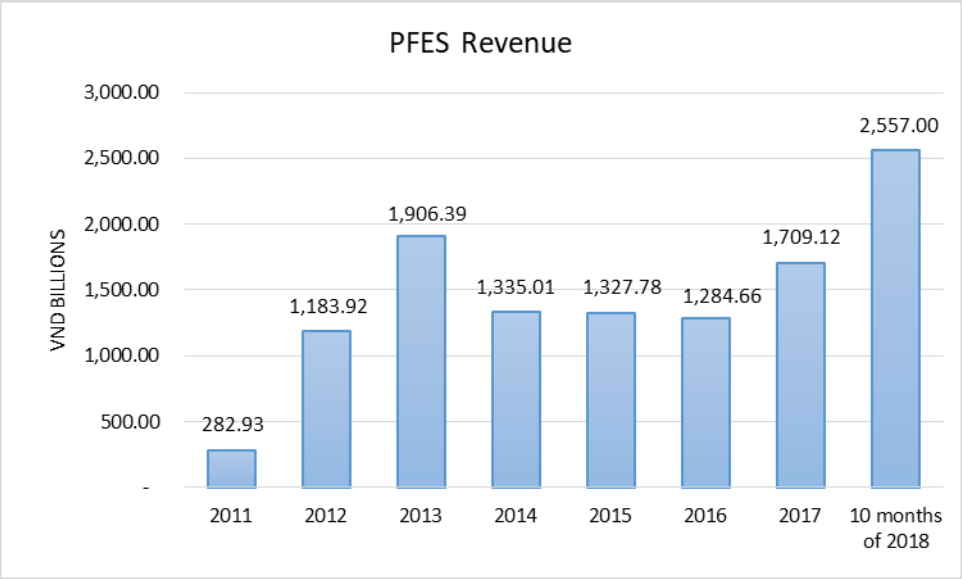
[126] Dang Van Lam. 2013. *Report on Environmental Policies for Cardamom Development.* Lao Cai Community College.
[127] Leveraging the Spice Sector for Poverty Reduction in Northern Vietnam Project, 2013- Study Report on Market and Value chain of Cardamon
[128] SNV 2013, Spice Market Research Report
[129] IPADE (PanAmerican Institute for High Business Management). 2011. *In-Depth Study on Cardamom Producers Social and Organizational Needs.*
[130] http://vukehoach.mard.gov.vn/MoHinh33.aspx.
[131] https://www.mard.gov.vn/Pages/bao-cao-thong-ke.aspx#.
[132] Nong Lam University- NTFPs focus on Pine Resin.
[133] Source: http://dangcongsan.vn/khuyen-nong-huong-toi-su-phat-trien-ben-vung/tin-tuc/nang-cao-chat-luong-san-pham-oi-de-hoi-nhap-quoc-te-409928.html
[134] Decision No. 2336/QD-BNN on approval proposal of conservation and development of NTFPs for the period from 2006 to 2020
[135] http://baochinhphu.vn/Kinh-te/Lam-san-ngoai-go-nhan-to-cho-bao-ton-rung-tu-nhien/343097.vgp
[136] http://hanoimoi.com.vn/Tin-tuc/Kinh-te/921341/bo-nnptnt-dat-muc-tieu-nam-2020-trong-150000ha-tre-nua.

Watershed protection

Vietnam includes low, flat deltas.[137] low coastal belts which within the central regions of the country lead up into mountainous areas.[138] Given the topography, forests play a critical role in watershed protection and coastal protection. Given the relationship between forest loss and erosion and floods, natural disasters have been a key driver for changes in forest policy triggering considerable investment in efforts to protect and/or plant forests in vulnerable watersheds. The watershed protection functions are particularly important to downstream industries relying on a stable flow of, clean water—for example, hydroelectric dams and water supply. Vietnam introduced various forest rehabilitation schemes, such as the 661 Program and, more recently, a PFES scheme, which has been operational since 2010.

The PFES policy has created and developed a state-led mechanism for services and goods in forestry, where sellers are forest owners in basins and buyers are hydropower plants, water supply companies, and other companies. "Users" of forest environmental services make payments, which are channeled to the forest owners who maintain and manage forest areas. To date, most payments have come from hydropower—collected at the provincial level and distributed according to the forest area in the watershed. The average annual revenue collected from users of forest environmental services over the period 2011–17 was about $383 million.[139] PFES revenue increased considerably in 2018, thanks to the application of a new rate, as set out in Decree 147.[140] Total payments over 2018 had been estimated at about 2,500 billion Vietnamese dong (about $108 million),[141] but were much higher: 2,937.9 billion Vietnamese dong[142] (figure 12).

FIGURE 12. PFES REVENUE



Source: Department of Finance and Planning, VNFOREST.

[137] The Mekong Delta in the South of the country and the Red River Delta in the North.
[138] Annamite Range (Vietnamese: Dãy Trường Sơn) is a mountain range of eastern Indochina. It extends approximately 1,100 km (680 mi) through Laos, Vietnam, and a small area in northeast Cambodia.
[139] MARD. 2018. Report on Summarizing 10 years of organization and activities of the Forest Protection and Development Fund for the period of 2008—18.
[140] Decree 147/2016/ND-CP dated on November 2, 2016, on revising several articles of Decree 99/2010/ND-CP.
[141] https://baomoi.com/het-nam-2018-co-the-thu-duoc-2-500-ty-dong-tien-dich-vu-moi-truong-rung/c/28246572.epi.
[142] http://vnff.vn/tin-tuc/.

Carbon payments from the LULUCF

A report assessing the role of land use, land use change and forestry (LULUCF)—as part of Vietnam's NDC—highlights the critical role of forests.[143] It estimates that with current efforts and rates of deforestation and reforestation, the total forest area of the country can reach 14.5 Mha by 2030. Annual average GHG mitigation for 2021–30 is 8.22 Mt CO_2e (total GHG mitigation is 82.2 Mt CO_2e) if the national targets are met which is equivalent to a 21 percent reduction compared to the BAU LULUCF scenario. With international support the GHG mitigation benefit could increase to 15.67 Mt CO2e per year (total GHG mitigation amount is 93.3 Mt CO_2e), equivalent to 39 percent of the LULUCF BAU scenario. The different mitigation options are shown in table 5. The report also estimated that the national target LULUCF under the NDC will create 83,308 permanent rural jobs and with international support the employment generation impact will more than double at 163,773 full time jobs.144 However, gaps remain in international support—both in direct funding and payments for emission reductions.

TABLE 5. FOREST MITIGATION UNDER THE NATIONALLY DETERMINED CONTRIBUTION (NDC)

Mitigation options	Domestic area target (ha)	International additional support target (ha)
F1: Conservation and protection of existing natural forest in mountainous areas	3,500,000	3,000,000
F2: Conservation and protection of existing coastal protection forests	300,000	-
F3: Restoration of protection and special use forest	50,000	150,000
F4: Enhancing forest quality and carbon stock of poor national forest areas	200,000	500,000
F5: Enhancing forest productivity and carbon stock of plantations for saw logs supply	90,000	200,000
F6: Replication of agroforestry practices for carbon enhancement and land conservation	10,000	500,000
F 7: Sustainable forest management and forest	500,000	3,000,000

Source: Vu, T.P., Merger E., and C.T. Luu. *Review and Update of the Nationally Determined Contribution for the land Use, Land Use Change and Forestry 2010–30.* Technical report.

The main source of carbon performance payments comes from Vietnam's Emissions Reductions Program which covers six provinces of the North Central Coastal region. As described in the Emissions Reduction Program Document,[145] the Carbon Fund will remunerate Vietnam in accordance with negotiated contracts for verifiably reducing emissions more than the reference scenario. According to the ERPD, Vietnam's ERP is expected to generate 32.09 MtCO_2e from reduced emissions and increased removals by sinks over the program period of 2018–25. Expected emission reductions from reduced deforestation and forest degradation will amount to 13.26 MtCO_2e (or a 20% reduction with respect to the reference-level emissions) and the increase in removals by sinks due to carbon stock enhancement aims to reach 12.7 million tCO_2e (a 34% increase with respect to the reference-level removals).[146] If the 4 percent uncertainty factor and 21

[143] Vu T.P, Merger E., Luu C.T. Review and Update the Nationally Determined Contribution for the land Use, Land Use Change and Forestry 2010–30. Technical report.
[144] Ibid.
[145] https://www.forestcarbonpartnership.org/sites/fcp/files/2018/January/00_FINAL%20ER-PD%20Vietnam%205%20Jan%202018_.pdf
[146] https://www.forestcarbonpartnership.org/sites/fcp/files/2018/January/00_FINAL%20ER-PD%20Vietnam%205%20Jan%202018_.pdf.

percent reversal-risk buffer are excluded from the calculations, the estimated net ex ante GHG emission reductions drop to 19.5 million tCO_2e over 6 years (2019–24)—6.5 million tCO_2e less. The results-based emission reduction payments for the sale of emission reductions to the Carbon Fund are estimated at $51.5 million, including $10.3 million in advance payment to meet the funding required to implement critical activities during the program's early stages.[147] Vietnam has also developed a National REDD+ Action Plan: 2016–20, which supports emission reductions throughout the country. The NRAP was already discussed in this note. However, currently no mechanism exists to provide carbon payments other than the Carbon Fund. It is still expected that payment will be made through the UNFCCC, most likely the Green Climate Fund. A project for REDD+ in the Central Highlands is on the government's priority list.

The Vietnam Fund for Forests (VFF) is currently in discussions with the Ministry of Natural Resources and the Environment (MONRE) about how to operationalize the carbon window of the PFES payment (C-PFES). There is a supporting national policy framework for C-PFES: Decree 99/2010/ND-CP (dated September 24, 2010). Activating this window could stimulate a significant new market for payments and (in addition) to the current payments would provide higher payments and a greater incentive for changing behavior.

Coastal protection

Vietnam's 3,400 kilometers of coastline, diverse topography, and variable climate contributes to it being one of the most climate hazard-prone countries in the world.[148] This exposure is compounded by the fact that a significant proportion of the country's population and economic assets are located in the vulnerable coastal lowlands and deltas. Mangroves act as natural defenses that protect people and property from flooding.[149] With global climate change predicted to increase sea level rise, climate variability and severe storms this will have further consequences across many sectors, ranging from the energy, infrastructure, fisheries to agriculture.[150] The costs of no action will be considerable.[151] This highlights the need for the country to prioritize measures to adapt/augment resilience to climate change, particularly in highly exposed areas such as coasts and deltas.

Mangrove forests and sandy soil forests along Vietnam's coastline reduce the impact of high-energy storms by minimizing erosion and decreasing wind power, waves and currents, and have been found to provide protection for coastal dikes, estuarine areas, and agricultural fields. While it is difficult to measure the exact value of mangrove to the economy, estimates have been carried out in Ca Mau province, which contains the largest remaining area of mangroves in the country. According to Vo et al.,[152] the value of mangrove ecosystem services in Vietnam using market price and replacement cost approaches was $600 million/year for 187,533 ha (approximately $3,000/ha/year). However, this is only a partial estimate that does not

[147] Vietnam's Carbon Fund proposal is available at:
https://www.forestcarbonpartnership.org/sites/fcp/files/2018/January/00_FINAL%20ER-PD%20Vietnam%205%20Jan%202018_.pdf.

[148] Garschagen, M, Hagenlocher, M, Comes, M, Dubbert, M, Sabelfeld, R, Lee, J, Grunewald, L, Lanzendörfer, M, Mucke, P, Neuschäfer, O, Pott, S, Post, J, Schramm, S, Schumann-Bölsche, D, Vandemeulebroecke, B, Welle, T and Birkmann, J (2016). World Risk Report 2016. World Risk Report. Bündnis Entwicklung Hilft and UNU-EHS.

[149] Beck, M. W., S. Narayan, D. Trespalacios, K. Pfliegner, I. J. Losada, P. Menéndez, A. Espejo, S. Torres, P. Díaz-Simal, F. Fernández, S. Abad, P. Mucke, L. Kirch. 2018. The global value of mangroves for risk reduction. Summary Report. The Nature Conservancy, Berlin.

[150] http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap24_FINAL.pdf

[151] Beck, M. W., S. Narayan, D. Trespalacios, K. Pfliegner, I. J. Losada, P. Menéndez, A. Espejo, S. Torres, P. Díaz-Simal, F. Fernández, S. Abad, P. Mucke, L. Kirch. 2018. The global value of mangroves for risk reduction. Summary Report. The Nature Conservancy, Berlin.

[152] Vo, T.C., Kuenzer, C., and N. Oppelt. 2015. "How Remote Sensing Supports Mangrove Ecosystem Service Valuation: A Case Study in Ca Mau Province, Vietnam. *Ecosystem Services* 14 (2015): 67–75.

consider other services (tourism, biodiversity, cultural and social values), due to the absence of primary data. Mangroves also contribute significantly to tourism and carbon sequestration.

The government recognizes the critical importance of coastal protection forests to improve the well-being of the rural poor and reduce their exposure to climate risks and mangrove protection has been given high priority in policies and plans.[153] MARD, though support from the WBG prepared the investment project: Forest Sector Modernization and Coastal Resilience Project with an aim to improve coastal forest management in selected provinces. In addition, the WBG is providing a $310 million loan for the Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project.

Tourism and recreational activities:

Vietnam's biodiversity and landscapes provide the opportunity to generate considerable revenue from ecotourism. In 2015, SUFs covered about 2.2 million hectares, distributed across 162 protected areas categorized into four groups: national parks (31), nature reserves (59), species and habitat nature reserves (11) and landscape protected areas (59, including historically, culturally and naturally valued forests).[154]

According to one 2016 report, 61 out of 164 SUFs are active in ecotourism.[155] About 2 million people visited National Parks and Nature Reserves in 2016, which was an increase of 178 percent with respect to 2015, and the total turnover of SUFs from ecotourism-related business reached over 114 billion Vietnamese dong ($4.9 million). While opinions differ on what exactly constitutes ecotourism, this does highlight a considerable economic value. However, major barriers remain to the introduction of sustainable eco-tourism in the country. The central problem is that the SUF management board tends to be responsible for establishing and running those enterprises—with limited capacity for developing and managing revenue-generation mechanisms; protected are (PA) planning/management; business planning; and marketing and communication strategies. Moreover, current incentive systems make it hard for individuals to generate revenue and perform effectively.[156] "Ecotourism" operations tend to be poorly managed and low-quality. The PA management board often lacks the authority to make decisions and critically to reinvest any funds raised. They continue to rely almost entirely on state budgets or donor funds. A more systematic planning of "ecotourism" in protected areas, including a system of entrance fees, opening up to private sector investment in order to deliver improved services sector could significantly boost the revenue generated from tourism.[157]

Agroforestry and intercropping

Integrated agroforestry systems can help protect crops and livestock from extreme weather, prevent soil erosion, reduce fertilizer needs, enable integrated pest management and allow for crop diversification.[158] Trees and bushes may provide additional farm benefits in the form of timber, fuel wood and food products such as honey and fruits, leading to greater household incomes. Planting trees and shrubs also increases the farm's carbon sequestration potential, thereby contributing to climate change mitigation. Agroforestry can also provide an important buffer zone between forested areas and agricultural production areas; hence reducing pressure on deforestation and forest degradation.

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[153] In 2015, the Prime Minister's Decision 120 approved a plan for coastal forest protection and development in response to climate change, and setting targets on planting mangroves and coastal forests.

[154] Department for Management of Special-use and protection forests, VNFOREST 2016.

[155] Le Van Lanh. 2016. *Eco-tourism at SUFs – Potential, Challenges and Solutions.*

[156] McNally, R.H.G., Vu, T.P., Nguyen, T.C., Pham, X.P., and V.D. Nguyen. 2017. *Issues and Options: Support for the Revision of the Vietnam National REDD+ Action Programme (NRAP) 2016–20* (see chapter on protected areas).

[157] Ibid.

[158] SNV. 2016. *Evergreen Farms: Resource Manual.* SNV, ICRAF (World Agroforestry Centre), and Meta Meta.

In the uplands of Vietnam agroforestry in its various forms is widely used by farmers and companies. Traditional mixed home gardens are practiced by almost all households in rural areas and in the highland mountainous areas for timbers, foods, feeds, medicinal herbs, firewood for household use. Beyond household consumption agroforestry is not being applied at scale. There have been growing efforts to encourage agroforestry (or intercropping) practices in some of the agricultural sectors which have historically been the most damaging to the country's forests—coffee and shrimp production.

More diverse coffee production practices increasingly gave way to monocultures in the early 2000s. Coffee monoculture has very low resilience to increasing evapotranspiration, drought periods or extreme rainfall events and the suitability of many areas of the coffee producing regions will change by 2050.[159] With the risks that monocultures pose, there is a strong case for intercropping. Add to this the fact that of the current coffee area, more than 100,000 ha has been in use for over 20 years, so there is a need for replanting and introducing improved varieties and planting techniques to improve yields. As part of this replanting and rejuvenation there is the need to improve the efficiency of natural resource use, increasing coffee quality and productivity and the incomes of coffee producers. The World Bank supported Vietnam Sustainable Agricultural Transformation Project provides loans for farmers for coffee rejuvenation and replanting.[160]

Another important agriculture subsector that has had a major impact on the country's forests and offers the opportunity for mixed production systems is aquaculture in mangrove. Thousands of hectares of mangrove forest have been converted into shrimp ponds in the Mekong Delta region leading to coastal erosion, salt water intrusion and muddying of the water and in some cases production collapses. Mangrove forests are highly productive in maintaining a wide variety of flora and fauna species and supporting coastal food chains and playing a crucial role in protecting coastal areas and adapting to changing climate conditions. They also provide an important source of livelihood such as timber products, food, contributing a significant value to households' livelihoods in surrounding communities.

SNV and Ca Mau province have been implementing the Mangrove and Market project (MAM),[161] which helps local authorities and companies gain access to markets that pay for the multiple benefits mangroves provide, while supporting shrimp importers, traders, and farmers in ecologically sound shrimp production in areas of high deforestation and degradation. This model, which has the potential to be scaled up throughout the vulnerable coastal areas of the Mekong Delta offers a mixed agriculture and mangrove forestry system. The project also acts as a buffer between areas of intensive shrimp production and critical areas of mangrove protection. An assessment of the potential income and carbon emission reduction potential have been estimated elsewhere.[162]

[159] Hagger J. and K. Schepp. 2012. *Coffee and Climate Change. Impacts and Options for Adaptation in Brazil, Guatemala, Tanzania, and Vietnam.* GIZ and University of Greenwich Natural Resources Institute. Working Paper Series No.4 on Climate Change, Agriculture, and Natural Resources.

[160] In addition to providing loans, the project supports a wide range of other activities focused on financial institutions and farmers, from building the capacity of the FIs, to supporting nursery establishment, providing training, contributing to demonstration projects and irrigation infrastructure, and the establishment/strengthening of smallholder coffee grower "clusters."

[161] http://www.snv.org/project/mangroves-and-markets.

[162] McEwin, A. and R. McNally. 2014. *Organic Shrimp Certification and Carbon Financing: An Assessment for the Mangroves and Markets Project in Ca Mau Province*. Vietnam, SNV, Hanoi.

APPENDIX C: ONGOING AND UPCOMING DONOR FORESTRY PROJECTS

Project	Description
Improving the resilience of vulnerable coastal communities to climate change related impacts in Vietnam *Donor:* GCF *Implementation:* UNDP *Duration*: 2015-2021	The project's objective is to increase the resilience of vulnerable coastal communities to climate change–related impacts in Vietnam through: • Safe housing to protect vulnerable coastal communities from increased flooding and storms; • Robust mangrove coverage to provide a natural buffer between coastal communities and the sea; and • Enhanced climate risk information to guide climate-resilient and risk-informed planning Under the forestry component, GCF funds will support regeneration of approximately 4,000 hectares of mangroves, in coastal areas vulnerable to climate change impacts and also promote community-based program on mangrove rehabilitation, maintenance and monitoring for project targets. GCF resources also aim to support the scaling up of good practices from various pilots and integrate field-proven successful methods of natural recruitment as a best practice approach.
Protection forests restoration and sustainable management project. *Donor*: JICA *Implementation:* JICA *Duration:* July 2012–July 2023	The project objectives are sustainable protection and management of protection forests; restoration and preservation of biodiversity and poverty reduction in the mountainous regions. This is achieved through: • Restoration and development of watershed protection forest in 11 provinces from Thanh Hoa province to Binh Thuan province; • Support to afforestation (17,946 ha); improvement of existing plantations: (2,960 ha); assisted natural regeneration: (14,162 ha) • Support to forest protection: 34,437 ha. • Strengthening capacity of local governments and owners of protection forests; and • Livelihood improvement of communities that will bear protection forest management responsibilities. The project is implemented in 11 provinces: Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri, Thua Thien Hue, Quang Ngai, Binh Dinh, Phu Yen, Ninh Thuan and Binh Thuan, covering 38 districts, 101 communes and 43 Management Boards of Protection Forests.
Project for Sustainable Natural Resource Management *Donor:* JICA *Implementation:* JICA *Duration*: 2015–20	The project objective is the sustainable natural resource management providing multiple benefits to the people. The program contains the following components: • Development and implementation of key policies on natural resource management; • Sustainable forest management promoted through the development and implementation of the Provincial REDD+ Action Plans (PRAPs) in four provinces in the Northwest (Dien Bien, Lai Chau, Son La and Hoa Binh);

	• An integrated and collaborative ecosystem management system is established for sustainable conservation and management of the Lang Biang Biosphere Reserve (LB-BR); and • The knowledge and lessons learned from Outputs 1–3 are synthesized and shared with related government agencies and other key stakeholders at national and international level. Project area: Dien Bien Province, Lai Chau Province, Son La Province, Hoa Binh Province, Lam Dong Province (Bidoup-Nui Ba National Park) and other related areas.
The Biodiversity Conservation Corridor Project *Donor*: ADB *Implementation:* MONRE *Duration*: 2011–19	The long-term goal of the BCC Project is to establish a system of biodiversity corridors across Vietnam, Lao PDR, and Cambodia, to ensure sustainable forest ecosystem services and climate change adaptation across the Central Truong Son region. In Vietnam, the focus is on Quang Nam, Quang Tri, and Thua Thien - Hue provinces to restore and maintain the coherence of the ecosystem in the region, bringing livelihood benefits to local communities. The project's short-term objective is to strengthen the capacity of the Central, Provincial, District and Commune levels of the project area in the planning of the biodiversity corridor, develop the corridor management plan and implement the plan. This requires support to restoration and afforestation to restore the linkage of biodiversity corridors and increase medium-rich forest area in 34 selected communes in the biodiversity corridor. There are also activities to support small-scale infrastructure to contribute to poverty reduction and improvement of the lives of ethnic minorities in poor mountainous districts of the project area. The project is implemented in 34 communes in 6 districts of the 3 target provinces.
Carbon and Biodiversity Programme (for the avoidance of deforestation and forest degradation in the border area of southern Laos and central Vietnam for the long-term preservation of carbon sinks and biodiversity) – Carbi Phase 2 *Donor:* KfW *Implementation:* WWF *Duration*: 2018–23	The program aims to protect and regenerate more than 250,000 hectares of unique forest and to protect and enhance the livelihoods of the people whose existence depends on the ecosystem services provided by these forests in the Central Annamities Mountains. The main activities include: • Conducting biodiversity surveys and monitoring to establish the status of species living in the forest and to pinpoint "hotspots" of illegal logging and timber trade, as well as areas of special biodiversity significance. • Train and equip forest guards to protect the unique biodiversity and ecosystem services. Build the capacity and logistics of law enforcement agencies and enhances their ability to combat illegal trans-boundary timber and wildlife trade through facilitated synergy and multi-agency cooperation. • Work with governments and villagers to reduce the illegal logging and hunting, and encourage sustainable community management of the forest. • Unlock the potential of a PFES system as a funding mechanism to sustain the gains once the project has ended, and to invest in livelihoods for the local population in remote buffer zones

	The target group is the local population is 100 villages in the buffer zones; government agencies and Management Boards of the protected areas in Quang Nam and Thua Thien Hue provinces.
Sustainable Forest Management and Biodiversity as a Measure to decrease CO_2 emissions (KfW8) *Donor*: KfW *Implementation:* GFA *Duration*: 2015–22	The overall goal of the project is to promote biodiversity in the Northern mountainous forest ecosystem, contributing to climate change adaptation and livelihood support for the local population. Its key components are: • Increasing the economic and ecological value of 7,000 hectares of planted production forest, 12,000 hectares of natural forest, creating immediate income for people through thinning and timber sales as well as increased revenue through lumber provision in the future; • Payments for performance-based forest protection, monitoring and integrated forest management via bank accounts; and • Financing of capacity building, basic field equipment, travel allowances and technical assistance to increase presence and monitoring in protected areas. Target Group: Local population in the project area dependent on the area's forest resources (about 184,000 people with 76% ethnic minorities). The target province are five northern mountainous provinces in Vietnam (Yen Bai, Lai Chau, Lao Cai, Ha Giang and Bac Kan).
Protection and Inclusive Management of Forest Ecosystems in the provinces of Quang Nam, Kon Tum and Gia Lai (KfW10) *Donor*: KfW *Implementation*: GFA *Duration*: 2014–20	The project contributes to the maintenance of the ecological integrity and biodiversity of natural forest ecosystems in the South-Central region and Central Highlands of Vietnam, while enhancing local ethnic communities living standards. Specific target of the project are protection and sustainable management of 20,000 ha natural production forests in 03 provinces of Quảng Nam, Kon Tum and Gia Lai, contributing to the protection of natural resources, biodiversity, and stable and regular income for 105 village communities through diversified forest products. Project measures include: • Financing of community forest management (e.g., establishment of Village Forest Management Board, forest inventory, area measurement); and • Livelihood development through establishment of Village Development Funds and micro-credit schemes Target Group: Local population, mainly ethnic minorities (55,000 people); local villages in which VDFs are implemented; villages with potentials for Forest Protection Contracts through PFES/ Target province: Quang Nam, Kon Tum, Gia Lai.
Coastal Management in the Red River Delta *Donor*: KfW	The project aims to increase the resilience of local communities and coastal ecosystems to climate change by: integrated coastal zone management; coastal hazard risk management (e.g., dikes): climate resilient communities and livelihood systems studies. The proposed project impact states: • Improved management of the coast line, resulting in a better protection and use of local natural resources;

I*mplementing*: to be determined *Duration*: 2020–27 *(going through the approval process of the government of Vietnam)*	• Estimated sequestration potential: 6 million tons of CO_2 stored in 6,000 ha of mangroves that will be directly protected by the project Target Group: Local population relying on ecological resources of the selected coastal area (50,000–75,000 people, 12,000 households). Target province: Thai Binh and Nam Dinh Provinces.
Restoration and sustainable forest management in Central Vietnam (KfW 9 phase 1). North Vietnam (phase 2) Donor: KfW *Implementing:* to be determined Duration: 2020–27 *(going through the approval process of the government of Vietnam)*	Proposed project measures: • Payments for conservation/protection efforts (patrols) of individual households and community forest management activities via deposit bank accounts (up to 40% of total investment); • Investments in economically rewarding livelihoods, e.g. via the establishment of Village Development Funds; and • Target Group (Phase 1): local population (24.000 households with 100.000 people from prevalent ethnic minorities), communities and Management Boards of Protected Areas. Expected project impact: • The population of wild animal species (threatened by poaching) stabilizes or increases. • Sustainable financing mechanisms (e.g., PFES) are securing project interventions (forest protection contracts in community forests) after the project ends; and • The area of natural forests in the project area remains stable or increases. Target province: Quang Ngai, Binh Dinh, Phu Yen, Ninh Thuan (Phase 1). Cao Bang, Bac Kan, Tuyen Quang, Thai Nguyen, Lang Son (Phase 2).
Conservation and sustainable use of forest biodiversity and ecosystem services in Vietnam *Donor:* BMZ *Implementation*: GIZ *Duration*: 2014–20	Overarching objective is the conservation and sustainable use of biodiversity and ecosystem services of forests in Vietnam. The program works in three main areas in order to help establish the conditions necessary for the conservation and sustainable use of forest biodiversity and ecosystem services: 1. *Legal framework*. It provides advisory support for the drafting of legal documents, including for conservation-oriented financing mechanisms (PFES), protected area management, and sustainable forest management. 2. *Development of institutional capacity*. It assists the Ministry in implementing the National Capacity Development Plan for Protected Area Management. The Department of Nature Conservation is supported to introduce information management systems to improve forest ranger patrolling strategies in protected areas ("SMART" Tool). Experiences drawn from the certification of two forestry companies are being used to contribute to the development and implementation of a national sustainable forest management plan, and to strengthen the capacities of

	service providers to enable them to assist additional forestry companies with certification. 3. *Timber legality (VPA FLEGT and TLAS).* Advising the partner within the context of FLEGT negotiations, including the design of timber legality assurance systems. The project will also provide support to strengthen the capacities of the verification authorities.
Strategic mainstreaming of ecosystem-based adaptation (EbA) in Viet Nam *Donor:* BMU *Implementation*: GIZ *Duration*: 2014–19	The project supports Vietnam's efforts to systematically mainstream ecosystem-based solutions in policy and society. It strengthens the capacities of national and provincial stakeholders to integrate ecosystem-based measures into decision-making and planning processes for national climate-change adaptation policy and to ensure their long-term implementation on the ground. The project acts in four main areas: • Awareness raising and capacity development for stakeholders at national and provincial levels. Stakeholders should be able to recognize the advantages of ecosystem-based adaptation and acquire the ability to integrate and implement appropriate procedures. • Scaling up. The project is elaborating a solid basis for a more extensive implementation of ecosystem-based adaptation measures. This draws on an evaluation of the existing experience and a pilot measure aiming to develop technical instruments, guidelines, manuals and monitoring approaches. • Integration of ecosystem-based adaptation into the national climate-adaptation policies and the relevant legal framework (with a focus on land use and development planning) and identification of national and international sources of funding. • Evaluation of the experience gained from special interventions and pilot measures; support for the partners and stakeholders in sharing the knowledge gained from the activities via national and international networks and platforms. The project was piloted in Ha Tinh and Quang Binh provinces.
Ecosystem-based Adaptation (EbA) in the North Central Coast of Vietnam: Restoration and comanagement of degraded dunes and mangroves. *Donor:* BMU *Implementation:* UNIQUE *Duration:* 2018–21	The project aims at demonstrating the technical feasibility of specific EbA solutions using native and endemic tree species for restoring the protective functions of degraded dunes and estuaries in the region, where about 230,000 ha of sandy coastal areas and dunes exist in this region in Vietnam. Project measures include the demonstration planting of 450 ha on sandy coastal areas, and 50 ha of mangroves in the estuaries with diverse actors and selected local communities. The approach is expected to provide a blueprint for up-scaling at landscape level and closes the coastal protection gap between the Mekong and North Vietnam.
Action plan for Public disclosure information and communication for	The project will build and carry out programs for disseminating the FLEGT Agreement and the Vietnam Timber Legality Assurance System (VNTLAS) to relevant parties in an appropriate and effective manner. It will also help the

implementation of the Voluntary Partnership Agreement VPA/FLEGT between Vietnam and EU *Donor*: FAO-EU FLEGT *Implementation:* VNFOREST *Duration:* 2019–20	country prepare for realizing information disclosure commitments under the VPA/FLEGT. The project's main activities include assessing relevant groups' demands for information about the VPA/FLEGT, assessing the availability of the disclosed information and building strategies and plans for communications and information disclosure.
Vietnam Forests and Deltas Program *Donor:* USAID Implementation: Winrock International, SNV, SRD, Red Cross *Duration:* Phase 1: 2012–17 Phase 2: 2018–21	The Vietnam Forests and Deltas Program is supporting land use practices which maintain forest resources and enhance environmental services (mitigation) while increasing resilience of people, places and livelihoods (adaptation). The sustainable landscapes component of this program is working in Thanh Hoa and Nghe An, focusing on the following activities: • Supporting a Provincial Green Growth Strategy (Thanh Hoa) by examining emission reduction strategies in the land use sector. A key element of this is developing a sustainable bamboo plan and engaging the private sector to invest. • Support to Provincial REDD+ Action Plans in both Thanh Hoa and Nghe An. • VFD has undertaken a review of PFES implementation, and supports implementation of new methods of forest mapping and agreements in one watershed area. In Thanh Hoa PFES activities have focused on the Ba Thuoc watershed which covers 100,000 hectares, and is supporting efforts to distribute payments to communities. VFD have also been supporting development of reviews of the national policy of PFES after its first three years of implementation. In 2018, the project began a new phase to provide further support for the advancement of PFES in Vietnam project's target sites in Son La, Lam Dong, Thanh Hoa, and Quang Ninh provinces. During this phase, VFD works in cooperation with local partners in three key areas of PFES implementation: • Expanding PFES in key sectors, with a focus on PFES for the carbon sequestration and storage services of forests; • Strengthening PFES monitoring and evaluation (M&E) systems; and, • Developing innovative digital payment mechanisms for more transparent and efficient distribution of PFES benefits.
Operationalizing REDD+ through public-private partnerships for sustainable landscapes in Lam Dong, Vietnam *Donor:* BMU	The project aims to reduce deforestation and forest degradation by addressing the conversion of forest to agriculture (primarily coffee) in a priority conservation landscape in the Central Highlands. It employs an effective model which has been applied globally and in Vietnam in various commodity-frontier contexts. The goals are to:

Implementation: SNV *Duration:* 2018–21	1. Strengthen inter-agency (public sector) coordination and institutional capacity for integrated climate smart landscape planning and more effective public-private partnerships with a focus on stabilizing agricultural production and empowering communities to manage lands and forests 2. Deliver improved yields and incomes for more than 1,500 farm households in buffer zones, who will be supported through trainings to improve farm management practices (and certification) and investments to rejuvenate their farms 3. Engage the private sector to invest in establishing and maintaining effective monitoring and traceability systems to address deforestation in their supply chains.
Scaling up Mangrove EbA in the Mekong Delta (MAM 2) *Donor:* BMU *Implementation:* SNV *Duration:* 2016–20	The sustainability of the shrimp sector and the conservation of mangroves are both national priorities. This project helps shrimp farmers become certified using the Naturland organic label through sustainable production and increasing mangrove cover in their shrimp pool. MAM-II is a follow-up to MAM-I: promoting ecosystem-based adaptation through reforestation and sustainable use of mangroves that ran between 2012 and 2016. In this phase of the project, around 2000 small shrimp farmers in Ca Mau province received training and technical assistance to enhance the sustainability of their production practices to meet Naturland organic certification standards, which require a 50% mangrove cover on each farm. The project collaborated with processing companies and government authorities to develop stable market linkages and create an enabling policy environment. The 2nd phase of the project scaled up the results of the 1st phase in Ca Mau, Ben Tre, and Tra Vinh, three provinces that contain half the mangroves in the Mekong Delta. This will strengthen the resilience of local communities to sea level rise, higher peak temperatures and similar stressors. The expected outcomes to 2020 are: • Train 5,000 shrimp farmer households in applying integrated mangrove-shrimp farming practices • At least three more processing companies commit to providing incentives for integrated mangrove-shrimp farming. • Mainstream PFES for sustainable mangrove-shrimp aquaculture into national and provincial development plans.

APPENDIX D: KEY CHALLENGES, RESPONSES, AND PRIORITY INTERVENTIONS

Key challenges	Key responses	WBG priority interventions (year)	Institution

With more countries imposing restrictions on the export of their wood raw materials, and with an increasing domestic and international demand, as well as wood product importers demanding to know the legal origin of the wood, Vietnam is faced with a growing challenge in terms of a future supply gap for raw wood which meets international standards.	The wood supply gap could, at least partially be met by transforming a significant portion of the current acacia short rotation in Vietnam, toward longer-rotation, sustainable (and legal) acacia plantations for sawnwood products, as well as supporting the sustainable development of the rubberwood sub sector. While the area for future plantation expansion is limited there is considerable potential for improving existing plantation productivity and economic value if good plantation business practices are applied, while further adding value through more efficient processing activities and technologies and diversifying the range of products produced from plantations. Despite forest SMEs generating most of the formal jobs along the value chain, forest sector SMEs suffer from limited access to business and financial services, lack of support to enhance their competitiveness, regulatory measures that constrain their ability to operate in a "legal" space or that create perverse incentives, and limited access to markets.	• Determine SFCs to engage, based on the results of the SFC assessment and auditing process. If some of this information is not available then follow up assessments of SFCs will be required (in 2019) • Undertake study on possible forest production models that group small farmers and encourage cooperation and links along the value chain, and on the major barriers for farmers to join such groups (in 2019) • Pilot collaborative forest production models (by forming forestry cooperatives or forest associations). Introduce demonstration models in selected areas to showcase sustainable and profitable small farmers' forestry business and management (in 2020–22) • Support improvement of efficiencies along the tree plantation supply chain. To achieve this requires effective information sharing platforms to support forestry related stakeholders along the supply chain (small farmers, enterprises, wood industries, etc.). In addition to forest data such as plantation areas, there is a need for scientific information on germplasm for forest planting, seed orchard, technical guidelines for forest management, soil suitability, etc. (2020–22) • Undertake study on the rubberwood sub sector in Vietnam, in order to provide recommendations on necessary interventions to tap into the growing market for legally sourced rubberwood (2019) • Provide business development support services for forest cooperatives/associations and/or state forest companies and other SMEs. Services should include, technical and training around business planning, market intelligence, access to finance, insurance schemes, support to business plans and needs to adhere to FLEGT and certification	VNforest, General Vietnam Customs Provincial authorities, VASF, VUF, VIFORES, Vietnam Forest Owners Association, MoF.

		requirements, etc. (2020–21) • Broker access to finance. Support provision of preferential credit (e.g., low-interest loans and/or longer tenor loans for) households, and small- and medium-sized forestry, companies/ cooperatives (2020–22) • Support to a more conducive investment climate for SFCs and the plantation sector. Various modalities to encourage investment into plantation development in SFCs need to be assessed and introduced (2020–22) • Strengthen law enforcement and forest protection against encroachment. Establishing an ACMA in the pilot areas can lead to greater clarity and agreement on forest boundaries, forest and land use and rights, the sharing of benefits from protection forests and possible investments in livelihood activities (2020–22) • Assess and design viable financial products, among others, how to improve access to finance for poorer households engaged in forest and agricultural products; and establishing insurance schemes to mitigate the risk for farmers of moving to longer-rotations plantations and to mitigate the financial risk for potential investors (in 2019).	

Agriculture continues to be the main direct cause of forest loss in Vietnam which is facilitated though the expansion of rural infrastructure, in particular roads. Unsustainable expansion is facilitated through policy and institutional arrangements, including the planning process, government targets, as well as fiscal and financial incentives driving production.	To curb further expansion of agriculture into forested areas, it is necessary to encourage intensification and more sustainable production. In tandem, it is necessary to address the policy and institutional arrangements supporting such expansion, including the planning process, government targets, and fiscal and financial incentives.	• Accelerate Forest Land Allocation (FLA): assess 800,000 ha identified for FLA. In this area introduce a streamlined approach which identifies CPC land, assesses and maps the land in order to demarcate boundaries and to produce a forest management plan (in 2019) • Adopt ACMA in selected areas. Activities supported should include: participatory boundary demarcation, formal agreement on land use together with targeted sustainable livelihood improvement activities (2020–23) • Build and enhance links between the value chain (processors, traders, exporters and farmers' organizations) and small farmers (agriculture and forestry) and strengthen their supply capacity (though improved management practices) (2020–22) • Promote sustainable use and development of NTFPs in the forest areas. Activities needed include: identifying potential species having good market value and conducting research on their ecology and sustainable harvest levels; analyzing trends and conducting value chain analyses (2020–22) • Support forest dwelling groups in particular the youth and marginalized groups in job creation (e.g., in the production and processing of plantations, as well as nonforestry sector such as vocational jobs in nearby towns and cities) (2020–21) • Enhance the use and effectiveness of PFES resources. Efforts should focus on piloting and introducing more inclusive disbursement models (e.g., through ACMAs), more efficient targeting of the funds, increasing funds by operationalizing the PFES carbon window, and combining payments with other social funding programs (2020–23) • Facilitate access to finance for poor households	VNforest, Provincial authorities, VASF, FIPI, IPSARD,
The poorest, in particular ethnic minority groups, are the most dependent for their income and livelihood from forest resources. There is the need to introduce alternatives that can help lift such households 'out of poverty'. This may require fundamental changes to how forests are governed and how the benefits are distributed in order to achieve more sustainable land uses and forest protection.	Poorer groups need greater incentives to manage and protect forests. They can derive more benefits from forests primarily through more access to productive land, alternative income sources and/or increasing the income from forest protection - while ensuring the remaining forest is better protected through improved governance arrangements.		VNforest, Provincial authorities, VASF, IPSARD, CEMA, MoF,

		(e.g., through formal and, where possible, semiformal financial organizations able to provide collateral-free loans with alternative loan security mechanisms) (2020–22)	