



Institutional setting for nature-based solutions and REDD+ policies and projects in Viet Nam

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Occasional Paper 232

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DOI: 10.17528/cifor/008614

Pham TT, Vu TP, Nguyen TML, Hoang TL, and Tran NMH. 2022. *Institutional setting for nature-based solutions and REDD+ policies and projects in Viet Nam*. Occasional Paper 232. Bogor, Indonesia: CIFOR.

Pu Luong Upland Landscape
Photo by Nguyen Duc Tu

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We would like to thank all donors who supported this research through their contributions to the CGIAR Fund. For a list of Fund donors please see: <http://www.cgiar.org/about-us/our-funders/>

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Abbreviations

BAU	Business-as-usual
CBO	Community-based organization
CEMA	Committee for Ethnic Minority Affairs
CDM	Clean Development Mechanism
CSO	Civil society organization
ERPA	Emissions Reductions Payment Agreement
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forestry Carbon Partnership Facility
FDP	Forest Protection Department
FLA	Forest Land Allocation
FPIC	Free, prior and informed consent
GDP	Gross domestic product
GHG	Greenhouse gas
INDC	Intended Nationally Determined Contribution
INGO	International non-governmental organization
IP	Industrial processes
LEAF	Lowering Emissions by Accelerating Forest Finance
LULUCF	Land use, land-use change and forestry
M&E	Monitoring and evaluation
MARD	Ministry of Agriculture and Rural Development
MoF	Ministry of Finance
MOLISA	Ministry of Labour, Invalids and Social Affairs
MONRE	Ministry of Natural Resources and Environment
MPI	Ministry of Planning and Investment
MRV	Measurement, reporting and verification
NBS	Nature-based solutions
NDC	Nationally Determined Contribution
NGO	Non-governmental organization
ODA	Official development assistance
PES	Payments for Ecosystem Services
PFES	Payments for Forest Environmental Services
PRAP	Provincial REDD+ Action Plan
REDD+	Reducing emissions from deforestation and forest degradation
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VNFF	Vietnam Forest Protection and Development Fund
VNFOREST	Vietnam Administration of Forestry
VNGO	Vietnamese non-governmental organization

Executive summary

Vietnam currently ranks 21st in the world for greenhouse gas (GHG) emissions, and 2nd in ASEAN, after Indonesia. Accordingly, the Government of Vietnam is always interested in developing and implementing national programmes and policies in response to climate change. To date, Vietnam is one of the few countries that has increased its contribution to GHG emissions reduction in its Nationally Determined Contribution (NDC) in 2020. Through its NDC, the Government of Vietnam has indicated that the forestry sector is expected to play a significant role in mitigating climate change. The NDC and existing forestry policies emphasize the role of Payments for Forest Environmental Services (PFES) and Reducing Emissions from Deforestation and forest Degradation (REDD+) development as means for achieving this ambitious target. Over the past 10 years of preparation for REDD+ readiness and implementation, Vietnam has made great strides in capacity building for stakeholders and refining national REDD+ benefit-sharing design, safeguards and measurement, reporting, and verification (MRV). Vietnamese policymakers also advocate following strict protection of natural forests, focusing on the development of planted forests and using the multifaceted environmental values of forests, including emissions reduction and forest carbon sequestration services. However, Vietnam has struggled to achieve economic development in a sustainable manner and prevent adverse impacts from environmental degradation and climate change. During the Covid-19 pandemic, many people have entered forests to harvest timber and other forest products for earnings, making forest protection difficult. Practical implementation of well-intended policies has been characterized by numerous failures and weaknesses. Many policy measures are compromised by limited funding for forest protection, weak local governance capacity, poor vertical and horizontal

coordination, low involvement of the poor, women and indigenous groups, low economic returns, elite capture of land and benefits, and corruption. Despite widespread awareness of these issues and concerted efforts by government and donors to address them, effective solutions are yet to be found.

This report identifies the drivers of deforestation and degradation in Vietnam, and then analyses aspects of the social, political and institutional context that might constrain or support the design and implementation of REDD+ in Vietnam. The study also aims to increase understanding of the national and provincial governing bodies, how they interact, their knowledge and capacity to engage in and implement REDD+ and identify gaps in stakeholders' capacity to implement REDD+. The recommendations contained in this report are intended for project investors and organizations who have interest in developing and implementing emission reduction and REDD+ projects in Vietnam. Our report is based on policy review, a review of secondary data and interviews with 21 experts from government agencies, donors, international organizations, national NGOs, ethnic minority people organizations, academic institutions and private sector actors who have engaged in forestry and REDD+ policy development and implementation in Vietnam.

Drivers of deforestation and degradation

The estimated annual national deforestation rates for 2000–2005, 2005–2010 and 2010–2018 are 249,000 ha, 220,000 ha and 148,000 ha, respectively. Deforestation was highest in the Central Highlands, followed by the Northeast and Southeast regions. Total forest area in 2020

was 1,289,140 ha higher than in 2010, mainly due to plantation forest expansion, with the area of plantation forests increasing significantly from 3.1 million ha in 2010 to 4.4 million ha in 2020. It was a different case for natural forests, with natural forest area falling by 0.2% or 25,631 ha over the same period at an average rate of 2,563 ha annually. Although forest cover has increased during the past two decades, the quality of the forests has decreased.

The paper identifies four main direct drivers and three main indirect drivers of deforestation and forest degradation in Vietnam. Direct drivers include land conversion for agriculture, infrastructure development, logging (illegal and illegal), and forest fire. Indirect drivers are related to the pressure of population growth and migration, the state's weak forest management capacity, the limited funding available for forest protection, and the political economy of deforestation. These drivers and their impacts vary from region to region. The majority of this loss (92%) was due to conversion to non-forest land and other land uses. Future policies and projects should be designed and implemented based on local drivers and socioeconomic needs (e.g. infrastructure development, agriculture development, land conversion), while also meeting demand from international markets (e.g. increasing demand for seafood and wood products).

Natural resources, forest and land governance

At the macro level, there are currently six key ministries working directly with social affairs, natural resources, forest, and land governance: (i) the Ministry of Agriculture and Rural Development (MARD), (ii) the Ministry of Natural Resources and Environment (MONRE), (iii) the Ministry of Planning and Investment (MPI), (iv) the Ministry of Finance (MoF), (v) the Committee for Ethnic Minority Affairs (CEMA), and (vi) the Ministry of Labour, Invalids and Social Affairs (MOLISA). Having multiple agencies providing careful reviews of climate change and forestry policies means delays in the implementation of any new policies, as has been the case with carbon rights, emissions

reduction rights transfer, and the national REDD+ benefit-sharing mechanism. Large numbers of consultations and policy reviews are necessary across different agencies, adding to transaction costs. Moreover, although there are multiple ministries responsible for natural resources, forest and land governance, their power and influence are not the same. MPI and MoF are the two most influential government agencies as MPI approves and directs sectoral and financial planning for other ministries, while the MoF regulates budget allocation and financial rules for operating policies. MONRE and MARD only have technical functions, while MoF and MPI set the strategic directions through budget allocations. Top-down planning is inappropriate as it usually means that programmes are selected on the basis of how much funding is available rather than on technical priorities and local needs. The system reduces the independence and commitment of implementing agencies in planning for their own work. Moreover, because the priorities of MPI change from year to year, it is difficult for agencies to get long-term commitments to finance nature-based forestry policies and programmes. Furthermore, as projects fall under different ministries with different powers, it is difficult for local authorities to coordinate them. Another problem is that technical ministries often either do not involve MOLISA and CEMA in their decision making or only include them on paper with no actual involvement in reality. Further, MOLISA and CEMA perceive environmental policies to be outside their expertise and priorities, so they often exclude themselves from discussions. Not only is cross-sectoral collaboration challenging, but each sector also has its own politics and power struggles. MARD and MONRE are the two most important agencies in Vietnam in designing, implementing and monitoring emissions reduction projects. However, conflict of interest and weak coordination between the two ministries are well-known by all stakeholders in Vietnam.

In Vietnam, the central government dominates as an authority, whereas subnational governments are usually implementing bodies. Decentralization is often seen as a means to create transparent and accountable mechanisms for the provincial government. However, this

does not necessarily improve the performance and accountability of local government, and indeed may only empower local elites to capture a larger share of public resources.

Emission reduction potential

Vietnam's GHG emissions would increase more than threefold from 283.97 Mt CO₂e in 2014 to 927.9 Mt CO₂e in 2030 across the five sectors (energy, agriculture, LULUCF, waste and industrial processes – IP). With 42 priority measures implemented using domestic resources, the potential emissions reduction for 2021–2030 is estimated at 529.7 Mt CO₂e at an estimated cost of USD 17.3 billion. If international resources are available, the reduction is estimated at 864.3 Mt CO₂e at an estimated cost of USD 30.6 billion. The energy sector has the most opportunities to reduce emissions (accounting for 56.1% of total emissions reduction potential with domestic resources). However, the cost of reducing emissions in the energy sector is still quite high, partly because measures to reduce GHG emissions require changes in techniques and equipment. Meanwhile, the agriculture and forestry sector has the greatest potential to reduce its GHG emissions with international support.

Vietnam's NDC identified seven forest-based measures: (1) F1: protect existing natural forests in mountainous areas. This measure aims to reduce emissions from deforestation and forest degradation; (2) F2: protect coastal protection and special-use forests. The focus of this measure is to control forest conversion; (3) F3: restore protection and special-use forests. This includes reforestation of forests in the mainland areas and coastal forests, including mangroves; (4) F4: improve carbon quality and stock of poor natural forests; (5) F5: enhance productivity and carbon stock of large wood plantation forests; (6) F6: scale up agroforestry models to increase carbon stock and land preservation. This focuses on planting trees on agricultural land of households and organizations. Based on ecological region, successful agroforestry models will be scaled up to enhance carbon stock and improve soil fertility. Agroforestry cultivation is recommended on steep gradients (Northwest, Central Highlands, etc.); and (7) F7: sustainable forest

management and forest certification, which aims at improving removals and reducing emissions. Implementation of mitigation options proposed in the NDC for 2021–2030 could lead to a total emissions reduction (including increased carbon sequestration) of 82.54 Mt CO₂e through national efforts, and 186.5 Mt CO₂e with external support.

Agroforestry has great potential to contribute to Vietnam's mitigation and adaptation targets. Expansion of agroforestry can be 1.3–17 times more cost-efficient for sequestering carbon than monoculture plantations. There are currently at least 48 agroforestry models recorded in 63 provinces. The most popular systems include Robusta coffee, arabica coffee, acacia, rubber, tea, cashew, *Melaleuca cajuputi* and *Rhizophora apiculata*. To sequester carbon, not considering possible economic gain, acacia- and cashew-based systems were the most cost-efficient, at USD 8–12 per ton of CO₂ equivalent. Our study also indicates significant potential for enhancing carbon stock and improving the quality of “poor” natural forests with interventions applied across the country, including: (i) replanting forest trees to improve “poor” natural forest and assist natural forest regeneration (with additional forest tree planting); (ii) using financial and policy incentives to promote long rotation and large timber species; (iii) converting monoculture acacia plantations to natural forest; (iv) promoting community forestry and co-management between the state and local people; and (v) promoting and increasing revenues from Payment for Forest Environmental Services (PFES) schemes.

Opportunities for nature-based solutions and REDD+ in Vietnam

The large number of policies supporting nature-based solutions and REDD+ shows government interest in emission reduction. The Government of Vietnam has set an ambitious national goal to become an upper-middle-income country by 2035 based on balancing economic prosperity with environmental sustainability, promoting equity and social inclusion, and enhancing the capacity and accountability of the state. The forestry sector strategy to support this goal includes restructuring state enterprises;

developing functioning land markets; increasing participation in global value chains; fostering innovation; and building climate resilience. Plantations continue to be the key source of timber supplies for wood processing sectors, while the conservation of natural forests is strictly controlled.

Vietnam also plans to drastically reduce coal power, and rapidly increase the share of renewable energy to 20% of total primary supply by 2030 and 30% by 2045. The level of emissions per gross domestic product (GDP) by 2030 will be reduced by nearly 15% and methane emissions in agricultural production will decrease by up to 10%. In 2021, MONRE submitted a decree to the government for promulgation regulating GHG emissions mitigation and ozone layer protection in order to improve the effectiveness and efficiency of state management on climate change. The government is developing a plan for mitigating emissions in land use, land-use change and forestry (LULUCF) for 2021–2030. The key targets for forestry development are maintaining national forest cover at 42–43%; sustainably managing forest areas and enhancing natural forests and biodiversity conservation. The forestry sector is also expected to contribute significantly to Vietnam's Nationally Determined Contribution (NDC) for emissions mitigation through forest-based mitigation measures, and the achievement of Vietnam's recent commitment to net zero emissions by 2050 in COP26. Other existing policies supporting nature-based solutions for achieving Vietnam's NDC include the National Strategy on Climate Change (2011), the Vietnam's updated Green Growth Strategy for 2021–2030 with vision to 2050 (2021), the National REDD+ Action Plan to 2030 (2017) and the national scheme of Payment for Forest Environmental Services (PFES) (2010).

In Vietnam, international mechanisms related to GHG emission reduction activities have also been implemented. These include 257 projects under the Clean Development Mechanism (CDM) and 13 Programs of Action under the CDM and a number of mechanisms for generating carbon credits on a voluntary basis (Gold Standard–GS, Verified Carbon Standard–VCS). Since 2009, Vietnam has participated in the REDD+ initiative with 44 large and small projects with total

funding of around USD 84 million to support awareness raising and capacity building, and pilot REDD+ actions, models and readiness in Vietnam. By 2020, 19 provinces had approved Provincial REDD+ Action Plans (PRAPs). From 2019 until now, there have been three major projects setting up a pathway for future emissions reduction projects in Vietnam's forestry sector: the World Bank FCPF; the potential Green Climate Fund (GCF) project on achieving emission reductions in the Central Highlands of Vietnam to support National REDD+ Action Plan goals; and Lowering Emissions by Accelerating Forest Finance (LEAF).

Implementation of the commitments set during COP26 will promote national and international investment in achieving emissions reduction targets, transferring and applying low-carbon technologies, sustaining and improving forest resources, and developing a carbon market. It is expected that from 2025 to 2027, there will be a pilot operation of the domestic carbon market and the promulgation of regulations with provisions on emissions trading and financial responsibilities of the participating parties. From 2028, the market will operate officially. The operation of a domestic carbon market will facilitate and promote emissions reduction and trading between sectors, especially investment in forestry and land use sectors for achieving the emissions reduction targets of the country and its other sectors (energy, industrial processes, etc.).

Challenges for nature-based solutions and REDD+ in Vietnam

Deforestation in Vietnam is rooted in government interests to boost economic growth. Planning at both national and provincial levels still prioritizes economic growth over environmental protection. While the government aims to provide financial support to forest owners for protecting forests, the sums involved in its financial schemes to support agricultural production and provide loans, subsidies and low-interest rates for agriculture production activities are much higher. Moreover, provincial governments are assessed annually based on the economic growth in their provinces rather than how well they protect their forests. The more

infrastructure development and the higher the GDP a province achieves, the more funding it will be allocated from the central government. Consequently, there is a weak financial incentive for forest protection.

Forestry is also the weakest among all sectors in terms of its influence and power. Different ministries have their own plans, and all want to expand their land use, which will come at the expense of forestry land. The value of forests and forest land is not fully recognized and is often the cheapest land to convert for other purposes. Market prices set by governments for forest land are often low and only consider the direct value of trees rather than the actual value of land and forest environmental services. The forest protection policies are only for the forestry sector and have no other macro or sectoral policy support. Without political will from the government to address and change political economy drivers of deforestation and forest degradation, the forestry sector alone cannot address drivers of deforestation. Further, addressing drivers of deforestation and forest degradation requires a landscape-based approach and cross-sectoral collaboration. However, many development policies have not been scrutinized in terms of their potential unintended effects. That is, a policy released to address one problem may in fact end up causing another problem. For example, in addressing the problem of unequal population distribution, the relocation policy led to increasing deforestation in resettlement areas. Regional linkages between provinces, districts, and communes are also weak and ineffective for addressing drivers of deforestation. While several policies related to REDD+ have been released and are currently being piloted across the country, REDD+ policy needs improvement in two main areas: 1) provisions for benefit sharing; and 2) procedures for assessment, approval, and provision of carbon rights.

Current land governance in Vietnam also presents three key challenges for REDD+ and any future results-based payment projects. First, land use planning and land allocation have high corruption risks. Second, due to the command and control system, and the state taking full rights to manage all land, Forests Land Allocation (FLA) does not guarantee custody

by a 'real owner' (i.e., a legal entity). Third, current FLA processes and policies also trigger many inequity issues. The fact that state actors own the highest-quality forests, while non-state actors, particularly local people, have mostly been allocated poorer-quality and degraded forest means that future REDD+ funds might be retained at the government level, with only very limited payments made to the actual forest managers. This also implies that difficulties will arise in relation to involving households in planning activities, monitoring, reporting and verifying, and in receiving and managing rewards – aspects that are integral to the long-term effectiveness of REDD+.

Moreover, national resources for investment in climate change adaptation are limited. Currently, the state can only meet around 30% of adaptation needs, while the financial requirements for construction upgrades, natural disaster prevention and control, and adaptation to climate change are huge. The cost of climate change adaptation is estimated to exceed 3–5% of GDP by 2030. If Vietnam implements the option to spend 1.5% of GDP on climate change adaptation during the 2021–2030 period, it will be necessary to mobilize an average of around USD 3.5 billion in capital from outside the budget each year, or around USD 35 billion for the 2021–2030 period. Vietnam has a great need for modern technologies for monitoring climate change, monitoring and forecasting hydrometeorology, and providing early warning of natural disasters and dangers; and technologies for building non-structural solutions to adapt to climate change. However, the capacity of experts and specialized technical staff, especially at the local level, on climate change and assessment of the effectiveness of adaptation activities is still limited. Nature-based solutions in Vietnam have also been impeded by overlapping policies, lack of synchronization, untimely and unclear guidance causing different interpretations making some localities unable to implement instructions. The approval procedures for investment projects in Vietnam are still lengthy, and sometimes slow in many places, which may lose the opportunity to immediately attract investment projects of multinational corporations.

Furthermore, REDD+ and emissions reduction were formed in top-down processes, led by

central government agencies with support from scientists and donor communities, and no proper dialogues or consultations with business actors or local communities had taken place. Private operators in Vietnam in sectors associated with major drivers of deforestation and forest degradation in Vietnam are absent in REDD+ decision making. The dominant role of government agencies in REDD+ policymaking limits political space for non-state actors in Vietnam, such as NGOs and civil society organizations (CSOs), to exert influence on final policy outputs. Some domestic CSOs have also taken an informal approach in forming personal connections with policymakers to propose ideas on the inclusion of ethnic minority rights and gender equality, both of which are now included in the National REDD+ Action Plan. However, they have a weak understanding of social and environmental safeguards, and their approaches to REDD+ monitoring have so far been weak, due to the complex nature of the work involved, which requires the participation of many parties. Other challenges identified by CSOs in Vietnam are the lack of legal support, financial and human resources, and clear policies on CSO operationalization. Vietnam's recognition of citizens and human rights is guaranteed in its successive constitutions. However, very few of representatives of vulnerable groups such as ethnic minority people or the poor are included in consultation processes. As human rights and democracy are seen as politically sensitive issues in Vietnam, FPIC is likely to be more accepted by the government if it is built upon the national legal framework on citizens' rights.

Recommendations

Future projects and investments should prioritize support for the Government of Vietnam in (i) refining policies and institutional settings on nature-based solutions and REDD+; (ii) enhancing cross-sectoral and cross-level collaboration; (iii) refining benefit-sharing plans for REDD+ and LEAF; (iv) strengthening ethnic minority people involvement in nature-based solutions, REDD+ policies, and LEAF; (v) supporting and promoting technology transfer and artificial intelligence towards an accountable and transparent financial distribution and benefit-

sharing plan for ethnic minority people; (vi) support in promoting policies and technologies to address illegal logging with special attention to small-scale and informal enterprises; (vii) providing financial and technical assistance for both national and subnational governments and local communities in monitoring forests and drivers of deforestation and forest degradation; and (viii) enhancing stakeholders' capacity for and awareness of REDD+ and LEAF. Current efforts toward effective, efficient and equitable outcomes of REDD+ can be further enhanced by a stronger political commitment to addressing drivers of deforestation from all sectors, broader changes in policy framework that create incentives for avoiding deforestation and degradation, cross-sectoral collaboration and committed funding from both government and developed countries.

Building capacity for IPLCs is essential to enhance their involvement in REDD+, LEAF and emissions reduction initiatives, but this is not enough. Not only does the capacity of individuals need to be strengthened, but organizational and political capacities also need to be enhanced. The major principle to be followed is that the institutional framework should be location-specific and should respect the local jurisdiction, and the cultural, ecological and economic circumstances of the area. Flexibility should be retained within the contract framework for each commune to negotiate an appropriate institutional arrangement that best reflects the social conditions of the area. It is also clear that variations in context also mean that, even if a programme is successful in one location, careful consideration is required before applying the same programme to another area. It is also important to design payment schemes that are relevant to local needs as this will encourage a higher level of commitment from poor households to participate in the scheme and fulfil contract requirements. Consultation with and engagement of the poor in all project stages would help ensure effective implementation of future emissions reduction schemes. It is likely to be costly to establish new organizations for implementation of emissions reduction projects. Using existing and trusted institutions and organizations from the local area should

not only increase local ownership of Payments for Ecosystem Services (PES) schemes but also minimize the costs of administration.

Equitable emissions reduction policies and projects have the potential to improve both socioeconomic and environmental outcomes. However, they need to be sympathetic to government policies and strategies in addressing poverty and environmental issues. Implementation of equitable emissions reduction policies and projects requires: (i) improvement of current land-use rights systems; (ii) improved understanding of REDD+, LEAF and emissions reduction

schemes among decision makers and willingness to participate among environmental service sellers; (iii) active and accountable participation of intermediaries, particularly local institutions; (iv) accountable, equitable and transparent benefit-sharing mechanisms; (v) enhanced involvement of the poor and their representatives in negotiations; and (vi) schemes designed to fit in with local conditions and identify the true needs of IPLCs. Public participation also requires sufficient time and resources dedicated to proper consultation processes, experienced intermediaries who can bring people together at the same time, and getting people to actively participate in activities.

1 Introduction

Vietnam currently ranks 21st in the world for greenhouse gas emissions, and 2nd in ASEAN, after Indonesia (Truong 2021). Accordingly, the Government of Vietnam is always interested in developing and implementing national programmes and policies in response to climate change. On 20 July 2020, the Prime Minister issued the National Climate Change Adaptation Plan for 2021–2030 with vision to 2050 through Decision No. 1055/QĐ-TTg. The plan aims to reduce vulnerability and risk to the impacts of climate change by strengthening the resilience and adaptive capacity of communities, economic sectors and ecosystems by promoting the integration of climate change adaptation measures into the strategic planning system. Vietnam also identifies green growth as a key goal and task in its sustainable development strategy. To date, Vietnam is one of the few countries that has increased its contribution to GHG emissions reduction in its Nationally Determined Contribution (NDC) (Communist Party Press 2021).

Through its NDC, the Government of Vietnam has indicated that the forestry sector is expected to play a significant role in mitigating climate change. The NDC and forestry policies emphasize the role of Payments for Forest Environmental Services (PFES) and Reducing Emissions from Deforestation and forest Degradation (REDD+) development as means for achieving NDC target (Rastall and Nguyen 2016; Vietnam NDC 2020). Vietnam became one of the first nine countries selected to pilot the United Nations REDD+ Programme and, in 2009, also one of the first to receive approval for the REDD+ Readiness Proposal (R-PIN) of the World Bank's Forest Carbon Partnership Facility. Vietnam is also the first country in the Asia-Pacific region and the fifth country globally to sign an Emissions

Reductions Payment Agreement (ERPA). The government perceives this payment agreement as a new tool to encourage sustainable land management and help connect Vietnam to other sources of climate finance (Do 2020; World Bank 2020). ERPA is also expected by the government agencies to increase earnings for forest owners through revenue from emissions reductions, improve planted forest productivity and sustainable livelihoods, and increase awareness among government agencies, forest owners, communities, households and the private sector of the value of forest carbon. Up to 95% of total emissions reduction concessions under the ERPA can be used to fulfil Vietnam's commitments in implementing the Paris Agreement and its NDC (Do 2020).

Over the past 10 years of preparation for REDD+ readiness and implementation, Vietnam has made great strides in capacity building for stakeholders, and developing national REDD+ benefit-sharing design, safeguards and measurement, reporting and verification (MRV). REDD+ has gradually been incorporated in forestry sector policy and government socioeconomic objectives (Van and Ha 2019). Vietnamese policymakers also advocate following strict protection of natural forests, focusing on the development of planted forests and using the multifaceted environmental values of forests, including emissions reduction and forest carbon sequestration services (Ha 2020). However, Vietnam has struggled to achieve economic development in a sustainable manner and prevent adverse impacts from environmental degradation and climate change (Asian Development Bank 2013). During the Covid-19 pandemic many people have entered forests to harvest timber and other forest products for earnings, making forest protection difficult (Van 2021). The country's

continued dependence on coal to meet its growing energy needs (Shearer et al. 2019; World Bank 2019) and government plans to double power generation by 2030 (*The Economist* 2020) also pose risks to Vietnam's climate change mitigation commitments. Despite the country's plans to use domestic schemes like Payment for Forest Environmental Services (PFES), such market-based approaches may be considered means for polluters to continue and extend their use of fossil fuels and cause emissions (Germanos 2019). Further, Vietnam's new conservation policies often prioritize tree planting rather than emissions reductions (Clouse 2020). Understanding these policies, as well as the underlying factors that led to them, is therefore important in the future implementation of REDD+.

This report identifies the drivers of deforestation and degradation in Vietnam, and then analyses aspects of the social, political and institutional context that might constrain or support the design and implementation of nature-based solutions, carbon offsetting projects and REDD+ in Vietnam. It also aims to increase understanding of the national and provincial governing bodies, how they interact, their knowledge and capacity to engage in and implement REDD+ and identify gaps in stakeholders' capacity to implement REDD+. The recommendations contained in this report are intended for project investors and organizations who have interest in developing and implementing emission reduction and REDD+ projects in Vietnam.

2 Methods

The research team adopted a number of research methods:

Policy review: Sectoral policies relating to climate change mitigation and adaptation, social inclusion and social safeguards were reviewed to explore government discourses, priorities and commitments to nature-based solutions, forestry adaptation and mitigation, and the national institutional setting for operating and monitoring political commitments and policy implementation.

Literature review: Academic and grey literature were reviewed to identify opportunities and challenges for international, national and

subnational actors to implement climate change policies and projects.

Key informant interviews: In total, interviews were conducted with 21 experts from government agencies, donors, international organizations, national NGOs, ethnic minority people organizations, academic institutions and private sector actors. The aims of these interviews were to understand climate change governance as well as opportunities and challenges for Vietnam to implement climate change policies effectively, efficiently and equitably, and to identify practical recommendations for Vietnam and project investors in upcoming years.

3 Overview of forest status and the forestry sector in Vietnam

3.1 Quantitative estimates of drivers of deforestation and forest degradation in Vietnam

3.1.1 Changes in forest cover from 1943 to 2020

In 1943 when the first data on forest area was published, natural forest, mostly primary forest, covered 14.3 million hectares (ha). Between 1943 and 1990, many of Vietnam’s forests were cleared, with forest cover declining dramatically from an estimated 43% to 28% of the nation’s terrestrial area. In 1990, the government began to recognize the need for reforestation, environmental protection and biodiversity conservation, after which a number of programmes and projects were implemented, including the re-greening barren land programme (Directive 327-CT dated 16 September 1992) and 5-million-hectare reforestation programme (Prime Ministerial

Decision 661/QD-TTg dated 29 July 1998). Plantation forests and natural regeneration helped to increase total forest area to an estimated 13.3 million ha in 2010, from 9.2 million ha in 1992. Plantation forest area has expanded rapidly, particularly after 1995, and contributed significantly to Vietnam’s forest cover. In 2010, the Prime Minister approved a plan for forest protection and forest development for the 2011–2020 period (Decision 57/2012/QD-TTg dated 9 January 2010) setting targets to increase forest cover to 42–43% by 2015 and 44–45% by 2020. Many programmes and projects were promoted during the 2010–2020 period to achieve these targets. As a result, forest cover increased from 39.5% in 2010 to 42% in 2020, still 3% lower than the target set under Decision 57/2012/QD-TTg. Changes in forest cover from 1943 to 2020 according to data from the Ministry of Agriculture and Rural Development (MARD) are shown in Figure 1.

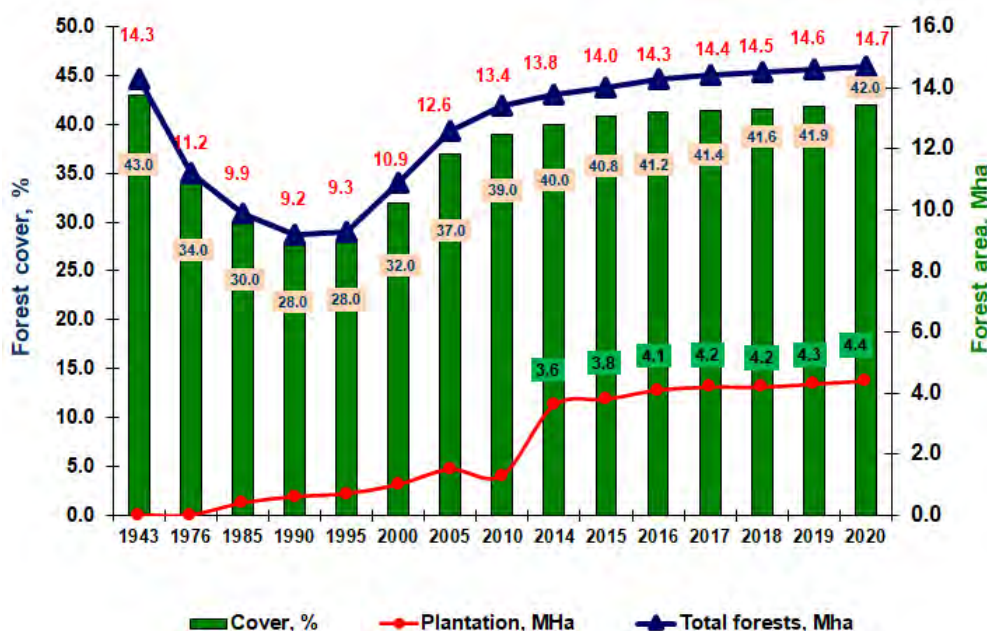


Figure 1. Changes in forest cover from 1943 to 2020

Remarkably, total forest area in 2020 was 1,289,140 ha higher than in 2010, mainly due to plantation forest expansion, with the area of plantation forests increasing significantly from 3.1 million ha in 2010 to 4.4 million ha in 2020. It was a different case for natural forests, with natural forest area falling by 0.2% or 25,631 ha over the same period at an average rate of 2,563 ha annually (Table 1). It is generally acknowledged that natural forests continue to become more fragmented and degraded.

By the end of 2020, Vietnam's forest area comprised: 2,173,231 ha of special-use forest (2,081,425 ha of natural forest and 91,805 ha of plantation forest); 4,685,504 ha of protection forest (4,074,519 ha of natural forest and 614,985 ha of plantation forest); and 7,818,480 ha of production forest (4,127,240 ha of natural

forest and 3,691,240 ha of plantation forest). As regulated, forests are assigned to and managed by various parties, including forest management boards, economic organizations, households, communities, etc. Currently, approximately 58% of Vietnam's forest area is managed by the state through protection forest management boards, special-use forest management boards, the armed forces, commune people's committees, etc. Forest area managed by households, individuals and communities accounts for 29% of the total forest area (Decision 1558/QĐ-BNN-TCLN dated 13 April 2021 on national forest data for 2020). Distribution of forest area by ecological region is presented in Table 2 below. It is worth noting that despite forest area and forest cover in Vietnam increasing over time, forest quality has declined significantly, with most forests being degraded and having low levels of biodiversity.

Table 1. Changes in forest area during the 2010–2020 period

Year	Total forest area (ha)	Natural forest area (ha)	Plantation forest area (ha)
2010	13,388,075	10,304,816	3,083,259
2011	13,515,064	10,285,383	3,229,681
2012	13,862,043	10,423,844	3,438,200
2013	13,954,454	10,398,160	3,556,294
2014	13,796,506	10,100,186	3,696,320
2015	14,061,856	10,175,519	3,886,337
2016	14,377,682	10,242,141	4,135,541
2017	14,415,381	10,236,415	4,178,966
2018	14,491,295	10,255,525	4,235,770
2019	14,609,220	10,292,434	4,316,786
2020	14,677,215	10,279,185	4,398,030
Difference between 2010 and 2020	1,289,140	-25,631	1,314,771

Source: MARD data on forest cover change published from 2010 to 2020

Table 2. Forest area and forest cover by ecological region in 2020

Region	Forest area (ha)	Natural forest (ha)	Plantation forest (ha)	Forest cover (%)
Total national	14,677,215	10,279,185	4,398,031	42.0
1. Northwest	1,782,210	1,574,797	207,414	46.4
2. Northeast	3,949,249	2,364,934	1,584,315	56.3
3. Red River Delta	83,328	46,269	37,059	6.18
4. North Central Coast	3,126,704	2,205,433	921,271	57.4
5. South Central Coast	2,443,185	1,570,943	872,242	50.4
6. Central Highlands	2,562,205	2,179,794	382,411	45.9
7. Southeast	480,107	257,122	222,985	19.4
8. Southwest	250,227	79,893	170,334	5.5

Source: Decision 1558/QĐ-BNN-TCLN dated 13 April 2021 on national forest data for 2020

3.1.2 Deforestation and forest degradation in Vietnam

During the 1945–1975 period, Vietnam lost around 3 million ha of forest, an average of 100,000 ha annually. The deforestation rate increased over the 1975–1990 period, with a total of 2.8 million ha of forest lost at an average rate of 140,000 ha annually (Huong 2010). Even though the Government of Vietnam's efforts to increase forest cover over the 30-year period from 1990–2020 are worthy of recognition, forest conversion to non-forest land uses is still happening at various rates across the country, while forest quality continues to deteriorate, and plantation forest becomes increasingly dominant.

The forest cover analysis for REDD+ implementation in Vietnam estimated annual national deforestation rates for 2000–2005, 2005–2010 and 2010–2018 to be 249,000 ha, 220,000 ha and 148,000 ha, respectively (Vu 2021b). Forest loss through conversion of forested to non-forested land, and forest degradation with the deterioration of forest quality and decrease in forest carbon reserves were analysed by region for the 2000–2018 period based on results of national forest surveys and remote sensing data (Table 3).

Total deforestation over this period was 2,395,043 ha, an average of 133,058 ha annually. Deforestation was highest in the Central Highlands, followed by the Northeast and Southeast regions. The majority of this loss (92%) was due to conversion to non-forest land and other land uses. By forest type, restored forest showed the greatest loss at 666,150 ha, accounting for nearly 29% of total forest loss, followed by plantation forest at 630,100 ha (26.3%) and “poor”¹ forest at 285,434 hectares (12%). Bamboo forests, mixed forests, “medium”² forests and deciduous forests also lost areas of 140,000 to 175,000 ha.

Total forest degradation nationwide over the period was 2,487,796 ha, with the Northeast, North Central Coast and Central Highlands regions accounting for 72.3% of the total

degraded forest area. According to the forest change matrix from Vu et al. (2021c), the proportion of “rich”³ forests degraded during this period was 336,935 ha, accounting for 44.3% of the total “rich” forest area, with 67% of this figure becoming “medium” forest and the remainder becoming “poor” forest, restored forest and mixed forest. The total area of “medium” forest degraded during this period was 632,043 ha, with 267,486 ha becoming “poor” forest, 209,468 ha becoming restored forest, 97,430 ha becoming mixed forest, and the remainder becoming bamboo or plantation forest. A key challenge for Vietnam is that because the government allows conversion of poor and degraded forests to non-forest land and production forests, provincial governments and forest owners often attempt to declare “rich” forests as being “poor” or overexploit them so they can be converted for other uses. Due to weak monitoring and evaluation (M&E), a large area of “rich” forests is being degraded and destroyed.

In terms of deterioration in forest quality, before 1945 Vietnam's forests had wood reserves of around 200–300 m³ per ha, in which precious timber species such as Dinh, Lim, Sen, Tau, Nghien, Trai and Gụ were very common, and trees with stem diameters of 40–50 cm accounted for 40–50% of standing stock. Since then, forest quality has deteriorated significantly, leaving mainly “poor” forests with low economic value. Forest timber reserves in 1993 were estimated at 525 million m³, averaging 76 m³ per ha per year. The current average growth rate is 1–3 m³ per ha per year, and for planted forests it can reach 5–10 m³ per ha per year. Many rare and endangered plant species need to be protected, including Cam lai (*Dalbergia bariaensis*), Tram huong (*Aquilaria crassna*), Sam bong (*Amentotaya argotenia*), Thong tre (*Podocarpus neriifolius*), Go do (*Azelia xylocarpa*), Trac (*Dalbergia cochinchinensis*), Giao xe tua (*Sterospermum ferebriatum*) and Goa bong (*Bombax insigne*) (Huong 2010).

The Vietnam Forest Reference Emission Level/Forest Reference Level (FREL/FRL) submission to the United Nations Framework Convention

1 Vietnam defines “poor” forest as having standing stock of 10–100 m³ per ha.

2 “Medium” forest is defined as having standing stock of 101–200 m³ per ha.

3 “Rich” forest is defined as having standing stock of 201–300 m³ per ha.

Table 3. Deforestation and forest degradation by ecological region from 2000 to 2018

Ecological region	Deforestation (ha)	Forest degradation (ha)
1. Northwest	290,060	214,405
2. Northeast	459,664	617,476
3. Red River Delta	22,589	7,641
4. North Central Coast	278,304	592,677
5. South Central Coast	153,927	261,044
6. Central Highlands	679,875	587,714
7. Southeast	400,318	192,210
8. Southwest	110,307	14,629
National	2,395,043	2,487,796

Source: Vu et al. 2021c

on Climate Change (UNFCCC) estimated that as of 2010, over two-thirds of Vietnam's natural forests were "poor" or regenerating, while "rich" and closed-canopy forest constituted only 5% of the total. Between 1995 and 2010, the area of natural forest classified as "rich" decreased at a rate of 35,000 ha annually, while "medium" forest fell by 66,000 ha per year (McNally et al. 2016). As a consequence, according to the FREL/FRL report, estimated emissions from deforestation/conversion and forest degradation for the 2005–2010 period were 106.12 Mt CO₂e (21.22 Mt CO₂e per year) and 163.52 Mt CO₂e (32.70 Mt CO₂e per year), respectively. Similarly, emissions from deforestation/conversion published in a national greenhouse gas inventory report for 2010 amounted to 35.7 Mt CO₂e (Vu et al. 2019).

3.1.3 Drivers of deforestation and forest degradation

There are different points of view on the drivers of deforestation and forest degradation in Vietnam. Relying on comprehensive literature reviews, this report provides in-depth analysis of the four key direct drivers (proximate causes): wood extraction; conversion for other land uses; forest fires; and political economy of deforestation (see Figure 2). These drivers are mapped in terms of existing policy measures to identify gaps.

3.1.3.1. Legal logging

The average volume of timber harvested from natural and planted forests over the 1995–2020

period (Table 4) was 6,082,400 m³ annually for the whole country. Most timber production was concentrated in the North and South Central Coast regions (2,770,700 m³ annually), followed by the Northwest and Northeast regions (1,739,800 m³ annually). Production for the whole country and most regions has increased steadily since 2005 with rapid acceleration from 2015 (Table 4).

There have been huge differences in production between forest ownership types. Annual production for the 2005–2019 period was highest in non-state forest at an average of 7,011,600 m³ annually, accounting for 74.6% of total production. Most of this was from forest under private sector ownership, averaging 6,816,500 m³ annually and accounting for 72.6% of the figure. Timber production from state-owned forest was 1,735,500 m³ annually, accounting for 24.3% of total production. Thus, only around 3.1% of timber produced annually came from other sectors (collectives, households and foreign investment sectors) (Table 5).

Legal logging was one of the major causes of forest loss recorded by the Forest Protection Department (FPD) in figures issued annually by MARD from 2002 to 2013 (Table 6). Accordingly, the average area of forest loss recognized as legal logging during this period was 43,116 ha annually, with plantation forests accounting for 41,718 ha and natural forests only 1,399 ha annually.

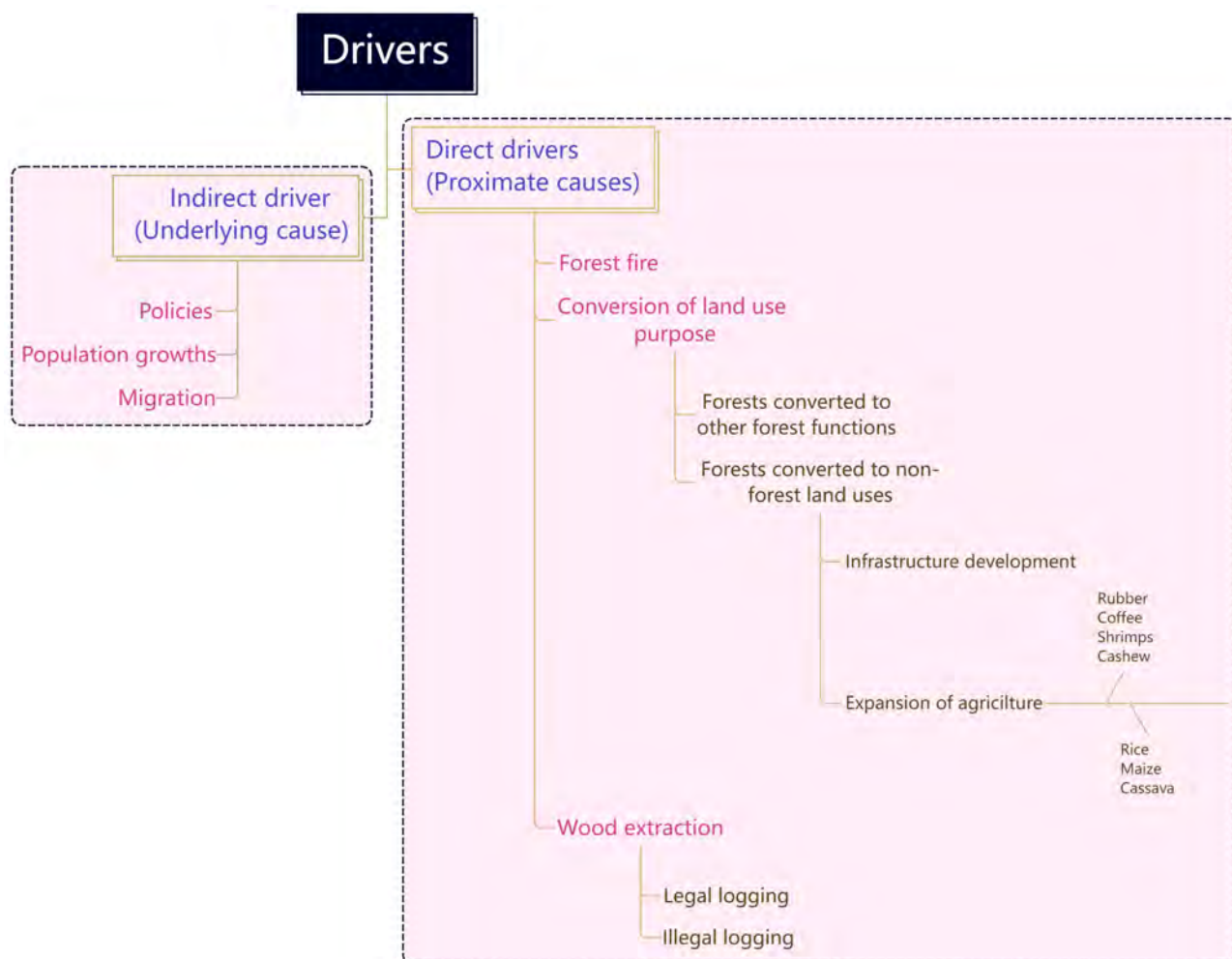


Figure 2. Key drivers of deforestation and forest degradation

Table 4. Timber production (m³) by region

Year	Whole country	Red River Delta	Northwest and Northeast	North and South Central Coast	Central Highlands	Southeast	Mekong River Delta
1995	2,793,100	291,800	790,000	653,500	415,300	121,800	520,700
1996	2,833,500	289,400	819,400	704,500	388,600	137,500	494,100
1997	2,480,000	201,500	665,500	646,800	335,100	103,200	527,900
1998	2,216,800	196,100	652,800	540,200	245,400	93,200	489,100
1999	2,122,500	142,600	692,300	497,000	243,500	84,900	462,200
2000	2,375,600	148,100	719,500	558,900	372,800	114,000	462,300
2001	2,397,200	133,500	751,100	553,200	395,200	105,400	458,800
2002	2,504,000	133,800	716,200	577,300	419,800	96,500	560,400
2003	2,435,800	121,300	687,300	656,300	313,000	76,100	581,800
2004	2,627,800	116,400	786,500	752,400	324,100	79,300	569,100
2005	2,996,400	157,000	996,700	833,200	309,300	90,400	609,800
2006	3,128,500	163,500	1,063,600	870,800	328,700	100,900	601,000
2007	3,461,800	178,800	1,185,800	991,100	352,500	127,400	626,200
2008	3,610,400	188,400	1,208,700	1,070,800	375,700	149,100	617,700
2009	3,766,700	182,900	1,738,600	2,487,500	543,600	360,100	594,100
2010	5,988,100	264,200	1,328,100	1,237,700	416,500	262,800	610,100
2011	4,692,000	278,700	1,402,900	1,443,500	589,500	324,600	652,800

Continued on next page

Table 4. Continued

Year	Whole country	Red River Delta	Northwest and Northeast	North and South Central Coast	Central Highlands	Southeast	Mekong River Delta
2012	5,251,000	318,700	1,590,200	1,717,300	620,300	323,000	681,500
2013	5,908,000	382,400	1,731,100	2,349,900	539,600	323,600	581,400
2014	7,701,400	516,300	2,278,100	3,474,300	447,300	320,800	664,600
2015	11,304,300	491,500	3,254,900	5,877,800	601,900	345,400	732,800
2016	12,633,200	467,000	3,526,200	6,938,400	590,200	365,300	746,100
2017	14,181,800	471,900	3,820,800	8,014,500	679,800	382,700	812,100
2018	15,248,000	491,000	4,087,800	8,772,900	685,700	410,100	800,500
2019	16,314,000	497,500	4,315,200	9,562,300	699,300	437,900	801,800
2020	17,169,700	518,000	4,424,600	10,255,500	712,000	453,700	805,900

Source: Data compiled by the authors from the GSO website (<https://www.gso.gov.vn/so-lieu-thong-ke/>)

Table 5. Timber production (m³) by forest ownership type

Year	Total	State	Non-state				Foreign investment
			Total	Collectives	Private	Households	
2005	2,996,400	915,400	2,041,500	2,200	1,999,100	40,200	39,500
2009	3,766,700	1,257,100	2,459,900	2,500	2,406,800	50,600	49,700
2010	5,988,100	1,383,300	4,548,200	33,600	4,393,900	120,700	56,600
2011	4,692,000	1,893,000	2,737,100	3,400	2,670,700	63,000	61,900
2012	5,251,000	1,721,400	3,460,300	3,700	3,386,100	70,500	69,300
2013	5,908,000	1,890,600	3,940,600	4,200	3,856,100	80,300	76,800
2014	7,701,400	2,356,000	5,245,500	5,700	5,132,000	107,800	99,900
2015	11,304,300	1,981,300	9,228,800	20,800	8,991,100	216,900	94,200
2016	12,633,200	1,915,400	10,626,600	19,000	10,387,600	220,000	91,200
2017	14,181,800	1,968,400	12,025,200	24,900	11,631,400	368,900	188,200
2018	15,248,000	1,744,600	13,397,200	33,500	12,952,700	411,000	106,200
2019	16,314,000	1,799,600	14,428,200	45,500	13,990,500	392,200	86,200
2020	17,169,700						

Source: Data compiled by the authors from the GSO website (<https://www.gso.gov.vn/so-lieu-thong-ke/>)

Together with loss of forest area, harvesting without consideration for forest ecological characteristics contributed to a rapid decline in the quality of natural forests. Unsustainable selective logging of natural forest was one of the main reasons for the severe decline in forest quality, and resulted in many “rich” natural forests becoming “poor” secondary forests with few commercial species. Only 5% of natural forests were categorized as “rich”, while 17% were categorized as “medium” and 73% as “poor” as a result of decades of overexploitation (MARD 2014). The volume of timber harvested from natural forests declined steadily from around one million m³ in 1990 to 200,000 m³ in 2011 (Cao 2011).

Commercial timber exploitation in natural forests has all but ceased today following the introduction of a nationwide logging ban in

Table 6. Forest loss resulting from legal logging

Year	Legal logging (ha)		
	Total	Natural forest	Plantation forest
2002	14,365	1,806	12,559
2003	20,487	3,440	17,047
2004	16,600	238	16,362
2005	19,509	530	18,979
2006	23,314	120	23,194
2007	27,231	376	26,855
2008	33,710	355	33,355
2009	41,238	2,763	38,475
2010	49,635	1,892	47,743
2011	78,533	3,201	75,332
2012	67,572	1,254	66,318
2013	125,204	812	124,392

Source: Forest change data published by MARD for 2002 to 2013. MARD has published no data on legal logging since 2014.

natural forests (Prime Ministerial Decision No. 2242/QĐ-TTg dated 11 December 2014). Internationally certified natural forests are theoretically exempt from this logging ban, but so far only three forest management units are certified (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 limited as MARD's Sustainable Forest Management Action Plan 2015–2020 aims for only an additional 150,000 of certified natural production forests by 2020. In fact, as per Government of Vietnam Decree No. 118/2014/ND-CP, most state forest companies operating in natural forests are now undergoing “reorganization” away from “timber production” towards “service provision” because of the poor quality of their forests.

The majority of natural production forests are too depleted to serve immediately for timber production, and there is a need for active management measures to rehabilitate these forests and protect them from conversion and agricultural encroachment. Such measures are essential to ensure recovery of forests for exploitation in the future, and are necessary to tap the potential of these forests to contribute to REDD+ and uphold Vietnam's pledge to contribute to mitigating climate change. Indeed, the regeneration of natural forests is expected to contribute as much as 19–27% of Vietnam's overall reduction in greenhouse gases (McNally et al. 2016).

The timber supply has mainly come from plantations since the logging ban was imposed in Conclusion 97-KL/TW of the Political Bureau of the Party Central Committee dated 9 May 2014 (Government of Vietnam 2014). The fast growth in establishment of plantations has contributed significantly to the increase in the country's forest cover. The volume of harvested timber has also increased considerably since 2005 to meet increasing domestic wood processing demand. This logged volume increased from 3 million m³ in 2005 to around 20 million m³ in 2019. Estimates suggest that around 90% of timber is supplied from plantations, while the remainder originates from trees outside forests. Vietnam aims to achieve export value targets of USD 13 billion in 2020 and USD 20 billion in 2025 for timber and timber-based products (Prime Ministerial Decision 523/QĐ-TTg dated 1 April

2021 on approving the forestry development strategy for 2021–2030 and vision to 2050). As a response, various policies have been promulgated with incentives for forest growers to focus on native species and long-term rotation plantations for sawn log production. The most recent of these is MARD Decision 774/QĐ-BNN-TCLN dated 18 April 2014 on an action plan for improving productivity, quality and value of commercial plantations over the period 2014–2020. However, to date, these decisions have not led to a shift to longer-term rotations.

3.1.3.2. Illegal logging

By the late 1990s, as a result of the imposed logging ban, most logging taking place in Vietnam had been declared illegal, and a police-like force was in place to prevent it (To and Sikor 2008). Despite the ban, logging was widespread in the late 1990s, even though much of it was illegal. On paper, Vietnam has a legal framework to address illegal logging, but in fact unauthorized cutting and trading is still ongoing. A report by UNODC (2013), which was based on different government data sources, estimated violations of forest protection regulations numbering 40,800 in 2009, 33,857 in 2010, 29,551 in 2011, 28,940 in 2012 and 19,703 to September 2013.

According to an FPD annual report (2014), illegal logging was worst in areas of rich natural protected forests, easily accessible areas, border areas and regions with many grassroots small-scale timber processing facilities. Illegal logging threatens valuable species and vulnerable protected forests under the management of national parks, nature reserves and forest protection management boards (Nguyen 2016). Violations occurred in all national parks across the country. The 115,000-ha Yok Don National Park in Dak Lak province is a hotspot for forest violations because of its prized trees and its vast expanse (Thanh Nien News 2015). Other hotspots include Phong Nha-Ke Bang National Park in Quang Binh province, and Ba Be National Park and Ky Hy Natural Reserve in Bac Kan province.

Forest loss due to illegal logging was also recorded by FPD and issued annually by MARD from 2002 to 2013 (Table 7), where average forest loss recognized as resulting from illegal logging over the 2002–2013 period was 7,347 ha annually.

Table 7. Forest loss resulting from illegal logging

Year	Illegal logging (ha)		
	Total	Natural forest	Plantation forest
2002	39,670	38,729	941
2003	4,436	4,287	149
2004	3,661	3,061	600
2005	8,829	7,643	1,185
2006	8,449	6,199	2,249
2007	1,784	1,648	136
2008	3,852	3,395	457
2009	3,459	3,338	121
2010	3,942	1,447	2,495
2011	6,703	6,097	606
2012	2,170	2,036	134
2013	1,204	1,137	67

Source: Forest change data published by MARD from 2002 to 2013

However, pursuant to this statistical data, illegal logging was a top cause of forest loss only in 2002, with 39,670 ha lost, and less of a concern from 2003 onwards.

Illegal logging has caused the gradual degradation of forests leading to their eventual conversion. Most illegal timber in Vietnam is high-value hardwood species such as Lim Xanh (*Erythrophleum fordii*), Re Gung (*Cinnamomum parthenoxylon*), Go do (*Afzelia xylocarpa*), Po-mu (*Fokienia*), etc. High demand for precious wood for decoration and medicinal purposes in China has driven illegal felling and trade, while demand in Vietnam has increased in recent years (McNally et al. 2016).

In addition, illegal logging has a significant impact on the most valuable remaining forests and on the people who live in them and rely on the resources they provide (Reboredo 2013). Illegal logging's negative impacts are not only its direct damage to the quality of forests, but also the process of gradual forest degradation it causes, which ultimately leads to conversion. Illegal logging may increase the likelihood of other causes of degradation, such as fires and storms, and the conversion of degraded forests for agriculture (Griscom 2009).

Many legal documents in Vietnam determine what is legal or illegal logging. However, legislation is subject to legal loopholes and/or is open to (mis)interpretation enabling illegal or quasi-illegal activities (World Bank 2010). This leads to a situation where wood imports are

deemed legal even though they may have been illegally exported from elsewhere, in particular from Lao PDR and Cambodia. This clearly highlights the need to tackle regional issues when working on illegal logging in Vietnam. Underpinning this is the lack of a standard definition and verification system for legal wood sourced nationally or internationally. In addition, there is no specific legality verification system for sawn timber from sawmills entering the market.

There are also illegal or quasi-legal activities through the complexity and volume of laws and guidelines. For example, companies or businesses may purposely 'misinterpret' harvesting guidelines in order to harvest volumes exceeding quotas or cut down trees in the wrong places. As highlighted with the case of rubber, large areas of 'degraded' natural forest have been legally converted inside forests managed by the state, particularly in the Central Highlands. This also raises concerns about the potential for future policies reclassifying protected forest as production forest.

Maximum penalties for illegal logging defined in Decree 157/2003/ND-CP dated 11 November 2013 on penalties for administrative violations in forest management, forest development, forest protection and forest product management are dissuasive, but difficult to implement. Therefore, the perceived penalties are substantially lower than the potential benefits of operating illegally, with most cases settled in civil court with fines rather than criminal punishment. Also, inspection and enforcement system limitations,

particularly in more remote areas, mean there is a low probability of being caught.

3.1.3.3. Conversion for other land uses

Official data on forest loss due to conversion for other land uses compiled by FPD and published by MARD for 2003–2013 (Table 8) shows conversion for other land uses being a major cause of forest loss and averaging 31,142 ha annually over that period. It is worth noting that 60% of this forest loss, an average of 19,943 ha annually, occurred in natural forests.

There are two types of forest conversion. The first is when “forests are converted to non-forestry land uses permanently”, for example when forests are converted to agriculture production (annual and perennial crops, etc.) or for infrastructure development (roads, power lines, construction, etc.). The second is when forests are converted to other forest functions, for example when protection forests are converted to production forests (Government of Vietnam 2017).

MARD reviewed and assessed forest conversion to non-forest use purposes for the 2006–2014 period to ensure conversion complied with the legal obligation to plan forestry activities in a non-forested area of equal size. Over this period, a total 385,157 ha of forest was converted to non-forest use purposes through 1,885 socioeconomic development projects on 299,483 ha of natural forests and 85,674 ha of plantation forests. The average area of forest converted annually was 48,415 ha. Around 68% of converted forest area

was for rubber development, followed by agriculture at 13%, hydropower plants at 6%, mining at 4% and other purposes (infrastructure, security, industry and resettlement) at 10% (Table 9).

Conversion of forests to non-forestry purposes varied greatly between regions. Conversion of forests to rubber plantations predominated in the Central Highlands, North Central Coast and Southwest regions, accounting for 37%, 23% and 24%, respectively. Provinces with large areas of forest conversion for rubber were Kon Tum, Gia Lai, Dak Lak and Lam Dong in the Central Highlands region; Binh Phuoc in the Southeast region; Nghe An in the North Central Coast region; and Dien Bien and Lai Chau in the Northwest region (Table 10).

Table 8. Forest loss due to conversion for other land uses

Year	Conversion for other land uses (ha)		
	Total	Natural forest	Plantation forest
2003	24,689	22,235	2,454
2004	34,942	24,916	10,026
2005	26,606	15,973	10,632
2006	30,890	18,449	12,441
2007	16,263	11,462	4,802
2008	29,236	21,190	8,047
2009	38,636	26,432	12,204
2010	46,519	29,088	17,431
2011	24,069	13,206	10,863
2012	59,172	32,307	26,865
2013	11,542	4,120	7,421

Source: Forest change data published by MARD from 2003 to 2013

Table 9. Forest conversion to non-forestry purposes 2006–2014

Conversion for	No. of projects	Total forest area (ha)	Natural forest (ha)	Plantation forest (ha)	Percentage (%)
Hydropower plants	237	22,350	19,515	2,835	5.8
Mining	545	14,870	10,995	3,875	3.9
Rubber plantations	460	260,876	231,567	29,309	67.7
Agriculture	211	49,379	10,583	38,796	12.8
Resettlement	57	5,026	2,655	2,371	1.3
Military security	99	3,566	2,673	893	0.9
Industry and factories	73	3,854	2,668	1,186	1.0
Tourist facilities	122	2,640	2,418	222	0.7
Irrigation construction	80	5,101	4,707	394	1.3
Rural infrastructure	1,107	17,495	11,702	5,793	4.5
Total national 2006–2014	1,885	385,157	299,483	85,674	100

Source: Projects planting forest to compensate for forests converted to non-forestry purposes (MARD 2014)

Over the 2006–2014 period, forest conversion to agriculture production (cash and substantial crops, such as coffee, cashew nut, pepper, tea, cassava and maize) was the second largest by area. Such conversion mainly occurred in the Southwest region, which accounted for around 91% of forests converted for this purpose. Provinces in the region with large areas of forest conversion for agriculture were Long An, Tra Vinh, Kien Giang and Tien Giang. Prime Ministerial Decision 750/QD-TTg dated 3 June 2009 approving the rubber development master plan to 2015 with vision to 2020 set a target of 800,000 ha for 2015 to be managed sustainably until 2020. It also indicated that land for rubber development would be sourced from “poor” agricultural land, unused land and “poor” natural forest land suited to biophysical requirements for rubber development. To implement this strategy, MARD issued several circulars guiding rubber plantation development and specifying technical requirements including biophysical conditions for rubber planting, where “poor” forests were permissible for conversion in different ecoregions (MARD Circulars No. 127/2008/TT-BNN dated 31 December 2008; No. 10/2009/TT-BNN dated 4 March 2009; and No. No. 58/2009/TT-BNNPTNT dated 9 September 2009). These circulars required approval for any project converting forest to rubber plantation, and specified actors engaged in rubber development as being forest owners (forest companies, households and organizations). Provincial-level departments of agriculture and rural development were responsible for approving

rubber plantation development in forest areas, while the Central Forestry Directorate (now the Vietnam Administration of Forestry) was responsible for monitoring and verification.

The area of rubber plantations doubled over the 2005–2015 period, then fell slightly from 2015 to 2020 (Figure 3). Planted area for cash crops like coffee, cashew, pepper and tea has changed over the 2005–2020 period, with coffee and pepper increasing by 1.4 and 2.7 times, respectively, while cashew planted area fell, and tea remained relatively stable (GSO website) (Figure 4). In many cases, cash crop development, particularly coffee, encroached on forestland. The Doi Moi reforms in 1986 liberalized the economy and trade and allowed for opportunities to engage with commodity markets, in particular coffee.

MARD Decision No.1987/QD-BNN-TT dated 21 August 2012 approved a master plan to develop the coffee industry by 2020 and vision to 2030. The plan envisions slashing the coffee planting area nationwide to 479,000 ha by 2030, focusing on provinces in the Central Highlands, Central Coastal and Northwest regions. Prime Ministerial Decision No. 124/QD-TTg dated 2 February 2012 on approving the master plan on development of agricultural production to 2020 and vision to 2030 states the need to “keep a stable area of 450,000 ha of cassava to 2020; with cassava production of around 11 million tons for animal feed and biofuels in areas with slope gradients below 15 degrees, mainly in the Northern Mountains, North Central Coast, South Central Coast, Central Highlands and Southeast regions”.

Table 10. Percentages of total forest conversion for non-forestry purposes by region

Forest converted to	Northern Mountains	Red River Delta	North Central Coast	South Central Coast	Central Highlands	Southeast	Southwest
Hydropower plants	22.2	0.0	24.2	14.7	36.4	1.1	1.3
Mining	33.8	28.5	16.0	12.9	2.4	3.0	3.4
Rubber plantations	10.1	0.0	22.8	14.2	37.1	15.7	24.2
Agriculture	0.1	0.1	0.0	3.8	4.0	1.3	90.5
Resettlement	4.0	0.1	7.6	1.1	39.8	36.3	11.1
Military security	15.7	2.2	4.0	10.4	38.8	22.8	6.1
Industry and factories	5.0	4.1	1.6	3.0	3.6	72.3	10.5
Tourist facilities	5.6	1.8	1.3	46.9	1.6	38.8	4.0
Irrigation construction	0.3	0.8	18.2	25.7	54.5	0.3	0.0
Rural infrastructure	14.9	0.9	11.1	10.7	37.3	13.6	11.5

Source: Projects planting forest to compensate for forests converted to non-forestry purposes (MARD 2014)

Other crops potentially related to forest conversion are cassava and maize. Cassava planted area increased by 1.2 times between

2005 and 2020, peaking in 2016. However, maize planted area fell by 6% over this period and peaked in 2015 (GSO website) (Figure 5).

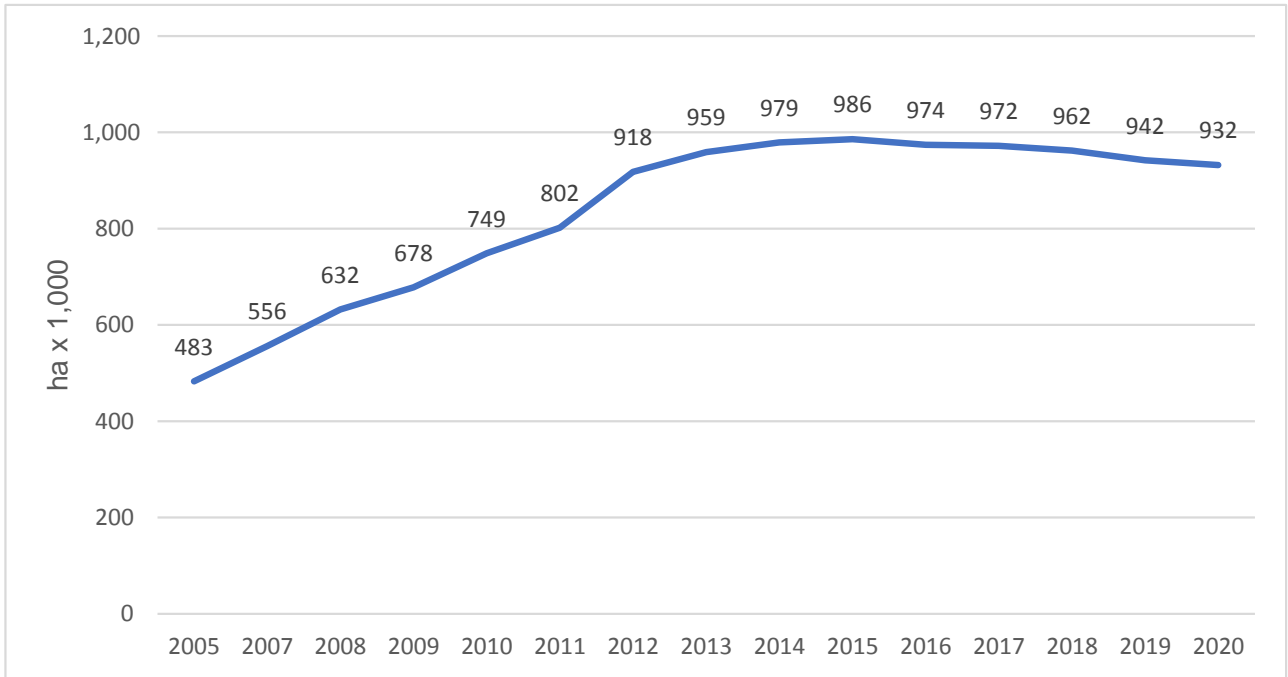


Figure 3. Change in area of rubber plantations from 2005 to 2020(ha x 1,000)

Source: GSO website

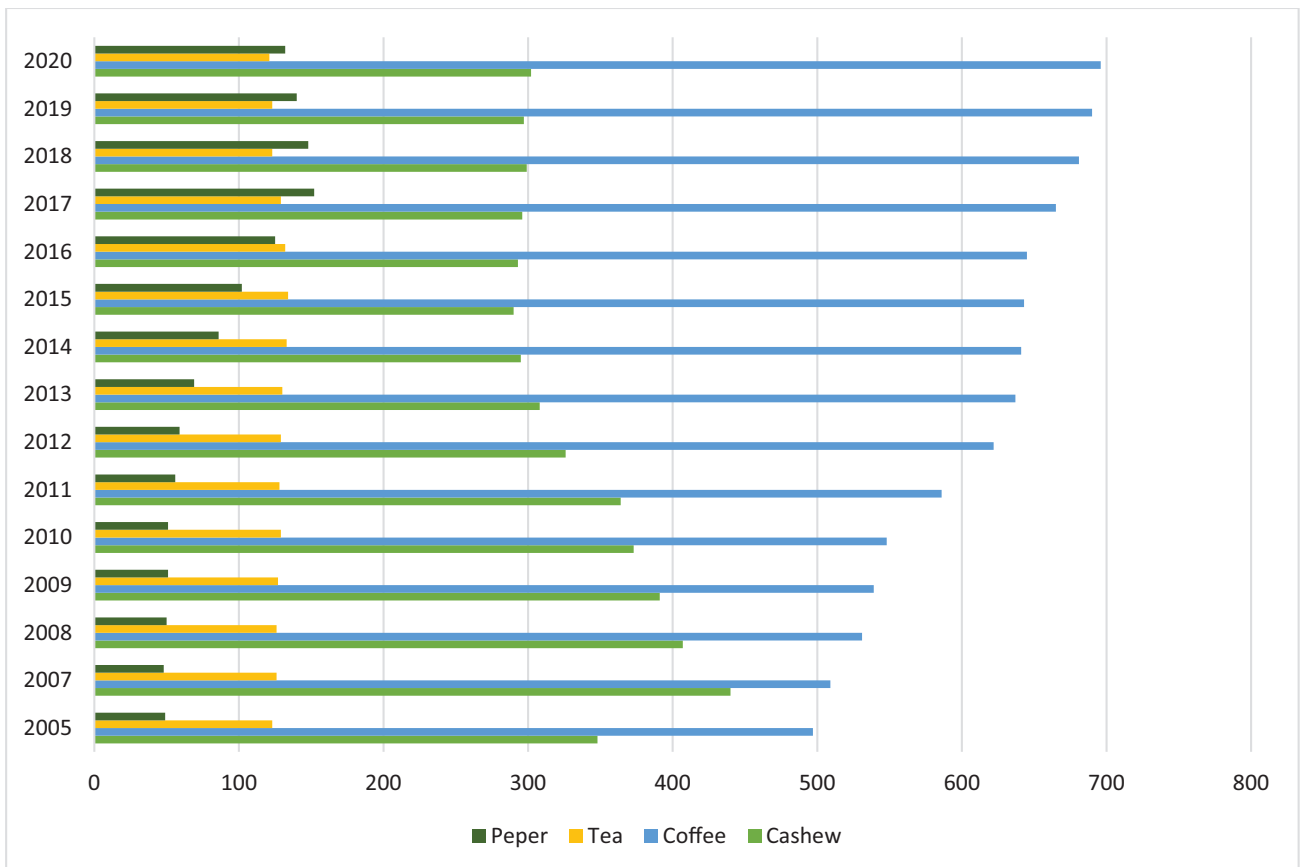


Figure 4. Change in planted area of main cash crops from 2005 to 2020 (ha x 1,000)

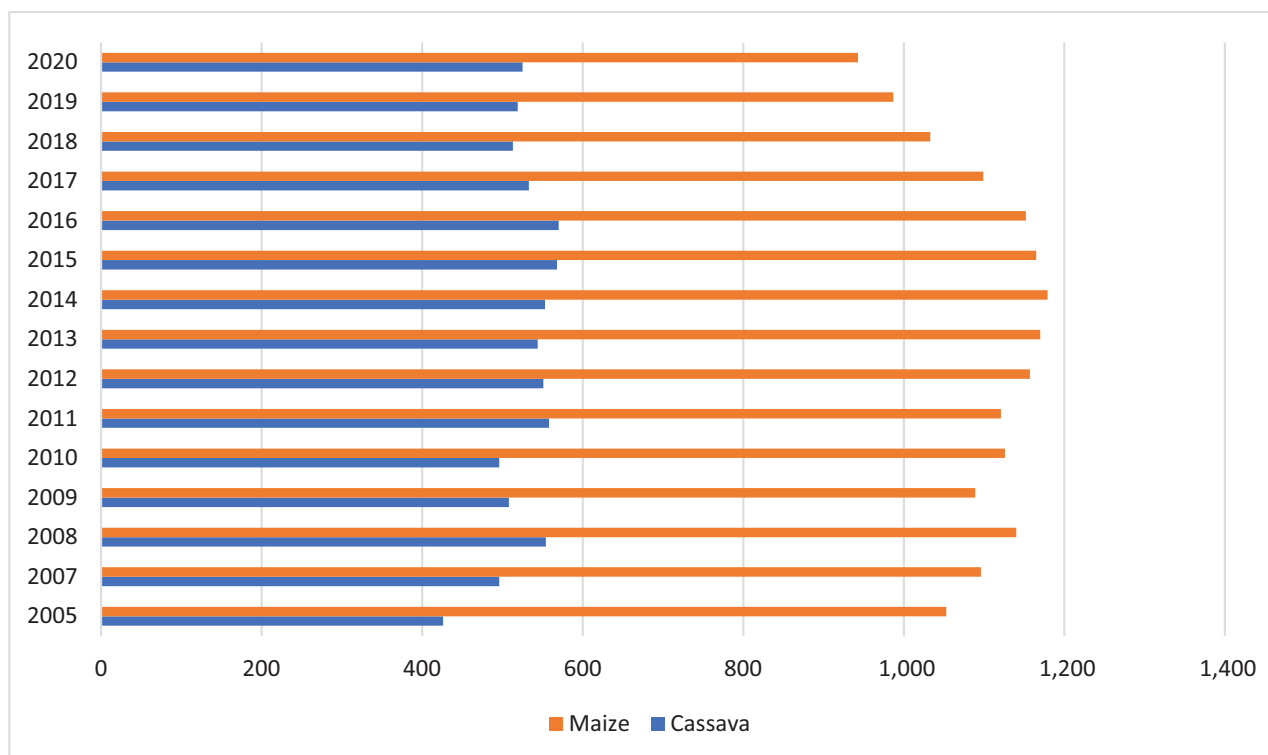


Figure 5. Change in planted area of cassava and maize from 2005 to 2020 (ha x 1,000)

Hydropower plant construction also contributed to forest loss, but only around 6% of total converted forest area, and commonly only in watershed areas. Hydropower plant construction was concentrated in the Central Highlands, North Central Coast, Northern Mountains and South Central Coast regions, with 36% of all forest conversion for hydropower occurring in the Central Highlands, followed by North Central Coast at 24%, Northern Mountains at 22% and South Central Coast at 15%. Provinces with large areas of forests converted for hydropower are Dak Nong, Nghe An, Lai Chau, Quang Nam, Lam Dong, Dak Lak, Gia Lai and Kon Tum.

Rural infrastructure development accounted for around 5% of all forest conversion, with the Central Highlands accounting for 37% of this figure, followed by the Northern Mountains at 14% and the Southwest region at 13%. Mining activities also contributed to forest loss accounting for around 4% of all forest conversion, with the Northern Mountains accounting for 34% of this figure, followed by Red River Delta at 29%, North Central Coast at 16% and South Central Coast at 12%. Other activities resulting in forest conversion were resettlement, military security, industry development, tourism facilities and irrigation

channel construction, which together contributed to around 5% of all forest conversion.

A total of 759,000 ha of forests were converted to other land uses over the 2000–2015 period (Tennessee et al. 2021), of which commodity production accounted for around 519,000 ha, or 68%. Globally, approximately 2 million ha of forests were converted for coffee during this period, with Vietnam estimated to account for around 12% of this figure (WRI 2021).

Infrastructure and hydropower plant development in forest areas can promote socioeconomic growth, but also provide better access to forests. Analyses of forest loss and degradation for 2000–2018 indicated correlations between forest loss and degradation rates and distance from residential areas and roads (Table 11).

Several assessments have focused on economic and environmental impacts of forest conversion. The latter include biodiversity degradation and loss, due to the loss and fragmentation of natural habitats (MONRE 2019). For example, environmental impacts associated with mining include loss of habitats for fauna and flora species, declining water quality, disappearance of aquatic species,

Table 11. Analysis of variation by distance to residential areas and roads

Forest changes	Distance <3 km (%)	Distance 3–5 km (%)	Distance >5 km (%)
Deforestation	63.8	19.0	17.2
Forest degradation	36.2	26.5	37.3

Source: Vu et al. 2019

reduced agricultural production and increased air pollution (Ky et al. 2015). The construction of hydropower plants has considerable impacts on biodiversity due to loss of habitats and species in areas used for reservoirs (Tu et al. 2013). While infrastructure construction generally contributes to socioeconomic development and poverty reduction, it provides easy access to forests, especially when roads cross forest areas. Consequently, infrastructure development creates increasing pressures on forests, leading to forest loss and degradation.

Changes in land use, especially conversion of natural forest to cropland, leads to reduced carbon stock. Depending on forest quality, total carbon stock in natural forests ranges from 145–491 tCO₂ per ha (MARD 2020). Estimated emissions associated with deforestation for 2000–2005 and 2005–2010 were 27.7 and 21.2 Mt CO₂e per year, respectively (MARD 2020). The annual figure for 2010–2018 was 15.8 Mt CO₂e (MARD 2020). An independent analysis estimated total carbon stock loss caused by forest conversion over 2000–2015 to be 51.5 Mt CO₂e (Tenneson et al. 2021).

The current visions for agriculture until 2020 and up to 2030, as stipulated in Prime Ministerial Decision No.124/QĐ-TTg on approving the master plan to develop agricultural production by 2020, are to stabilize the total area for most crops and focus on adding value to sectors.

The Doi Moi reforms in 1986 liberalized the economy and trade in order to meet the country's ambition for economic growth and poverty alleviation, and there was an unprecedented period of infrastructure development across the country. Viet Nam's roads doubled in length between 1990–2008, while strategic roads such as the Ho Chi Minh highway along the Ho Chi Minh trail further opened up more mountainous areas to roads and markets (World Bank 2009). New and better roads provided greater market opportunities

for agricultural crops (in some cases at the expense of forests). They are also likely to have brought illegal loggers. Moreover, the process to decide on hydropower and infrastructure projects tends to be opaque, lacks cross-ministerial input and provides limited opportunity for input and discussion from the public, including civil society. As a result, hundreds of hydropower dams have been permitted without notification to or consultation with key groups such as MARD, DARD and management boards of SUFs and protection forests.

Natural forests play significant roles in soil erosion control and water regulation. The loss of these forests leads to reduced ecosystem services, such as water regulation capacity and soil and coastline erosion control. Soil erosion rates in natural forests are 0.2–3.4 tons per ha per year, while water runoff rates are 84.3–310.0 m³ per ha per year (Sam et al. 2005). Figures for agricultural crop production are much higher, at around 22.6 tons per ha per year for soil erosion and 2,161 m³ per ha per year for water runoff.

3.1.3.4. Forest fires

Compared with the causes mentioned above, forest fire is a minor cause of deforestation and forest degradation. However, it is a matter of concern at certain times of the year and in certain areas of the country. Data and statistics on forest loss resulting from fires was collated by FPD and published by MARD for 2002 to 2013. Average area of forest loss for the 2002–2013 period for the whole country was 2,791.2 ha annually, mainly in plantation forests (2,063.8 ha annually). The largest areas of natural forest loss due to fires were recorded in 2004 and 2010 (Table 12). Since 2013, data on forest loss due to fires is no longer published annually. An online forest fire monitoring system (FireWatch Vietnam) developed under FPD uses satellite image data for early detection of fire hotspots across Vietnam. However, the system seems to have failings as information and data cannot be looked up.

Consequently, access to information and data on numbers of forest fires and forest loss due to fires is only available through unofficial data from a small number of articles on annual fires.

Forest fires generally occur during the dry season. The highest risk areas for forest fires are the Central Highlands, Northwest, Northeast and North Central Coast regions and the Melaleuca peat forest areas in Ca Mau and Kien Giang provinces. Data indicates the Northeast region is the most vulnerable to fires. In 2002, a series of devastating fires destroyed large areas of Melaleuca forest in U Minh Thuong National Park in the Mekong Delta region, focusing the attention of the government and the general public on the issue of forest fires. Between 2004 and 2008, 3,659 cases, which damaged 15,479 ha were reported. This equates to 3,096 ha per year on average (FPD 2009). According to a news report in the government newspaper Do (2021), by 30 November 2020, there had been 68 forest fires across the country; down 35% from 179 during the same period in 2019, while the fire damaged area was 645 hectares; down 68% from the 1,331 ha by the same period in 2019. Also, according to the report, with its harsh climate and large forest area, Nghe An province often had Level IV (dangerous) and Level V (extremely dangerous) fire warnings. The total burned area recorded in Nghe An province for 2020 was 122.38 ha, with 44.75 ha severely damaged.

Table 12. Forest loss due to fire

Year	Forest fires (ha)		
	Total	Natural forest	Plantation forest
2002	6,602.9	970.1	5,632.8
2003	1,784.8	670.2	1,114.6
2004	5,563.3	2,141.4	3,422.0
2005	5,114.1	454.6	4,659.5
2006	1,535.4	259.0	1,276.4
2007	2,328.1	696.7	1,631.4
2008	782.8	108.6	674.2
2009	967.6	93.6	874.0
2010	4,549.5	1,892.0	2,657.5
2011	1,185.6	21.5	1,164.1
2012	1,385.1	122.7	1,262.4
2013	495.0	97.7	397.3

Source: Forest change data published by MARD from 2002 to 2013

In the case of peatland fires in U Minh Ha National Park (UMHNP), in the early days of its establishment the park was always at risk during the fire season, which runs from December to April. Fires are mainly caused by people burning forest land for shifting cultivation, for hunting or for smoking out bees when collecting honey. Another reason is the prolonged droughts caused by climate change, which makes the forest environment warmer, drier and more fire prone. According to forest fire statistics from 2012 to 2017, UMHNP experienced four forest fires burning a total area of 13.97 ha over the five years (Ho et al. 2021). Forest fire prevention and fighting have improved in UMHNP in recent years, but still face some difficulties. Therefore, it is necessary to take appropriate measures, such as strengthening communication, finalizing mechanisms and policies, and supplementing fire protection equipment and facilities to improve environmental quality and local community well-being.

The likelihood of fire increases with the gradual degradation of forest areas, when, for example, the extraction of timber (legal or illegal) leaves deadwood which is dried by sun exposure (Griscom et al. 2009). Currently, Vietnam has more than six million hectares of “poor” and “easy-to-burn” forest, consisting of pine forest, supratidal forest, bamboo forest, eucalyptus forest, dry open dipterocarp forest and regenerating forest (FAO 2009). With the increasingly unpredictable weather situation due to more extreme events, including droughts, linked to climate change, the potential forest fire risk is becoming more serious.

3.1.3.5. Political economy and underlying drivers of deforestation and degradation

Deforestation in Vietnam is rooted in government interests to boost economic growth. Forestry is the weakest among all sectors in terms of its influence and power. As Vietnam wants to maintain its global position as a leading coffee and rice producer, and remain competitive in agricultural production, its sectoral policies all aim towards crop expansion, which leads to deforestation. While the government aims to provide financial support to forest owners for protecting forests, the sums involved in its financial schemes to support agricultural production and provide loans, subsidies and

low interest rates for agriculture production activities are much higher. Moreover, provincial governments are assessed annually based on the economic growth in their provinces rather than how well they protect their forests. The more infrastructure development and the higher the GRDP a province achieves, the more funding it will be allocated from the central government. Consequently, there is no financial incentive for forest protection.

3.1.4 Future scenarios and the likelihood of success in reducing deforestation and forest degradation

The Government of Vietnam has set an ambitious national goal to become an upper-middle income country by 2035 based on balancing economic prosperity with environmental sustainability, promoting equity and social inclusion, and enhancing the capacity and accountability of the state. The forestry sector strategy to support this goal includes restructuring state enterprises; developing functioning land markets; increasing participation in global value chains; fostering innovation; and building climate resilience. The key targets for forestry development are: maintaining national forest cover at 42–43%; sustainably managing forest areas; and enhancing natural forests and biodiversity conservation (Prime Minister 2021). The forestry sector is also expected to contribute significantly to Vietnam's Nationally Determined Contribution for emissions mitigation through forest-based mitigation measures, and the achievement of Vietnam's recent commitment to net zero emissions by 2050. Plantations continue to be the key source of timber supplies for wood processing sectors, while conservation of natural forests is strictly controlled.

As analysed, major drivers of forest conversion are associated with the development of agricultural commodities, especially rubber, followed by the development of infrastructure such as hydropower plants, roads etc. Forest conversion and land-use change are complex and driven by numerous drivers, particularly policies and market demand. Policy drivers relate to development directions, planning and investment. Markets are also important factors causing land-use changes and forest conversion.

In the future, conversion of forests to some agricultural commodities such as rubber might not be significant since Forestry Law 2017 stipulates that any forest conversion, especially of natural forest, must be considered and approved by the prime minister and the National Assembly. In addition, there is a market requirement for certification of rubber forests, and the Vietnam Forest Certification Scheme (VFCS) – endorsed by the Programme for the Endorsement of Forest Certification (PEFC) – stipulates that any area still forested in 2010 and converted for rubber and other land uses will not be certified as sustainable. Consequently, strict rules will apply to rubber development. Forest conversion for the development of hydropower plants seems to have declined. In 2013, the government required responsible ministries and provinces to strengthen hydropower plant development (Vietnam National Assembly 2013). According to the energy development strategy to 2030, coal and gas power plants would account for 57% of electricity generation; renewable energy (wind, solar) for 21%; and hydropower for 17% (GIZ 2020). Forest loss and conversion seems not to be taking place on a large scale, but remains small and scattered for road construction and urbanization to meet demand for socioeconomic development and population growth. Based on past rates of natural forest loss, estimates are that by 2030 natural forest area could fall by 11% (Vu et al 2022). So expansion of planted forests will be necessary to achieve the forest cover target of 42%–43% by 2030, though limited land is available for this purpose. In interviews, all key informants voiced their concern that as the government still positions economic growth as its primary objective, there will be severe pressure on forests.

Meanwhile, the government has issued a large number of policies to address drivers of deforestation and forest degradation:

- **Forestry Development Strategy for 2021–2030 and vision to 2050** (Prime Minister Decision 523/QĐ-TTg dated 1 April 2021): The strategy's targets are: National forest cover remaining stable at 42% to 43% and effectively contributing to the implementation of the NDC to reduce GHG emissions; building a green Vietnam; 100% forest areas being managed sustainably by 2030; 10% of natural forest being improved in quality during the 2021–2025 period; improving biodiversity conservation efficiency and forest protection

- capacity; minimizing violations of forestry law; and ensuring environmental security.
- **Policies on halting harvesting of natural forests and strictly controlling forest conversion for other uses** (Decision 2241/QD-TTg dated 11 December 2014; Government Office Notice 119/TB-VPCP dated 8 June 2016; and Conclusion 97-KL/TW dated 9 May 2014). Main points from these pieces of legislation are: strict implementation of policies on stopping logging of natural forests and closing natural forests; prohibiting the conversion of 2.25 million ha of existing natural forest for other uses; and prohibiting the conversion of “poor” natural forests to industrial crops.
 - **Legislation on law enforcement and protecting forest from illegal logging and forest conversion** (Directive 13/CT-TW dated January 2017; and Decree 01/2019/ND-CP dated January 2019). These legislations are aimed at: improving the effectiveness and efficiency of state management of forest protection and development; building a strong ranger force; and establishing a mechanism for strict management and supervision of projects on forest conversion for other purposes, especially hydropower development, mineral exploitation, construction of industrial parks and tourism services.
 - **Master plan on development of agricultural production to 2020 and vision to 2030** (Decision 124/QD-TTg 2012 dated 2 February 2012). Targets set out in the decision are: i) Cassava: stabilizing cassava planted area at 450,000 ha by 2020; and limiting the use of land with slope gradients below 15°, mainly in the Northeast and Northwest, South Central Coast, Central Highlands and Southeast regions; ii) Coffee: maintaining a stable production area of 500,000 ha; and iii) Rubber: stabilizing production area at 800,000 ha.
 - **National REDD+ Action Plan (NRAP)** (Decision 419/QD-TTg dated 5 April 2017). Targets are: stabilizing natural forest area of at least the 2020 level by 2030; increasing forest cover to 45% (subsequently revised to 43%) of the national terrestrial area; and contributing to targets under the national commitment to the Paris Agreement, with contributions increasing by 25% after receiving international support (updated to 27% in the 2020 NDC).
 - **Provincial REDD+ Action Plans (PRAPs)** Nineteen provinces had approved PRAPs

- by 2020; 11 provinces need to update their PRAPs by 2030 to align them with the newly approved NRAP (Decision 419/QD-TTg).
- **Forest protection, restoration and sustainable development in the Central Highlands 2016–2030** (Decision 297/QD-TTg dated 18 March 2019). The programme’s objectives are: protecting 2,246,068 ha of existing natural forest; preventing deforestation, encroachment on forest land, illegal exploitation of forests, illegal trading and transportation of forest products and wild animals, and fighting against law enforcement officers; actively implementing forest fire prevention and control, with timely detection and organizing forest fire fighting; and radically reducing the area of forest damaged by various causes.
- **Policies on supporting livelihoods and budgets for forest protection and development.** The PFES mechanism (Decree 156/2018/ND-CP), Decision 38/2016/QD-TTg, and Decision 24/2012/QD-TTg.

A goal of the Vietnam Forestry Development Strategy for 2021–2030 and vision to 2050 is to keep forest cover stable at 42% to 43% of the national terrestrial area, effectively contributing to the implementation of NDC commitments (National Assembly 2021a; Prime Minister 2021). However, no policymakers interviewed could confirm the underlying reasons for setting this forest cover target. It seems these figures are based on political wishes, but policymakers themselves have little confidence that Vietnam can attain these targets. Their lack of confidence is explained by two factors: First, different ministries have their own plans, and all want to expand their land use, which will come at the expense of forestry land. Second, planning at both national and provincial levels still prioritizes economic growth over environmental protection. Third, the value of forests and forest land is not fully recognized, and is often the cheapest land to convert for other purposes. Market prices set by governments for forest land are often low and only consider the direct value of trees rather than the actual value of land and forest environmental services.

State budget allocation for implementing forestry policies is lacking and there is no monitoring and evaluation to track their progress. Furthermore, the policies listed above are only for the forestry sector and have no other macro or sectoral policy support. As previous sections have pointed out,

without political will from the government to address and change political economy drivers of deforestation and forest degradation, the forestry sector alone cannot solve these problems. The likelihood of reducing deforestation and forest degradation is uncertain and depends on macro and other sectoral policies as well as government priorities in economic development. Table 13 on the National Assembly's plan for land-use change to 2030 shows that economic zones, high technology zones and urban land will increase in size by 2030, and conflicting forest protection and infrastructure development/urbanization targets mean it will be difficult for Vietnam to reduce deforestation and forest degradation (Table 14).

Further, addressing drivers of deforestation and forest degradation requires a landscape-based approach, whereas regional linkages between provinces, districts and communes are weak and ineffective for addressing these drivers.

3.2 Understanding the role Vietnam sees for nature-based solutions (NBS) in achieving its NDC under the Paris Agreement

Table 15 provides an overview of nature-based activities in the Asia-Pacific region and Vietnam.

According to IUCN, nature-based solutions can contribute 37% of climate goals under the Paris Agreement (IUCN 2021). Vietnamese policy makers also strongly believe that nature-based solutions can help the country in achieving its NDC under the Paris Agreement. Since 2015, the nation has actively completed its legal framework on climate change mitigation and adaptation. Vietnam now has a policy system related to GHG emissions reduction (Figure 7). Currently, policies and documents promulgated by the government,

ministries and branches amount to over 300 important documents, of which 67 have been issued directly or indirectly by the government.

Some key policies supporting nature-based solutions for achieving Vietnam's NDC are presented in Table 16.

In addition to the above policies, to meet its updated NDC targets (Figure 8), Vietnam is developing a plan for mitigating emissions in land use, land-use change and forestry (LULUCF) for 2021–2030 (Vu et al. 2021).

MARD (2020) projected that Vietnam's GHG emissions would increase more than threefold from 283.97 Mt CO₂e in 2014 to 927.9 Mt CO₂e in 2030 across the five sectors (energy, agriculture, LULUCF, waste and IP). With priority measures implemented using domestic resources, the potential emissions reduction for 2021–2030 is estimated at 529.7 Mt CO₂e at an estimated cost of USD 17.3 billion. If international resources are available, the reduction is estimated at 864.3 Mt CO₂e at an estimated cost of USD 30.6 billion. In general, the energy sector has the most opportunities to reduce emissions (accounting for 56.1% of total emissions reduction potential with domestic resources). With international support, the emissions reduction potential in the energy sector could increase to around 424.6 Mt CO₂e, and account for around 52% of total emissions reduction potential for 2021–2030. However, the cost of reducing emissions in the energy sector is still quite high, partly because measures to reduce GHG emissions require changes in techniques and equipment.

Meanwhile, the agriculture sector has the greatest potential to reduce its GHG emissions with international support. At present, Vietnam's

Table 13. Land-use change planning to 2030 (ha x 1,000)

No.	Land type	Status - 2020	Planned - 2030	Change
1	Agriculture land	27,983.26	27,732.04	-251.22
2	Non-agriculture land	3,931.11	4,896.48	+965.37
3	Unused land	1,219.75	505.60	-714.15
4	Economic zones	1,634.13	1,649.53	+15.40
5	High technology zones	3.63	4.14	+0.51
6	Urban land	2,028.07	2,953.85	+925.78

Source: Vietnam National Assembly 2021b

agricultural production still relies on traditional methods and is heavily dependent on intensive use of inputs. Practices related to sustainable agriculture that reduce GHG emissions, such as irrigation and water management, integration of biogas technology in livestock, improved forage

management, etc. are now being applied, but remain relatively limited.

The Vietnamese government also highlight the important role of forestry sector in achieving its NDC targets (See Section below).

Table 14. Conflicting visions for forestry land planning and national development goals

Region	Forestry land planning	Other land-use planning and economic priorities
Northeast and Northwest	Focus on protecting and restoring forests, especially protection forest to ensure environmental security and protect ecosystems	Make full use of and invest in mining and mineral exploitation
Red River Delta	No specific vision	Promote coastal economic development zones
North and South Central Coast	Enhance forest protection especially for protection forests, special-use forests, national parks, nature reserves and coastal protection forests	Promote development of economic zones and industrial zones and develop transportation and infrastructure networks in coastal areas
Central Highlands	Strengthen and protect special-use forest, national parks and nature reserves	Improve the efficiency of industrial crops, promote renewable energy, construct highway infrastructure and upgrade traffic networks Develop large tourist centres and tourism facilities
Southeast	Protect watershed protection forest, coastal protection forest and mangroves	Develop Cai Mep – Thi Vai Port for international container transit
Mekong River Delta	Protect mangrove ecosystems	Accelerate urbanization, develop road and sea traffic networks Develop clean energy and renewable energy

Source: Vietnam National Assembly 2021b

Table 15. APAC nature-based activities

Country	Credits or abatement for nature-based activities	Number of nature-based projects
Australia	62,605,482	394
Indonesia	14,067,253	5
Cambodia	5,877,442	4
Papua New Guinea	1,032,650	1
India	713,008	30
Laos PDR	138,813	3
Malaysia	138,013	1
Timor Leste	22,949	1
New Zealand	5,970	1
Vietnam	2,665	1
Republic of Korea	621	1
Total	84,604,866	442

Source: Carbon Market Institute (2021)

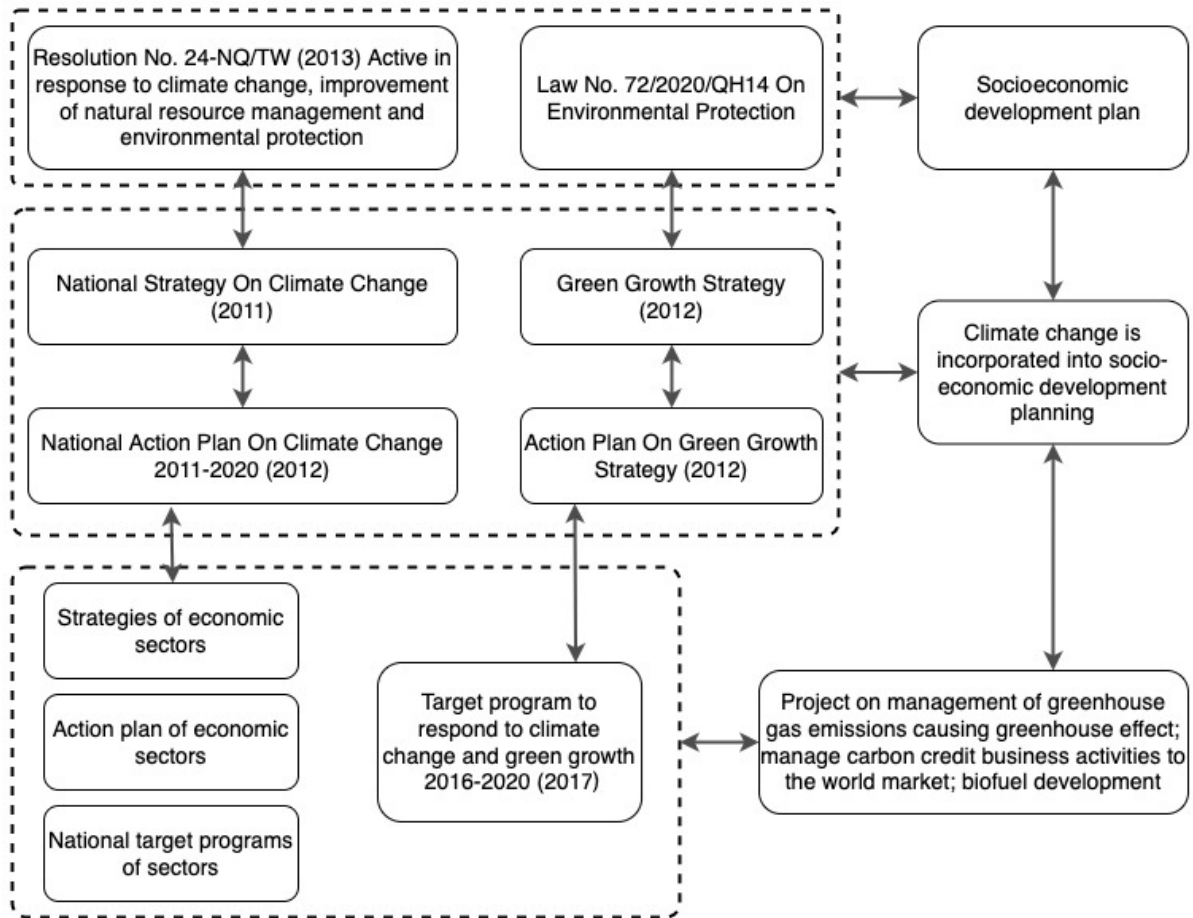


Figure 6. Policy system related to GHG emissions reduction in Vietnam

Source: Department of Climate Change 2017

Looking at the measures in the five sectors in detail, we find many measures with negative net emissions reduction costs. For example, “burying solid waste with landfill gas recovery for power generation” has an emission reduction cost of USD 0.5 per ton CO₂e. When such measures are implemented, in addition to reducing GHG emissions they also create other benefits, thereby making benefits greater than costs. This is a group of “no regrets” measures that analysts often highly recommend (Nguyen 2014). Thus, these measures with negative net costs should be prioritized. The financial requirement for these measures is estimated at USD 3.9 billion for 2021–2030. Total estimated GHG emissions reductions from these measures alone is 45.5 Mt CO₂e by 2030, equivalent to a reduction of 4.9% compared to a BAU scenario, or more than half (54.2%) of the 9% commitment (83.9 Mt CO₂e) under the updated NDC. With international support, up to 29 measures could be implemented at an estimated financial requirement of USD 8.84 billion (international assistance accounts for around 56%). The estimated total emissions reductions resulting

from these “no regrets” measures are equivalent to around 10.4% of the total emissions forecast for 2030, reaching 38.5% compared with the 27% commitment under the updated NDC. In short, “no regrets” measures, which guarantee a certain return when implemented, will contribute between 38.5% and 54.2% of the GHG emissions reduction commitments under the updated NDC. The analysis presented here has yet to take into account the positive externalities of these measures, which help advance efforts to reduce GHG emissions in other sectors of the economy as a whole. However, this shows that Vietnam has many opportunities to successfully implement the commitments in the updated NDC.

Although Vietnam is very active in developing climate change adaptation and mitigation plans, there are still a few areas that have not been paid attention to in the greenhouse gas reduction plan, such as the oil refinery technology park; production of cement, bricks and tiles; enterprises producing automobiles and motorbikes; construction materials; food processing; apartment buildings;

Table 16. Policies supporting nature-based solutions in Vietnam

Year	Policy	Contents
2011	The National Strategy on Climate Change	This policy provides directions for responding to climate change to 2020. Forestry-related content includes forest restoration and sustainable forest management to minimize damage caused by natural disasters and land degradation; and strengthening protection and development of forests and wetland ecosystems to reduce forest emissions and increase carbon absorption. The specific objectives are: increase forest cover to 45%; sustainable management of 16.24 million ha of forestry land, including 8.1 million ha of production forest; 5.8 million ha of protection forest and 2.1 million ha of special-use forest; and develop and implement programmes and projects on reducing emissions and enhancing carbon absorption and sustainable forest management. The climate change strategy is currently being updated for 2021–2030 with a vision to 2050.
2012	Green Growth Strategy	This policy highlights the need to change the economic growth model towards making use of comparative advantage, improving efficiency and competitiveness of the economy”, in particular: restructuring and improving institutions towards encouraging economic sectors to use energy and natural resources efficiently with high added value, limiting the wasteful use of natural resources, environmental pollution and ecological imbalances; researching and applying more advanced and suitable technologies for more efficient use of natural resources, reducing the intensity of GHG emissions and contributing to effective climate change responses; improving people’s lives by creating more jobs in green industries, agriculture and services; and improving quality of life through the construction of green infrastructure and environmentally-friendly lifestyles.
2017	The National REDD+ Action Plan to 2030	This policy focuses on reducing emissions from forest loss and forest degradation, preserving and strengthening carbon reserves and sustainable management of forest resources. Some of the proposed solutions focus on actions to reduce emissions caused by forest loss and forest degradation, and on enhanced carbon uptake by improving forest quality. The main objectives include: increasing forest cover by 42% by 2020, and reaching a total forest area of 14.4 million hectares; increasing forest cover by 45% by 2030; and implementing solutions to reduce emissions, increase forest carbon reserves and manage forests sustainably.
2020	Law on Environmental Protection	This aims to develop and implement mechanisms on reducing GHG emissions in accordance with international laws and treaties to which Vietnam is a party; and develop a domestic carbon market. At the same time, a decree is currently being drafted for guiding the implementation of the Law on Environmental Protection 2020, which contains content on carbon markets, carbon taxes and payment for carbon sequestration and storage services, and will strongly promote efforts to reduce GHG emissions in all activities of society.
2016- 2020	Vietnam NDC	Vietnam’s first Nationally Determined Contribution (NDC), submitted in 2016 and updated in 2020, clearly states the country’s mitigation targets, where by using domestic resources Vietnam will reduce its total GHG emissions by 9% compared to a business-as-usual (BAU) scenario by 2030; a reduction equivalent to 83.9 Mt CO ₂ e. Of this figure, GHG emissions reductions from the energy, agriculture, LULUCF, waste and IP sectors are 51.5 Mt CO ₂ e (5.5%), 6.8 Mt CO ₂ e (0.7%), 9.3 Mt CO ₂ e (1.0%), 9.1 Mt CO ₂ e (1.0%) and 7.2 Mt CO ₂ e (0.8%) respectively, compared to BAU. National emissions reductions can be increased by 27% compared to BAU (equivalent to 250.8 Mt CO ₂ e) with international support through bilateral and multilateral cooperation and implementation of mechanisms under the Paris Agreement on climate change. Under this scenario, estimated emissions reductions from the energy, agriculture, LULUCF, waste and IP sectors are 155.8 Mt CO ₂ e (16.7%), 32.6 Mt CO ₂ e (3.5%), 21.2 Mt CO ₂ e (2.3%), 33.2 Mt CO ₂ e (3.6%) and 8.0 Mt CO ₂ e (0.9%) respectively, compared to BAU.

Continued on next page

Table 16. Continued

Year	Policy	Contents
2021	Vietnam's updated Green Growth Strategy for 2021–2030 with vision to 2050	This policy sets out four important tasks: reducing the intensity of GHGs (by at least 15% by 2030 and 30% by 2050, compared to 2014 levels); greening economic sectors; greening lifestyles and promoting sustainable consumption; and greening the transition on principles of equality, inclusion and resilience. Specific targets for greening economic sectors for 2021–2030 are: reducing primary energy consumption by 1.0–1.5% annually, with renewable energy making up 15–20% of the primary energy supply; the digital economy reaching 30% of GDP; forest cover remaining stable at 42%; and at least 30% of irrigated upland crop areas applying advanced water-saving irrigation methods. Greening lifestyles and promoting sustainable consumption focuses on building green lifestyles combined with traditional practices to create high standards of living in harmony with nature; carrying out urbanization and building new rural areas to ensure green and sustainable growth goals; and creating a sustainable consumption culture in the context of global integration. Meanwhile, greening the transition on principles of equality, inclusion and resilience relates to improving people's quality of life and resilience to climate change; ensuring equal opportunities for people to develop their capacities and enjoy the fruits of development; and leaving no one behind in the green transition.
2021	COP26 Commitment	During COP26 the prime minister committed to Vietnam achieving net zero emissions by 2050, contributing to initiatives to reduce CH ₄ emissions by 30% and combatting deforestation. Minister of Industry and Trade, Nguyen Hong Dien, speaking at a roundtable on the sidelines of COP26, affirmed that Vietnam will embark on cutting coal-fired power output, aiming to double its wind and solar energy generating capacity to 31–38 gigawatts by 2030.
2021	The Resolution of the 13th National Congress of the Party	This policy states orientations for the country's development from 2021–2030 to: proactively and effectively adapt to climate change; prevent, control and mitigate natural disasters and epidemics; manage, exploit and use resources reasonably, economically, efficiently and sustainably; protect the living environment and people's health as top priorities; remove projects that pollute the environment; ensure the quality of habitats; protect biodiversity and ecosystems; and build a green, circular, environmentally friendly response

ports and airports, etc. In addition to coal-fired power plants, power plants using residual oil, biomass, rice husks and natural gas also release emissions, so Vietnam needs to research and develop solutions that can enhance efficiency. This is an area that Vietnam has never paid attention to. Acquiring greenhouse gas emissions capture technology not only meets the net-zero emissions target, but more importantly creates the conditions for bio-methane production synthesis (collected CO₂ + green H₂ generated from wind or solar power). This bio-methane source would be a fuel for Vietnam's gas power plants and Vietnam would have a "Closed Cycle" of electricity production with net-zero emissions.

3.3 Existing initiatives and programmes relevant to NBS

In Vietnam, international mechanisms related to GHG emission reduction activities have also been

implemented. These include 257 projects under the Clean Development Mechanism (CDM) and 13 Programmes of Action under the CDM (PoA) (Minh et al. 2020), and a number of mechanisms for generating carbon credits on a voluntary basis (Gold Standard–GS, Verified Carbon Standard–VCS). The implementation of emissions reduction activities under these mechanisms and the Paris Agreement will help create a new investment channel where enterprises have access to and apply advanced low-carbon technologies, products, systems and services, and have enhanced capacity in implementing GHG emissions reduction activities according to international standards and contribute to promoting the development of a low-carbon society (Minh et al. 2020; Cong and Dung 2020).

According to UNDP (2021), REDD+ is a key nature-based solution (NBS) for the forestry sector and considered a cost-effective solution for climate mitigation and adaptation in NDCs.

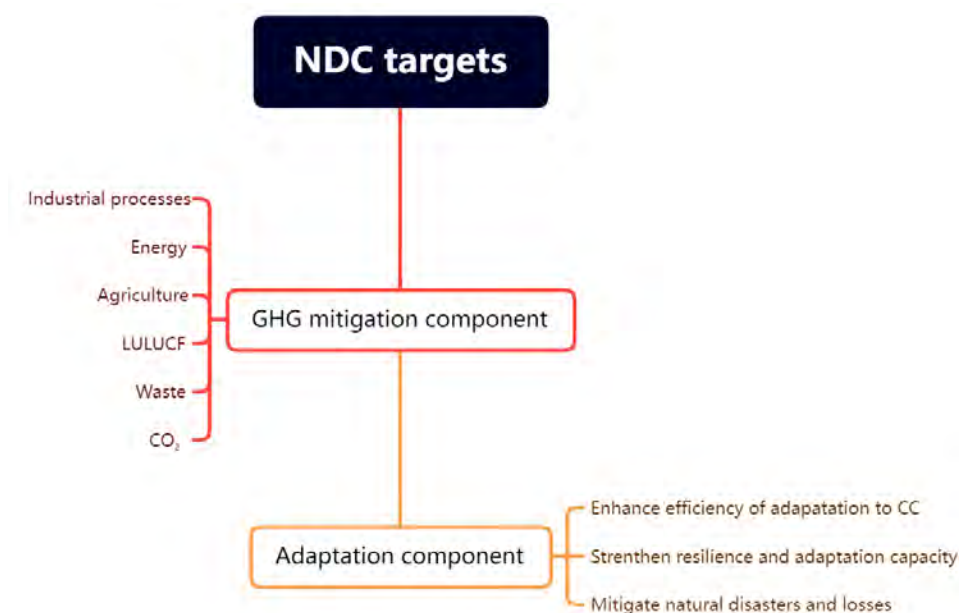


Figure 7. Vietnam's NDC in 2021

Source: SIPA project (2021)

Accordingly, one mitigation measure in Vietnam's intended nationally determined contribution (INDC) was REDD+. As a result, Vietnam became the second country in the world (after Mexico) and the first country in the Asia-Pacific region to have completed the Warsaw Framework for REDD+, fully meeting the requirements of UNFCCC, and is already eligible to receive results-based payments for REDD+. Since 2009, Vietnam has participated in the REDD+ initiative with 44 large and small projects with total funding of around USD 84 million to support awareness raising and capacity building, and pilot REDD+ actions, models and readiness in Vietnam. By 2020, nineteen provinces had approved Provincial REDD+ Action Plans (PRAPs) (Nhung 2019). However, all of these REDD+ pilot projects only stop at capacity building and awareness raising without actual emissions reduction activities.

From 2019 until now, there have been four major projects setting up a pathway for future emissions reduction projects in Vietnam's forestry sector: the World Bank FCPF; the GCF pilot programme for REDD+ results-based payments; the potential Green Climate Fund (GCF) project on achieving emission reductions in the Central Highlands of Vietnam to support National REDD+ Action Plan goals; and Lowering Emissions by Accelerating Forest Finance (LEAF).

The Forest Carbon Partnership Facility (FCPF). Currently, MARD is implementing a programme

to reduce emissions in the North Central Coast region for 2018–2025. The estimated emissions reduction for this period is 25 Mt CO₂e, and an emissions mitigation transfer agreement of 10.3 Mt CO₂e has been signed with the Forest Carbon Partnership Facility (FCPF) coordinated by the World Bank. The first report to FCPF covering two years (2018 and 2019) showed a total emissions reduction in the North Central Coast region of 20.7 Mt CO₂e, of which 14.2 Mt CO₂e could be transferred to FCPF while the remaining 6.5 Mt CO₂e was put to buffer pool for uncertainty and reversal risks. The results of the first report to FCPF is being reviewed and validated by an independent third-party organization contracted by the carbon fund. The validation includes a review of the report and all related documents, and field checks by the validation team. The Emissions Reduction Payment Agreement (ERPA) reflects commitments from the Communist Party, the state and the people to reducing carbon emissions, deforestation and forest degradation. This means Vietnam will need to switch to a calculation mechanism to estimate GHG emissions, and that the country can have a new, growing stable source of finance for its efforts in forest protection and development.

UN-REDD programme (2009–2020). Vietnam joined the UN-REDD programme in 2009, which helped the country develop a reference emission level for REDD+ payments and formulate policies and guidelines for REDD+ implementation.

Vietnam has met all conditions for implementing and reporting REDD+ results, which are: (1) a National REDD+ Action Plan; (2) a Reference Emission Level; (3) a National Forest Inventory; and (4) a Safeguard Information System.

The Green Climate Fund (GCF) is implementing a pilot programme for REDD+ results-based payments (Green Climate Fund 2017), for which any country's achievements in reducing emissions from 31 December 2013 to 31 December 2018 will be considered for payment. The total allowed emissions reduction amount for a country to request should not exceed 30 Mt CO₂e, and the payable price is USD 5 per ton CO₂e. To be eligible for payment for REDD+ results, a country must meet all conditions for REDD+ implementation, report emissions reductions to UNFCCC as annexes to its biannual updated reports (BUR), and submit a funding proposal to GCF. MARD, with the support of JICA, has submitted the funding proposal to GCF and prepared a technical report on REDD+ implementation and results according to Decision 14/CP.19. The report, which was enclosed in Vietnam's BUR3 and submitted in 2021, shows emissions reductions from deforestation and forest degradation of 91.5 MtCO₂ for 2014–2018, or 18 Mt CO₂e annually; and 192.5 MtCO₂, or 38.5 Mt CO₂e annually from removal enhancements from reforestation and forest restoration. Vietnam's REDD+ results are being reviewed by the UNFCCC Technical Team for payment consideration.

The potential GCF project on achieving emission reductions in the Central Highlands of Vietnam to support National REDD+ Action Plan goals. In 2018, FAO as the Accredited Entity (AE) and MARD as the Executing Entity submitted the project concept note to the Green Climate Fund. According to data analysed for the national FRL, the Central Highlands region accounted for 22% of annual national emissions from forestry and land-use change from 1995 to 2010. Over its five-year implementation period, the project aimed for a net emissions reduction of one Mt CO₂e, and a total net reduction of 6 Mt CO₂e, equivalent to 10% of average annual emissions according to the FRL, over the project's 12-year lifespan. This would be achieved through activities to reduce and avoid deforestation and forest degradation in hotspots on a combined area of 0.7 million ha (out

of a total 2.2 million ha of forest in the region) and through activities to enhance forest carbon stock on 0.5 million ha of land across the five provinces in the Central Highlands region. In 2021, IFAD took over FAO's role as AE and worked with MARD in advancing the concept note to become a full proposal. On 15 December 2021, IFAD was still carrying out its final task working with provinces to finalize their work plans and activities. Interestingly, IFAD is currently hiring FAO as project writer. Although the project concept note was still being refined, discussions with stakeholders revealed two challenges for the project:

- The main objective of IFAD is to provide loans for provinces listed in the proposal. While IFAD contributed USD 1 million as a grant to support MARD in developing and implementing the project, it wants provinces under the project to accept taking loans from IFAD. This idea is not welcomed by many government agencies.
- Not all provincial authorities in the Central Highland region listed in this proposal are supporting the project. While poor provinces like Dak Nong are interested in the project, rich provinces like Lam Dong show no interest in it due to their intensive requirements and low payments in return.

Lowering Emissions by Accelerating Forest Finance (LEAF). In 2021, MARD and Emergent signed a Letter of Intent on the Lowering Emissions by Accelerating Forest Finance (LEAF) initiative. Through the LoI Vietnam will transfer 5.15 million tons of CO₂ emissions reductions to LEAF/Emergent from forests in the South Central and Central Highlands regions over the 2022–2026 period. LEAF/Emergent will pay for this service at a minimum price of USD 10 per ton of CO₂, resulting in a total value of USD 51.5 million. The registered area of commercial forest for emissions reduction is 4.26 million ha, including 3.24 million ha of natural forest and 1.02 million ha of plantation forest. The Central highland has a high level of deforestation with the development of coffee and fruit commodities being key drivers of deforestation in the region. As the region has the most favourable biophysical and climate conditions for commodity crop development, it will be challenging to implement emissions reductions in the area as the opportunity costs of land use are extremely high. The committed price for emissions reductions under LEAF of USD 10 per

ton CO₂e is quite low compared to revenues from coffee and fruit harvests. Applying ART TREEs under the LEAF initiative will generate fewer benefits as removals are not counted, and the reference level is more up-to-date compared to REDD+ and FCPF programmes. In addition, around 2%–5% of revenues from selling emissions reductions would be deduced to pay transaction costs.

Uncertainty hangs over Vietnam's LEAF programme as its payments for emissions reductions are quite low and because removals are excluded. The challenge is that the financial rewards of reducing emissions by protecting forests cannot compete with those from converting forests for commodity crops. Further, emissions reduction monitoring and measurement will incur considerable expense, and the costs of emission reductions and the possible failure of the carbon market are not fully calculated in the carbon price. Carbon prices for emissions reductions should consider lost opportunity costs from other land uses. Moreover, the Central Highlands is also a “politically sensitive” region. To ensure any kind of success, Vietnam's LEAF programme should be integrated into government programmes on forest protection and development. Revenue from emissions reductions could be considered as added value for such programmes. It has also been suggested that LEAF should consider including efforts for increasing carbon sequestration, and non-carbon benefits such as biodiversity conservation and improved ecosystem services.

As shown above, the GCF and LEAF projects are both targeting the Central Highlands region, but as they have different government focal points, coordination and information exchange between the two projects is weak.

3.4 Vietnam's perspective and interest in carbon markets

According to MARD Vice Minister, “*Vietnam wants the carbon credit mechanism to be implemented on a large scale. Only thing, called the market must have buyers and sellers, we are looking forward to forming a compulsory credit mechanism, that is, carbon emitters are required to pay carbon absorbers. If the market is soon formed, I believe that our country will be a beneficiary because we do not emit much, but absorb a relatively large amount of carbon thanks*

to a very high forest coverage rate” (Bich 2020; Khanh 2020). According to the Department of Climate Change from the Ministry of Natural Resources and Environment (MONRE), from now until 2025 will be a period of preparation and implementation with activities including studying and establishing implementation regulations on building carbon markets; regulations on allowing project participants to exchange carbon credits; strengthening the capacity of parties involved; and investigating, evaluating and determining total GHG emissions quotas that will be allocated to establishments participating in the market.

In order to create a premise for the formulation of policies on the carbon market, Vietnam officially launched the Vietnam Partnership for Market Readiness Project (VNPMR) in 2015. After five years of implementation, the project has proposed policies and state management tools on a carbon market and carbon pricing relevant to Vietnam, including a crediting mechanism, an emissions trading system (ETS), a carbon fee/tax and a green certification scheme (MONRE 2021). Vietnam will continue to participate in the programme of Partnership for Market Implementation (PMI) initiated by the World Bank to form and develop a carbon market. This is a continuation phase of VNPMR, and ministries, sectors and localities will jointly develop policies and implement and contribute to perfecting management tools for carbon credits, determining carbon prices in Vietnam over the next decade. Organization and development of a domestic carbon market has been included as a GHG emissions mitigation activity under Article 91 of Environmental Protection Law 2020 - 72/2020/QH14 dated 17 November 2020 (Vietnam National Assembly 2020). In addition to fulfilling the country's emissions reduction commitments, the development of a domestic carbon market will help create the necessary legal conditions for carbon trade and create additional financial sources for forest protection and development. It is expected that between 2025 and 2027, there will be a pilot operation of the domestic carbon market and the promulgation of regulations with provisions on emissions trading and financial responsibilities of the participating parties. From 2028, the market will operate officially.

The Vietnam Administration of Forestry (VNFOREST) feels Vietnam has a great opportunity to participate in the international carbon market because the Paris Agreement has come into force

with the strong commitment and responsibility of the international community. The “door” to carbon credit trading in forestry is opening, which means efforts to control deforestation and forest degradation and increase forest carbon stock will become increasingly focused. After ten years, the forestry vision has gradually shifted its focus from “more forests” to “better forests”. This is reflected in the National REDD+ Strategy and concretized into provincial REDD+ programmes, with important contents being forest protection and restoration, along with integrated solutions for land use, strengthening capacity to adapt to climate change, and ensuring environmental and social safety (Natural Resources and Environment Newspaper 2019).

However, VNFOREST leaders have also highlighted difficulties with current legal regulation on the trading of forest carbon credits being incomplete and not specific on the trading of emissions reduction credits. Vietnam still lacks regulations on a GHG inventory system and transparent and accurate GHG emissions monitoring systems at national, sectoral, sub-sectoral and production facility levels that accord with international standards. There is no clear roadmap to reduce GHG emissions for each sector and sub-sector, and a lack of legal guidance to ensure flexibility and compliance with the requirements of different markets. Moreover, according to MARD leader interviewees, there are three major challenges for Vietnam to take part in a carbon market:

- **Unclear financial management regulations:** There is no guide on how to collect and spend money generated from selling emissions reductions.
- **Unclear carbon rights and transfer of carbon rights:** Emission reduction forest carbon credits are government assets that have not been regulated. Carbon accumulated is considered yield. So, for natural forest owned by the state, and constituting state property, of course, the yield will also belong to the state. However, for plantation forests, in addition to forests belonging to the state or state-owned forestry companies, some forests belong to private companies, households and individuals. In theory, carbon assets from such forests would be their own property; however this is not specified under any provisions.
- **Ensuring permanence:** One MARD official said, “Let’s not make emissions reduction merely a pilot. We must make it a permanent mechanism, only

then can countries be motivated or feel encouraged to protect and develop forests sustainably. Without stable finance, the country cannot keep forests when it needs economic growth”.

3.5 Opportunities and challenges in nature-based carbon removal in Vietnam

3.5.1 Opportunities

The Government of Vietnam has confirmed its strong political will and support (Table 16). Vietnam has a strong political system, so the mobilization of ministries, branches and localities to participate in joint efforts is very convenient and consistent (Truong 2021). Implementation of the commitments set during COP26 will promote national and international investment in achieving emissions reduction targets, transferring and applying low-carbon technologies, sustaining and improving forest resources, and developing a carbon market. The operation of a domestic carbon market will facilitate and promote emissions reduction and trading between sectors, especially investment in forestry and land-use sectors for achieving the emissions reduction targets of the country and its other sectors (energy, industrial processes, etc.). Vietnam also plans to drastically reduce coal power, and rapidly increase the share of renewable energy to 20% of total primary supply by 2030 and 30% by 2045. The level of emissions per GDP by 2030 will be reduced by nearly 15% and methane emissions in agricultural production will decrease by up to 10% (Vietnam Meteorological and Hydrological Administration 2021).

The forestry sector is considered an important factor in delivering emissions reduction targets and reducing natural disasters in the context of climate change (Tables 17,18 and 19). The sector has large potential to reduce emissions and increase removals. Vietnam’s NDC identified seven forest-based measures:

- F1: protect existing natural forests in mountainous areas. This measure aims to reduce emissions from deforestation and forest degradation;
- F2: protect coastal protection and special-use forests. The focus of this measure is to control forest conversion;
- F3: restore protection and special-use forests. This includes reforestation of forests in the

mainland areas and coastal forests, including mangroves;

- F4: improve carbon quality and stock of poor natural forests;
- F5: enhance productivity and carbon stock of large wood plantation forests;
- F6: scale up agroforestry models to increase carbon stock and land preservation. This focuses on planting trees on agricultural land of households and organizations. Based on ecological region, successful agroforestry models will be scaled up to enhance carbon stock and improve soil fertility. Agroforestry cultivation is recommended on steep gradients (Northwest, Central Highlands, etc.);
- F7: sustainable forest management and forest certification, which aims at improving removals and reducing emissions. Implementation of mitigation options proposed in the NDC for 2021–2030 could lead to a total emissions reduction (including increased carbon sequestration) of 82.54 Mt CO₂e through national efforts, and 186.5 Mt CO₂e with external support.

The potential area for implementing the proposed mitigation options was spatially mapped using different criteria (Vu et al. 2021d). Of those proposed mitigation options, there are significant opportunities for F1, F4, F5 and F6. Regions with the highest potential for agroforestry are the Northwest and Central Highlands, where it aligns with policy direction. In these regions, timber cannot compete with fruit crops in terms of market access. There are fewer opportunities for reforestation since available land for plantation forest expansion is limited. As Vietnam's forest cover target is around 43% of its terrestrial area, while current cover is around 42%, forest restoration by improving areas of “poor” natural forest (F4) has significant potential since more than 70% of existing natural forests are considered “poor”.

Table 19 provides an overview of emissions and removals in forestry.

Agroforestry has great potential to contribute to Vietnam's mitigation and adaptation targets (Box 1 and Table 21), and expansion of agroforestry can be 1.3–17 times more cost efficient for sequestering carbon than monoculture plantations (Finlayson 2021).

There are currently at least 48 agroforestry models recorded in 63 provinces. The most popular systems include robusta coffee, arabica coffee, acacia, rubber, tea, cashew, *Melaleuca cajuputi* and *Rhizophora apiculata*. To sequester carbon, not considering possible economic gain, acacia- and cashew-based systems were the most cost efficient, at USD 8–12 per ton of CO₂ equivalent (Finlayson 2021).

Table 18 lists approximately 500,000 ha with potential for agroforestry, while Box 1 and Table 19 indicate that agroforestry could be expanded to 10 million ha across the country. This huge difference is explained in Table 20 below.

No study to date can confirm which figure is the best to use as both are based on different assumptions and data. However, what is clear is that the figures in Table 17 are too low compared to what could be done, while the estimates in Table 21 are used to articulate more options for future central and provincial land-use planning. Financial incentives and technical support on developing appropriate agroforestry models and post-harvesting techniques are required to encourage provincial governments and local farmers to enhance carbon stock in existing natural forests and plantations as well as in agriculture and unused land with appropriate agroforestry models.

Table 18 shows the Northwest and Central Highlands regions having the greatest potential for agroforestry, whereas Table 19 shows those regions having the lowest potential area, with more promising options being the Northeast, South Central Coast, Southeast and Mekong River Delta regions. This is because the different authors developed models using different assumptions.

Table 18 suggests the Northwest and Central Highlands regions' having the greatest potential for agroforestry is due to:

- Timber availability and smallholder market access in the two regions being challenging, while the land is suitable for fruit tree development and both areas have large-scale tree fruit markets. This results in farmers being more willing to apply agroforestry models;
- The Vietnam Forestry Development Strategy 2021–2030 and vision to 2050 placing a strong emphasis on the expansion of agroforestry models in these two regions;

- Provincial government agencies in the two regions expressing their strong interest in expanding agroforestry.

Table 19 suggests the Central Highlands and Northwest regions have the lowest area with potential for agroforestry, with more promising

Table 17. Potential area for implementing mitigation options by ecoregion

Options	F1	F2	F3	F4	F5	F6	F7
1. Using domestic investment resources							
Northwest	899,320	-	18,244	61,981	-	2,170	-
Northeast	608,977	17,231	7,962	77,635	-	-	-
Red River Delta	-	10,005	420	2,954	-	-	-
North Central Coast	479,275	24,513	12,416	27,533	55,245	84	214,964
South Central Coast	85,998	13,435	9,889	16,449	33,386	29	61,517
Central Highlands	840,049	-	7,422	19,736	-	8,538	-
Southeast	308,862	54,799	1,714	19,758	6,029	-	128,823
Southwest	-	181,384	971	12,148	-	-	-
Total	3,622,481	301,368	59,037	238,194	94,660	10,821	405,304
2. With external resources							
Northwest	162,935	-	87,138	43,002	-	330,010	-
Northeast	907,885	-	28,968	203,488	-	-	1,568,089
Red River Delta	12,213	-	47	5,691	-	-	-
North Central Coast	1,133,212	-	20,948	74,192	122,816	1,561	980,258
South Central Coast	373,225	-	11,032	32,904	94,352	1,823	453,678
Central Highlands	747,699	-	9,960	63,536	-	157,086	-
Southeast	125,187	-	3,573	31,752	5,828	-	158,896
Southwest	5,616	-	5	15,986	-	-	-
Total	3,467,974	-	161,671	570,551	222,997	490,480	3,160,920

Source: Vu et al. 2021d

Table 18. Estimated emissions reductions by mitigation component and ecoregion

Region	F1	F2	F3	F4	F5	F6	F7	Total
I. National efforts								
Northwest	13.27	0.00	1.15	0.54	0.00	0.05	0.00	15.01
Northeast	8.99	0.25	0.50	0.68	0.00	0.00	0.00	10.42
Red River Delta	0.00	0.15	0.03	0.03	0.00	0.00	0.00	0.20
North Central	7.07	0.36	0.78	0.24	3.90	0.00	6.31	18.67
South Central	7.17	0.20	0.62	0.14	2.36	0.00	1.80	12.30
Highland Central	12.40	0.00	0.47	0.17	0.00	0.21	0.00	13.25
Southeast	4.56	0.81	0.11	0.17	0.43	0.00	3.78	9.85
Southwest	0.00	2.68	0.06	0.11	0.00	0.00	0.00	2.84
II. With external support								
Northwest	2.40	0.00	5.47	1.24	0.00	8.06	0.00	17.18
Northeast	13.40	0.00	1.82	1.77	0.00	0.00	46.01	63.00
Red River Delta	0.18	0.00	0.00	0.05	0.00	0.00	0.00	0.23
North Central	16.73	0.00	1.32	0.65	8.68	0.04	28.76	56.16
South Central	5.51	0.00	0.69	0.29	6.67	0.04	13.31	26.51
Highland Central	11.04	0.00	0.63	0.55	0.00	3.84	0.00	16.05
Southeast	1.85	0.00	0.22	0.28	0.41	0.00	4.66	7.42
Southwest	0.08	0.00	0.00	0.14	0.00	0.00	0.00	0.22
Total I and II	104.57	4.45	13.86	6.90	22.45	12.24	104.63	269.09

Source: Vu (2020)

options being in the Northeast, South Central Coast, Southeast and Mekong River Delta regions because:

- High opportunity costs and investment costs in the Central Highlands and Northwest regions mean local households may not be interested in pursuing forest plantation or agroforestry models;
- While the Central Highlands and Northwest regions have been positioned as national priorities, and projects and support are being developed to help the two regions, other regions and their potential have been overlooked and not fully explored;
- Possibilities of securing more land for agroforestry expansion in the two regions is lower than in other regions due to pressures from other sectors, as described above;
- Agroforestry potential also depends on the species and national agricultural production planning. For example, Vietnam's master plan on agricultural production development to 2020 with vision to 2030 specifies the Central Highlands, Southeast and North Central Coast

regions as the main production regions for robusta coffee, but the Northwest and Northeast regions also have large areas suitable for this commodity. The plan also specifies the Northeast, Northwest and Central Highlands regions as main production centres for tea, but the Southeast and North Central Coast regions are also suitable for tea expansion. The Northwest, Northeast and North Central Coast regions have larger areas suitable for cashew than the South Central Coast. In the Mekong River Delta region, *Rhizophora*-based agroforestry can potentially reconcile mangrove restoration and livelihood improvements by combining mangrove planting and shrimp farming. As mangroves can sequester four times more carbon than rainforests, and organic certified shrimps from the Mekong Delta have better market access than other farmed products, there is significant potential for expanding this agroforestry model.

Table 19. Emissions and removals in forestry

Item	1995–2000	2000–2010	2010–2018
Emissions (Mt CO ₂ e)	277.1	622.3	333.3
Average emissions from deforestation	101.2	244.7	126.1
Average emissions from forest degradation	175.9	377.6	207.2
Removals (Mt CO ₂ e)	-222.6	-493.1	-624.9
Average removals from reforestation	-110.4	-282.8	-204.7
Average removals from forest restoration	-112.2	-210.3	-420.2
Net emissions (Mt CO ₂ e)	54.5	129.2	-291.5
Average emissions (Mt CO ₂ e per year)	55.4	124.5	41.6
Average removals (Mt CO ₂ e per year)	-44.5	-98.6	-78.1

Box 1. Contribution of agroforestry to Vietnam's NDC

- The total area of agroforestry in Vietnam is currently estimated to be around 900,000 ha with potential for expansion to 10 million ha.
- Existing agroforestry currently stores around 1,346 Mt CO₂e, including aboveground, belowground and soil carbon, and could be expanded to 2.4 million ha, with around 10% considered highly suitable for production, with potential to sequester up to 44 Mt CO₂e during 2021–2030.
- Estimated sequestration rates for aboveground carbon in agroforestry in the country calculated over a ten-year period range from 1.89 to 2.95 tons per ha annually.
- For belowground carbon, estimated sequestration rates range from 0.23 to 1.26 tons per ha annually.
- For soil carbon, estimated sequestration rates range from 0.92 to 2.98 tons per ha annually.
- Total mitigation potential from agroforestry in the country represented by the sum total of aboveground, belowground and soil carbon over the ten-year period amounts to 648.8 to 824.5 million tons.

Sources: World Agroforestry (2021), Finlayson (2021)

Table 20. Comparison of different estimations

	Table 17 = 500,000 ha	Table 21 = 10 million ha
Purpose	To set up the most feasible NDC targets by 2030–political choice that needs to be harmonized and agreed between sectors and ministries.	To articulate policy scenarios and policy planning for national agroforestry development strategy as requested by MARD.
Definition of agroforestry	Fruit- or timber tree-based models	Agroforestry has been practised in Vietnam for decades in the form of traditional models, such as forest–garden–fishpond–livestock systems in the lowlands and fruit- or timber tree-based models in the uplands. Agroforestry systems in Vietnam are based on the main product that can be derived from the systems (timber tree, fruit tree or commercial tree crop-based systems).
Authors	Central government agencies with support from international donors	Independent scientists
Data used to develop future scenarios	<ul style="list-style-type: none"> • Climate and natural conditions (e.g., topography, water, rainfall, etc.) and socioeconomic development priorities • Forest inventory maps • Do not include existing agroforestry areas but only identify new potential areas in planned forestry land, such as “poor” and degraded forests and swidden areas in forestry land • Agreements between government agencies • Mainly use data from MARD and MONRE as well as planning priorities listed in the Vietnam Forestry Development Strategy 2021–2030 and vision to 2050. 	<ul style="list-style-type: none"> • Climate, soil conditions, slope, and other natural conditions (e.g., water, rainfall, etc.) • Forest inventory and agriculture land maps • Include both existing agroforestry area and potential new area based on climate and natural factor filters • Publicly available data • Mainly use data from MARD and MONRE.
Strengths	<ul style="list-style-type: none"> • This figure is formally adopted by the central government and there is a political commitment to achieve it • It has been discussed among government agencies and has captured political interest and political planning from various sectors and ministries • Central government agencies only examine potential for agroforestry expansion on forestry land without considering other land use categories (e.g., degraded agriculture land, bare land) being articulated by provincial government agencies for conversion to agroforestry. 	<ul style="list-style-type: none"> • This figure is politically free and provides a full scientific overview of the total land area across the country that could be used to develop agroforestry • While Table 17 only looks at forestry land, Table 21 includes forestry land, agriculture land, home farms, semi-urban areas, and land either unused due to land-use conflicts or subject to future decisions that could be used for agroforestry • This figure was also developed based on ground truthing by scientists.
Weaknesses	<ul style="list-style-type: none"> • As the Government of Vietnam does not want to overcommit in its NDC and only wants to put what is “safe” and involves “the least effort”, this figure does not show the real potential for agroforestry expansion but rather a political choice • This figure is based on government statistics and data that are sometimes not up-to-date. It is worth noting that in the Central Highlands region where LEAF will be implemented, large areas labelled as forestry land have already been converted illegally for agriculture. Provincial governments in these areas recognize that they cannot ask local people to plant forests or return the land to forestry, so they plan to develop and expand agroforestry models. Although there have been no reliable data to date on the total area of such land, central and provincial government officials interviewed said it could be above 300,000 ha—the figure 500,000 ha is too low. 	<ul style="list-style-type: none"> • As the figure is based on public data, which are not always accountable and often reflect political choice rather than actual and underlying political interests, it might miss the political dynamics and agreements on what is politically feasible. • According to existing policies, the government only allows agroforestry expansion on up to 20% of the total area in protection forests and natural protection forests. Therefore, unless these policies are revised, the figures applied to forestry land might be overestimates.

Table 18 also indicates significant potential for enhancing carbon stock and improving the quality of “poor” natural forests. Interventions applied across the county include:

- **Replanting forest trees to improve “poor” natural forest and assist natural forest regeneration (with additional forest tree planting):** There is much knowledge and many examples available in Vietnam of enhancing carbon stock and improving the quality of “poor” natural forests. Additional planting varies from 500 to 1,000 trees per ha, and requires the use of native tree species with rotations of at least 20 years. Appropriate species are selected depending on biophysical conditions (soil, terrain, rainfall, etc.). This measure can help increase carbon sequestration by 30%.
- **Using financial and policy incentives to promote long rotation and large timber species:** Studies have demonstrated significantly higher economic returns (and carbon sequestration gains because furniture stores carbon much longer than paper) from moving to 8-year rotations for furniture-grade timber at a time when Vietnam’s wooden furniture sector, which had an export value of USD 12.5 billion in 2020, is increasingly dependent on imported wood. Political support for investments in forest quality has grown because of the industry’s desire to source more low-risk domestic timber, thereby reducing market risk and capturing greater added value. MARD’s Forestry Development Strategy for 2021–2030 and vision to 2050 strongly prioritizes “large timber plantations”. During the conference on Sustainable Development for Wood Exports in Ho Chi Minh City in August 2020, Prime Minister Nguyen Xuan Phuc instructed ministries to help wood growers and timber processing companies overcome difficulties to boost their performance, embrace digital transformation processes, and focus on enhancing sustainable linkages and value chains from wood sources to wood products. However, the 1,000,000 or so farmers that produce wood chips prefer short-rotation acacia because it generates short-term income and offsets the risk of crop loss from wind damage, which is particularly important in storm-prone central Vietnam. This barrier to a transition is essentially financial: farmers’ need for short-term income and/or insurance to reduce their risk exposure. Financial innovations, reformed extension services, value chain development, and the formation of farmer producer organizations are key to this transition.
- **Converting monoculture acacia plantations to natural forest:** Studies in central Vietnam have shown the profitability of converting acacia plantations to native species such as *Heritiera*, *Dipterocarp* and *Hopea*. These species were selected because of their growth potential and high-value timber. Acacia serves as a nurse tree for native species to develop and grow. So far, this model has only been implemented at a small scale and not been commercially demonstrated. However, assisted natural regeneration through native species introduction (NSI) only makes economic sense on land larger than 10 hectares, and landowners do not make any profits until year ten. NSI is also constrained by the lack of seeds and seedlings. The forest economy in central Vietnam has become “acacia-ized” with government research and extension oriented entirely towards acacia. At present, the government cannot provide the seeds, seedlings or technical expertise necessary for large-scale NSI.
- **Promoting community forestry and co-management between the state and local people:** As most natural forests are managed by state agencies with limited financial and human resources, which can lead to ineffective natural forest management, most projects promote a co-management approach to involve local communities in natural forest protection.
- **Promoting and increasing revenues from Payment for Forest Environmental Services (PFES) schemes:** Improving “poor” natural forests depends mainly on state budgets and PFES. While state budget allocation for improving natural forest quality is unstable and has fallen over time, PFES has become the main source of finance for state agencies to enhance forest carbon stock and natural forest quality. As the result, the government is prioritizing increased PFES revenues over the next 20 years to partly cover associated costs.

Table 21 provides an overview of the potential expansion domain for agroforestry and carbon gain ten years after conversion. The Central Highlands region, where most LEAF provinces are located, with its dominant coffee production has the lowest carbon gain compared with production systems in other regions.

Average investment costs of the different agroforestry (AF) systems across the regions range from USD 613 to USD 5,300 per hectare annually (Table 22). The total investment cost required for converting the whole potential expansion domain into the AF systems is USD 24.7 billion \pm 11.29 billion (Table 22). The highest investment cost relates to establishing coffee robusta systems in the Central Highlands. However, both central and provincial governments are putting plans in place to intensify this production system, with no consideration for alternative agroforestry systems or climate change impacts such as droughts and serious water shortages.

Based on the trees outside forest (TOF) approach, estimated average C stock across the provinces ranges from 9 to 47 tons C per ha with an average of 21.85 tons C per ha. The total C storage of all trees outside natural forest land, which represents potential C storage from agroforestry in the country, is approximately 355 million tons C from the roughly 20 million ha of land across the country. LEAF provinces have high C stock potential (Table 23).

3.5.2 Challenges

Vietnam's economy has been developing rapidly in recent decades, and in order to continue doing so, the country will need more energy and electricity. Reducing the resulting greater emissions will be a challenge as technologies for reducing emissions are currently expensive. Legislation on responding to climate change has not been synchronized and needs to be reviewed, adjusted and supplemented in accordance with the current context. If Vietnam implements the

option to spend 1.5% of GDP on climate change adaptation during the 2021–2030 period, it will be necessary to mobilize an average of around USD 3.5 billion in capital from outside the budget each year, or around USD 35 billion for the 2021–2030 period (Truong 2021). However, national resources for investment in climate change are limited. Currently, the state can only meet around 30% of climate change adaptation and mitigation needs. The cost of climate change adaptation is estimated to exceed 3–5% of GDP by 2030.

Vietnam has a great need for modern technologies for monitoring climate change, monitoring and forecasting hydrometeorology and providing early warning of natural disasters and dangers; and technologies for building non-structural solutions to adapt to climate change. However, the capacity of experts and specialized technical staff, especially at the local level, on climate change is still limited (Truong 2021). It is necessary to continue to improve capacity for forecasting and warning of natural disasters; develop scientific research and technology to adapt to climate change; and strengthen capacity to select and prioritize resources to implement climate change adaptation activities in Vietnam. Moreover, our interviews conducted with other ministries and senior government officers show that future planning and policies from other sectors such as energy, transportation, tourism, real estate (which are not yet published or are awaiting approval) still aim to promote economic growth. Many forest and bareland areas listed in studies presented in Table 18 and Table 19 are already converted to other land uses or are under central and provincial government consideration

Table 21. The potential expansion domain for AF and C gain ten years after conversion

Region	Tree species in the AF system	Total suitable area for AF (10 ³ ha)	Averaged carbon stock (tC/ha)*	Carbon gain from expansion (10 ³ t)	Annual carbon gain (tC/ha)
Northwest	<i>Coffea arabica</i>	618	14.85	6.1 \pm 0.2	0.98 \pm 0.4
Northeast	<i>Camellia</i>	1,762	15.02	17.6 \pm 2.8	1.00 \pm 0.16
Red River Delta	<i>Acacia spp.</i>	858	37.70	28.1 \pm 3.6	3.27 \pm 0.42
North Central Coast	<i>Hevea</i>	756	26.36	16.2 \pm 7.7	2.14 \pm 1.01
South Central Coast	<i>Anacardium</i>	1,569	34.07	46.2 \pm 20.8	2.91 \pm 1.31
Central Highlands	<i>Coffea robusta</i>	745	17.95	9.6 \pm 3.7	1.28 \pm 0.50
Southeast	<i>Acacia spp.</i>	2,184	37.70	71.4 \pm 9.3	3.27 \pm 0.42
Mekong River Delta	<i>Rhizophora</i>	1,599	46.76	66.7 \pm 28.7	4.17 \pm 1.8
Total		10,111		261.9 \pm 77	

*C stock when trees are ten years old

Source: Mulia et al. (2018)

Table 22. Investment costs for different AF systems by ecoregion

Ecoregion	Tree species in the AF system	Average investment cost (USD per ha per year)	Total investment cost (USD x billion)
Northwest	<i>Coffea arabica</i>	1,892	1.17 ± 0.02
Northeast	<i>Camellia</i>	917	1.62 ± 0.28
Red River Delta	<i>Acacia</i> spp.	2,554	2.19 ± 1.16
North Central Coast	<i>Hevea</i>	1,400	1.06 ± 0.43
South Central Coast	<i>Anacardium</i>	4,900	7.78 ± 4.38
Central Highlands	<i>Coffea robusta</i>	5,227	3.89 ± 1.92
Southeast	<i>Acacia</i> spp.	2,554	5.58 ± 2.96
Mekong River Delta	<i>Rhizophora</i>	613	0.98 ± 0.14
Total			24.27 ± 11.29

Source: Mulia et al. (2018)

Table 23. National and provincial C storage based on the TOF approach

Province	Average C stock (ton per ha)+	Land area (10 ³ ha)*	Provincial C stock (10 ⁶ ton)
National	21.85	19,954	354.54
LEAF PROVINCES			
Binh Dinh	20.98	400	6.95
Binh Thuan	11.95	429	5.1
Dac Nong	27.81	629	17.49
Dak Lak	20.55	263	6.41
Gia Lai	22.28	829	14.97
Khanh Hoa	19.77	251	5.09
Kon Tum	29.95	351	8.18
Lam Dong	35.34	363	11.66
Ninh Thuan	13.8	169	2.04
Phu Yen	17.96	300	4.55
Quang Ngai	23.54	350	7.86
OTHER PROVINCES			
Bac Kan	45.4	246	7.46
Binh Phuoc	26.9	524	12.64
Ca Mau	25.12	416	9.17
Cao Bang	37.79	391	10.75
Dien Bien	16.3	656	8.17
Dong Nai	23.54	430	7.52
Ha Giang	30.3	511	9.54
Kien Giang	19.02	558	8.73
Lang Son	36.75	644	15.75
Lao Cai	27.15	460	7.05
Long An	16.65	388	5.55
Nghe An	23.72	935	15.35
Phu Tho	25.26	261	5.01
Quang Binh	34.67	298	8.72
Quang Nam	23.53	610	11.87
Quang Ninh	46.25	384	15.99
Quang Tri	36.93	333	8.91
Son La	22.1	1,018	14.37
Thanh Hoa	19.85	666	11.34

Continued on next page

Table 23. Continued

Province	Average C stock (ton per ha)+	Land area (10 ³ ha)*	Provincial C stock (10 ⁶ ton)
Ha Tinh	28.31	267	6.92
Hoa Binh	32.54	312	8.17
Thua Thien - Hue	28.38	288	6.23
Tuyen Quang	34.06	291	6.83
Yen Bai	20.28	444	6.8

for allocation to large-scale companies to develop industrial zones or tourism areas, or to meet national priorities in infrastructure development. As a result, these government agencies, while unable to reveal how large these areas subject to conversion might be, still voiced concerns that despite the government planning to expand agroforestry and protecting forests, its plans are unviable due to inconsistent land-use planning and other sectors, such as tourism and real estate, having more political support than the forestry sector for securing land. Other challenges to implementing nature-based solutions in Vietnam have been identified (Table 24).

Furthermore, although the country started implementing REDD+ in 2009, the last 12 years have revealed major challenges for REDD+ implementation in Vietnam (Table 25).

Furthermore, each forestry mitigation option listed in the NDC has its opportunities and challenges (Table 26).

The government needs to create a favourable environment by providing strong supporting policy frameworks to promote the implementation of NDC solutions as well as the application of NDC solutions technology

law. Such interventions should take the form of revisions to existing policies, and/or creation of new policies and/or guidelines. Incorporating policy dialogue with line ministries to monitor the progress of strengthening the policy environment for NDC solutions into the updating process can be helpful. Similarly, integrating the NDC into the national legal framework is an important autonomous solution to take, as is implementing the NDC by linking solutions with the responsibilities of implementing agencies. This will ensure the NDC will be realized and not just be someone else's problem (Department of Climate Change 2018). Further, for NDC solutions to be able to meet the sustainable development goals, the socioeconomic impacts of mitigation options need to be carefully assessed. While it is useful to perform technical analyses of the emissions reduction potential of each NDC solution along with applicable technology options, it is more important to ensure that decisions are made with adequate information to optimize development and social benefits. Some NDC solutions may be preferred by the climate community, but may not earn the same respect from industry or sector development communities. Harmonizing the preferences and choices of the parties is therefore extremely important (Department of Climate Change 2018).

Table 24. Challenges to reducing emissions in Vietnam

Issues	Details
Policies	<ul style="list-style-type: none"> • Lack of guidelines and mechanisms for translating national or sectoral NDC plans into plans at the local level • Unclear regulations on the Clean Development Mechanism, and no sanctions for violations against project implementation activities • Unattractive legal environment for international donors, businesses and the private sector investing in climate change mitigation and forest plantation • Regulations on technology standards and equipment labelling have taken effect, but implementation is still slow. • No specific policy mechanism, or attractive enough financial mechanism to attract the participation of the private sector in GHG emissions reduction activities • Institutions and policies are incomplete, overlapping and poorly enforced
Financial and technical capacity	<ul style="list-style-type: none"> • Initial investment capital for GHG emissions reduction solutions is often high, while financing for GHG emissions reduction activities is limited; • The level of support for forest protection, planting and restoration is still low and does not fully consider the costs for these activities in practice; • Opportunities to access preferential credit sources to implement GHG emissions reduction measures are limited; • The general capacity of enterprises (financial capacity, capacity to receive and apply new technologies) is still limited; • The market for energy saving and renewable energy technologies in Vietnam is still limited; • The number, capacity and qualifications of management staff, scientific and technical staff is still limited; • Although domestic investment has increased significantly over the years, international support is limited as Vietnam becomes a middle-income country; • Domestic investment sources are often managed according to programmes, projects and schemes, so the connection and coordination of resources are still limited; • The incentives for production forests is unclear; • The crop structure is still inadequate, the variety quality is low, technical management, variety quality management is weak and silvicultural technical solutions for each object are limited; • The forest extension services do not meet requirements in terms of quantity and quality; • The link between research, training and forestry promotion is not effective, the application of research results in practice is weak; • The tree varieties have yet to be diversified. Agroforestry production potential has not been exploited to increase the added value of forests;. • Businesses lack information on policies and do not understand the legal mechanisms and procedures, so projects are often very slow to be approved; • Awareness of authorities, businesses and people about solutions to reduce GHG emissions is still limited.
MRV	<ul style="list-style-type: none"> • GHG inventory reports have a high degree of uncertainty due to incomplete and inconsistent information and data; • There is a lack of publicity and transparency in projects to attract private participation; • Investigation activities and information on survey results for renewable energy sources are still limited; • There is a lack of scientific and technological research to reduce GHG emissions.

Sources: Thai et al. 2014, Tue et al. 2014, National Science and Technology Information Bureau 2015, Audinet et al. 2016, Hai and Anh 2019, Pham et al. 2019, Cong and Dung 2020, Hoang 2020, Huy et al. 2020, MARD 2020, Phuong 2020, Quang et al. 2020, Thuan 2020, Trung et al. 2020, Giles et al. 2021, Nguyen and Nguyen 2021

Table 25. Key challenges for REDD+ implementation in Vietnam

Issues	Details
Technical	<ul style="list-style-type: none"> • Technical capacity of staff and implementation staff is still very limited; • Weak monitoring and evaluation particularly in reducing leakage.
Institutional	<ul style="list-style-type: none"> • Policy issues for REDD+ implementation in Vietnam are mainly caused by the inadequacies of existing policies and regulations, notably those on benefit sharing; • Weak governance guarantees on forest tenure and carbon rights, stakeholder participation, gender equity and women's empowerment and empowerment of ethnic minority people, especially the right to free, prior and informed consent (FPIC); • FPIC is very sensitive and related to the national legal and political system as well as the cultural and social characteristics of each province.
Organizational and capacity	<ul style="list-style-type: none"> • A REDD+ implementation organization system at the central level has just been established, but the capacity to coordinate, manage and mobilize resources for REDD+ implementation is still weak; • Local REDD+ implementation systems have not been established; • Managing large amounts of donor funds for REDD+ implementation and piloting is a major challenge for local governments due to the lack of transparent and accountable procedures, which can easily lead to overspending and inappropriate distribution; • The awareness of all levels, sectors, forest owners and local communities on REDD+ is still inadequate and incomplete, leading to a lack of coordination between agencies and local authorities at all levels and donors.
Financial	<ul style="list-style-type: none"> • The state's financial resources do not meet the set policies, and the level of financial support for afforestation, zoning, reforestation and contracted forest protection is still low to entice organizations and people to participate; • Funding for villages in buffer zones is still low, so only small activities are invested in, while large activities are unaffordable, thus limiting the effectiveness of investments in improving production capacity; • Support for planting, seedlings and essential works are small and fragmented, meaning little improvement in efficiency; • Forestry companies have problems in performing their tasks of producing and supplying public products and services because there is no mechanism for ordering and assigning annual plans of the state; • Companies with no revenues from forest environmental services do not have enough funds to carry out forest protection tasks, and face many difficulties in forest management and protection; • Sources of capital to invest in developing special-use protection forests and support people in planting production forests have not been identified; • Forest companies do not have access to concessional loans to plant production forests. The output market of plantation timber products has no potential, so people have not been encouraged to plant production forests; • Inadequate financial support for sustainable forest management and forest rehabilitation: A number of policies for production forest development during 2007–2014 only entitled owners to receive less than USD 5/ha/year in financial support for certified forests. Decision 2242/QD-TTg dated 11 December 2014 on approval of projects to improve natural forest timber exploitation management for the period 2014–2020 provides for small interim compensation payments of only USD 8/ha/year for forest companies not permitted to harvest under the logging ban until 2020; • Certification is not a viable option for many companies because of the poor status of their natural forests.

Sources: Tran 2015, Pham et al. 2012, Pham et al. 2019, Duong 2021b

Table 26. Opportunities and challenges for each forestry mitigation option listed in the NDC

	Opportunities	Challenges
F1: Protect existing natural forests in mountainous areas. This measure aims to reduce emissions from deforestation and forest degradation.	<ul style="list-style-type: none"> • This can be linked to existing national reforestation programmes • Natural forests are owned by the state and are under exclusive protection • The state budget prioritizes natural forest protection activities 	<ul style="list-style-type: none"> • As natural forests are owned by state agencies, local people and communities cannot benefit from payments for this option • Natural forest quality has been degraded and state agencies do not receive sufficient funding to protect natural forests
F2: Protect coastal protection and special-use forests. The focus of this measure is to control forest conversion.	<ul style="list-style-type: none"> • High potential for enhancing NDC targets • Increasing interest and support from the state and donors • Offers adaptation benefits particularly for coastal communities 	<ul style="list-style-type: none"> • Mangrove area has frequently changed due to government plans on economic growth, infrastructure development, urbanization, tourism and aquaculture • Vulnerable to storms, pollution and erosion • While the government provides incentives for planting new mangrove forests, there are no incentives for protecting existing natural mangroves or newly planted mangrove areas
F3: Restore protection and special-use forests. This includes reforestation in mainland areas and coastal forests, including mangroves.	<ul style="list-style-type: none"> • State budget funds are secured for forest restoration in special-use and protection forests • Increasing support from international donors 	<ul style="list-style-type: none"> • No land is available for reforestation • Challenges for restoration are most land being degraded or left bare after intensive aquaculture production • Poor seedlings and species selection leads to low survival rates • Poor site selection
F4: Improve “poor” natural forest quality and carbon stock.	<ul style="list-style-type: none"> • Large areas of “poor” natural forests • Low investment costs and low transaction costs 	<ul style="list-style-type: none"> • Low forest quality
F5: Enhance productivity and carbon stock of large wood plantation forests.	<ul style="list-style-type: none"> • Increasing interest from both international and domestic businesses • Easy to measure sequestered CO₂ emissions • Reduces pressure on natural forests • State support for different national programmes including certification schemes 	<ul style="list-style-type: none"> • Long rotations while farmers have limited livelihood option • High investment costs and a lack of financial support for producers and farmers • Insecure tenure and fragmented land leads to significant risk and high transaction costs
F6: Scale up agroforestry models to increase carbon stock and land preservation.	<ul style="list-style-type: none"> • Offers immediate benefits for local people and contributes to food security • Increasing interest from government agencies and local people • Improves local livelihoods 	<ul style="list-style-type: none"> • Climate change leads to low production • Unstable market and farmers have difficulties accessing markets • Poor species selection and overuse of chemical inputs • Lack of land for expanding agroforestry • Weak agriculture extension services • Farmers cannot access government programmes and support, and have to rely on information networks from brokers • Climate policies in Vietnam often fail to provide sufficient financial incentives or national guidelines on sustainable agroforestry practices
F7: Sustainable forest management and forest certification aim at improving removals and reducing emissions.	<ul style="list-style-type: none"> • The government has set up a Standing Office for Certification • Vietnam has joined FLEGT-VPA, and the agreement will be fully effective from June 2022 • Vietnam has many free trade agreements with other countries that require certificated products, thereby providing stronger incentives for stakeholders to engage in certification 	<ul style="list-style-type: none"> • Stakeholders have limited understanding of certification schemes • High investment and transaction costs involved in securing and maintaining certification • Insecure tenure • The lack of financial incentives for local farmers to participate in FLEGT

4 Natural resources, forest and land governance

This section provides an overview of ministries and agencies with authority relating to REDD+, including, but not limited to forest management, carbon emissions and climate change policies.

4.1 State management structure

Figures 9 and 10 provide overviews of state management structures in Vietnam as well as the relationships between government bodies in governing policies and practices in the country.

At the macro level, there are currently 5 key ministries working directly with natural resources, forest and land governance: the Ministry of Agriculture and Rural Development (MARD), the Ministry of Natural Resources and Environment (MONRE), the Ministry of Planning and Investment (MPI), the Ministry of Finance (MoF), The Ministry of Labour, Invalids and Social Affairs (MOLISA) and Committee on Ethnic Minority Affairs (CEMA). Their full mandates and responsibilities are included in Annexes.

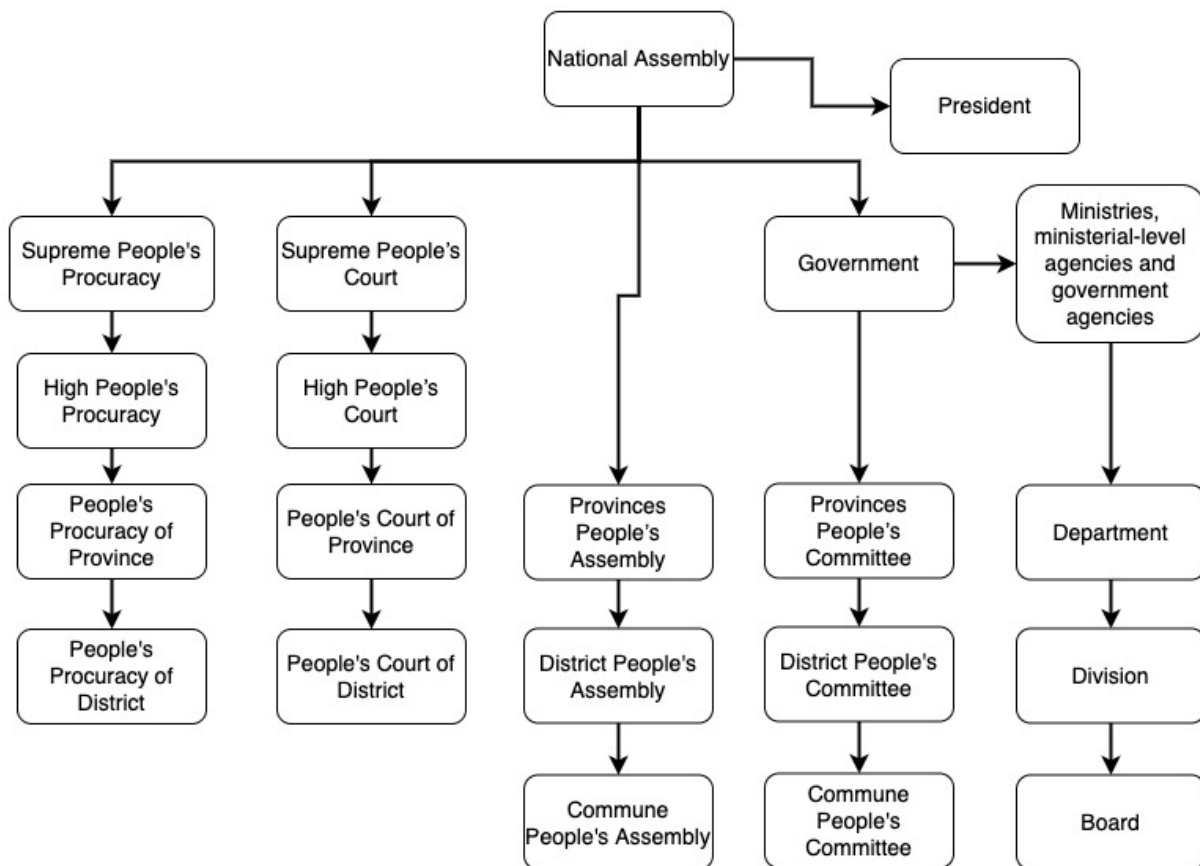


Figure 8. State management structure in Vietnam

Source: Compiled by the authors from Vietnam Government Portal 2021a and Thukyphaply 2021

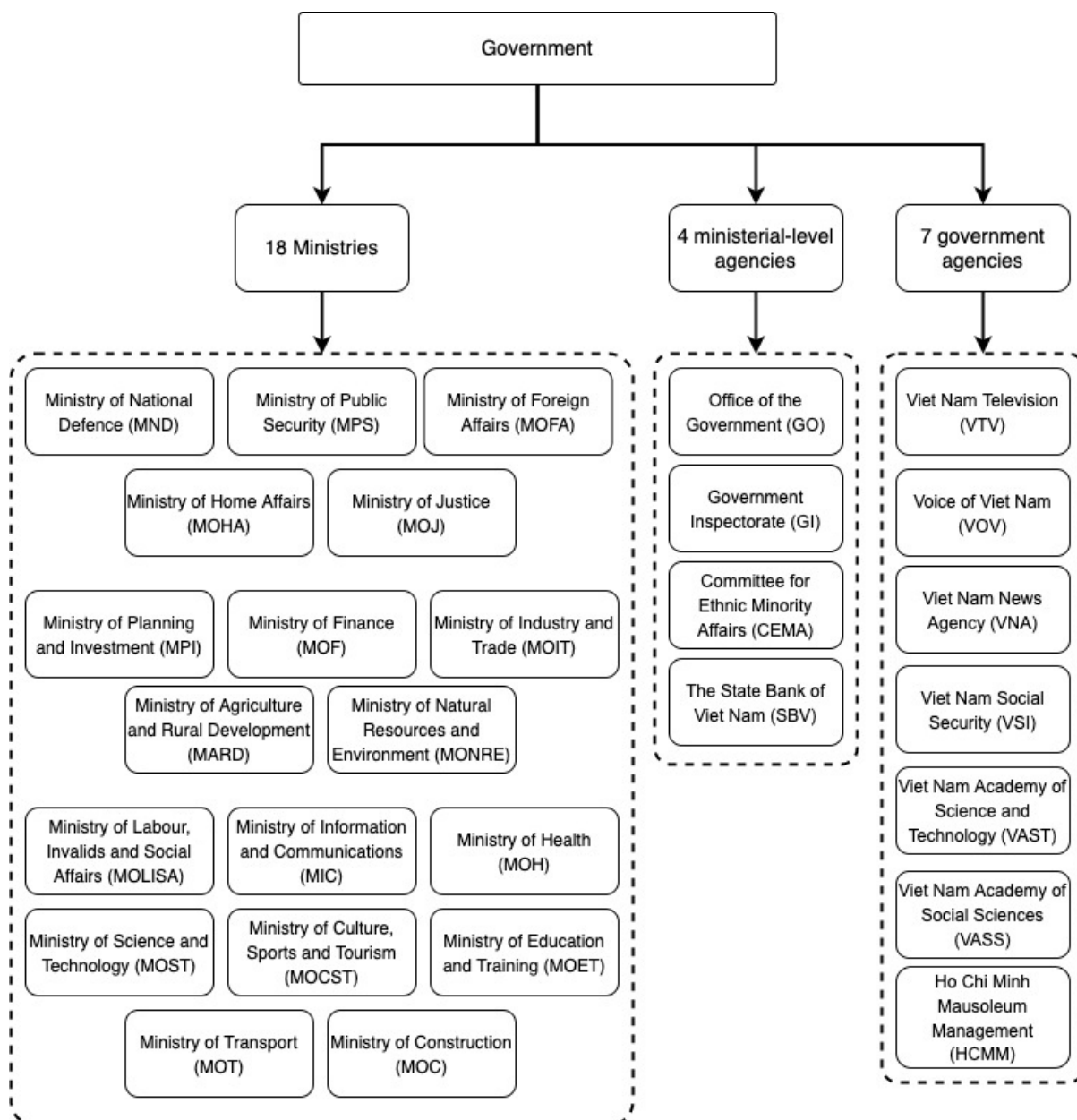


Figure 9. Ministries and state management structure

Source: Compiled by the authors from Vietnam National Assembly 2021a and Vietnam Government Portal 2021b

After COP26, MONRE proposed to the Prime Minister to consider early promulgation of decrees on reducing greenhouse gas emissions and protecting the ozone layer; lists of fields and establishments emitting greenhouse gases that must carry out GHG inventories; and a monitoring and evaluation system for national-level climate change adaptation activities. These detailed guiding documents for the Law on Environmental Protection, effective from 1 January 2022, are important legal foundations for the implementation of GHG emissions reduction commitments under the Paris Agreement,

and for Vietnam meeting the transparency requirements specified in the Code of Conduct guiding the implementation of the Paris Agreement. Moreover, ministries, sectors and localities will review and adjust strategies, master plans and plans to bring them in line with the goal of net zero emissions by 2050, and actively and proactively enhance international cooperation to take advantage of financial and technological resources to strengthen capacity to implement the Paris Agreement and commitments declared by the Prime Minister at COP26 (Table 27).

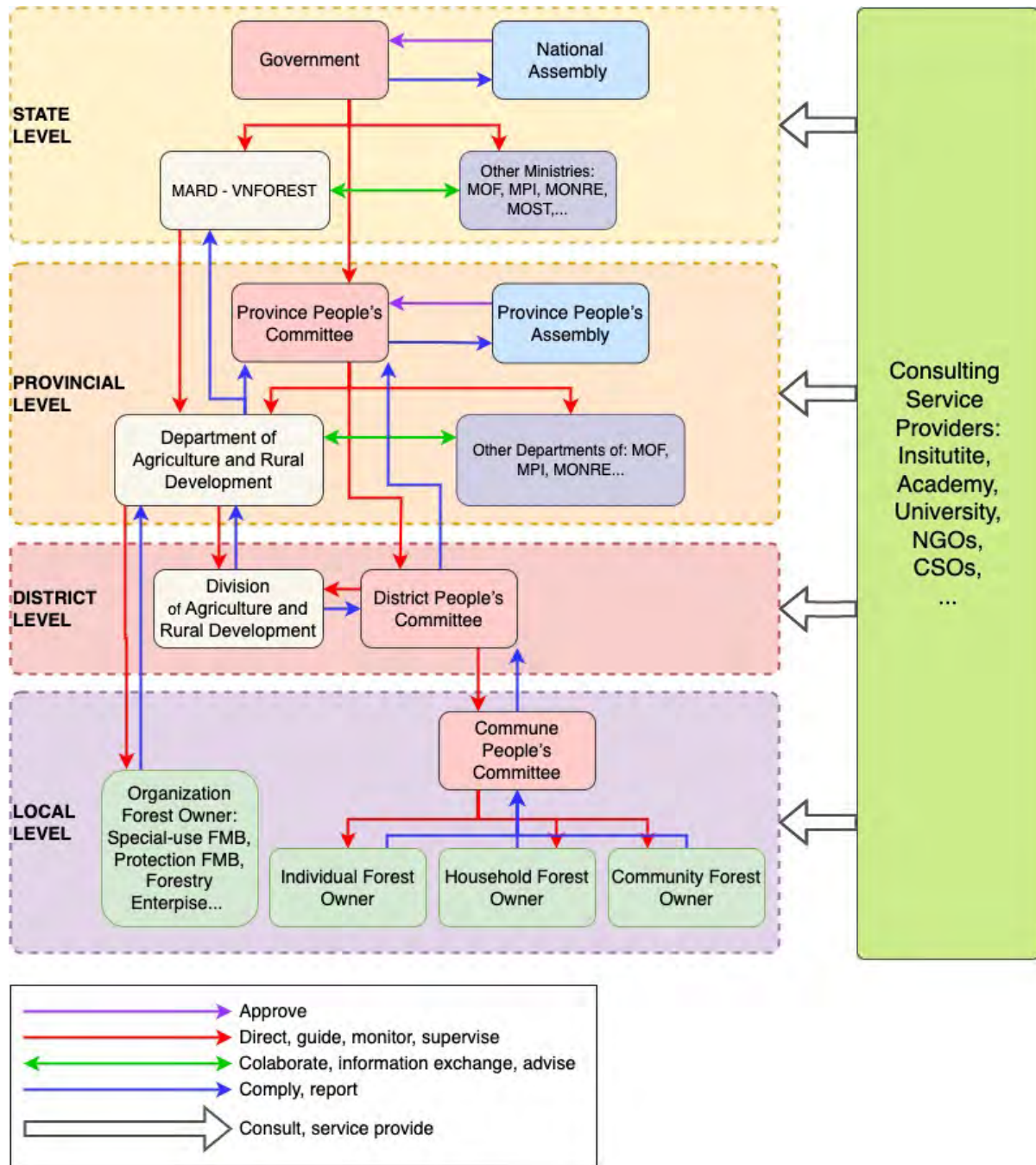


Figure 10. State management structure on climate change policy governance

Table 27. Ministries' post-COP26 tasks

Ministry	Tasks
MONRE	<ul style="list-style-type: none"> Finalize the update of the National Strategy on Climate Change for the period to 2050, including the goal of achieving net zero emissions by 2050, and submit it to the Prime Minister in June 2022; Coordinate with The Ministry of National Defence and relevant ministries, branches and localities in carrying out marine surveys to serve the planning for offshore wind power development in line with the National Marine Spatial Plan; Coordinate with relevant ministries and sectors in applying carbon pricing tools, including carbon tax and developing the domestic carbon market; Propagate and raise awareness and capacity for organizations, businesses and individuals to participate in market and non-market mechanisms under Article 6 of the Paris Agreement and develop an action plan to reduce methane emissions by 2030, and a plan to implement the Glasgow Declaration on forests and land use.

Continued on next page

Table 27. Continued

Ministry	Tasks
The Ministry of Foreign Affairs	<ul style="list-style-type: none"> • Lead and coordinate with concerned departments, ministries, branches and localities in implementing the work of “climate diplomacy” to mobilize international support for the purpose of improving adaptability to climate change and achieve net zero emissions; • Enhance Vietnam’s role and position in multilateral organizations, mechanisms and forums.
The Ministry of Planning and Investment	<ul style="list-style-type: none"> • Promote the mobilization of investment resources for infrastructure to adapt to climate change and implement the National Strategy on Green Growth, contributing to the achievement of committed goals; • Provide support to solve difficulties and obstacles, and create favourable conditions for investors in Vietnam to implement projects to respond to climate change and develop renewable energy.
The Ministry of Finance	<ul style="list-style-type: none"> • Lead and coordinate with the Ministry of Natural Resources and Environment and relevant ministries and branches in researching and proposing financial mechanisms and policies to serve the transformation of projects under the Clean Development Mechanism (CDM), to the project under the Contribution Mechanism to reduce greenhouse gas emissions and support sustainable development (SDM) in accordance with the provisions of the Code guiding the implementation of the Paris Agreement.
The Ministry of Agriculture and Rural Development	<ul style="list-style-type: none"> • Coordinate with the Ministry of Natural Resources and Environment to review efforts to contribute to reducing greenhouse gas emissions in the agriculture and forestry sectors, ensuring the target implementation of commitments, including reducing methane in agriculture by 2030; • Review projects to exchange carbon credits from forests on the principle of prioritizing the use of credits to fulfil Vietnam’s commitments on mitigating greenhouse gas emissions, ensuring rights and encouraging investment in forest development projects; • Lead and coordinate with relevant Ministries, sectors and agencies to implement the Letter of Intent with Emergent Organizations within the framework of the Alliance to reduce emissions through strengthening forestry finance for the proposal of “Purchase Agreement” for reducing greenhouse gas emissions in the Central Highlands and South Central regions”; • Implement the COP26 initiatives on: (i) agricultural innovation to respond to climate change; (ii) Innovation Center for Food Technology and the “100 million farmers: transition to a zero-emission and environmentally friendly food system” initiative; (iii) promoting sustainable productivity growth for food security and resource conservation; (iv) Agenda Policy Action towards sustainable agriculture and food system transformation through policy adaptation and public support; (v) transforming the food system through ecological agriculture; (vi) sustainable food and food systems programmes.
The Ministry of Industry and Trade	<ul style="list-style-type: none"> • Assume primary responsibility for, and coordinate with concerned ministries and branches in reviewing and finalizing the national electricity development master plan for 2021–2030 with vision to 2045 in line with the net zero emissions target by 2050; • Develop a plan to implement the Global Declaration on the transition of coal power to clean energy; • Research, evaluate and propose policies for Vietnam to join the initiative of the Leading Group on Industrial Transformation, the Glasgow Breakthrough Target Agenda.
The Ministry of Transport	<ul style="list-style-type: none"> • Study the suitability of participating in the declaration to end the production of petrol and diesel vehicles from now to 2040; • Develop a roadmap to convert vehicles using clean energy and report to the Prime Minister; • Research, evaluate and propose a policy for Vietnam to join the declaration on zero emissions from waterway transport.
The Ministry of Construction	<ul style="list-style-type: none"> • Study and propose a roadmap for green urban infrastructure development in line with commitments; • Participate in initiatives related to the construction sector announced at COP26.
The Ministry of Science and Technology	<ul style="list-style-type: none"> • Coordinate with the Ministry of Industry and Trade and other ministries and branches to organize research and development of new energy such as hydrogen energy, wave energy, geothermal, nuclear power development; • Plan and organize the elaboration and publication of national technical standards and regulations related to technologies to respond to climate change, perfecting mechanisms and policies related to promoting technology transfer to respond to climate change.

Source: MONRE 2021

However, implementation of these commitments and policies on forest management, protection and development still have many shortcomings due to the complexities in both vertical and horizontal political connections and power distribution between government agencies. Having multiple agencies providing careful reviews of climate change and forestry policies also means delays in the implementation of any new policies, as has been the case with carbon rights, emissions reduction rights transfer and the national REDD+ benefit-sharing mechanism. Large numbers of consultations and policy reviews are necessary across different agencies, adding to transaction costs. Also, it is unclear which agencies have responsibility for various functions. For example, four different departments in MARD and MONRE have separate biodiversity monitoring systems, each with its own approaches, indicators and standards, with no shared systems or agreements. In addition, their power and influence are not the same (Figure 12). Stakeholders see MPI and MoF as the two most influential government agencies as MPI approves and directs sectoral and financial planning for other ministries, while the MoF regulates budget allocation and financial rules for operating policies.

MONRE and MARD only have technical functions, while MoF and MPI set the strategic directions through budget allocations. The technical ministries claim that top-down planning is inappropriate as it usually means that programmes are selected on the basis of how much funding is available rather than on technical priorities. The system reduces the independence and commitment of implementing agencies in planning for their own work. Moreover, because the priorities of MPI change from year to year, it is difficult for agencies to get long-term commitments to finance nature-based forestry policies and programmes. Furthermore, as projects fall under different ministries with different powers, it is difficult for local authorities to coordinate them.

Implementation of social safeguards requires multisectoral involvement and strong collaboration between stakeholders, but inter-agency communication is weak in Vietnam (Schiavo-Campo and Sundaram 2000; McCarty 2001). Currently, there are weak linkages and collaboration, with no formal meetings between ministries. Ministries should share experiences and provide comments to other ministries on plans to develop new laws and decrees, but

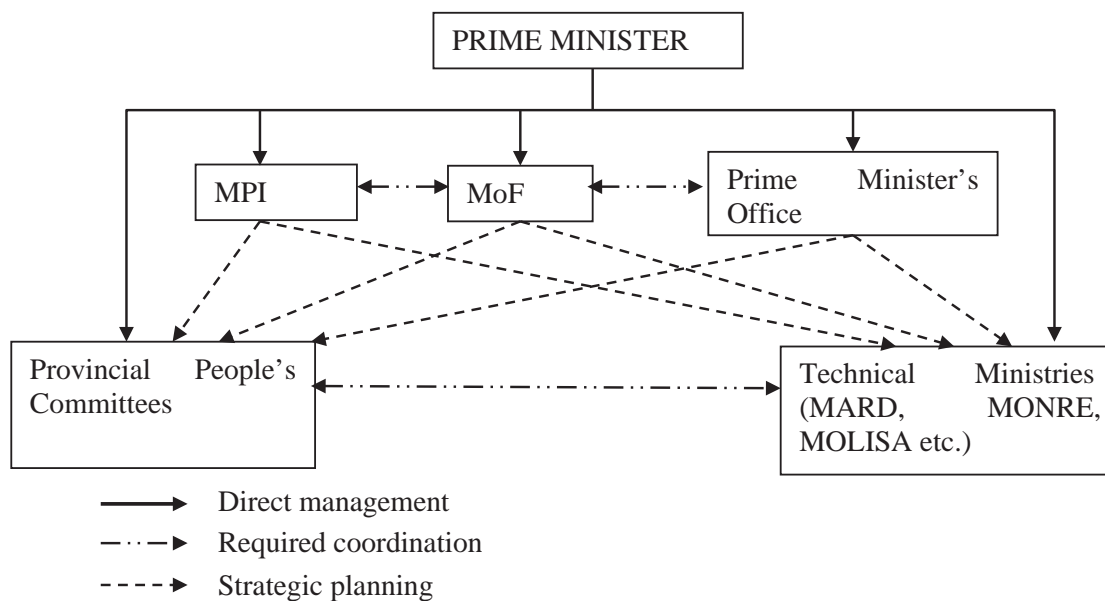


Figure 11. Current government planning for environmental activities in Vietnam

Source: Pham et al. (2008)

relevant consultations are often overlooked or take place too late to be useful. For instance, when MONRE organized consultative workshops to integrate payment for environmental services into the law on biodiversity, MARD decision makers were often absent or only represented by junior staff. To ensure social safeguards, MOLISA should participate in the process, but this ministry has never been invited to any consultation workshops. Stakeholders claim that relationships between ministries mainly depend on relationships between people working in those ministries. Interviewees also argued that the current approach that ministries use to collaborate is not effective. Another problem is that technical ministries often either do not involve MOLISA and CEMA in their decision making or only include them on paper with no actual involvement in reality. Further, MOLISA and CEMA perceive environmental policies to be outside their expertise and priorities, so often exclude themselves from discussions. Moreover, although MARD and MONRE believe they are technically capable of handling indigenous issues, there is a lack capable staff in these two ministries. Not only cross-sectoral collaboration is challenging but each sector also has its own politics and power struggles. Each of these is discussed in the following section.

4.1.1 Sectoral planning and the role of the Ministry of Planning and Investment (MPI)

Figure 13 gives an overview of the MPI organizational structure. Although MPI plays an important role in approving REDD+ policies, its understanding of REDD+ and nature-based solutions is limited *has been taken so far. I don't understand what REDD+ is about. I think right now efforts are uncoordinated and people still don't understand what REDD+ is or what their roles might be. Vietnam tends to be quite good at theory. So, consultation processes look really good on paper. In reality, information sharing is inadequate; it seems that ministries don't share information beyond their own departments. The goal of REDD+ is to create equity and benefits for forest communities. This is a big goal. Money is coming from the international level, but this is just a promise. We haven't seen any real payment yet, we can't design policies based on something unreal... how can we measure the impacts?*

Moreover, REDD+ concerns many sectors, while there is an absence of linkages between MARD, MONRE and the private sector. In order to implement REDD+, we need more macro policies where REDD+ is only a part.

4.1.2 Financial planning and the role of the Ministry of Finance (MoF)

Figure 14 presents an overview of the MoF organizational structure.

Our interview shows there is a reluctant to support emission reduction projects. An interviewee from the Ministry of Finance shared that “It is too expensive to establish and develop renewable energy such as solar and wind. The biggest question for us is how to invest in the area that is Vietnam’s strengths meanwhile to reduce missions. Our population is 100 mill people, but the energy supply can only meet 20% of the population. Yes, hydropower plants can lead to deforestation, but this might be the easiest way”. MARD and Ministry of Finance also have different views on REDD+ and emissions reductions. MoF prefers REDD+ revenue to be integrated into the national budget. The interviewees from Ministry of Finance also shared that “many people and companies propose to create additional support for reforestation activities. However, since this is too new, the government believes that these suggestions should be carefully examined”.

4.1.3 Forest management structure in Vietnam

MARD is the government focal point for forest governance in Vietnam. Figure 15 provides an overview of its management structure. Key agencies within MARD are VNFOREST, OMARD, the Department of International Cooperation and IPSARD.

While VNFOREST develops forestry policies with research inputs from IPSARD where relevant, it needs to get legal and political clearance from the three other agencies. In addition, while VNFOREST has a mandate to issue guidance on nature-based solutions and emissions reduction projects related to the forestry sector, its management structure and politics are also complex (Figure 16).

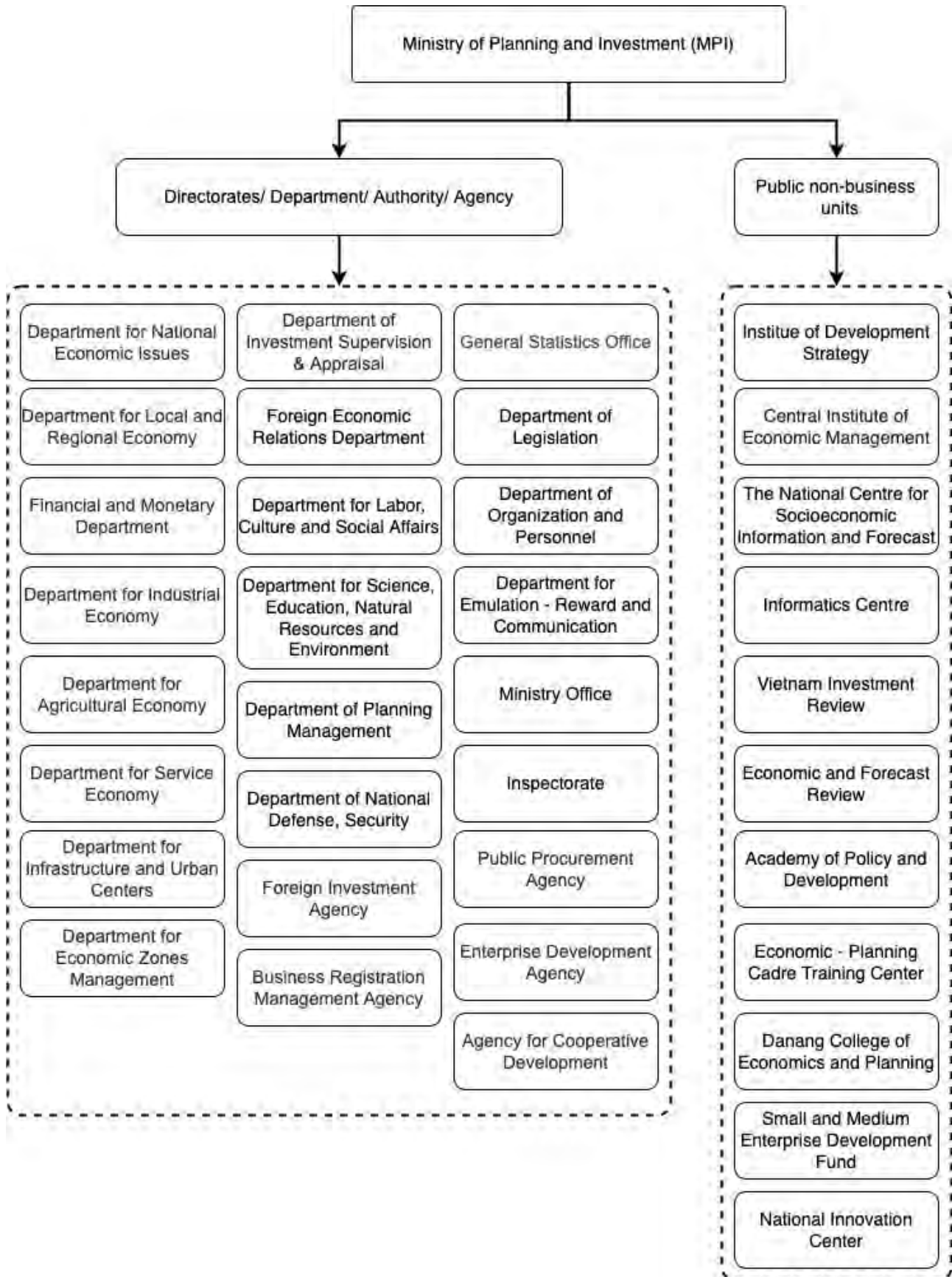


Figure 12. MPI organizational structure

Source: Compiled by the authors from MPI 2021a, MPI 2021b

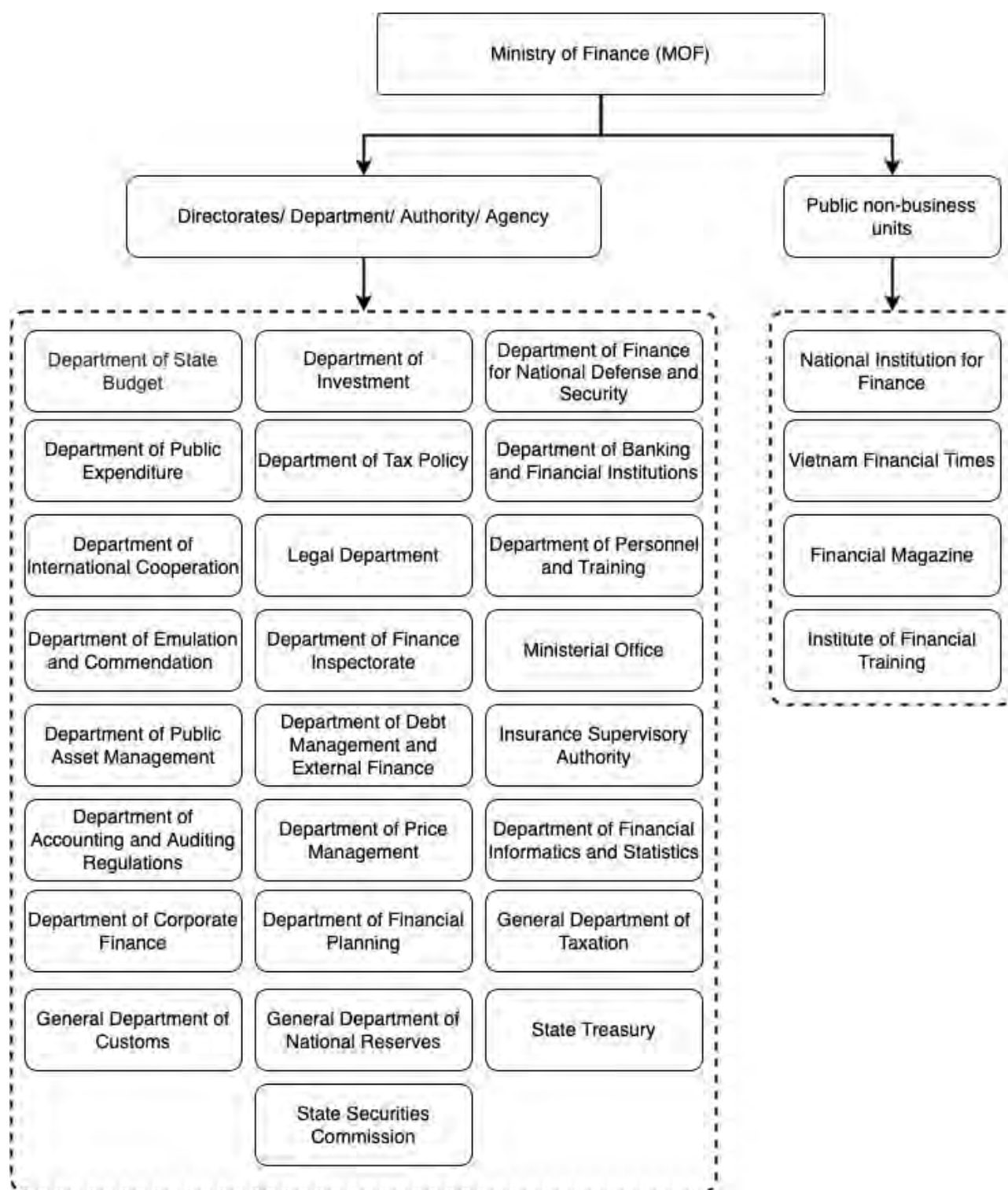


Figure 13. Ministry of Finance organizational structure

Source: Compiled by the authors from MoF 2017

Four key agencies in VNFOREST are also involved directly in emissions reduction policies and projects. These are the Vietnam REDD+ Office (VRO), the Department of Planning and Finance, the Department of Science, Technology and International Cooperation (DOSTIC)

and the Department and Inspectorate of Legal Affairs. In addition to these organizations, the Vietnam Forest Protection and Development Fund (VNFF), a state financial institution under MARD, was established on 28 November 2008 through Decision No.114/2008/QD-BNN,

which aimed to mobilize societal resources to protect and develop forests; contribute to realizing guidelines on forestry awareness raising; raise awareness of and responsibility for forest protection and development; and support capacity building to improve fund management and utilization effectiveness. VNFF is working with a non-profit operation to mobilize, receive, manage and utilize financial resources for forest protection and development programmes.

Further, VNFF also allocates funds, and examines and evaluates the results of forestry sector programmes, projects and non-project activities.

However, the Vietnam REDD+ Office (VRO), now renamed the State Steering Committee Office for Sustainable Forest Development and REDD+ Target Programmes and VNFF play leading roles in emissions reduction projects such as LEAF and ERPA.

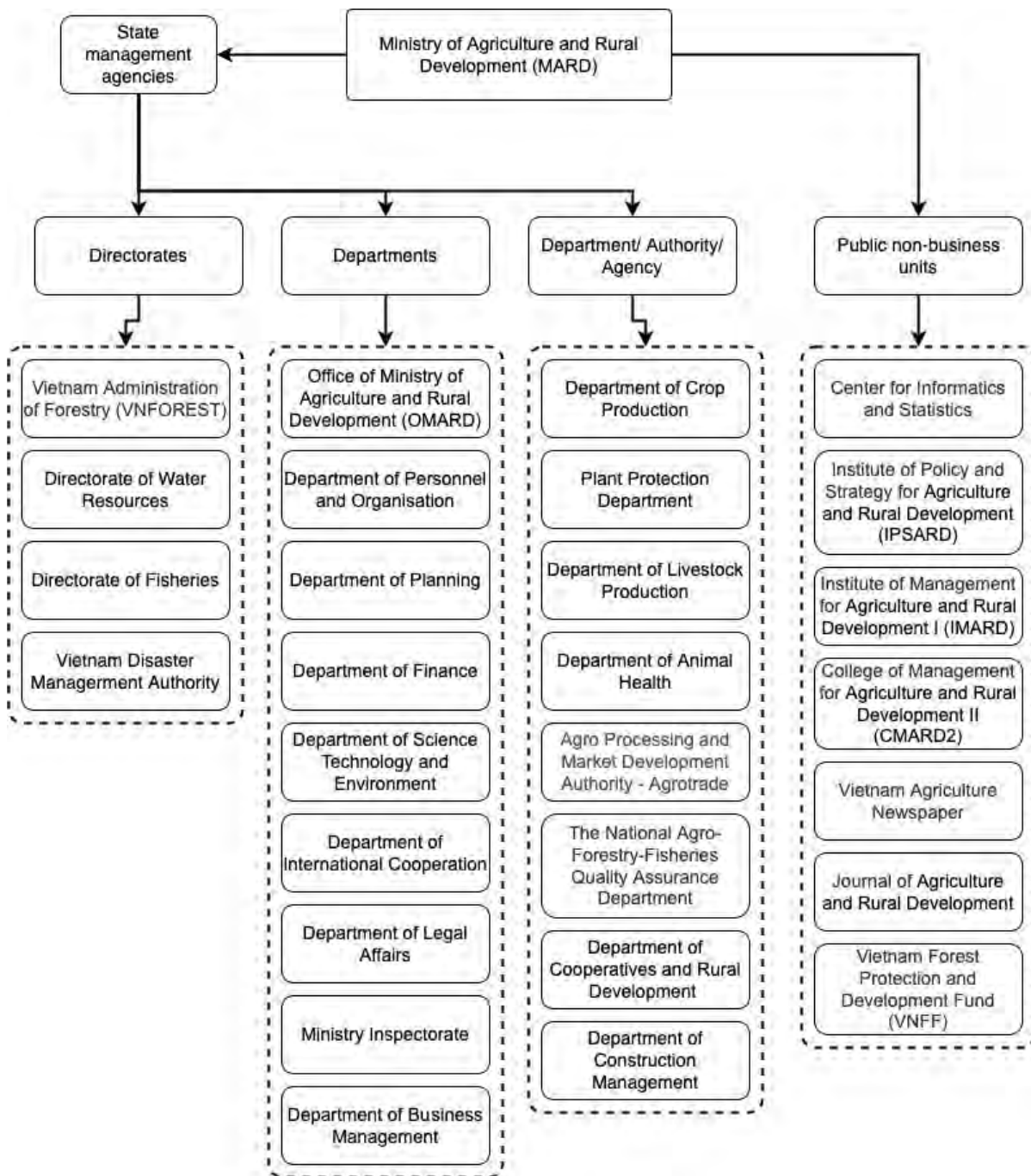


Figure 14. MARD management structure

Source: Compiled by the authors from MARD 2008 and MARD 2017

In 2015, the VRO was established as the government focal point on REDD+ in Vietnam in the expectation of receiving international REDD+ payments. It managed and provided guidance, directions and strategies on all issues related to REDD+ for Vietnam. It also bridged international actors with Vietnamese actors and fostered international collaboration. Decision No. 106/QD-TCLNVP regulated the establishment of VRO and specified that it was allowed to create its own accounts and use the VNFOREST office seal for transactions. However, as REDD+ did not materialize as planned and there was uncertainty on REDD+ finance, the government issued Decision No. 823/QD-BNNTCCB in 2018 on Establishment of the State Steering Committee Office for Sustainable Forest Development and REDD+ Target Programmes for 2016–2020 merging the State

Steering Committee Office for Sustainable Forest Development for 2011–2020 and VRO. Since then, VRO can no longer use the VNFOREST seal nor create and manage financial transactions.

However, the State Steering Committee Office for Sustainable Forest Development and REDD+ Target Programmes remains the national REDD+ focal point, and should be the first point of entry for any future emissions reduction programmes or projects wishing to work in Vietnam. Although the State Steering Committee Office for Sustainable Forest Development and REDD+ Target Programmes does not manage financial transactions as Vietnam Forest Protection and Development is a dedicated entity for such purposes, it is still responsible for providing guidance on how money should be managed and transferred, and for monitoring, evaluation and reporting.

Despite its important role, the State Steering Committee Office for Sustainable Forest

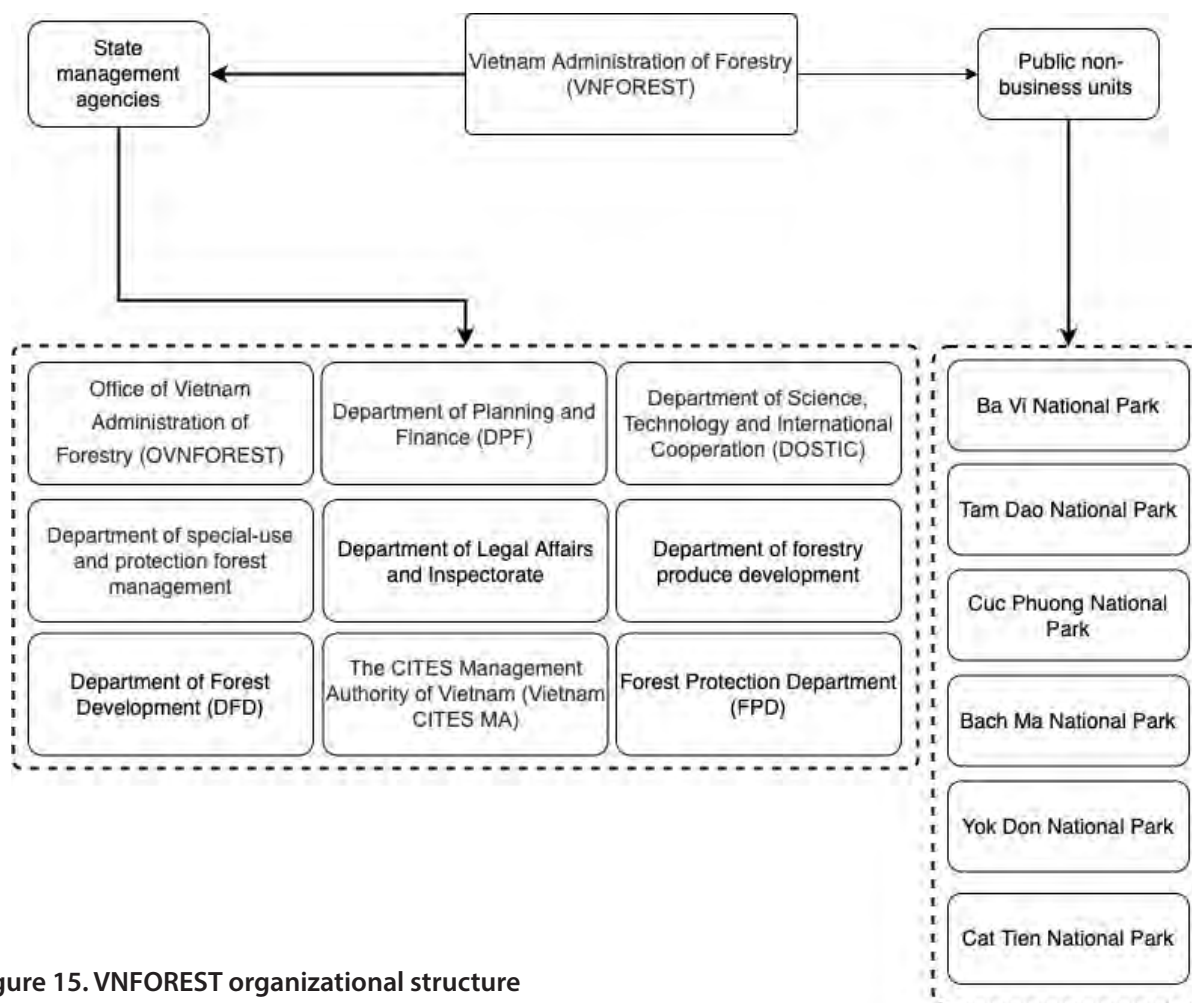


Figure 15. VNFOREST organizational structure

Source: Authors, compiled from VNFOREST 2017, VNFOREST 2018

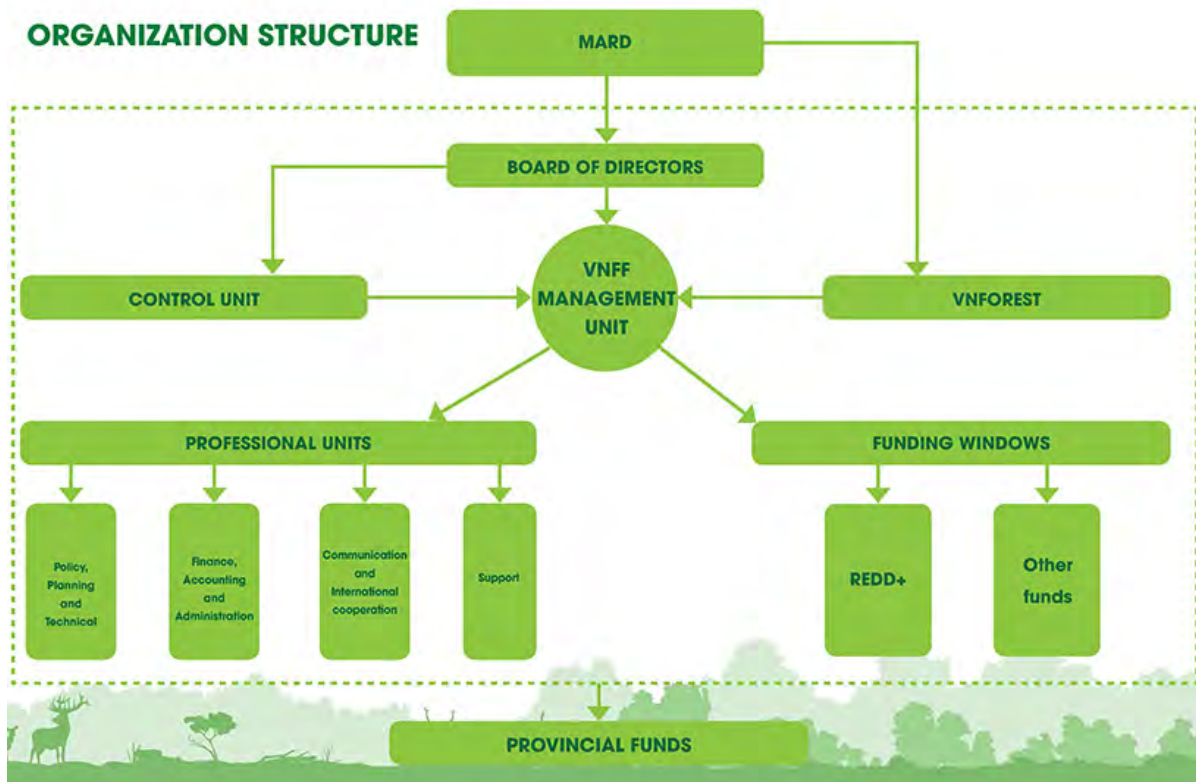


Figure 16. VNFF organizational structure

Source: <http://vnff.vn/about-vnff/organizational-structure>

Development and REDD+ Target Programmes has a limited number of staff to do the job. However, of its three staff members, only one staff has sufficient knowledge and capacity to address REDD+ and handle its technicalities and paperwork. This interviewee also voiced her concern over future LEAF implementation as there is no funding from the government for hiring consultants to help make it work. In her words, “*In the next nine months, we’ll need technical support when applying ART-TREES standards. Because LEAF first needs a reference baseline, the calculation period for LEAF is from 2022. We currently have no resources for these activities. With previous World Bank initiatives, they had financial resources to support Vietnam to prepare reports and appraisals. As for LEAF, according to ART/TREES standards, the government either pays for itself or has to mobilize support to help with this activity, but there’s no funding available for us to do so*”.

While MOLISA has much to offer in terms of its experience and network to ensure the social well-being of IPLCs, the office has no direct

relationship or contact with this ministry, and only sends formal requests for data when needed. The Steering Committee closely works with CEMA as it also has programmes to support ethnic minorities in forested areas. While the central government might have some interaction with CEMA, provincial governments working on REDD+ rarely work with provincial CEMA units.

The forest management structure in Vietnam is also regulated by Forestry Law 2017 with different levels of power (Table 28). Article 7 of Forestry Law 2017 specifies two forms of forest ownership: (i) state-owned forests, which include natural forests, plantation forests invested in by the state; and forests managed by people with the state as their sole representative; and (ii) planted production forests owned by organizations, households or individuals in accordance with Vietnamese laws. An important feature of forest governance in Vietnam is that a ministerial-level agency (MARD) and local administrative units jointly exercise the right to legal limit for forests. MARD is responsible for developing national forestry plans to guide decision making

on forest use (Government of Vietnam 2017), and requesting the Prime Minister to establish new special-use forests or protection forests of national importance (Government of Vietnam 2017). However, provincial and district people's committees can also establish forests that are not of national importance, and they play a more significant role in allocating use rights to all forest types, as described below (Government of Vietnam 2017). This Forestry law also creates more favourable conditions for forest product processing and trading, such as leasing of land to foreign-invested enterprises to plant production forests, and encourages the expansion of cooperation in forestry with foreign countries, organizations and individuals to support the achievement of SDGs, and the realization of commitments on environmental protection,

response to climate change and Vietnam's other international commitments.

As regulated, forests are assigned and managed by various parties, including forest management boards, economic organizations, households, communities, etc. Currently, around 58% of forest area is managed by the state through protection forest management boards, special-use forest management boards, the armed forces, commune people's committees, etc. Forest area managed by households, individuals and communities accounts for 29% of the total forest area (1558/QD-BNN-TCLN dated 13 April 2021). The state aimed to promote the economic performance of the state and reduce dependency on public budgets by closing down state-owned enterprises and transforming state forest enterprises into one-member limited

Table 28. Forest management structure in Vietnam

Management level	Details
National Assembly	<ul style="list-style-type: none"> • Promulgates laws; • Decides to change the use purpose of special-use forests, watershed protection forests and border protection forests of more than 50 ha; wind, sand-shielding, wave-shielding and sea encroachment protection forests of 500 ha or more; and production forests of 1,000 ha or more.
Prime Minister	<ul style="list-style-type: none"> • Approves forest category changes; • Regulates in detail the allocation of forests, lease of forests, conversion of forest types, conversion of forest-use purposes to other purposes, and recovery of forests; • Approves the establishment of special-use forests and protection forests with national importance or located across provinces; • Decides to close and open natural forests nationwide or in many provinces and cities under central authority.
Ministry of Agriculture and Rural Development (MARD)	<ul style="list-style-type: none"> • Provides detailed regulations on the content of sustainable forest management plans, stipulating the order and procedures for developing and approving sustainable forest management plans; • Develops criteria on sustainable forest management; • Chairs and collaborates with the Ministry of Finance on submitting to the Prime Minister for consideration and decision support for forest owners when the Prime Minister's decision to close natural forests comes into effect; • Conducts and publicizes the results of the National Forest Inventory every five years and the specialized themes; directs the implementation of provincial forest inventory; • Regulates details and regulations of forest inventory; specifies methods and procedures for forest inventory and develops and manages the national forest database.
Provincial people's committees	<ul style="list-style-type: none"> • Plan for forest assignment, lease and change of forest-use purpose submitted by district people's committees; • Decide on the use of compensation fund for forest loss paid by hydropower plants to the provincial forest protection and development fund on how and where to replant forests; • Approve forest allocation, forest lease, conversion of forest-use purposes to other purposes, and recovery of forests for organizations; • Approve foreign-investment enterprises in Vietnam to lease land for production forests; • Decide on the establishment of special-use forests or protection forests; • Decide on the opening and closing of natural forests in their localities after the People's Councils of the same level approve the schemes; • Conduct local forest inventories and publish results; • Promulgate according to their competence, or submit to competent state agencies for promulgation, legal documents on forestry, deciding on programmes and projects on sustainable forestry development in their respective localities.

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Table 28. Continued

Management level	Details
District people's committees	<ul style="list-style-type: none"> • Carry out forest allocation, forest leasing, conversion of forest-use purposes and recover forests for households, individuals and communities; • Promulgate according to their competence, or submit to competent state agencies for promulgation, legal documents on forestry, decide on programmes and projects for sustainable forestry development in their respective localities; • Organize the implementation of legal documents on forestry, programmes and projects on sustainable forestry development in localities; • Organize the classification of forests and demarcate forests of different types in their respective localities according to the provisions of law; • Assign forests, forest leases, conversion of forest-use purposes and recovery of forests for households, individuals and communities; set up local forest management records; organize substitute afforestation; • Organize the implementation of forest inventory, inventory and monitoring of forest changes in localities; • Organize forest management and protection; preserve forest biodiversity; organize fire prevention and firefighting; • Propagate, disseminate and educate on forestry legislation in localities; • Direct commune people's committees in formulating land and forest assignment for forests that have not yet been assigned or leased according to the provisions of law; • Inspect, examine and handle law violations; settle disputes, complaints and denunciations in the forestry domain according to the provisions of law.
Commune/ward/township people's committees	<ul style="list-style-type: none"> • Promulgate according to their competence, or submit to competent state agencies for promulgation, legal documents on forestry, to decide on programmes and projects on sustainable forestry development, forestry, agriculture and fishery production, combination farming, cultivation and implementation organization in the locality; • Manage forest area and boundaries; confirm the purpose of forest assignment or lease for organizations, households, individuals and communities according to the provisions of law; • Organize the management and protection of forest areas not yet assigned or leased by the state; • Organize the inventory of forests in their localities; guide population communities in elaborating and implementing their forest protection conventions and rules in their localities in accordance with the provisions of law; • Organize the activities of forest fire prevention and firefighting; • Prevent and control violations of the forestry legislation in their respective localities and handle violations of the law, and settle disputes, complaints and denunciations in the forestry domain in localities according to the provisions of law.

Source: Forestry Law 2017

liability. However, such policies have generally focused more on the legal status of the state than on their operations and management and the actual challenges they face, including lack of capital and equipment, and lack of competence in planning, financial management and forest protection (Le 2014). Moreover, in some localities, due to limited funding when closing access to natural forests, no financial support was provided for forest protection. Regulations on forest exploitation have not created conditions to promote autonomy in forest owners' production and businesses; mechanisms and policies for benefitting from forests remain inadequate due to overdependence on prescribed technical standards for management (Vu 2020). Overlapping, lack of synchronization,

slow guidance, and unclear instructions cause different interpretations, and some localities have been unable to implement policies. Current work reviewing and adjusting protection, special-use and production forests still has many shortcomings, and is detached from reality.

The government has issued a large number of forestry policies, notably the Forest Land Allocation process that provides enabling conditions for nature-based policies and projects, but implementation is challenging (Table 29). In line with Land Law 2013, the new Forestry Law 2017, which replaced Forest Protection and Development Law 2004, clearly specifies the two main forms of forest ownership:

1. forests, including natural forests, planted forests wholly invested by the state, planted forests recovered by the state, donated to the state or with their ownership transferred to the state, are owned by the people but the state stands as their sole representative;
2. planted production forests, including forests invested in by organizations, households, individuals, or population communities, and forests transferred, donated, or inherited from other forest owners, are owned by these entities.

These two laws sanction the management of forests by local people and the private sector and allow legitimate titleholders to lease, exchange, inherit, mortgage and transfer titles. “Red books” or land certificates provide land-use rights for different groups of users.

There are three main forms of Forest Land Allocation:

1. forest-land allocation to state organizations, mainly forest companies and forest management boards;
2. forest-land allocation to households, individuals, and communities;
3. contract-based allocation of forest land to households, communities and individuals (e.g., forest management boards contract households and communities to protect forests).

Although commune authorities have a responsibility to protect forests, their patrol forces are thin and underfunded, while the implementation of regulations and plans on coordination in forest management and protection between neighbouring provinces, districts, communes and villages is limited, which leads to difficulties in fulfilling tasks (Bac Kan FPD 2016).

4.1.4. Land management structure in Vietnam

Table 30 provides an overview of actors and their responsibilities in land-use decision making in Vietnam.

MONRE is the government focal point on land governance. Its organizational structure is presented in Figure 18.

As mentioned earlier, MARD and MONRE are the two most important agencies in Vietnam in designing, implementing and monitoring emissions reduction projects. However, conflict of

interest and weak coordination between the two ministries are well-known by all stakeholders in Vietnam.

Interviewed government officials also listed major challenges for REDD+ implementation in Vietnam, including:

- The government’s limited negotiation skills and power in international discussions;
- Implementing national commitments and international agreements not being easy, particularly as the government has to decide on trade-offs between environmental protection and economic growth;
- Vietnam not participating in the carbon market;
- Despite MONRE being the CDM focal point, it is incapable of supporting the private sector in entering the carbon market or acting as a broker in linking companies with international buyers. Consequently, companies have to figure out their own ways to join the market;
- MONRE has no up-to-date information on carbon credits and carbon markets;
- Experience from implementing AR-CDM in Vietnam shows that Vietnam might face difficulties related to technical capacity, full cost estimation methods and benefits analyses, as well as weak coordination between MONRE and MARD;
- Many donors want to support the government in implementing climate change mitigation and emissions reduction programmes. However, they only want to provide technical assistance while the government needs sustainable funding sources to pilot or fully implement such activities;
- It is unclear whether local people benefit from such processes or if they only benefit ministries and government agencies;
- Vietnam’s policies and strategies change over time, so ministries and the private sector cannot be confident that what is being designed and implemented will be sustainable and supported by other policies;
- Vietnam does not have a full understanding of forest degradation, so policies and measures are ineffective at improving forest quality;
- Internal communications within MONRE are very weak, so departments fail to share what they have learned from workshops, meaning new participants have to learn the same things again;

Table 29. Opportunities and challenges in Forest Land Allocation (FLA) in Vietnam

Opportunities	Challenges
<ul style="list-style-type: none"> • Forest and FLA policies have been implemented since 1983 and were further strengthened by the Land Law 2013 and Forestry Law 2017 and the master plan for restructuring the forest sector. • Forestry Law 2017 acknowledges, for the first time, religious and customary forests and the need to respect them. • Forestry Law 2017 ensures publicity, transparency and participation of local people, with no discrimination in terms of religion, belief and gender in forest assignment or leasing. • It respects the living space, customs and habits of the community, gives priority in assigning forest to ethnic minorities, households, individuals and communities of people who have customs, traditions, culture, beliefs and traditions attached to forests. 	<ul style="list-style-type: none"> • FLA has been slow and continues to be fraught with difficulties and misuse of power. • The slow progress is attributed partly to the reassignment of forest land allocation responsibilities from MARD to MONRE, which lacks the necessary human and financial resources; the strict conditions for allocation; the lack of interest among households; the lack of support to help groups benefit from the outcome; and the fact that SFCs were assigned large areas of land for which they are unwilling to cede authority. • The fact that forest land was defined according to planned future use rather than present use meant that the policy resulted in some areas being classified as “forests” that were currently being cultivated with annual crops and had been for dozens of years. • This policy and the limiting impact on communities’ access to forest land remains today. With priority given to state forest enterprises and protection forest management boards for forest land allocation, households have been deprived of access to land, causing land conflicts in many places. • Figures are inconsistent on the amount of land actually allocated to communities for management. • The land communities and ethnic minority people have been allocated is of poor quality, inaccessible from their villages and/or completely treeless, making it impossible for them to earn money while state-owned forestry enterprises, although inefficient, hold many of the best forest lands. • Commune people’s committees are responsible for designing and implementing forest allocation plans as well as carrying out the allocation process, but often lack sufficient capacities and resources. • Policies and guidelines do not contain specific provisions on the type of forest to be allocated to local communities. This has often resulted in them being allocated poor or inaccessible forests with limited to no economic potential. • The review and adjustment of three types of forests (protection, special-use and production) still have many shortcomings and are not close to reality. • It is slow to accelerate the implementation of forest allocation and forest leasing in association with land allocation, especially for forest area managed by commune people’s committees, in order to ensure that the entire forest area has owners. Reviews of the replacement afforestation area to speed up the afforestation progress to accomplish the set targets have not been satisfactory. • The decentralization of management responsibilities for forests and assignment of forest land to local authorities is still weak, with migration to forest areas and forest destruction still prevalent. • Allocating land to ethnic minorities is also challenging because provinces, districts and communes do not have sufficient funding or personnel to complete the paperwork. • Despite the government asking commune people’s committees and companies that fail to protect forests to return land to government agencies for allocation to local people for protection, such forest lands are often subject to land-use conflicts or cannot be used for other purposes. • Despite there being policy on land allocation and forest allocation with guidance on financial resources, payment norms for zoning, protection and payment for forest environmental services, the payments involved are too low to motivate people to protect and develop forests actively and voluntarily.

Sources: Castilla et al. 2006, Pham et al. 2013, To et al. 2013, To and Tran 2014, Government of Vietnam 2017, 2017c, 2017d, Vu 2020, Hoang 2020

Table 30. Actors and their responsibilities in land-use decision making

Institution	Responsibilities
Parliament	Promulgating laws and resolutions on land; deciding on national master plans and plans on land use; exercising supreme supervision over the management and use of land throughout the country; and making decisions on settlement of disputes related to geographical boundaries of administrative units of provinces and centrally run cities.
People's councils at all levels	Exercising the right to approve master plans and plans on land use in their respective localities before submitting them to competent agencies for approval; approving the land price list, the land recovery for implementation of socioeconomic development projects for national and local public benefits according to the competence prescribed by law; and supervising the enforcement of land laws in the locality.
Government	Exercising the right to represent the owner of the land; being responsible for state management of land and unified state management of land throughout the country; submitting to the National Assembly for decision on settlement of disputes related to the boundaries of administrative units of provinces and centrally run cities; submitting to the National Assembly Standing Committee for decision on settlement of disputes related to the boundaries of administrative units of districts, urban districts, towns and provincial cities, communes, wards and towns; establishing a council to appraise national master plans and plans on land use; organizing the formulation of national land-use master plans and plans; approving defence land-use plans, security land-use plans, and provincial land-use plans.
Ministry of Natural Resources and Environment (MONRE) and relevant ministries and ministerial-level agencies	Taking responsibility before the government for the unified state management of land; being responsible for providing necessary documents and coordinating with competent state agencies to settle administrative boundary disputes; being responsible for assisting the Appraisal Council in the process of appraising master plans and plans on land use; assuming the prime responsibility for assisting the government in formulating national land-use master plans and plans; synthesizing and reporting to the Prime Minister and announcing the results of annual land statistics and the results of 5-year land inventory for the whole country.
Ministry of Defence and Ministry of Police	Organizing the elaboration of master plans and plans on land use for national defence; organizing the planning and use of land for security; assuming the prime responsibility for, and coordinating with provincial people's committees in making statistics and inventory of defence and security land and sending reports on the results to the Ministry of Natural Resources and Environment.
MONRE	Establishing a council to appraise land-use planning and plans for national defence and security and provincial land-use master plans and plans; providing detailed regulations on land statistics and inventory; and mapping current land use.
Council for appraisal of land use plans at all levels	Being responsible for appraising and sending notices of appraisal results of master plans and plans on land use to the competent agency that organizes the formulation of master plans and plans on land-use; ensuring organizations making master plans and plans on land use are responsible for receiving and explaining according to the notified contents of results of appraisal of land-use master plans and plans; conducting field inspections and surveys of areas where land-use purposes are expected to be changed, especially the change of land use purposes for rice cultivation, protection forest land, and special-use forest land.
People's committees at all levels	Being responsible for the state management of land in their respective localities according to their competence: approving master plans and plans on land use at lower administrative levels; organizing the planning of land allocation and zoning according to functional areas and types of land to each district-level administrative unit in the provincial planning; organizing land-use planning; organizing the implementation of land statistics and inventory; mapping the current land-use status of the locality; reporting to MONRE on the results of statistics, land inventory and mapping of the current status of land use in the locality.
Chairs of provincial people's committees	Establishing of a council to appraise district-level master plans and plans on land use.
Provincial and district land management agencies	Being responsible for assisting the Appraisal Council in the process of appraising land-use master plans and plans; and being responsible for making plans for allocating and zoning land according to functional areas and by type of land to each district-level administrative unit in the provincial planning and provincial land-use planning. District-level land management agencies are responsible for formulating district-level land-use master plans and plans.

Source: Land Law 2013 revised in 2021

- Current policies and programmes fail to take efficiency, transaction costs and actual public administration costs into account;
- Land allocation programme implementation is weak, so problems will arise when REDD+ reaches the local level. Forest Land Allocation (FLA) is an issue that needs closer consideration. Vietnam has a policy framework at the central level, but implementation is very different in the provinces, which have their own contexts. Stakeholder participation in FLA is weak, so local people get few benefits, and there are often tensions over land rights. One example is the tensions between state forest enterprises and local people over the use of forest land. Another issue is land conversion, with each province having its own different policies. Some provinces insist they will implement large-scale reforestation programmes, while others allow the conversion of areas of “poor” forest. REDD+ project designers and implementers should be aware of all of these issues and policy inconsistencies;
- REDD+ participation processes are good, but not good enough. The REDD+ Steering Committee, for example, is not as active as it could be because members are often absent in meetings as they are busy with other tasks. The steering committee plays a very minor role in REDD+ management;
- There are no assessments of government capacity for law enforcement before policies are issued, and weak capacity at the provincial level leads to ineffective implementation.

The Department of Climate Change and the Vietnam Meteorological and Hydrological Administration are the key leading agencies driving the formulation and implementation of policies on emissions reduction strategies, while the General Department of Land Administration under MONRE leads land allocation and issues land use rights certificates. Table 31 summarizes opportunities and challenges for land allocation processes in Vietnam.

Current land and forest governance in Vietnam presents several challenges for REDD+ and any future results-based payment projects.

First, land-use planning and land allocation have high corruption risks. Bribes are required to receive land-use rights certificates. In the

upland areas, ethnic minority people often refuse to apply for red books due to these informal costs as well as the complex paperwork involved. There are still more than 300,000 poor ethnic minority households without access to residential and production land. Ethnic minority communities in the Central Highlands region also face difficulties having their customary tenure recognized through forest land allocation. This region contains the country’s largest forest area, but only 4% of ethnic minorities report that they have forest use access. There is also a staggering discrepancy in access to good quality land between members of ethnic majority groups (Kinh and Hoa) and other ethnic groups. Indigenous people’s rights to forest resources are still far from secure.

Second, due to the command and control system, and the state taking full rights to manage all land, FLA does not guarantee custody by a “real owner” (i.e., a legal entity) and might in fact create open-access conditions. More seriously, land classified by the government as “unused” is in fact under customary tenure not formally recognized by law. In many places, households do not want to invest in forest land because they fear the state may reclaim the land for forest plantations at short notice. There are often land-use conflicts and tensions between special-use forest management boards and local communities as special-use forests (national parks and protected areas) have often been established on customary land and in customary forests.

Third, current FLA processes and policies also trigger many inequity issues. Land allocation in Vietnam has been based on the ability to invest in the land, with labour and capital. However, most poor people, including the ethnic minorities that comprise the majority of forest-dependent people lack both labour and funds. These policies, therefore, often exclude them from receiving a larger share of land allocation. Moreover, even though the government aims to decentralize forest management by allocating forest land to households and individuals to improve livelihoods and increase forest cover, priority for allocation has generally been given to state forest organizations. Forest land has become the basis of capital accumulation for households that have access to political power and social networks. As a result, there is no remaining land available for interested low-income households.

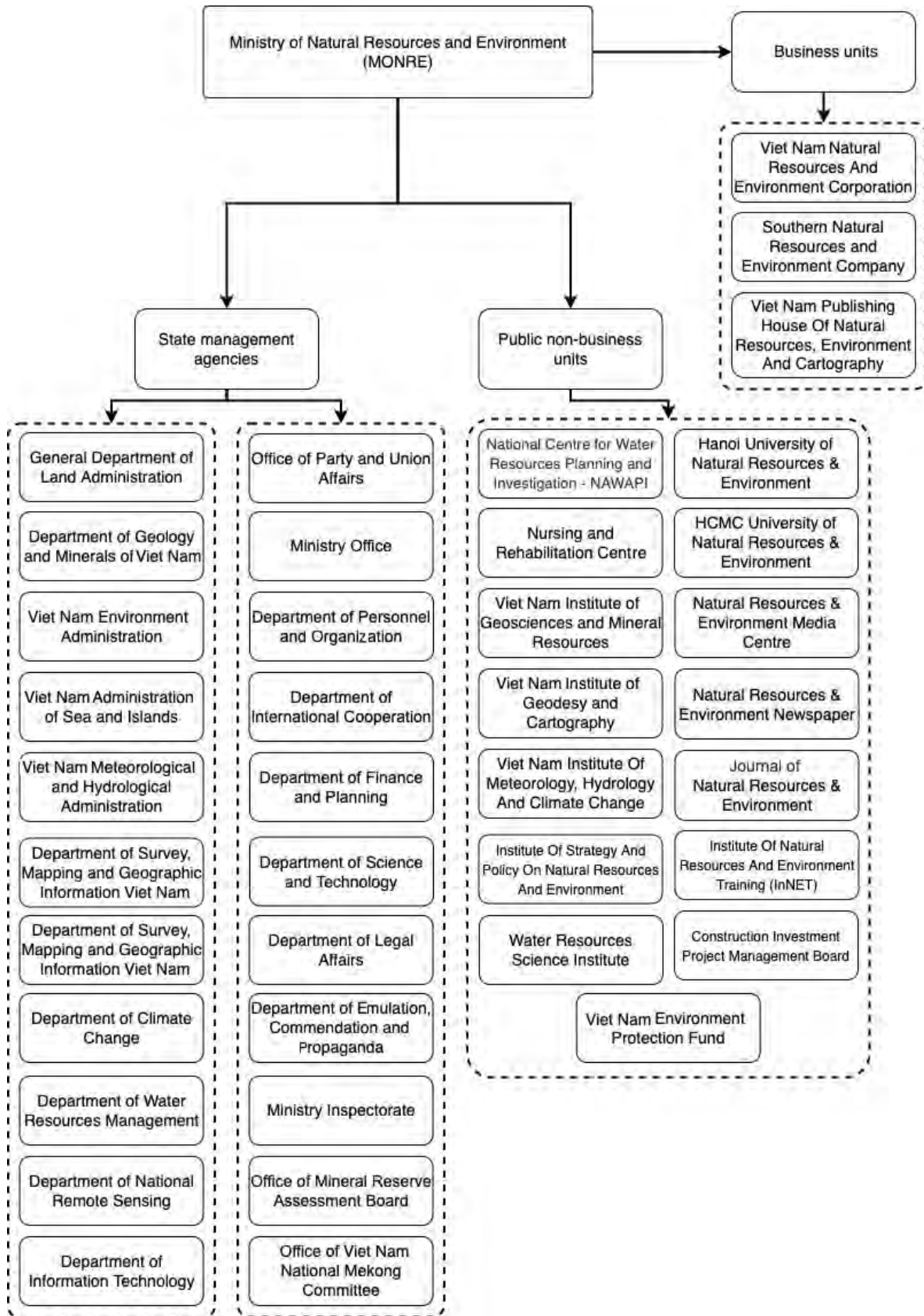


Figure 17. MONRE management structure

Source: Compiled by the authors from MONRE 2021

Further, criteria to select recipients of forest land through FLA processes have sometimes excluded poor households due to requirements of permanent housing and sufficient labour to carry out forest protection/plantation duties. Even when communities and local people can access forest

land, allocated forest land is often infertile and, in the absence of financial and technical support from the government, lands are often simply abandoned. The fact that state actors own the highest-quality forests, while non-state actors, particularly local people, have mostly been allocated poorer-quality and degraded

Table 31. Opportunities and challenges for land allocation

Opportunities	<ul style="list-style-type: none"> • The provincial role in land management has increased over time as some powers to allocate and manage land have been decentralized to local authorities; • Provincial people's committees (local governments) can make decisions on land-use planning and related infrastructure development, land appropriation, allocation, conversion and leases to organizations and individuals. District people's committees have the same authority, but only for individuals and households. Commune authorities will manage community-land funds that retain 5% of agricultural land for common use; • New Land Law 2013 shifts the main authorized body for land-use planning from the commune up to the district level. This change enables more centralized control, reins in communes that were not following procedure, fits in with other efforts to reduce commune authority more broadly, tackles disagreements between communes and districts, and acts to reduce tensions around land. With an average of 10–20 districts per province, it then becomes possible to manage land at the provincial level, which was not possible when responsibility was delegated to each commune.
Challenges	<ul style="list-style-type: none"> • Although the National Assembly has issued Resolution No. 112/2015/QH13 on strengthening the management of land originating from state-owned agricultural and forestry farms run by agroforestry companies, forest management boards and organizations, and used by other organizations, households, and individuals, provincial authorities cannot implement the resolution. Local authorities do not want to accept land returned from state agencies and companies because it is difficult to issue land-use rights certificates due to land-use conflicts and regular encroachment. Local authorities need sufficient financial and human resources to measure and check the quality and quantity of forests before and after being returned, but the necessary funds are not available, and neither are past documents to confirm the status of the forests; • Although decentralization in Vietnam has given more decision-making power for land-use negotiations to provincial governments, the real power still lies with the central government. The law stipulates that district governments and communes have discretionary power to promote local relevance, but in reality, they lack the power, financial resources and competence to make key decisions; • Despite holding a great deal of information and maintaining extensive networks at local level, communes' powers over forest resources are not clearly defined by regulation and are weak in practice. Their main responsibilities remain limited to raising awareness, preventing forest fires, reporting on illegal logging and assisting with forestland allocation. Commune authorities do not have the power to monitor the fulfilment of contracts by private companies, and are generally unaware of contractual arrangements for forestland lease or their rights and responsibilities regarding forestland use and monitoring of land leased to private companies; • Land grabbing; • Limitations in current land management give rise to difficulties in land allocation. As forest allocation is not associated with resources, overlapping occurs. Unclear policies also cause problems, with areas of natural forest people had self-zoned for natural regeneration now becoming forests, but they are not exploited and used, making people's lives worse. Forest economy-based capital is problematic, and there are few contracts for forest protection. • Although Joint Circular (07) issued by MONRE and MARD in 2011 allows the allocation of land and forest together, it has been challenging to enforce this policy in practice. As discussed in the previous section, MONRE is responsible for issuing land use certificates, while MARD is responsible for allocating forest areas. However, these two agencies rarely work closely with each other, so there have been many cases of people being allocated land, but not trees on that land, or vice versa. Moreover, while forestry and land laws allow forest owners to benefit from forest products and environmental services, it is unclear whether carbon credits and carbon rights are included, or whether forest owners are eligible to receive benefits derived from them. As a result, the private sector is reluctant to invest in forestry carbon projects in Vietnam.

forest means that future REDD+ funds might be retained at the government level, with only very limited payments made to the actual forest managers. This also implies that difficulties will arise in relation to involving households in planning activities, monitoring, reporting and verifying, and in receiving and managing rewards – aspects that are integral to the long-term effectiveness of REDD+.

Fourth, according to Land Law 2013, all land belongs to the people, with the state acting as the owners' representative. In this system, property owners cannot have full and legal ownership of land. Forest-owning entities in Vietnam include state forest companies, protection forest management boards, special-use forest management boards, joint ventures, private companies, foreign enterprises, households, individuals, communities, armed forces and scientific organizations. The state can hand over land-use rights to these land users and protect the lawful right to use land and land-attached assets of land users, and these land users may be allocated or leased land, have land-use rights recognized by the state, or receive a transfer of land-use rights by the Law.

4.1.5. Social and ethnic minority groups affairs

As discussed above, CEMA and MOLISA are the government agencies responsible for ethnic minority groups and social affairs (Table 32 and Table 33). Although some policies require other ministries to work closely with these two agencies to formulate social inclusivity, as briefly discussed above, these two agencies are often excluded by other ministries, or decide to exclude themselves from emissions reduction and REDD+ discussions.

Figure 19 and Figure 20 provide overviews of the management structures of these two government agencies.

While MOLISA is not involved in REDD+, CEMA was often invited by VRO to take part in REDD+ discussions. While supporting REDD+ initiatives, CEMA interviewees also shared their concerns on the main challenges for REDD in Vietnam. These included:

Most provinces having limited resources for forest protection, making the permanence of REDD+ questionable;

REDD requirements being complex and taking time to understand and apply. During this time, deforestation will continue and the state of forest will change. Vietnam needs to secure financial resources now to deal with the situation and should not wait around for REDD+;

- The awareness of ethnic minorities on REDD+ and emissions reduction being very poor. Project developers need to find a simple, easy to understand approach with clear division of tasks and responsibilities, and benefit-sharing mechanisms including for non-timber forest product utilization;
- While MARD and different projects are now designing benefit-sharing mechanisms, it is important that these mechanisms are consistent with government policies on ensuring social well-being, and support programmes for ethnic minorities;
- CEMA staffs having limited understanding of REDD+.

Table 32. Mandates of the Committee for Ethnic Minority Affairs (CEMA)

Policy name	Mandates
Resolution No. 84/NQ-CP on approval of the investment policy for sustainable forestry development programmes for 2021–2025	<ul style="list-style-type: none"> • Coordinate with the Ministry of Agriculture and Rural Development; • Organize the implementation of forest protection and development activities in areas II and III according to the Prime Minister's Decision.

Table 33. Mandates of the Ministry of Labour, Invalids and Social Affairs (MOLISA)

Policy name	Mandate
Decision No. 324/QĐ-TTĐ on approval of the general programme for sustainable agriculture development in response to climate change in the Cuu Long River Basin to 2030 with vision to 2045	<ul style="list-style-type: none"> • Assume primary responsibility for, and coordinate with the Ministry of Agriculture and Rural Development, and the Vietnam Farmers' Association in formulating and implementing the Professional Farmer Training Programme and the Agricultural Labour Transformation Programme.

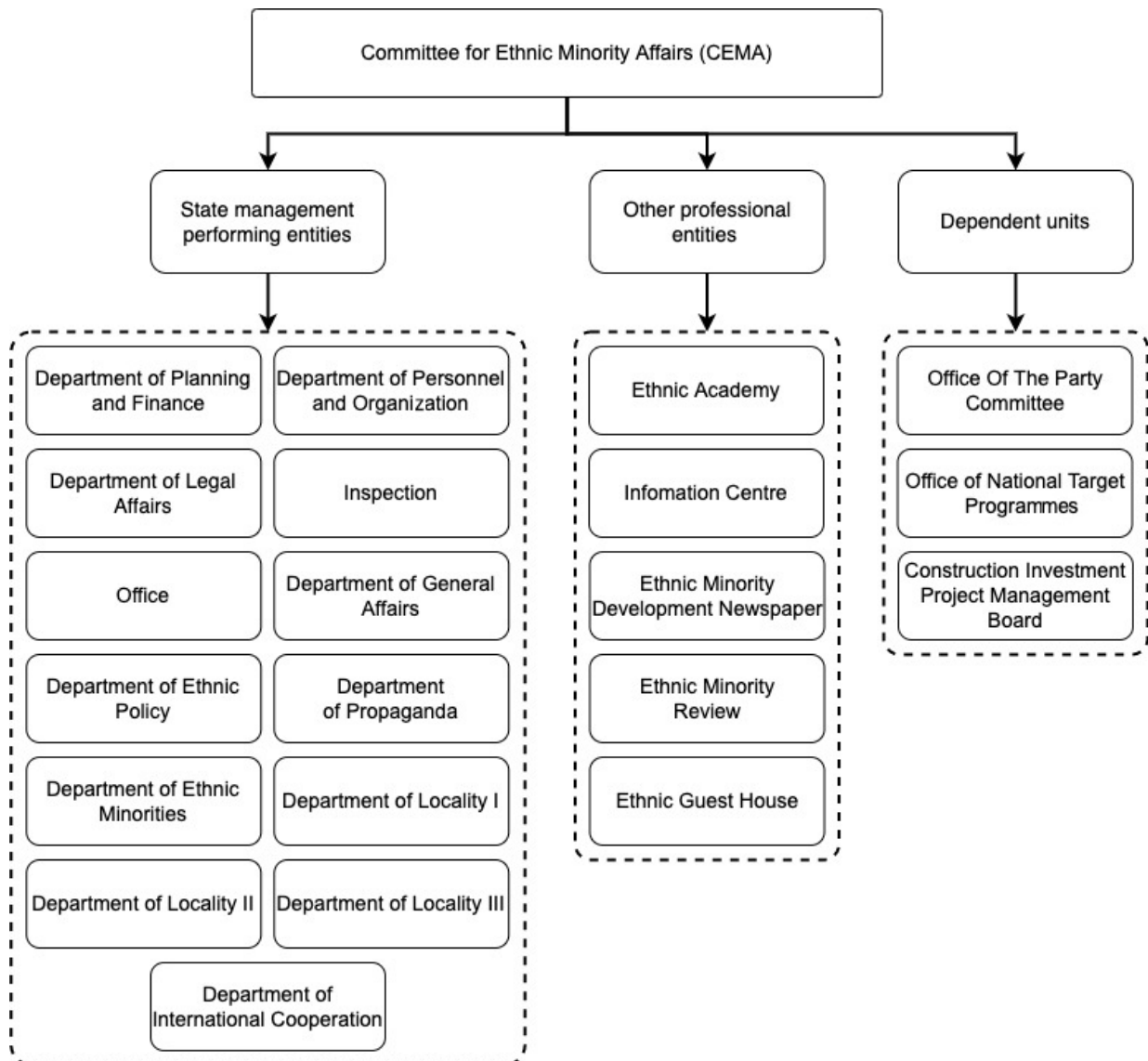


Figure 18. CEMA management structure

Source: Compiled by the authors from CEMA 2016 and CEMA 2021

4.2 Relationships between federal and state-level authorities in decision making on nature-based solutions and forestry offset projects

4.2.1 Horizontal relationships

National level: When implementing Forestry Law 2017, there is a lack of synchronization with the provisions of the Land Law and the Investment Law. Specifically: Article 14 and Article 15 stipulate that forest allocation and forest lease are synchronized with land allocation and land lease, but it is not clear whether the forest lease is through auction of forest use rights. Natural forests with certain characteristics should be clearly regulated on whether or not to auction to create a legal

corridor for localities when implementing forest allocation and forest leasing. The coordination and management capacity of the REDD+ implementation system in Vietnam is still lacking and weak (Dan 2019). Pham et al. (2014) also revealed conflicts and weak cooperation between MONRE and MARD. More importantly, some key ministries, most notably the Ministry of Planning and Investment and the Ministry of Finance, which are important for sectoral planning and financial management, did not participate in certain events because they saw REDD+ as being outside their areas of expertise. Of all the ministries, only MARD is active in the REDD+ discussion on forest carbon rights. Furthermore, local government agencies have only limited representation in the current consultation process because most consultations are

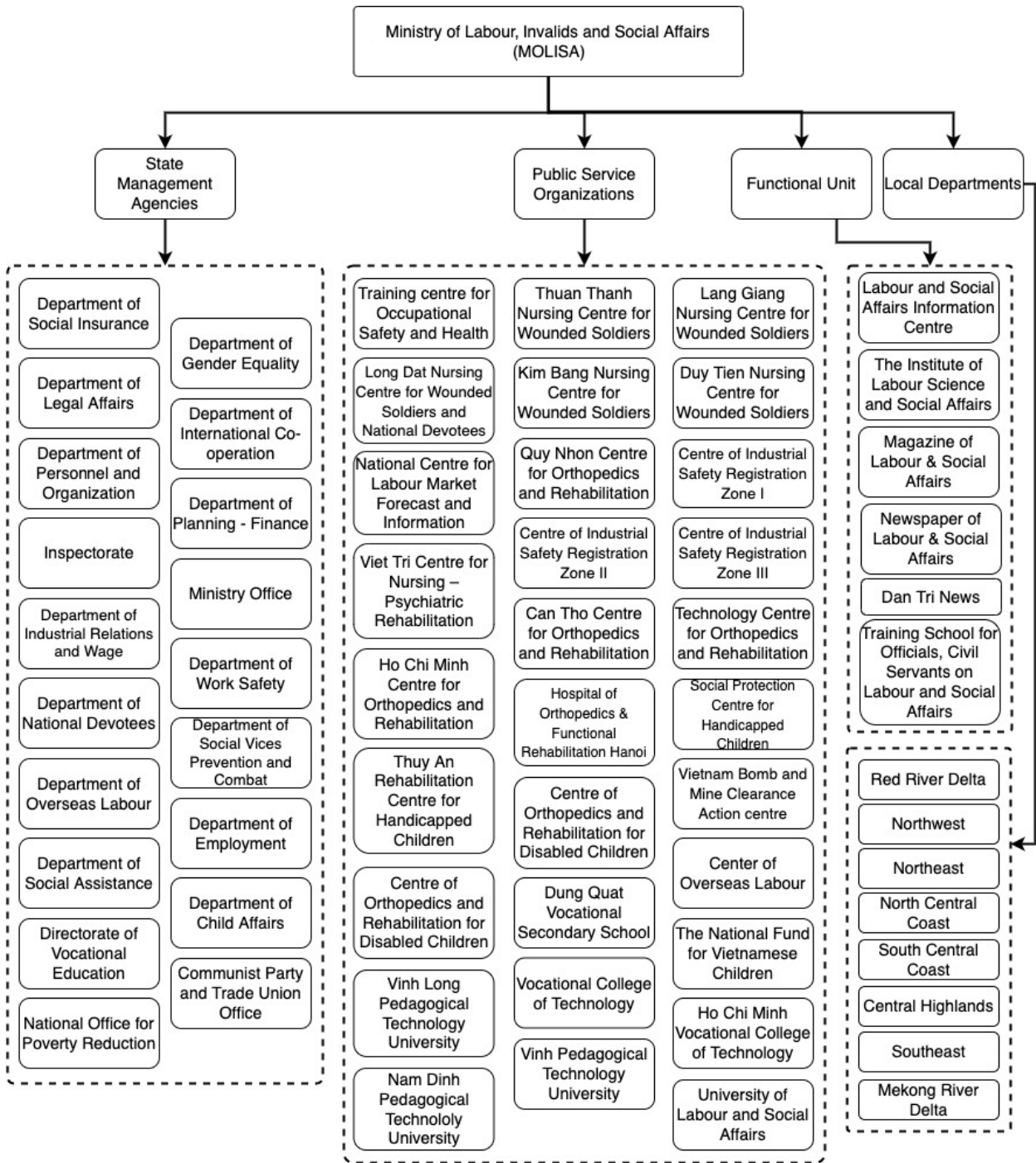


Figure 19. MOLISA management structure

Source: Compiled by the authors from MOLISA 2021

conducted at the national level and little funding is available for local representatives to attend.

Subnational levels: Provincial actors can also play an active role in piloting carbon credit trading. Quang Nam province is the first leading province to pilot carbon trading in Vietnam. After completing the procedures for project formulation, international bidding will take place, and foreign

enterprises will be invited to participate. Quang Nam Provincial People’s Committee plans to export 5.2 million forest carbon credits from 2021–2025. Specifically, in 2021 it will sell 1.2 million tons of CO₂ (equivalent to 1.2 million credits). From 2021 to 2025, an average of 0.8 million tons of CO₂ will be sold each year. The selling price is at least USD 5 per ton CO₂, which will bring revenue of VND 110 billion to 130 billion per year to Quang

Nam province, more than the revenue from forest environmental services, and equal to 2–2.5 times the annual investment of the central and local budgets on forestry. Funds collected from selling forest carbon credits will be reused for forest management, protection and development. The state will have a mechanism for local people to directly participate in patrolling, protecting, planting forests and preserving and storing carbon (Luong 2021). However, in many other provinces, coordination between provincial agencies is limited and not timely, while provincial budgets are still limited, and there are not enough resources to invest in and support forestry sector development (Duong 2021a).

4.2.2 Vertical relationships

In Vietnam, the central government dominates as an authority, whereas subnational governments are usually implementing bodies (Libert-Amico and Larson 2020) although local governments, especially at the provincial level, were given more power to make decisions on resource allocation within their provinces (Morgan and Long 2017). Decentralization is often seen as a means to create transparent and accountable mechanisms for the provincial government. However, this does not necessarily improve the performance and accountability of local government, and indeed may only empower local elites to capture a larger share of public resources.

The Forestry Law permits the reclassification of forest land from one class to another or as non-forest. The Forestry Law grants the right to change forest types to the Prime Minister at the request of the Ministry of Agriculture and Rural Development for forests established by the Prime Minister, and empowers provincial people's committees for forests established by the people of the province (Government of Vietnam 2017). This law also allows the National Assembly, the Prime Minister and provincial people's committees to convert forest use purposes to other purposes on a case-by-case basis, depending on the type and size of the forest (Government of Vietnam 2017). Although the law stipulates that conversion of natural forest uses should not occur except "for projects of national importance, projects for national security purposes or other urgent projects" approved by the government", it does not provide much guidance, and provincial people's

committees often fail to follow land-use plans when reclassifying forests (Truong et al. 2017). Under the Forestry Law, provincial or district people's committees can assign forest use and management rights through tax-free transfers or by giving them to different entities (Government of Vietnam 2017) (Table 34).

By law, provincial people's committees can decide to delegate powers to economic organizations or other organizations, while district and municipal people's committees can only assign powers to households, individual organizations and local communities (Government of Vietnam 2017). MARD and provincial people's committees are jointly tasked with developing processes for the proper valuation of forests prior to leasing (Government of Vietnam 2017). However, the assignment and decentralization of responsibilities for forest and forestland management to local authorities is still weak. Due to local interests, some localities have allowed the development of inefficient and unsafe hydropower projects, and this is a direct cause of deforestation and ecosystem loss. The direction and implementation of regulations on afforestation are not strict, and there are no permit revocations or cessations of operations for projects that fail to comply with replacement afforestation and the obligation to pay for forest environmental services. In addition, inadequacies due to the lack of synchronization in the policy have hampered its implementation (Vu 2020).

With the Investment Law, after surveying the proposed investment location for a change of forest use, the Department of Planning and Investment will synthesize the opinions of other departments, including the Department of Agriculture and Rural Development for a provincial people's committee to issue a decision on investment policy. However, decisions to change forest land use in a locality falls to the provincial people's council, which only convenes twice a year. Consequently, waiting for a provincial people's council to decide on a forest use change policy will delay investment attraction and not ensure administrative procedures for investment. If a provincial people's committee decides an investment policy without a provincial people's council decision to change forest land use

Table 34. Management rights and use rights by forest type

Forest categories	Special-use forest	Protection forest	Production forest
Actors that can receive management rights or use rights	<ul style="list-style-type: none"> • Special-use forest management boards • Protection forest management boards • Scientific organizations • Communities with cultural traditions or beliefs associated with the forest • Economic organizations with natural forest nurseries 	<ul style="list-style-type: none"> • Protection forest management board • Armed forces • Households and individuals living there legally • Communities living there legally • Economic organizations, interspersed with production forests 	<ul style="list-style-type: none"> • Armed forces • Communities • Protection forest management boards, where forest is interspersed with protection forest • Households and individuals living in or adjacent to the forest* • Economic organizations*

* If it is for commercial purposes it takes the form of a lease arrangement (Government of Vietnam 2017)

to another purpose, it will be in contravention of the provisions of the 2017 Forestry Law (Cao 2020).

The work of directing, inspecting and urging the implementation of regulations at district and commune levels is sometimes irregular, and coordination between forest rangers and the police in establishing dossiers and prosecuting criminal cases is inconsistent, with each stepping on the other's toes. The handling of criminal cases is lengthy, and leads to inadequate education and deterrence for violators. Legal provisions on the investigating competence of forest rangers are very limited (Quang Ngai Forest Protection Department 2018).

The roles of provincial governments in MRV activities are also limited as MARD activities are only carried out at the central level. In jurisdictional emissions reduction projects, MARD will hire experts from Forest Inventory and Planning Institute (FIPI) and Vietnamese Academy of Forest Science (VAFS) to do the whole area. The provincial government will support the MRV process by (i) sharing data related to forest area, forest owner, forest type, etc.; (ii) accompanying the field appraisal and guiding the plots and compartments that need to be monitored. Central government and donors think that these provincial agencies have sufficient data to carry out these two tasks. However, the key problems that need to be addressed are poor and inaccurate data provided by the provincial government and the inability and insufficient funding for provincial staff in consolidating and verifying these data before submitting to central government.

When VRO works with programmes and projects on emissions reduction, it asks them to make sure 30% of all meeting or activity participants are women. However, there is no law enforcement or monitoring on whether projects or provincial authorities comply with this request. In fact, provincial governments perceive this requirement as a “proposed recommendation” and not a “must”. Also, due to limited budgets and to keep donors happy, in many consultation meetings governments and projects do not invite ethnic minority people as doing so would necessitate hiring interpreters and paying to translate materials. Government agencies and projects often choose what is easy to do rather than what should be done.

4.3 Political assessment of agency leadership including names of ministers and key staff, relevant relations and political influence

4.3.1 COP26 commitments: From policy to practice

During COP26, Prime Minister Pham Minh Chinh made a strong commitment to emissions reduction. In his statement, the Prime Minister placed emphasis on “*capitalizing on Vietnam's advantage in renewable energy and taking stronger measures to reduce greenhouse gas emissions. To this end, we will make use of our own domestic resources, along with the cooperation and support of the international community, especially from the developed countries, in terms of finance and technology, including through*

mechanisms under the Paris Agreement, in order to achieve net-zero emissions by 2050". Vietnam's strong commitments at COP26 open up many opportunities for cooperation in low-emission growth and climate change adaptation. Domestic and foreign development partners expressed their desire and commitment to cooperate with Vietnam to implement the commitments after the Conference. The commitment to bring net emissions to zero and join the commitment to reduce methane emissions has sent a strong signal to the international community, opening up opportunities to take advantage of the shift of global financial resources for low-emissions development into Vietnam.

However, at present, the approval procedures for investment projects in Vietnam are still lengthy, and sometimes slow in many places, which may miss the opportunity to immediately attract investment projects of multinational corporations, especially projects to develop low-carbon renewable energy (MONRE 2021).

4.3.2 Forest carbon credits

Carbon rights and emission reduction transfer title are currently under development in Vietnam. According to MARD policymakers, MARD originally wanted to pursue a prime ministerial decision on piloting carbon rights and emission reduction title transfer under ERPA before it could be formally legalized. However, as this is a new policy that will be applied over a large area with six provinces under ERPA for five years, the Ministry of Justice does not support the option of piloting a decision, but requests MARD to follow the legal requirement to develop a new policy. While some MARD interviewees expressed their high hope that other ministries would support this policy and expected the new policy on carbon rights and emission reduction title transfer to be issued before February 2022, many other policymakers at MARD have their doubts as the process could take years. Moreover, the benefit-sharing plan (BSP) under ERPA is planned to align with the Forestry Law and Decree 156, but has yet to be confirmed as it also needs to follow the upcoming decree/circular. Respondents from the World Bank also said it is unclear in terms of BSP, POM and ERMR processes and timelines for delivery what the next steps are and how long they will take. A key element for BSP ERPA is the consultation

process but there is a need to document more clearly the consultation process (i.e., how many consultations, with whom and when), particularly in the localities where there was participation from stakeholders or beneficiaries as specified in the Advanced Draft BSP (including representation from civil society, non-governmental organizations (NGOs), local communities or ethnic minorities) or if the consultation processes established during the National REDD+ readiness, or used to determine the BSP, were employed. If not, it is important to understand if these stakeholders will be consulted in the process of finalizing the BSP (which will presumably be updated for consistency with the final PM Decision), and what happens in the event of stakeholders not agreeing with changes contained in the PM Decision.

4.3.3 Provincial commitment and leadership in addressing deforestation and social inclusion

Over the five years from 2012–2017, the areas of natural forest lost due to forest land use change in approved projects accounted for 89% of total forest loss, with the remaining 11% resulting from illegal deforestation. Notably, a number of serious deforestation cases in some provinces were detected late, and the handling itself was indecisive, inconsistent, and even showed signs of avoided responsibility, and aiding and abetting the deforestation, causing great damage to forest resources (Lai 2021). With government and localities' tree planting efforts across the country, although forest area has increased, the quality of natural forests is still limited. Therefore, the requirement to protect and develop forests, especially natural forests, is both an urgent task and a long-term strategy with the orientation of the government, and above all needs solidarity and a joint effort of the people in order to develop the country sustainably.

The interest, knowledge and willingness to mainstream gender into REDD+ and PES is weaker among local governing bodies compared with national agencies. Many provincial government agencies feel gender cannot be prioritized and that they have more important issues to take care of such as MRV and improving the legal framework on institutional settings (Pham and Brockhaus 2016).

4.4 Current capacity and gaps at the national and provincial government level to implement REDD+ under the LEAF Coalition

Based on a literature review, CIFOR's previous research results, and key informant interviews with government agencies and stakeholders, key capacity gaps identified for the national and provincial levels are as follows:

Lack of financial management capacity: While the government does not perceive MRV as a key challenge for emissions reduction projects in Vietnam, all government agencies pointed to the establishment of the benefit-sharing plan and financial management mechanism as being major challenges. Most government agencies perceived trying to satisfy requirements from all government agencies, and carrying out proper consultation activities as “black holes”, time-consuming and costly, and no one could be certain of when the country could finalize these two requirements. Managing large amounts of donor funds for REDD+ implementation is a major challenge for local governments due to the lack of transparent and accountable procedures, which easily leads to overspending and inappropriate, unreasonable and unfair distribution and allocation of funds (Department of Forestry 2013; Tran 2015). Due to limited human resources and the large size of allocated forest areas, provincial government management activities are currently facing many difficulties... An interviewee said, *“Not only do they have a limited number of staff, but their financial management capacity is weak. They might be good and familiar with domestic financing schemes using Vietnamese currency, but they are new and do not have experience with international payments and foreign currency”*. Many interviewees also acknowledged the different levels of understanding and capacity between provinces and within provinces in terms of financial capacity. LEAF is planned in the Central Highlands and South Central Coast regions. However, while provincial governments in the Central Highlands region have strong competencies and rich experience in managing a large funding scheme drawn from PFES implementation, provinces in the South Central Coast region have had limited exposure to and experience with REDD+, PFES and large funding schemes.

Lack of capacity in designing and implementing an accountable benefit-sharing plan: While all interviewees felt Vietnam is making good progress in registering LEAF, and benefit sharing will just need to be adjusted to new policy, they did mention the benefit sharing mechanism needing to align with a new policy, which is still under development. Our research findings indicate that men and women have different perceptions and preferences with respect to benefit-sharing mechanisms. For example, while men prefer REDD+ cash payments, women prefer in-kind payments, such as rice and tree seedlings, as well as technical support and training on financial management and market access. However, the current proposed benefit-sharing mechanism under both existing REDD+ pilot projects and the national PFES programme adopt a uniform approach for both men and women, and also ignore the role of other social variables, such as ethnic background, in shaping differing preferences between women and men. For example, in the delta where infrastructure and market access are often established, women's key interest in PFES schemes is access to loans and further market development, while for women residing in more remote areas, their main motivation is to cover basic household food security needs. As a result, women are not able to enjoy the benefits derived from PFES payments, which are mostly in the form of cash and often managed by men, and this leads to their lower willingness over time to participate in the scheme. There have been attempts to tackle these issues in the first trial of Free Prior and Informed Consent in Lam Dong province. However, under this design, women are still treated as a homogenous group when in reality this is not the case.

Lack of understanding of REDD+: A central-level REDD+ organization system has just been established, but the capacity to coordinate, manage and mobilize resources for REDD+ implementation is still weak and lacking (Department of Forestry 2013; Tran 2015). The awareness of all levels, sectors, forest owners and local communities of REDD+ is still inadequate and incomplete, leading to a lack of coordination between agencies and local authorities at all levels and donors (Department of Forestry 2013; Tran 2015). REDD+ Vietnam also faces many challenges and problems, such as: integrating REDD+ contents and connecting components

of the forestry sector policy system; ensuring the harmonization of REDD+ objectives with other socioeconomic objectives; and coordination between stakeholders to achieve a common goal (PanNature 2019a; Cao 2020). The system of organizing REDD+ implementation at the local level has not been established and put into operation at the request of the Prime Minister. However, while in 2015–2016, most stakeholders cited lack of understanding and knowledge of REDD+ as the main challenge, by 2018–2019, only government and inter-governmental organizations still had the same opinion (Pham et al. 2021).

Lack of understanding of LEAF: While provincial governments under the LEAF initiative express interest in LEAF, they do not have a full understanding of the initiative and still need a lot of awareness raising. Interviews conducted with stakeholders in Vietnam show that there is no common platform for understanding PES, REDD+, LEAF and emissions reduction in Vietnam. Even departments in the same Ministry do not have the same perspective on these issues. Many leaders across ministries and within the same ministries are not interested in emissions reduction as they do not understand these initiatives very well. All policy makers interviewed note that most publications on REDD+, LEAF and emissions reduction are in English and that the language barriers are high. The safeguard requirements are not well understood by decision makers and these policymakers perceived that those safeguards and emissions reduction are nice slogans, but cannot be put into practice. Limited understanding about safeguards means that the key PES constraints of high transaction costs and insecure land tenure are unlikely to get sufficient attention. All interviewees perceived land tenure as a major problem and recognized that having a multitude of government agencies involved did not make it easy to deal with land tenure problems. Even more interesting was the view that land tenure was spelt out in the Constitution and thus was impossible to change. No interviewees recognized transaction costs as a major problem. They believed that the transaction costs were unavoidable and could be dealt with by a government budget so that no other stakeholders would have to bear the cost. The shift from the government's traditional command-and-control regulatory approach to a more market-oriented

solution can only work if it is based on scientific evidence and people's preferences and choices. The public's choices, however, are limited because of limited understanding on emissions reduction policies.

Lack of capacity in PFES and forest monitoring and evaluation: According to Article 15 of Decree 119/2006/ND-CP dated 16 October 2006 on the operation and activities of forest rangers, forest owners are entitled to organize specialized units for forest protection with each member covering an average of 1,000 ha; and protection forests with an area of 20,000 ha or more can establish forces of forest rangers for forest protection. However, forest management boards are allocated limited budgets for this purpose, often have far fewer forest rangers than necessary, and suffer from weak overall governance. Monitoring and enforcement of the forest protection and development law are under-resourced in Vietnam, and a severe shortage of trained technical staff often means untrained administrative staff are used for field investigations. In some places, local governments still lose management control as people often encroach on forest land. As the central government does not impose sanctions, but only informs local authorities, this forest encroachment has yet to be resolved completely. It is also difficult to determine boundaries for demarcation in areas assigned to management units by provincial people's committees since the 1990s (Thanh 2021). Due to the specific nature of timber, only highly specialized or trained officers may be able to identify differences between the various timber species. Additionally, illegal loggers can be well organized and armed, and hire locals to take risks, while local forest guards, especially in remote areas, do not have the capacity to confront them. Legislation assigns the main responsibility for ensuring compliance with forest protection to MARD, and more specifically the FPD. However, for effective enforcement there needs to be close collaboration with other agencies. Recognizing the need for inter-agency coordination, various directives were introduced, most notably Prime Ministerial Directive 08/2006/CT-TTg on "urgent measures" for forest protection, which included establishing institutional mechanisms for inter-agency coordination between MARD, the Ministry of Public Security (MPS) and the Ministry of National Defence. In 2007, an

environmental police force was established under the MPS. Nevertheless, even with these efforts there continue to be obstacles to improving inter-agency cooperation: most notably a lack of financing, conflicting legislation, policies or guidelines, and a lack of human, physical or financial resources (World Bank 2009). While MARD and donors have suggested that MRV technical capacity in Vietnam is sufficient, there are only a small number of experts that have these skills. Most policymakers, implementers and researchers in Vietnam have limited understanding and experience regarding methods to identify, quantify, value and monitor environmental services and emissions reductions. All interviewees pointed to the weak skills and capacity of government staff, particularly at the local level. These issues are compounded by a lack of funding and limited numbers of staff to deal with REDD+, LEAF, and emissions. Skill issues relate not only to emission concepts but also to time and budget management. Moreover, Vietnam plans to adopt a stepwise approach in refining MRV. The MRV system in Vietnam relies on two reporting systems: (i) an annual report system implemented by central and provincial forest departments to monitor the changes in forest area and forest resources; and (ii) the Forest Inventory and Planning Institute (FIPI). FIPI's forest inventory system is based on plot monitoring once every five years. However, the system and database are unreliable and often made up by government agencies without ground-truthing. Moreover, as increasing forest cover and forest quality are criteria for both central and provincial government authorities to get promotions, none of these agencies have either the commitment or political will to report and discuss them. All REDD+ and emissions reduction projects will have to spend significant amounts to redo the mapping and forest inventory, as well as forest demarcation.

Incomplete legal framework and guidelines for MRV for REDD+ and mitigation and adaptation: MRV for REDD+ was established and linked to the national forest inventory, and the forest-based information from the national forest inventory was used for periodic reports of emissions and removals in the forest and land use sectors. Under a new decree on emissions reduction, MONRE plans to coordinate the development of detailed guidelines for accounting emissions and removals suitable for

different sectors, including the forestry sector. MONRE is preparing a draft national monitoring and evaluation system for climate change adaptation with specific criteria and indicators, which is planned for approval by the end of 2021. So far, no concepts or guidelines for nature-based solutions have been prepared.

Gender mainstreaming in central and provincial policies: The capacity of grassroots-level officials to practice gender equality is limited in ethnic minority and mountainous areas. Government reports indicate limited ministerial, agency and local authority capacity to integrate gender equality into socioeconomic development strategies, planning, and programme and project formulation. They tend to focus mainly on procedures and fail to take gender factors into account. It is a common perception that gender equality is a women's matter and the responsibility of the Vietnam Women's Union. Capacity building has also been highlighted as a key challenge with policies and projects often having limited budgets and focusing only on dissemination and training (Vietnam Women's Union et al. 2020). Local authorities have also highlighted a lack of guidance from the central government as being a major barrier to mainstreaming gender in PFES and REDD+ (Table 35).

Lack of skills and capacity to involve ethnic minority people and local communities in project design: The National Target Programme on socioeconomic development in ethnic minority and mountainous areas in 2021–2030 (NTP-EMMA) in implementation of National Assembly Resolution No. 88/2019/QH14 dated 18 November 2019 ratifying the Master Plan for Socioeconomic Development in Ethnic Minority and Mountainous Areas (EMMA) in 2021–2030 holds a critical strategic role in institutionalizing the viewpoints and instructions related to national issues and activities of the Communist Party and the Government of Vietnam when the country is about to start its next five-year socioeconomic development plan (2021–2025), ten-year socioeconomic development strategy (2021–2030) and the National Action Plan to implement Sustainable Development Goals (2020 Agenda of the United Nations). In addition to socioeconomic development, national security and defence, NTP-EMMA also covers gender mainstreaming and equality activities and

creates opportunities for all people and communities to have equal access, participate in and benefit from development based on an inclusive viewpoint where no one is left behind and the most vulnerable groups (including EMMA women and children) are paid due attention.

Key actors responsible for designing and implementing EMMA are the Vietnam Women's Union (VWU) in cooperation with the Ethnic Council of the National Assembly Committee for Ethnic Minority Affairs (CEMA) and the Ministry of Labour, Invalids and Social Affairs (MOLISA). In most benefit-sharing plans, social

Table 35. Opportunities and challenges for gender mainstreaming in REDD+ and nature-based projects

Opportunities	<ul style="list-style-type: none"> • Vietnam policies such as the NDC, the Law on Environmental Protection 2020, and the National Action Plan for Climate Change (2011–2020) recognize the importance of involving women and men equally in tackling climate change and other environmental challenges.
Challenges	<ul style="list-style-type: none"> • Despite high political commitment, neither MARD nor MONRE are able to mainstream and implement gender sensitive policies; • While according to the Law on Promulgation of Legal Documents, gender integration in legal documents, particularly laws, is mandatory in Vietnam, at the level of circulars (technical guidelines) that guide the law, there is no regulation on mainstreaming gender equality; • A sector-level review of gender equality and climate change in agriculture, water management, waste management and renewable energy further reveals that integration of gender into policy at the sector level is inconsistent; • Gender is either not explicitly addressed, or not considered at all, in the water management and renewable energy sectors. Meanwhile, even in the agriculture sector, where both climate vulnerability and women's participation are high, gender is only explicitly addressed in one action plan; • Across sectors, there is also an overall lack of guidance on gender mainstreaming and mechanisms for the monitoring and evaluation of gender integration. Potentially related to this, the review found that women's participation in the setting of such policies is limited, and further constrained by structural barriers at the community level; • Implementation of gender strategies and action plans remains weak due to a combination of unclear policies, guidelines, and the capacity of officials in translating policy direction into specific actions, reflecting a lack of technical capacity at all levels; • Practitioners are often guided by assumptions and generalizations, and face challenges in assessing climate vulnerabilities in a sex-disaggregated manner; • Existing capacities and skills among men and women are not presented as potential solutions in addressing climate change; • In the absence of the right data, analysis and evidence on gender-related aspects, countries remain limited in their ability to include and consider gender equality in the institutional and policy frameworks of climate change, in climate action design and implementation, and in reporting on progress to the Sustainable Development Goals (SDGs) and the Paris Agreement; • Sanctions and enforcing these provisions remain largely limited by the lack of law enforcement officers, prosecutors and judges and legal aid workers trained in gender-based discrimination, in addition to the low demand for assistance due, in part, to a lack of awareness among women regarding existing remedial options; • The proportion of women represented in decision-making positions in Vietnam is still very low; • Women have limited access to resources and productive assets, and technical and vocational education and training; • The terms and conditions of preferential loan programmes are also not responsive to women's production and business needs, limiting their access to credit and to alternative livelihood opportunities and more sustainable economic practices.

Sources: Vietnam UN 2016, Nguyen 2021

organizations such as women's unions and youth unions are seen as effective channels for ensuring household and women's rights. However, these organizations are the right arms of the Communist Party and do not act in women's interests. In interviews, CSOs claimed that although co-management is promoted as an effective governance model for joint state and local community protection of forests, local communities and households are mainly perceived as labour providers rather than co-managers of forest resources. Most government plans and policies promoting co-management are weak and are not enforced. CSOs also pointed out a problem at the local level where provincial, district, commune and village leaders are neither interested nor capable of implementing effective, efficient and equitable co-management approaches. In fact, provincial governments perceive involving and supporting ethnic minority people as a politically sensitive topic, and most benefit-sharing plans are developed without prior involvement and engagement with local people. Several government agencies also perceived and referred to their role in involving local people and complying with safeguards as simply "reporting and writing reports on paper in a nice manner for submission to donors, including LEAF".

Lack of capacity to implement Free, Prior and Informed Consent (FPIC): Although the Grassroots Democracy regulation emphasizes citizen's rights of being informed and being consulted, as well as their roles in supervising and deciding, these are often mere slogans and people lack the capability of making their voices heard even at the commune level. As human rights and democracy are seen as politically sensitive issues in Vietnam, FPIC is likely to be more accepted by the government if it is built upon the national legal framework on citizens' rights (Pham et al. 2015). Applying FPIC in this context can ensure that both government and citizens' interests are achieved within the permitted political space. FPIC activities should be seen as a learning process and designed based on local needs and preferences, with accountability of facilitators, two-way and multiple communication strategies, flexibility and collective action in mind (Pham et al. 2015).

4.5 Understanding the stakeholder landscape: What voices, entities, NGOs, or business lobbies are critical/influential in determining federal policy on forestry/offsets?

Pham et al. (2014) found that REDD+ stakeholders in Vietnam were sceptical about the effectiveness of consultations and participatory approaches employed by government and international organizations. Concerns have been raised that REDD+ and emissions reduction were formed in top-down processes, led by central government agencies with support from scientists and donor communities, and that no proper dialogues or consultations with business actors or local communities had taken place. Pham et al. (2014) found donors had used a large number of consultation workshops and mailing lists to disseminate information about REDD+ and seek actors' feedback on the design of emissions reduction projects. On the one hand, this was a good way to keep stakeholders up to date on programme progress, while on the other, actors felt their participation and contributions were not reflected in final decisions. Moreover, as workshops were often conducted in English, the language barrier left many actors unable to participate. Also, provincial and local representatives were unable to attend consultation workshops because they lacked the resources to travel, so their voices were often overlooked. Even though most meetings and consultations have been organized virtually since Covid-19, they do not provide a comfortable environment for provincial governments to express their thoughts.

4.5.1 The private sector

Interviews conducted with government representatives revealed that many international companies have contacted MARD and VNFF to express their interest in nature-based solutions and emissions reduction projects. Pham et al. (2014) found some companies had been involved in decision making offering alternative suggestions on PFES payment levels, while others said they had not participated in decision-making processes largely because they felt unable to influence decisions. Pham et al. (2014) also noted a challenge to future REDD+ implementation was the absence of private

operators in Vietnam in sectors associated with major drivers of deforestation and forest degradation in Vietnam. Large-scale agriculture producers, such as the Vietnamese Coffee and Tea Association and the Fishery Association, and large-scale timber and furniture companies are all state forest enterprises. This is problematic because without considering the interests of these stakeholders, REDD+ policies will not be able to address deforestation and forest degradation drivers effectively.

Regulations on environmental impact assessments do not include adequate public consultation or independent reviews at the assessment and appraisal stages. Also, in order for environmental impact assessment reports to be approved, there is no requirement that they be made public, meaning both investors and environmental management agencies cannot be held accountable. The desire for non-carbon benefits is growing, but not yet a primary investment driver. There is a growing desire to fully unlock the value of non-carbon outcomes, including the additional positive social, cultural, environmental and economic "co-benefits" to communities that often emerge through NBS. Whilst these benefits can assist other corporate social responsibility (CSR) and reputational goals, investment is still primarily carbon driven. However, provincial authorities often want to attract private investment into their areas. Hence, they support private companies by any means, sometimes to the detriment of districts and communes. To avoid upsetting investors, local authorities often ignore contract violations as they are afraid the private sector will exert pressure by threatening to withdraw investments (Pham et al. 2009).

In Vietnam, the private sector is motivated to work with small and poor households in order to obtain government support via financial credits. This provides opportunities for poor households to enter the environmental services market, generate additional income, obtain technical assistance, and achieve technology transfer. While government policies may encourage the private sector to work with the poor, hence providing the poor with more opportunities to participate in PES, case studies show that the poor can be severely disadvantaged when working with the private sector because the private sector is often given a higher level of support than the poor

by policymakers particularly in shaping the rules. They also have greater access to technical and market information, have improved access to capital for investment and institutional development, and enjoy economies of scale and increased buying power.

4.5.2 CSOs and NGOs

According to Pham et al. (2014), the dominant role of government agencies in REDD+ policymaking limits political space for non-state actors in Vietnam, such as NGOs and civil society organizations (CSOs), to exert influence on final policy outputs. However, even in this highly centralized context, they did find some evidence of political space being given to non-state actors to propose alternative policy options in decision making. CSOs in Vietnam have participated actively in technical groups supporting forestry and REDD+ policy development, providing consultancy services for stakeholders, taking part in developing databases and open data sources for forest governance, piloting and monitoring REDD+ activities, establishing social and technical networks on REDD+, and providing capacity building for local communities and journalists on REDD+. Some domestic CSOs have also taken an informal approach in forming personal connections with policymakers to propose ideas on the inclusion of ethnic minority rights and gender equality, both of which are now included in the National REDD+ Action Plan (Pham et al. 2021). However, they have weak understanding of social and environmental safeguards, and their approaches to REDD+ monitoring have so far been weak, due to the complex nature of the work involved, which requires the participation of many parties (Ngo and Le 2019). Major challenges identified by CSOs in Vietnam are the lack of legal support, financial and human resources and clear policies on CSO operationalization (Department of Climate Change 2018). Other challenges include: the REDD+ implementation system's weak coordination and management capacity; no timely access to information or plan for civil society participation; and the lack of a synchronous coordination mechanism, which makes it difficult to apply in all provinces, when pilots only operate in a few places. In addition, the state has yet to determine the role of socio-professional organizations in monitoring forest degradation and deforestation, and has failed to

attract communities to participate in forest and environmental protection activities due to lack of motivation. The state has yet to fully recognize the role of CSOs in REDD+ implementation processes (Department of Climate Change 2018).

Pham et al. (2014) also highlighted that no representatives of vulnerable groups such as ethnic minority people or the poor are included in consultation processes as national NGOs are expected to speak on their behalf. At the time of the study, interviewees attributed the absence of national NGOs in consultations to their limited political influence and only partly to their limited capacity and available resources. The issue, however, is not the absence of NGOs but rather the non-representative nature of the processes. Furthermore, mass organizations, such as women’s unions or farmers associations, are notably absent from REDD+ decision making. This should be seen not as the fault of Vietnamese

civil society but rather as a structural feature of the political system; grassroots interests are meant to be represented via mass organizations, but this does not often occur in practice. Table 37 above outlines the strengths and weaknesses of these organizations.

4.5.3 Ethnic minorities

Vietnam is considered a multiethnic country, made up of 54 ethnic groups. The Kinh ethnic group makes up 85.4% of Vietnam’s population, or 78.32 million people, while the remaining 53 ethnic groups make up only 14.6% of the overall population (Open Development Vietnam 2020a). Vietnam’s definition of an ethnic minority is based on four criteria: (i) a language different from the national language; (ii) long traditional residence on, or relationship with, land; and long traditional social institutional system; (iii) a self-provided production system; and (iv) a distinct cultural



Figure 20. Typical CSOs working on ethnic minority issues in Vietnam

Source: Open Development Vietnam (2020a)

Table 36. Opportunities and challenges for NGOs and CSOs in Vietnam

Opportunities	<ul style="list-style-type: none"> • Political space for CSOs has been widened now compared to the 2000s by the government's willingness to facilitate NGO and CSO registration and consider comments from CSOs when formulating and implementing policies; • CSOs have moved from being politically sensitive to being a social trend; • The technical and financial capacities of CSOs and NGOs have improved thanks to government and donor support, their networks have become more engaged with planners and stakeholders, and their advocacy activities have provided input for policies in recent years; • Social and technological changes, increased internet coverage and telephone access have facilitated easier information exchange with the extensive use of social media; • As Vietnamese women's unions, farmer associations and youth unions under the Vietnam Fatherland Front, also called "sociopolitical organizations", are closely managed by the government and have networks reaching to the commune level, international non-governmental organizations (INGOs) and Vietnamese non-governmental organizations (VNGOs) often partner with them to conduct field work; • Collaboration with the private sector would help achieve more independence from government.
Challenges	<ul style="list-style-type: none"> • Since 2016, with a slightly more restrictive environment being applied with information security policies over social media and delays in approvals of project applications from NGOs, there are more regulations controlling CSO activities; • The Communist Party issued Regulation Number 102-QĐ/TW dated 15 November 2017 on Party members' behaviour stipulating that party membership will be withdrawn if a person promotes or is a member of a civil society organization; • Ethnic minority-led civil society has been nearly non-existent, despite the government's intentions as set forth in its Grassroots Democracy Decree; • Many VNGOs now face the challenge of shifting from delivering services at community level to engaging more strategically with communities, officials and stakeholders to ensure that sustainable systems for gradual rights fulfilment are left behind; • International donors, and in some cases precisely those that promoted a rights-based approach, are leaving Vietnam, leading to difficulties for CSOs to have sufficient operational funding; • As yet there is no clear framework that distinguishes CSOs from other organizations. The development of the "Law of Associations" has been delayed. Most organizations still describe themselves as VNGOs and many are established under an umbrella government organization. Their independence is questioned, as they receive government financial support, lack broad beneficiary representation, and may not be non-profit; • Mass organizations mainly mirror the approach of government agencies. Ethnic minority groups are rarely included as members or choose not to participate in these organizations; • Most field activities relating to ethnic minorities are undertaken by INGOs, NGOs and CBOs. However, many CBOs are unregistered, so tracking their activities is difficult; • In 2002, INGOs and VNGOs jointly established an Ethnic Minorities Working Group (EMWG), which serves as a platform for sharing experiences and lessons learned regarding ethnic minority development in Vietnam. However, programmes suffer from limited resources, and impacts are hard to measure. In short, EMWG and its members are assessed to be quite strong in empowering citizens and supporting livelihoods, moderately good at responding to and meeting social needs, but not very active or successful in influencing policy or budgeting processes and raising authorities' accountability; • CSO staff capacity is weak; • Not all VNGOs and CBOs are recognized by local authorities. With a narrow membership base and the need to ally with mass organizations to implement in-field activities, progress is slow and administrative workload is high; • A comprehensive/systematic understanding of what different CSOs/NGOs can do at different levels, scales and sectors of REDD+ is still lacking.

Sources: Vietnam UN 2016, Pham and Hansen 2018, MARD 2019, Open Development Vietnam 2020a

Table 37. Pros and cons of social organizations such as women's unions and farmers' associations

Pros	<ul style="list-style-type: none"> • Such organizations have operated since 1930 and their members account for 85% of the population of Vietnam; • They have units and staff working at all levels of the government (central, provincial, district and commune, village), and regularly engage in activities and meetings with IPLCs; • Since these organizations belong to the Communist Party structure, they receive updated information on government directions, agendas, policies and priorities, and have close connections with other government agencies, which makes negotiations easier; • They are already the mediators when conflicts occur in local communities; • Such organizations are funded by government; the transaction costs to run these organizations can be reduced or can even be shared between the government and the private sector.
Cons	<ul style="list-style-type: none"> • Local organizations have the least power among intermediaries because of their political status; • Although they have close relationships with government and a detailed understanding of government policies, they are also strongly influenced by government and are still under the management and direction of local authorities and the Party at the central, provincial, district and commune levels; • Many staff and leaders working in these organizations (particularly at village level) cannot write reports and have only completed primary school; • The process of registering competent community-based organizations (CBOs) that are representative of the different interests of local actors, and sensitive to the dynamics and power relations in communities, is an arduous task, usually needing at least two years.

identity, and self-identification as a distinct cultural group that is accepted by neighbouring ethnic groups (MARD 2018; IWGIA 2021). Although the country voted in favor of UNDRIP, it does not recognize ethnic minorities as Indigenous Peoples and has not ratified ILO Convention 169. Figure 22 and Table 38 presents policies on ethnic minorities and major actors for ethnic minority related works.

Figure 23 and Table 39 also discuss gaps in government policies and programmes for ethnic minorities.

4.5.4 Women's champions and organizations representing women's interests

Ethnic minority women face numerous barriers in accessing paid employment opportunities in Vietnam. Numbers of trained ethnic minority female workers are also much lower than their male counterparts. In addition to education constraints, ethnic minority women also face cultural and language barriers. The social perception confining women to housework and caring for children and the elderly deprives them of opportunities to access paid employment. Grassroots-level participation of ethnic minority women in the Communist Party and government

agencies is still limited with only 7.9% of grassroots-level Communist Party members constituting ethnic minority women who have little opportunity to become leaders. Women's voices and standing in EMMA community development is still limited (Vietnam Women's Union et al. 2020). While the rate of women's participation in policy planning is high in Vietnam, their input is not considered high. Popular reasons for this judgment include women not being confident to share their opinions; not having a decisive voice in consultative meetings and having to ask their husbands' opinions afterwards; age/generational barriers; meetings' organizational and management methods not encouraging women's interest and participation; and limited facilitation capacity among commune/hamlet officials. It should be noted that high rates of women's participation in certain meetings are partly due to men being away for work. In many communes, hamlet-level consultations are often omitted during planning processes, and only hamlet representatives are invited to give comments in communes' draft plans. Consequently, local residents, including women, do not always have opportunities to provide direct input (Vietnam Women's Union et al. 2020).

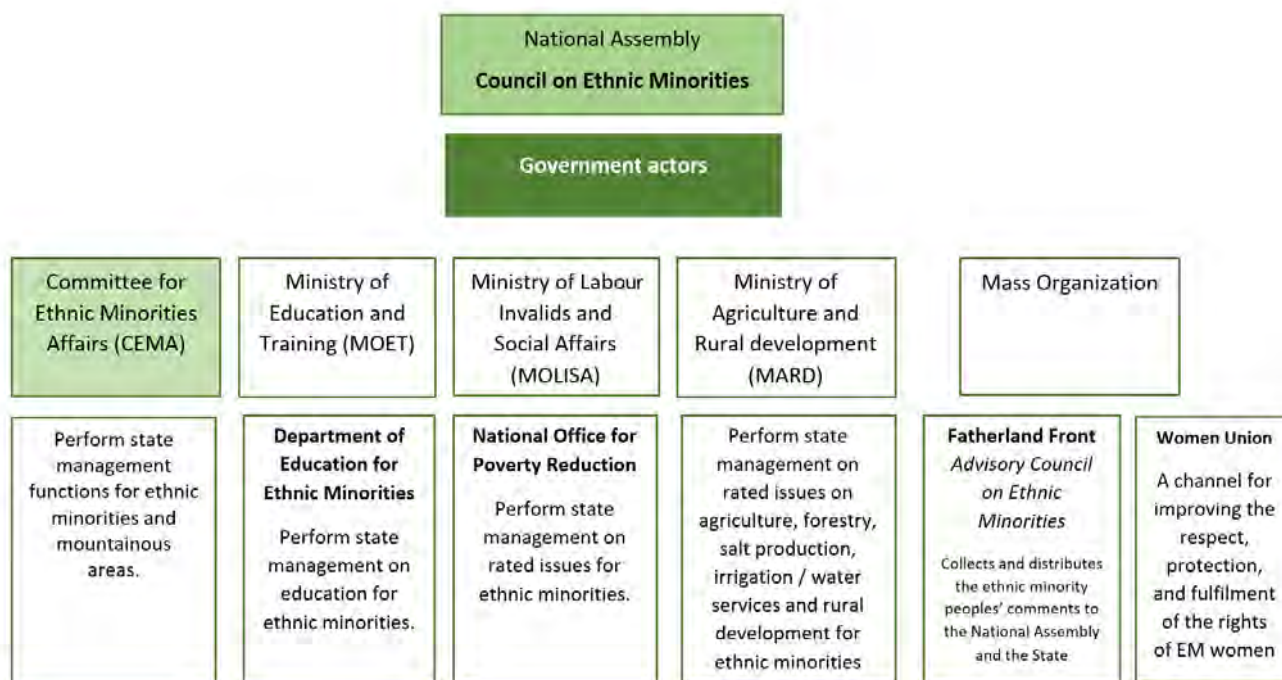


Figure 21. Major actors for ethnic minority related work

Source: Open Development Vietnam 2020a

Table 38. Government policies and programmes to support ethnic minorities in remote areas

Policy areas	Detailed action plans
Livelihood and poverty reduction	Shifting communities from their traditional nomadic lifestyles to one that is sedentary, forest land allocation, credit and subsidy, foster sustainable poverty reduction and narrow the gaps between ethnic regions and other regions of the country while protecting and preserving ethnic cultures and customs
Human resource development	School fee exemption, preventive healthcare promotion and nutrition improvement, gender equality, promotion of ethnic leaders in the community and government authorities at all levels
Cultural development	Village culture houses, traditional product commercialization, cultural asset stock-taking
Infrastructure development	Essential infrastructure including schools, clinics, roads, bridges, electricity grid, irrigation construction, wholesale and retail markets, telecommunication systems
Science and technology application	Application of science technology, especially information technology, communication, capacity building (online learning, e-library, etc.)

Source: Open Development Vietnam 2020a

In 2012, only 13 percent members of the National REDD+ Steering Committee were women. By 2015, this had risen to 50 percent. However, there is still doubt whether this will lead to increased participation by – and influence of – women in final policy outcomes on REDD+. Most women participating in REDD+ discussions have reported that they focus on representing organizational interests and have no gender mandate. They do not see themselves as gender champions, do not promote gender topics in

policy debates, nor do they prioritize gender mainstreaming (Pham and Brockhaus 2016).

4.5.5 Powerful REDD+ actors in Vietnam

Between 2011 and 2020, CIFOR carried out social organization surveys on REDD+ in three phases: 2011–2012 (52 organizations), 2015–2016 (51 organizations), and 2018–2019 (28 organizations). These studies indicated that organizations and individual persons' ability

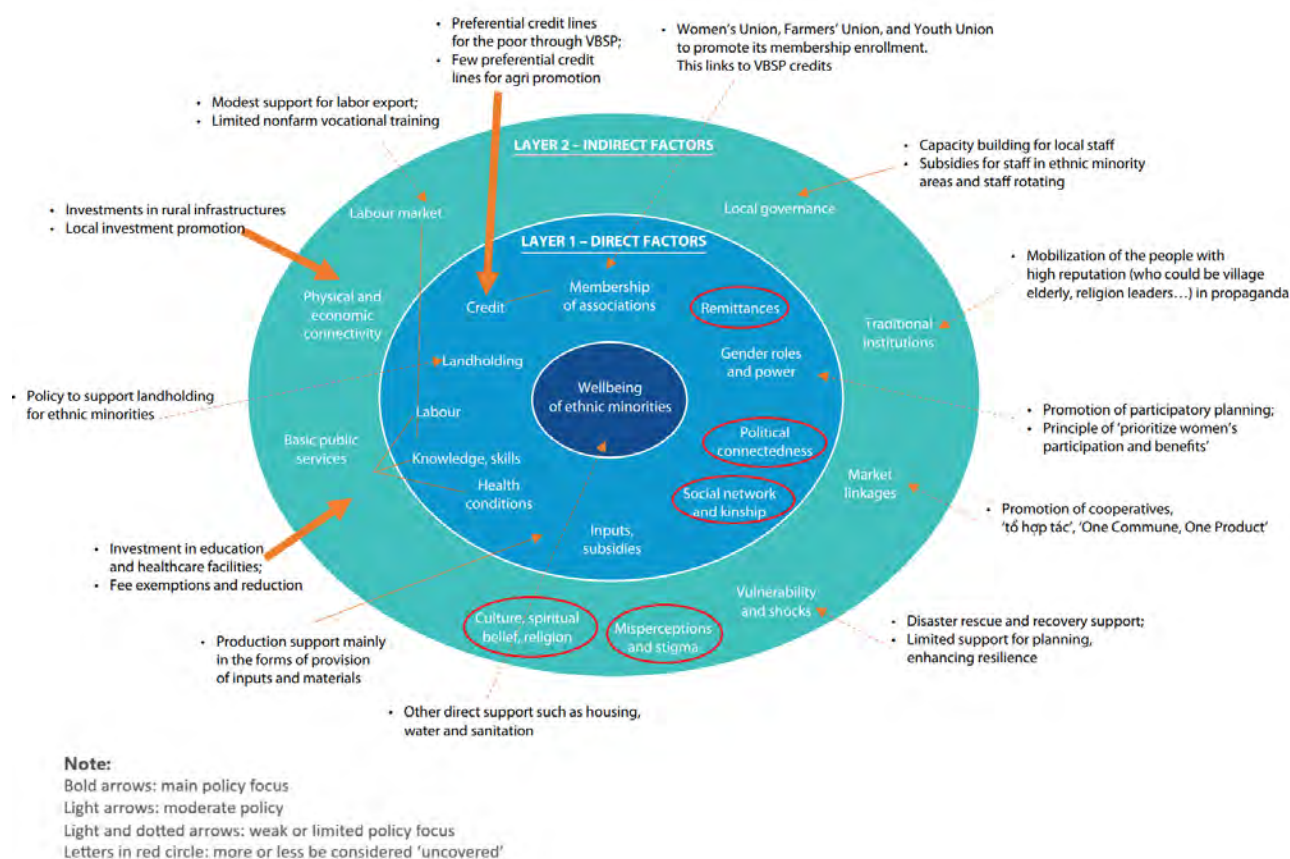


Figure 22. Gaps in government policies and programmes for ethnic minorities

Source: Open Development Vietnam 2020a

in Vietnam to influence forestry, policies on reducing emissions, and forestry offsets are determined by: (i) reputational power; (ii) the amount of funding they are given; (iii) their role and influence as knowledge brokers; and (iv) the collaboration network. Each of these are analysed below. Table 40 provides an overview of whom REDD+ stakeholders perceived to be the top ten most influential actors in national REDD+ policymaking. MARD and MONRE, together with key donors, including NORAD and World Bank/FCPE, were seen as influential actors in designing and developing REDD+ policy. However, Table 40 also shows that although several national CSOs and indigenous representative groups were active in REDD+,

they were not perceived to be influential as their voices were not being heard. It is important to note that while national REDD+ actors perceived provincial people's committees like the one in Lam Dong (a province in the Central Highlands region) as important actors in 2011–2012, no provincial authorities were perceived as important or influential from 2015–2020

Sometimes organizations need expert scientific information about REDD+ that can only be provided by other organizations or particular scientists. Table 41 provides an overview of organizations that national REDD+ actors have often turned to for obtaining reliable scientific information on REDD+ in Vietnam since 2011.

Table 39. Opportunities and challenges for ethnic minorities

Opportunities	
	<ul style="list-style-type: none"> • The government has dedicated a government focal point for ethnic minority affairs. The Committee for Ethnic Minority Affairs (CEMA), a ministerial-level agency, is responsible for unified state management of ethnic affairs in Vietnam. CEMA has line agencies in most provinces and has representatives down to the district level; • The human rights agenda in Vietnam continues to evolve toward a greater openness by the state to engage on specific rights issues and instruments, reflected in both domestic policies (e.g., the 2013 Constitution, sectoral policies, protection and development of EM in the 2021–2030 period, the National Target Programme (NTP) on Social and Economic Development for Ethnic Minority Groups and Mountainous Areas for 2021–2030, government project on “Strengthening international cooperation to support socioeconomic development in ethnic minority areas” to 2025, Program 135 (infrastructure in poor and remote areas) and Program 134 (eradication of poor quality houses) and welcomes comments and feedback from the international community; • There are now higher education institutes offering master’s and doctoral degrees in human rights disciplines, annual bilateral meetings with other Member States to exchange best practices for protecting human rights, and more online media outlets that allow citizens to exchange certain politically sensitive opinions; • Ethnic minorities are supported by a network of international and national NGOs and CSOs, Vietnamese mass organizations, Vietnamese umbrella organizations, Vietnamese NGOs (VNGOs), community-based organizations (CBOs), and professional organizations. Although professional organizations’ work is rarely related to ethnic minority issues, they work together to promote inclusive growth and protect indigenous knowledge and religious customs; • The Government of Vietnam has conducted regular surveys on ethnic minorities, and the Ethnic Minority Development Plan 2016–2020 was planned for development using this data. However, the data is questioned because of the small sample size not adequately representing smaller ethnic groups. Although work has already been done to close the gender gap in Vietnam, this remains an issue that particularly impacts ethnic minority communities; • The percentage of ethnic minority households with access to the internet (Wi-Fi, cable or 3G) increased 9.4 times from 6.5% in 2015 to 61.3% in 2019; • The average income per capita per month of ethnic minorities in 2018 increased by 1.8 times in four years, and the average monthly income per capita of ethnic minority female-led households was always higher than that of male-led households; • The proportion of children attending school at the right age increased by 15.2% from 2015 to 2019; and the percentage of ethnic minority people participating in health insurance reached 93.5% with no difference between men and women.

Sources: Authors’ experiences and own studies, Open Development Mekong 2012, SNV 2012, Tran 2015, Vietnam UN 2016, Pham and Hansen 2018, MARD 2019, Natural Resources & Environment Newspaper 2019, *Nature* 2019, Ngo and Le 2019, Tran 2019, Cao 2020, Hoang 2020, Open Development Vietnam 2020a, Open Development Vietnam 2020b, Duong 2021a, IWGIA 2021, Nguyen 2021, Siman et al. 2021 and Tien 2021

Table 40. Organizations perceived by stakeholders to be the top ten most influential actors in national REDD+ policymaking

Rank	2011–2012	2015–2016	2018–2019
1	Vietnam REDD+ Office under Ministry of Agriculture and Rural Development (MARD)	Department of Science, Technology and International Cooperation - Vietnam Administration of Forestry / MARD	State Steering Committee for the Target Programme on Sustainable Forest Development for 2016–2020 and REDD+ Implementation / MARD
2	United Nations Development Programme Vietnam (UNDP)	Vietnam REDD+ Office / MARD	World Bank / Forest Carbon Partnership Facility (FCPF)
3	Norwegian Agency for Development Cooperation (NORAD)	Vietnam Academy of Forest Science	Food and Agriculture Organization (FAO)
4	Ministry of Natural Resources and Environment (MONRE)	FAO	Japan International Cooperation Agency (JICA)
5	Food and Agriculture Organization (FAO)	MONRE	MONRE
6	Netherlands Development Organization (SNV)	SNV	NORAD
7	Government office	European Forest Institute	Vietnam Forest Protection and Development Fund
8	World Bank	NORAD	Center for International Forestry Research (CIFOR)
9	Ministry of Planning and Investment (MPI)	MPI	World Bank / FCPF
10	Lam Dong People's Committee	World Bank / FCPF	UNDP

Source: Authors' own analysis (2021)

Table 41. Organizations national stakeholders rely on for reliable information on REDD+

Rank	2011–2012	2015–2016	2018–2019
1	Vietnam REDD+ Office	Vietnam Academy of Forest Science	CIFOR
2	UNDP Vietnam	CIFOR	JICA
3	FAO	UN-REDD Programme	Forest Inventory and Planning Institute
4	JICA	FCPF	FAO
5	World Agroforestry / CIFOR	Forest Inventory and Planning Institute	Vietnam Forest Protection and Development Fund
6	Forest Trends	World Bank	State Steering Committee for the Target Programme on Sustainable Forest Development for 2016–2020 and REDD+ Implementation / MARD
7	The Center for People and Forests	MARD	Research Centre for Forest Ecology and Environment
8	Winrock International	Department of Science Technology and International Cooperation - Vietnam Administration of Forestry	FCPF
9	Da Nhim Commune People's Committee	FAO	World Bank
10	Department of Meteorology, Hydrology & CC	Vietnam Forest Protection and Development Fund	European Forest Institute

Source: Authors' own analysis (2021)

5 Recommendations

The recommendations below are developed based on key informants' suggestions, literature reviews and the authors' own experiences.

5.1 Support the Government of Vietnam in refining policies and institutional settings on nature-based solutions and REDD+

As discussed earlier, political will and government commitment towards forest protection are key to ensuring successful emissions reduction policies and projects. While the government still positions economic growth and post Covid-19 economic recovery as its priorities, future projects can support central and provincial governments in developing green and deforestation-free agriculture production models. As Vietnam committed to strengthening its emissions reduction efforts at COP26, future projects can also provide technical support and capacity building in translating this commitment into practical plans for both central and provincial governments, notably on technology transfer in monitoring forest resources and financial flows, and facilitate information sharing and networking.

As key policies (e.g., carbon rights, emissions reduction transfers) for operating nature-based solutions and emissions reduction programmes (including LEAF) are still being refined and the Government of Vietnam is calling for international support in providing both financial and technical assistance, future investors can play an important role in supporting MARD and MONRE in developing policies and guidelines for GHG mitigation. Key guidelines important for both the central government and provincial governments in LEAF areas to operate emissions reduction programmes include: guidelines on

integrating the implementation of emissions reduction tasks into investment programmes and projects related to forest protection and development; guidelines on supporting livelihood development; regulations on investment norms and financial management for GHG mitigation and NBS implementation; technical guidance on low-emission land-use planning; and implementing emission mitigation measures.

National, regional and local stakeholders interviewed identified insecure land tenure, corruption, inequitable benefit-sharing mechanisms, elite capture, weak coordination, lack of transparent and participatory decision-making processes, and weak information sharing as the main risks to LEAF and its ART-TREES and benefit-sharing mechanisms. Future projects need to allocate sufficient financial resources and set up institutions to address these issues. Particular attention should be paid to supporting provincial governments in LEAF areas to identify hotspots where major displacement is occurring and pushing local groups further to the forest margins, and support the development and introduction of more integrated and targeted livelihood activities for meeting the multiple objectives of food security, economic development and forest protection. These should form part of broader assessments of land use and social dynamics in key hotspots, which over the long term should feed into provincial sectoral and land-use planning.

Vietnam still faces numerous challenges preventing progression in gender inclusion, particularly when it comes to translating political commitment into concrete policies and activities that can be enforced and monitored; ensuring dedicated funding for gender to avoid gender being considered an "ad hoc" activity; having the political will to not treat gender as an

"administrative process"; and ensuring inclusive decision making. The country and MARD need support to develop clear legal frameworks and formulate concrete action plans and targets that are sufficiently funded and implemented with the support of both international and national actors. While external pressure and funding can help countries make their first steps in mainstreaming gender into REDD+, coalitions for change that include influential government agencies able to make binding decisions, and the active presence of civil society, are also required to translate policy into practice on the ground and maintain gender as a political priority. Future projects can support government agencies by providing clear technical guidance on how to integrate gender aspects into climate policy and LEAF implementation plans.

It is important to promote and regulate FPIC implementation in LEAF programmes and to develop a complaint settlement and monitoring mechanism with the participation of mass organizations, civil society organizations, ethnic minority people and independent NGOs. LEAF and future projects should establish an open, concise, participatory consultation mechanism for ethnic minorities and local communities in the development of national REDD+ policies and strategies with no preconditions, and information should be provided to them free of charge and in their local language. Future projects can also help the central and provincial governments to consider women's preferences and interests in participating in LEAF, then tailor benefit-sharing mechanisms, access to information and resources, and governance structures to address those preferences and interests.

Experience shows that developing a proper LEAF benefit-sharing mechanism or plan could easily take two years to get the necessary consultation processes right. This time frame could be shortened if potentially contentious issues can be resolved in broad, trustful and participatory consultations with all stakeholders. Particular aspects that need to be addressed include carbon rights; capacity development; participation and legitimacy in decision making; payment mode (e.g., in-kind or cash), frequency, time and level; baselines and additionality; avoidance of leakage; contract length; MRV of PES; proper site selection; and LEAF implementation under unclear rights. Urgent and important tasks that

need future projects' support to legalize the REDD+ benefit-sharing mechanism and provide enabling conditions for LEAF are:

- Supporting MARD and MONRE in clarifying **carbon rights** and the relationship between tree and land ownership will help to determine how the REDD+ and LEAF benefit-sharing mechanisms are going to be implemented on the ground.
- Providing sufficient **capacity building** for actors on the ground. Stakeholder preferences suggest that funding be set aside for (i) supporting technical and financial management capacity for regional governments; (ii) enhancing financial management capacity of state and non-state actors; and (iii) financing and providing technical support in sustainable agroforestry and reforestation activities for smallholders.
- **Determining the payment mode:** Although most stakeholders agree that combining in-kind and in-cash payments would provide stronger incentives to participate in LEAF, local people in LEAF areas prefer in-kind payments (e.g., infrastructure development, training and technical support for agroforestry and plantation). In the context of land with insecure tenure, issuing land-use rights certificates and in-kind payments could be the main incentives for stakeholders to engage in LEAF.
- **Avoiding leakage:** Interviews conducted with government agencies and donors showed LEAF activities focusing on high deforestation risk areas. However, only focusing on these areas might lead to leakage to other parts of the country. The LEAF benefit-sharing mechanism will need to provide a comprehensive scheme that provides incentives for all regions to avoid deforestation.
- **Developing livelihood options and enhancing the potential role of agroforestry extension:** Accelerating land allocation is also a key measure in supporting local people to develop sustainable livelihoods. LEAF and future projects should create sustainable livelihoods for people and pay attention to fulfilling their urgent needs (irrigation pipes, roads etc.). LEAF and future projects should also support and improve agriculture and forestry extension services to help farmers adopt better-yielding varieties and better practices for more sustainable production,

and develop agroforestry systems and introduce deforestation-free models through certification for aquaculture produce, coffee, rubber, timber, etc. Future projects could also support the development of an information hub or mobile app for information on market prices, and assess market trends and land suitability for different crops and the optimum mix of production and forest protection.

Future projects could also support central and provincial governments in setting up an M&E system to monitor financial flows and the environmental and social impacts of LEAF. The M&E framework would not only require actions to monitor and reward compliance, but also sanctions for non-compliance (e.g., withholding future payments, withdrawing current payments or forcing LEAF recipients to pay back past benefits or pay additional fines for non-compliance). The M&E system should include a grievance handling system and encourage both state and non-state actors to participate in monitoring the environmental and social impacts of LEAF.

5.2 Enhancing cross-sectoral and cross-level collaboration

As previous sections have shown, inconsistent sectoral land-use planning has undermined efforts to reduce emissions from deforestation and forest degradation. Up to now, there has been no mapping exercise to identify overlapping land areas planned by different sectors and provinces. Future projects could help both central and provincial governments to identify such areas and facilitate discussions between sectors and ministries to ensure forest lands placed under NDC and LEAF programmes are not removed for other national priorities.

Future projects could also foster collaboration between stakeholders by providing stronger incentives for cooperation and regular platforms for information exchange. As earlier sections have shown, despite being influential actors, the Ministry of Finance, MOLISA and the Ministry of Planning and Investment do not actively take part in emissions reduction projects. LEAF and future projects should create a common platform to facilitate regular dialogue between ministries.

It is also important for future initiatives to involve **MOLISA in providing support on safeguards for the central government and LEAF provinces**. For LEAF (or any emissions reduction scheme) to be successful, it needs to be closely interlinked with national poverty reduction targets and goals. In this regard, it is problematic that MOLISA expresses no interest in REDD+, and LEAF has not been actively incorporated by other ministries into emissions reduction planning. By getting MOLISA involved, it could merge its social security funds with environmental funds to provide sustainable and adequate support for IPLCs. Moreover, while technical ministries have no expertise on gender mainstreaming and safeguards, MOLISA and its provincial departments have rich experience, networks and lessons learned to support these ministries in developing and implementing appropriate safeguards policies and, more importantly, have a national monitoring and evaluation system to measure these social policies. However, capacity building for MOLISA on REDD+, LEAF and emissions reduction is also necessary. It should be noted that the Government of Vietnam sees pro-poor policies as a strategy for contributing to national security. Many areas inhabited by the poor are remote, with high national security importance. Without livelihood options, such areas will be depopulated. Therefore, LEAF and other projects could articulate options for emissions reduction programmes as a strategy for stabilizing populations to secure national support and increase funds to such areas. By bundling social security funds, national security funds and environmental funds together, there could be a greater chance of increasing political and financial support from the state to implement safeguards policies.

5.3 Strengthening ethnic minority people involvement in nature-based solutions, REDD+ policies and LEAF

As Vietnam has a top-down, command and control governance regime, transformational change cannot be achieved if the underlying political economy is not well addressed. CIFOR's previous findings have already pointed out the important role that future projects could play in helping to address the core factors that hinder the design and implementation of effective,

efficient and equitable LEAF projects and engagement of local communities and ethnic minority people in Vietnam. These factors are: (i) the weak legal framework of government agencies in implementing inclusive decision making to ensure equitable benefit distribution and full engagement of ethnic minority people and local communities (IPLCs) as well as limited information, conceptual and methodological frameworks, tools and analyses on LEAF options to best engage and support IPLCs; (ii) the lack of adequate understanding of LEAF and ART-TREES among government agencies, practitioners, CSOs and IPLCs; (iii) IPLCs' lack of technical capacity and social networks for implementing and benefiting from LEAF; (iv) CSOs' lack of capacity in holding the state accountable for making good on its promises to deliver environmental and social justice; (v) the lack of champions and successful models showing how IPLCs can be engaged in and benefit from LEAF; and (vi) the lack of a sustainable policy platform to effectively bridge government agencies and IPLCs on how LEAF and ART-TREES need to be designed and implemented.

More specifically, in order to achieve effective, efficient and equitable LEAF institutional settings and legal frameworks on safeguards (including ART-TREES), future projects could help to strengthen the knowledge, capacity and skills of CSOs, local communities and ethnic minority people to implement LEAF and ART-TREES. These could be developed based on:

- scientific assessments of policies and knowledge gaps on LEAF and ART-TREES, and landscape mapping of IPLC organizations, including their understanding and interests in REDD+, ART-TREES and/or LEAF, existing engagement with the LEAF Coalition and/or its extended network, relevant geography and levels of awareness of the LEAF Coalition and/or ART-TREES and other initiatives with the potential to create opportunities and risks for communities;
- awareness raising and capacity building for government agencies, CSOs, local communities and ethnic minority people to implement ART-TREES, REDD+ and LEAF effectively, efficiently and equitably;
- establishment and strengthening of social networks between ethnic minority people to advocate for changes, and a policy forum to promote dialogue between government

agencies, local communities and ethnic minority people in effective, efficient and equitable implementation of LEAF, ART-TREES and REDD+;

- development and promotion of champions and best practices on how local and ethnic minority people can successfully take part in LEAF design and implementation;
- development of guidelines and tools to help government agencies, local communities and ethnic minority people implement LEAF and ART-TREES.

Future projects should create conditions for people, particularly ethnic minority people and women, to actively and fully participate in REDD+ project activities and forest protection by creating regional, provincial, district and commune social networks and promoting and supporting direct participation of local communities and ethnic minority people in national and provincial meetings.

Future initiatives should also prioritize programmes to build capacity and confidence (particularly of women and ethnic minority people), and facilitate the active participation of non-state actors in LEAF decision-making processes. LEAF should encourage stakeholders to resolve conflicts about forests through open and democratic dialogue. As different groups of actors have different access and interests to take part in different social groups, there is a need to understand their social network structures so policies and projects can build on and make full use of existing networks. LEAF should build on existing local governance structures, both formal (government-formed networks) and informal (traditional). LEAF should work with the top ten most powerful and influential REDD+ actors pointed out in earlier sections and use their networks to disseminate information and create stronger impacts.

Critics often argue that intermediaries are expensive and consume most of the payments in transaction costs. However, since REDD+, LEAF, and emissions reduction projects are still new in Vietnam, intermediaries have played a critical role in changing attitudes, building trust, networking with stakeholders, influencing policy priorities, promoting learning, sharing knowledge and bringing stakeholders together. These intermediaries can also help government

agencies and government staff to articulate ideas. Intermediaries are important for facilitating REDD+ and LEAF, but the strengths and positive impacts of intermediaries lie in their international and local identities, relationships, capacity, neutrality and adaptation to local situations. They can influence and define certain relationships because of their commercial and political missions. The manner in which such institutions are structured and made accountable to the community needs to be carefully analysed if negative impacts on the poor are to be avoided. LEAF and future projects should not try to take shortcuts by choosing existing institutions without analysis, but must be clear about the objectives and operations of these associations or networks to ensure the trust of the IPLCs is not misplaced.

5.4 Refining benefit-sharing plans for REDD+ and LEAF

The LEAF proposal was developed by national consultants without any consultations with local governments and local people. A full process to achieve Free, Prior and Informed Consent (FPIC) needs to be carried out in all regions, and more consultation workshops are required to develop a functional benefit-sharing mechanism at both the LEAF jurisdiction and national levels. However, carrying out FPIC requires clear protocols and guidelines, actors capable of conducting FPIC activities, funding to organize consultations and a monitoring system to enforce such activities. All of these are missing at this stage. Future projects should invest in capacity building for local stakeholders and accountable actors to carry out these FPIC activities, and provide adequate funding for them to complete the necessary tasks.

REDD+ benefits and (sometimes hidden) costs need to be properly and completely accounted for. An observed mismatch of benefits as understood by stakeholders and government representatives needs to be resolved as the basis for setting up a benefit sharing plan acceptable to all parties in Vietnam. These costs would then need to be adjusted to take into account regional variations across LEAF jurisdictions. Vietnam's LEAF proposal outlines the different types of emissions reduction activities and potential beneficiaries. However, these beneficiaries differ

in more ways that need to be addressed: they can be actors that reduce emissions, forest stewards, cost bearers, facilitators, rights holders or the poor and marginalized. Discourses on benefit-sharing mechanisms differ considerably between LEAF provinces and these differences need to be addressed to avoid later hiccups during implementation of the benefit-sharing plan.

Currently, the central and subnational governments simply think benefit sharing is a task to decide how much and how many percentages will be allocated for different beneficiaries. In LEAF areas, we suggest that before any percentages are fixed, rapid assessments on possible incoming financial sources, and implementation and transaction costs, are undertaken to provide solid bases for LEAF implementers. The final list of beneficiaries should also be decided based on the agreement of stakeholders in the LEAF priorities. Whom exactly to pay (and how much) is a question of justice and fairness, but also depends on negotiation, political feasibility (which again includes perceptions of fairness), legality (particularly vis-à-vis land tenure), and also requires addressing possible problems arising from the fact that some actors may actually lose illegal revenues. The process of determining beneficiaries should be done in a deliberate and participatory manner, to avoid or reduce future conflicts. The question of payments and compensation, how much, when and for whom will need to be revisited regularly to adjust to changing circumstances and drivers of deforestation. Stakeholders have clear views on how the shares of benefits should be distributed, while the exact percentages differ from place to place and from time to time. Thus, a benefit-sharing plan cannot just consist of a fixed percentage allocation, but requires setting up a process that brings all stakeholders on board and provides for full participation and transparency.

While national and provincial benefit-sharing plans are still being discussed, based on lessons learned from Brazil, Mexico, Vietnam, Peru and Indonesia, LEAF and future projects could channel benefits to different actors and activities (Table 42). How many channels are used, and the amounts paid for each activity would depend on national needs and stakeholder consensus.

Table 42. Potential disbursement channels and activities funded for LEAF and future emissions reduction activities

Disbursement channel	Activities funded
Channel 1. Management and operational costs for LEAF management unit (e.g., Vietnam REDD+ Office, the Vietnam and Provincial Forest Protection and Development Fund)	Staff time costs and operational costs to run LEAF activities. How many of the management and operational costs would need to be covered depends on the scale of LEAF funding for each province, financial capacities of the management agencies, the number of beneficiaries, the number of contracts that need to be signed, the level of monitoring and evaluation requirements.
Channel 2. Funding to support government agencies	LEAF and future projects could support the following activities: <ul style="list-style-type: none"> • Policy development and capacity building for LEAF and REDD+; • Support for government agencies in developing and implementing subnational REDD+ actions plans; • Development of national and subnational provincial REDD+ operations including MRV, NFMS and SIS; • M&E and inspection activities; • Forest demarcation and accelerating land allocation processes.
Channel 3. Competitive calls for all actors to apply	Activities (e.g., research, capacity building, market development) to support policy development and capacity building for LEAF and REDD+ or support for technical scientific research to implement national programmes that contribute to greenhouse gas emissions reduction or absorption and capacity building; implement the regional REDD+ action plans. A certain percentage may be allocated to enable national players (universities, NGOs) to come to the fore and support the National REDD+ process with advanced thinking and technology support (e.g., in the areas of M&E and MRV).
Channel 4. Benefit-sharing mechanism based on implementation results directed towards beneficiaries who are forest owners and forest managers who have forest protection and management contracts	Forest protection and activities with clear performance results demonstrated (e.g., forest quality and forest quantity). This would seem to be covered by payments to REDD+ investments; however, LEAF may consider allocating a fixed percentage to be able to issue incentives for forest protection provided by actors not formally covered by REDD+ and LEAF payments.
Channel 5. A dedicated channel to support communities and actors who are landless or do not have land titles, and those who cannot formally participate (e.g., migrants, non-natives) but should nevertheless benefit from the programme for reasons of justice and fairness	Future projects and LEAF could create a dedicated fund to compensate Indigenous and traditional communities, with the goal of increasing the viability of forest-based livelihoods and strengthening their role as forest stewards. Payments would be tied to performance. LEAF could learn from existing projects in developing this channel to support local communities, including local people native to the area, non-native people and immigrants. These communities differ in their approaches to and interest in forests and management. Funding could be allocated to local communities to support their own initiatives to enhance capacity building of local community members in forest management and to support initiatives by local populations for socioeconomic and environmental development.

Source: Authors 2021

Further, numerous issues need to be considered by LEAF in order to carry out financial arrangements in an effective, efficient and equitable manner:

- Payment from LEAF must be made on time so that money is also paid on time for beneficiaries. To ensure transparency and legitimacy, it is important to state clearly in the LEAF financial agreement the time required to complete each stage.
- To ensure accountability and transparency, the government and LEAF should regulate the maximum amount of time government agencies can keep payments before they have to distribute them to beneficiaries. This aims to ensure payments for beneficiaries are made as soon as possible and to avoid low disbursement rates.
- An FPIC process needs to be carried out as a safeguard principle to inform beneficiaries

and local communities of the potential benefits and risks of engaging with LEAF before they can decide for themselves whether or not to sign the financial agreements.

- While it might be relatively easy for government agencies, NGOs and large-scale private companies to enter into contracts, small-scale households, local communities, NGOs, and particularly ethnic minority groups, might have difficulties in understanding and signing contracts due to their low literacy rates. These groups might need support and training to negotiate and enter into contracts based on mutual benefits for all parties.
- A requirement for forest owners, local communities and ethnic minorities to receive payment from LEAF, and emissions reduction projects in general, is that they submit their annual workplans and budgets to government. While it might be easy for government agencies, NGOs and large-scale private firms to prepare and submit their annual work plans and budgets, many small organizations (e.g., cooperatives, loggers, miners and individuals) might have difficulties in preparing these documents. These groups might need support through training. In many cases, if the forest areas are small and the payment is too small, it is impractical and costly to prepare these details. Future projects could help LEAF jurisdictions to analyse and decide what payment amounts are efficient enough to require such paperwork. As government agencies will have to screen and edit beneficiaries' annual work plans and budgets, and as many beneficiaries are new to such paperwork, significant time will have to be devoted in the first year to training these beneficiaries, responding to their requests, and supporting them in revising their paperwork.
- While it is ideal to have many organizations to monitor, the paperwork and time devoted to auditing, certification and reviewing beneficiaries' financial reports can be lengthy and costly. It is suggested that the reviewing and monitoring should not be more than two times/year otherwise it will be too intensive for all actors involved. It is suggested that for the transparency of monitoring and evaluation of the impact of the program, all financial reports and activities will be published online so that external stakeholders can also verify them.
- To channel funding from the national to the regional level, LEAF and the national government might consider applying criteria based on needs, disadvantages and other differentiating factors. For example, the government could determine, assess and rank which regions have the greatest need, economic disadvantage, remoteness or inaccessibility to markets. Areas where agricultural activity is more difficult, due to natural handicaps caused by low soil productivity or climatic or topographic conditions, might be eligible for higher payments.

When funds reach the local level, the community should decide how funds are to be distributed based on their own participatory process at the local level. This process starts with defining community priorities and getting consensus on payment criteria among community members. The most popular options suggested by communities in Vietnam include equal distribution to all households within a community; payment for forest protection groups; building infrastructure; community investments; and livelihood development options, e.g., microcredit schemes. However, to avoid high risk of misappropriation due to the lack of auditing and monitoring requirements, capacity building for communities in financial management and auditing is required.

Significant funding from the LEAF programme should be used to improve surveillance systems to stabilize and carry out strict control of land use, with the creation of a unit to monitor existing farmers and land use (field monitoring, remote sensing). LEAF only refers to performance indicators for actors who sign contracts, but some performance criteria should also be developed to monitor and evaluate LEAF operators (e.g., government agencies, state enterprises) in terms of their financial management and effectiveness. Payment criteria need to be developed through a participatory process, where actors negotiate on mutually-agreed metrics or indicators that are context-specific and relevant to the institutional-political process. Payment criteria also need to be designed so as to promote and incentivize actors to achieve transformations deep enough so that long-term impacts are achieved. Proxy indicators might be needed to provide measures of long-term outcomes and co-benefits of REDD+.

Vietnam in general and LEAF in particular also need to harmonize between simpler input-based conditionality indicators (e.g., number of trees planted, number of monitoring surveys carried out) and long-term outcome-based indicators (e.g., forest cover maintained, volume of carbon emissions reduced) and in realizing objectives for effectiveness (e.g., households that are eligible based on their expected deforestation behaviour) and equity (e.g., reaching the poorest households).

Based on the consultation results so far, the understanding of how LEAF and REDD+ benefits should be allocated to beneficiaries is based on different rationales:

- **More effort, higher payment:** The sharing of benefits should be based on performance, the latter identified as efforts in four major groups of activities: (1) forest conservation; (2) carbon sequestration; (3) activities avoiding deforestation and forest degradation; and (4) activities enhancing carbon stock.
- **Balancing payments among actor groups to ensure equitable benefit sharing among actors:** The percentage of allocation to each group should show a good balance between different actor groups including government agencies, NGOs, the private sector, local communities and the research community.
- The ability of actors to reinvest in activities that can lead to emissions reductions will determine how much these actors will benefit from REDD+.

LEAF, along with benefit-sharing mechanisms and safeguards mechanisms, should clearly:

- determine **responsibility** of national and local authorities in relation to access to information and participation rights;
- determine **information** related to the types of benefits under LEAF that are freely accessible, clearly establishing relevant responsibilities, rights and procedures to guarantee such access;
- establish overarching **principles** so that consultations are **representative** of ethnic minority people, women and young people and that consultation is mandatory;
- determine specific **levels of decision making at which participation will be guaranteed**, including REDD+ policy and law making, project selection, impact assessment, concession granting, project implementation review and monitoring;

- specify that government authorities should be obligated to **consider outcomes of consultation**;
- **ensure transparency and predictability** regarding how the rights and interests of stakeholders, communities and landholders are managed, in order to provide external investors with certainty regarding processes;
- take special measures to **support the participation of vulnerable or marginalized groups**. One way to increase transparency and accountability, and therefore avoid corruption, is to use information and communications technologies (ICT) to register beneficiaries, reconcile transfers, and document impacts for monitoring and evaluation. However, whether ICT allows full participation needs to be determined for each region (e.g., missing IT literacy or unavailability of services in remote places could jeopardize transparency and participation if they are the only means);
- perhaps conduct dispute resolution processes through regular, informal meetings. The most common disagreements relate to payment, product quality issues and failure to keep agreements. Traditional methods local stakeholders use to mediate and solve their disputes hold a lesson for LEAF. Future projects could also help to establish a time-bound dispute-resolution procedure and a web-based mechanism so stakeholders can submit and track complaints and appeals as a way of facilitating transparency.

5.5 Supporting and promoting technology transfer and artificial intelligence towards an accountable and transparent benefit-sharing plan and Payment for Forest Environmental Services for ethnic minority people

As mentioned in previous sections, with inconsistent guidelines and sectoral policies, weak financial management capacity both at the central and local level, and weak monitoring and evaluation, a key challenge for nature-based solutions, REDD+ and LEAF is to ensure accountable and transparent payment to local and ethnic minorities. Although the government and donors are promoting e-banking, they often overlook ethnic minorities inaccessibility to e-banking and inability to comply with the procedural and administrative paperwork

involved in accessing payments. Specifically, the amount and the complexity of administrative paperwork and forms along with the language barrier are key issues; and most transactions need several intermediaries and transaction costs which reduce the payments reaching landowners.

To address these issues, future projects could help to develop a communication and transaction platform that links across stakeholders and processes. This platform could utilize Machine Learning techniques to lower the language barrier and provide technology solutions (e.g., mobile apps) to help ethnic minority people to access transparent and accountable payment, reduce corruption and improve the effectiveness of results-based payment schemes. Specifically, we propose the use of NLP techniques in providing a speech-to-text and auto-translation capability, and the use of a Graph Neural Network to provide link predictions of transaction types, volumes and values.

As most nature-based solutions and emissions reduction projects aim to scale up and apply the benefit-sharing mechanism model employed by the current national scheme of Payment for Forest Environmental Services (PFES), future projects could help to improve the current PFES scheme. Vietnam is the first country in Asia initiating a national scheme on PFES where revenue is generated through additional fees added to users' water and electricity bills. Water supply companies and hydropower plants act as intermediaries collecting these fees and transfer them to a national agency and trust fund called the Vietnam Forest Protection and Development Fund (VNFF), which has a mandate to receive PFES payments, manage revenues and distribute payments to forest environmental services providers in return for their efforts in protecting forests. PFES currently contributes 29% of total revenue for the forestry sector in Vietnam, and forests protected under PFES schemes account for 45% of the nation's total forest area.

Forest environmental services providers in Vietnam include both government agencies, forest management boards, private companies, mass organizations (e.g., women's unions, farmers' associations) and individual households and communities. Although PFES aims to

achieve dual goals of forest protection and local livelihood improvement by providing financial incentives and support, local people and ethnic minority communities have confronted many challenges in accessing PFES.

First, people need to fill in, complete and submit numerous forms and reports to government agencies for their approval, as the basis for PFES payments. However, CIFOR research findings across Vietnam show ethnic minority people often having more difficulties completing these forms due to language barriers and lower levels of education. As a result, they either cannot access PFES payments or have to bribe government officers and pay them to help with report completion. Low payments reduced further by these additional expenses create disincentives for local people to engage in PFES.

Second, local people have no copies their payment histories to reflect not only the forest area under their management, but also as proof of their ability to continue to deliver environmental services. This puts local communities at a disadvantage, particularly when land use conflicts arise. Future projects could help develop user-friendly and effective mobile apps that assist local people and indigenous communities in completing, submitting and monitoring their PFES payment contracts. These projects could also design simple and low-cost mobile tools, adapted for local contexts and local languages and based on local needs, to help ethnic minority people complete all the paperwork associated with the PFES payment system. Future projects could also help provide capacity building and technical training for local communities and ethnic minority people in using these tools in their PFES implementation to improve transparency and accountability and enhance PFES outcomes in reducing emissions from deforestation and forest degradation.

5.6 Support in promoting policies and technologies to address illegal logging with special attention to small-scale and informal enterprises

Vietnam has already signed up Forest Law Enforcement, Governance and Trade (FLEGT) and the agreement will take place fully in June 2022. However, the country faces

significant challenges in implementing the scheme due to having more than 5,000 small-scale and informal forest enterprises in the supply chain; a significant degree of illegality in small-scale forestry operations; weak law enforcement; a high risk of corruption; weak governance; and a limited understanding of FLEGT among small-scale operators and producers.

While negotiations are now ongoing and there tends to be growing awareness of FLEGT among state-owned and large-scale companies, CIFOR research findings have highlighted the need to pay special attention to small-scale and informal forest product enterprises, and the gendered, social, economic and political dynamics of their operations. This is because of the significant contributions that small-scale producers make to timber sector profits, and their inability to meet legal requirements. If FLEGT or any future Free Trade Agreement is not well-implemented, additional risks for small-scale and informal producers might also be: the loss of existing rights; elite capture of potential benefits; greater gender inequality; the emergence of new forms of corruption; and social conflicts. FLEGT negotiations also involve high transaction costs (both formal and informal) that can hinder the development of small-scale and informal enterprises. Engaging informal sector operators in FLEGT is also challenging because they are often poorly organized, which limits their ability to acquire knowledge and understanding of FLEGT. Furthermore, there is often weak representation of small-scale operators, and small-scale and informal forest product enterprises in FLEGT discussions and decision making. Future projects could support MARD in developing a national database and monitoring tool to assess the current status and operations of small-scale and informal producers, traders and sellers, with particular reference to their “position” along the broader forest sector’s value chain. Future projects could also help develop a monitoring and evaluation system to support the government and companies in Vietnam to monitor whether women are concentrated in specific nodes and/or spread across the value chain; the nature of women’s involvement as employees; and to recognize and better integrate the domestic timber sector into

the formal economy. This could also help the Government of Vietnam to simplify its system for monitoring timber supplies and rethink its approach to forest governance.

5.7 Providing financial and technical assistance for both national and subnational governments and local communities in monitoring forests and drivers of deforestation and forest degradation

Vietnam has a long history of forest inventory and there is a good national forest monitoring system. However, monitoring and reporting emissions reductions is complex. Earlier sections have shown both national and subnational stakeholders being unready to carry out such tasks. The technical capacity of provincial, district and commune government agencies and forest owners is far behind the technical requirements for monitoring emissions and removals generated by forest-based activities. Future projects support could prioritize: helping provincial and district government agencies and CSOs with remote sensing and spatial analysis; developing a monitoring database and evaluating the implementation of GHG mitigation and NBS measures including establishing and operating emissions measurement, reporting and monitoring systems connected to the national system; developing a database on the implementation of plans to reduce GHGs emissions; developing and applying mobile devices, means and equipment in the implementation of measuring, monitoring, reporting; and updating the database system on emissions monitoring and introducing it to forest owners to coordinate in monitoring and management. Building capacity for national experts to implement internal and independent validation of emissions reduction programmes is also needed to contribute to reducing validation costs. National validation should link with the Vietnam Forest Certification Scheme (VFCS) endorsed by the Programme for Endorsement of Forest Certification (PEFC) that provides certification for forest-based goods and services.

Most investment in forestry development comes from the state budget. This is very limited and insufficient to meet the demand for implementation of mitigation options and

NBS. To meet a net zero emission target by 2050 and reduce natural disasters in the context of climate change, Vietnam needs more external investment resources, especially from the private sector. Emissions reduction programmes should also cover removal enhancement, biodiversity conservation and other ecosystem services provided by forest landscapes. The current LEAF programme only deals with emissions reduction associated with deforestation and forest degradation, while these other benefits are not covered. This lowers motivation for the programme. Investment should focus on the proposed mitigation options stated in Vietnam's NDC, in particular the replication of agroforestry practices in the Northwest and Central Highland regions, enhancement of "poor" natural forests, and plantations for sawn logs. Future projects could fund scientific research needs to focus on investing in gene research in selecting and creating new varieties for large-scale plantation.

Future investments could also support MARD with technical and digital solutions in developing its carbon credit registry system to provide transparent information for carbon buyers and avoid double counting and trading. Central and regional governments also need to monitor forest use and trade to safeguard central-level interests, develop a monitoring and evaluation framework for gender integration into climate policies, and establish a database of the gendered impacts of climate change. Future projects could also help the Government of Vietnam to develop a monitoring and evaluation framework to systematically track the integration of gender into climate policies, and to understand the gendered impact of climate change by sector and region. LEAF and other projects could also help CSOs and communities to participate in national decision-making processes.

While participatory carbon monitoring and measurement tools are being developed and applied throughout the world, the application of these tools in Vietnam is still very limited due to policy and institutional barriers in which the current mechanism still emphasizes the use of government personnel without paying adequate attention to the role of communities, NGOs and local governments. LEAF and future projects could support technology transfer and encourage LEAF provinces to involve local people in monitoring forests. This would not

only enhance the local people's ownership of the LEAF programme, but would also enhance transparency in the existing MRV system. As discussed earlier, fire is a major driver of forest loss in Vietnam, and future projects could also support central and provincial governments in applying technology to set up a fire early warning system.

5.8 Providing support to enhance capacity for and awareness of LEAF

Different groups of actors require different sets of capacity building and future projects should provide specific and relevant training for different actor groups, as listed below.

Government agencies: Awareness-raising on LEAF and ART-TREES is essential as only a few people at the central level and none of the provincial authorities listed in the LEAF proposal have a basic understanding of the initiative. There is a need to conduct education and training for state agencies in charge of implementing REDD+ and LEAF. It is also necessary to strengthen training and capacity building for provincial forest owners on implementing Forestry Law 2017 and social safeguards requirements. Supporting VRO will be key to having a functional and capable agency to drive LEAF and emissions reduction projects going forward. Moreover, establishing a platform and a national network comprised of both national and international stakeholders who provide regular technical backup and on-ground experience to feed into VRO decisions is important. Continuous awareness raising and lobbying activities by INGOs, and international agencies, coupled with continued research efforts, may shift the thinking of policymakers over time. The thinking of policymakers cannot be changed overnight but requires continuous awareness raising, formal and informal lobbying, and on-ground knowledge. Both central and provincial governments also need support in building capacity on the financial management of large-scale and foreign-funded projects, and more importantly on monitoring forest resources and complying with social safeguards.

Local communities and ethnic minorities: IPLCs need a means to exchange information with government organizations, donors and

the private sector. Future projects could provide training in communication skills, MRV, negotiation skills and business planning. LEAF and future projects should provide relevant information in the languages of ethnic minorities who should be consulted for consensus. LEAF could also make full use of six major channels through which local people obtain market and climate information: from friends outside villages; through government

agencies (extension officers, national parks); through mass organizations (farmers' associations, youth unions); through local NGOs working in their area; through traders; and through brokers. However, as women often face more challenges in accessing information, LEAF and future projects could help to broaden the channels for women and ethnic minority people to access information in their local languages.

6 Conclusions

Although the Government of Vietnam generally supports emissions reduction policies and projects, cumbersome administrative processes and lack of coordination between government departments and stakeholders has led to competing objectives and mismatched project approaches. Building capacity for IPLCs is essential to enhance their involvement in REDD+, LEAF and emissions reduction initiatives, but this is not enough. Not only does the capacity of individuals need to be strengthened, but organizational and political capacities also need to be enhanced. The major principle to be followed is that the institutional framework should be location-specific and should respect the local jurisdiction, and the cultural, ecological and economic circumstances of the area. Flexibility should be retained within the contract framework for each commune to negotiate an appropriate institutional arrangement that best reflects the social conditions of the area. It is also clear that variations in context also mean that, even if a programme is successful in one location, careful consideration is required before applying the same programme to another area. It is also important to design payment schemes that are relevant to local needs as this will encourage a higher level of commitment from poor households to participate in the scheme and fulfil contract requirements. Consultation with and engagement of the poor in all project stages would help ensure effective implementation of

future emissions reduction schemes. It is likely to be costly to establish new organizations for implementation of emissions reduction projects. Using existing and trusted institutions and organizations from the local area should not only increase local ownership of PES schemes but also minimize the costs of administration.

Equitable emissions reduction policies and projects have the potential to improve both socioeconomic and environmental outcomes. However, they need to be sympathetic to government policies and strategies in addressing poverty and environmental issues. Implementation of equitable emissions reduction policies and projects requires: (i) improvement of current land-use rights systems; (ii) improved understanding of REDD+, LEAF and emissions reduction schemes among decision makers and willingness to participate among environmental services sellers; (iii) active and accountable participation of intermediaries, particularly local institutions; (iv) accountable, equitable and transparent benefit-sharing mechanisms; (v) enhanced involvement of the poor and their representatives in negotiations; and (vi) schemes designed to fit in with local conditions and identify the true needs of IPLCs. Public participation also requires sufficient time and resources dedicated to proper consultation processes, experienced intermediaries who can bring people together at the same time, and getting people to actively participate in activities.

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Annexes

Annex 1. Ministry mandates and responsibilities

Ministry	Position and functions	Decree
Ministry of Planning and Investment (MPI)	Responsible for state management of planning, development investment, and statistics, as well as general advice on strategies, planning and development plans. Socioeconomic development, national public investment plan; economic management mechanisms and policies; domestic investment, foreign investment in Vietnam and Vietnamese investment abroad; economic sector; official development assistance (ODA), concessional loans, and foreign non-governmental aid bidding; business development, collective economy and cooperatives; statistical data; state management of public services in sectors and fields under the ministry's state management in accordance with legal provisions. MPI provides secretariat functions for the council. It operates to organize and facilitate cross-sectoral and cross-regional activities in terms of development planning and effective implementation of Vietnam Agenda 21 by all arms and levels of government. MPI is responsible for state management of planning and investment, including national socioeconomic development plans, and official development assistance throughout the country. It is responsible for mainstreaming sustainable development and climate change into Viet Nam's strategies and development plans. MPI facilitates implementation of the National Sustainable Development Strategy (Agenda 21) in sectors and local government areas, although the specific role and influence of Agenda 21 on government development policy and action is not clear. MPI, with international support, has undertaken a study into low-carbon, climate-resilient development in Vietnam as the first step in designing a low-carbon growth strategy as identified in the NTP-RCC.	86/2017/NĐ-CP
Ministry of Finance	Performs the state management function on: finance - budget (including: state budget; taxes; fees, charges and other state budget revenues; project state reserve; state financial funds; financial investment; corporate finance; finance of cooperatives and collective economy; public property as prescribed by law); custom; accountant; independent audit; price; stock; insurance; financial services and other services under the state management scope of the ministry; to represent the owner of the state capital in the enterprise in accordance with the provisions of law.	87/2017/NĐ-CP
Ministry of Labour, War Invalids and Social Affairs	The Ministry of Labour, War Invalids and Social Affairs is a government agency that performs state management functions in the following areas: labour, wages; job; job education; social insurance; occupational safety and hygiene; people with meritorious services; social protection; children; gender equality; prevention and combat against social evils (hereinafter referred to as the field of labour, people with meritorious services, and society) nationwide; state management of public non-business services in sectors and fields under the state management of the ministry.	14/2017/ND-CP
Ministry of Justice	Performs state management functions in the following areas: law formulation and enforcement, examination of legal documents, law dissemination and education, and civil judgment enforcement, administrative judgment enforcement, judicial assistance, judicial administration, state compensation; management of law enforcement on administrative violations; and state management of public non-business services in the fields under the state management of the ministry.	96/2017/ND-CP

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Annex 1. Continued

Ministry	Position and functions	Decree
Ministry of Natural Resources and Environment (MONRE)	<p>Performs the function of state management of land; water resources; minerals and geology; environment; hydrometeorology; climate change; survey and cartography; integrated management of marine and island resources and protection of the marine and island environment; remote sensing; and state management of public services in the fields under its management.</p> <p>MONRE provides secretariat functions for the steering committee and is the coordinating ministry for the NTP-RCC, including its implementation, management, and monitoring of progress. MONRE is also the national focal point responsible for implementing the United Nations Framework Convention on Climate Change and the Kyoto Protocol, and is the designated national authority for the Clean Development Mechanism. MONRE 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 and integrated water management at the river basin level. Environmental management responsibility in Vietnam is spread over many ministries and implementation responsibility is often devolved to provincial and district levels. MONRE is responsible for preparing the 10-year strategy and 5-year action plans for natural resources and environment protection. It also administers laws relating to environment protection, biodiversity, water resource management, and land administration and planning.</p> <p>The Vietnam National Mekong Committee under MONRE is responsible for oversight of MRC activities through the 1995 Agreement on Cooperation for the Sustainable Development of the Mekong River Basin, between Cambodia, Lao PDR, Thailand and Vietnam. The committee is participating in the implementation of the MRC Climate Change Adaptation Initiative, which includes the establishment of a Mekong panel on climate change and a network of demonstration projects throughout the Lower Mekong Basin</p>	36/2017/ND-CP;
Ministry of Agriculture and Rural Development (MARD)	<p>Performs the function of state management of the sectors and fields of agriculture, forestry, salt production, fisheries, irrigation, natural disaster prevention and control, and rural development; and state management of public services in the sectors and fields under its management as prescribed by law.</p> <p>Most of the natural system conservation functions remain with MARD, which is responsible for rural development, governance and the promotion of agriculture, fisheries, forestry and irrigation in Vietnam. It is also the standing chair of the Central Steering Committee for Flood and Storm Control, responsible for organizing responses to natural disasters. It has the capacity for targeted local-level implementation of adaptation and mitigation measures through its nationwide network of 63 provincial offices and its relatively large cadre of field staff. MARD assists the Climate Change Steering Committee in supervising, guiding and facilitating agencies to implement climate-change-responsive agriculture and rural development projects. Areas under its umbrella of responsibility include irrigation, water management, forest and marine biodiversity management and flood control, all of which are vulnerable to climate change. Deforestation and associated land degradation, as well as inefficient intensive rice irrigation, fertilization, and processing are some of the largest contributors to GHG emissions in Vietnam. MARD therefore has a lead role in policy and planning for the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD). MARD is responsible for implementing Vietnam's national Payment for Forest Environmental Services Decree: 99/2010/ND-CP which requires collection of payments from forest ecosystem services users and disburses the funds to forest managers to support sustainable resource management and livelihoods. MARD's fisheries functions include marine protected areas. Its forest management covers special-use forests (or terrestrial protected areas), protection forests (for watershed and coastal protection) and production forests (including both plantations and natural forests designated for production purposes). In most cases, day-to-day forest management responsibility is devolved to state entities at provincial, district and commune levels. Only a small proportion of forest land has been allocated to the community and household level.</p>	15/2017/ND-CP

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Annex 1. Continued

Ministry	Position and functions	Decree
Ministry of Transport	The MOT governs rail, road and water transport in Vietnam. The transport sector, as the main user of petroleum fuels, contributes to the production of GHGs, mainly carbon dioxide. Key strategic decisions on the technologies and mix in transport modes will have far-reaching impacts on national GHG emissions and on the capacity of the country to adapt to climate change. The MOT plans and implements national infrastructure development, such as major roads and rail and port facilities. Poorly planned and located road development is a significant factor in biodiversity and forest loss in Vietnam.	12/2017/ND-CP
Ministry of Education and Training	Oversees education policies and educational institutions on educational objectives, programmes and contents; examination, enrolment, and diploma and certificate regulations; developing a contingent of teachers and educational administrators; school facilities and equipment; quality assurance, education quality accreditation; within the scope of its state management, performs state management of public non-business services.	69/2017/ND-CP
Ministry of Industry and Trade	Responsible for state management of industry and commerce, which includes the following sectors and fields: electricity, coal, oil and gas, new energy, renewable energy, chemistry chemical, industrial explosives, mechanical industry, metallurgy, mining and mineral processing industry, consumer industry, food industry, supporting industry, environmental industry, industrial industry high technology; industrial clusters, handicrafts, industrial promotion; domestic trade; import and export, border trade; develop foreign markets; market management; promotion; ecommerce; commercial services; international economic integration; competition, consumer rights protection, trade defence; public services in sectors and fields under the ministry's state management. The Ministry of Industry and Trade (MOIT) is also a key stakeholder in addressing climate and environmental issues. MOIT leads the development and management of key industrial sectors including iron, steel, cement, machinery, metallurgy, power generation, renewable energy, oil and gas, mining, fertilizers and chemicals, and explosive materials, which are some of the most GHG-intensive industries. MOIT owns over 2,000 industries, including 51 large general companies and enterprises and numerous enterprises concerned with steel, petroleum, chemicals, textiles, paper manufacturing and coal mining. By June 2005, only 300 of the MOIT state-owned enterprises (15%) had been equitized. MOIT prepares inventories of GHG emissions from industry and is responsible for managing national target programmes on energy efficiency and conservation. In line with several government directives, MOIT and the Ministry of Transport (MOT) have established environment departments to help improve sector environmental management and performance.	98/2017/NĐ-CP; Asian Development Bank (2013)
Ministry of Construction	Oversees construction planning, architecture, construction investment activities, urban development, infrastructure, house, office, real estate market and building materials. In accordance with the law, the state manages public services in the fields of state management of the ministry. The Ministry of Construction is responsible for urban and regional infrastructure planning and development control. It administers the national building code and, through its urban planning institutes, prepares plans for most cities, towns and other settlements in the country—in addition to supporting MONRE and the DONREs in preparing their land use plans. The Ministry of Construction has extensive responsibilities for promoting and implementing climate change adaptation and mitigation measures in the built and urban environment.	123/2016/ND-CP; Asian Development Bank (2013)
The Ministry of Public Security	Advises the party and the state on national security, social order and safety; carries out state management of national security protection, social order, and safety assurance, and combats hostile force plots and activities, as well as all types of crimes and violations of the law on national security, social order, and safety.	Decree No. 01/2018/ND-CP– Law on People's Public Security 2014

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Annex 1. Continued

Ministry	Position and functions	Decree
Ministry of National Defence	Advises the party and the state on military and national defence guidelines and tasks; managing national defence throughout the country; organizing the construction, management, and command of the People's Army, Militia, and Self-Defence Forces; and managing public services in accordance with the law. The Minister of National Defence is the person who directs the performance of state management functions on military and national defence in accordance with the provisions of law, is responsible for the organization, construction, and management of the People's Army, the Militia, and the Self-Defence Forces, and is the highest commander of the People's Army, the Militia, and the Self-Defence Forces. The General Staff, the General Department of Politics, the General Departments, and other affiliated units are all part of the Ministry of National Defence. The Ministry of National Defence decided to give officers in the Vietnam People's Army the ranks of colonel and lieutenant.	mod.gov.vn
Ministry of Culture, Sports and Tourism	The Ministry of Culture, Sports and Tourism is a government agency that performs the function of state management of culture, family, physical training, sports and tourism throughout the country; and state management of public services in sectors and fields under the ministry's state management.	79/2017/ND-CP
Ministry of Science and Technology	Performs the function of state management of science and technology, which includes scientific research activities, technological development, and innovation; developing scientific and technological potentials; intellectual property; quality measurement standards; atomic energy, radiation and nuclear safety; and state management of public services in the fields under the ministry's management in accordance with the provisions of the Constitution.	95/2017/ND-CP

Annex 2. Government agency mandates

Name	Organizational structure	Source
Provincial people's committees	Provincial people's committees comprise a chair, vice chairs and members. Class I provincial people's committees have no more than four vice chairs, while Class II and Class III provinces have no more than three vice chairs. Members of provincial people's committees include the heads of the committees' specialized agencies, members in charge of the military, and members in charge of public security. Specialized agencies under provincial people's committees include departments and agencies equivalent to departments.	Law No: 77/2015/QH13 - Law on organization of local government
District people's committees	District people's committees comprise a chair, vice chairs and members. People's committees in Class I districts can have no more than three vice chairs, while Class II and Class III districts can have no more than two vice chairs. Members of district people's committees include the heads of the committees' specialized agencies, members in charge of the military, and members in charge of public security. Specialized agencies under district people's committees include departments and agencies equivalent to departments.	Law No: 77/2015/QH13 - Law on organization of local government
The Vietnamese Fatherland Front	The Vietnamese Fatherland Front is a part of the political system of the Socialist Republic of Vietnam led by the Communist Party of Vietnam; it is the political base of the people's government; it is the place to express the will and aspirations of the people, to gather the great unity of the entire people, and to promote the people's right to mastery; and it is where members consult, coordinate and unify their actions. The Vietnamese Fatherland Front's mission is to gather, build and promote the strength of the great national unity; to implement democracy and strengthen social consensus; to represent and protect the lawful and legitimate rights and interests of the people; to supervise and criticize the party and state; and to contribute to the construction and defence of the Fatherland. Political organizations, socio-political organizations, social organizations and individuals representing various classes, social classes, ethnicities, religions and overseas Vietnamese are all members of the Vietnamese Fatherland Front at all levels. Joining the Vietnamese Fatherland Front is done voluntarily by agreeing to the Vietnamese Fatherland Front's Charter and specific regulations, which are reviewed by the Vietnamese Fatherland Front Committee of the same level.	The Charter Of The Vietnamese Fatherland Front Term VIII
The State Bank of Vietnam	The State Bank of Vietnam is a ministerial-level agency of the government and is the central bank of the Socialist Republic of Vietnam. The State Bank performs the function of state management of currency, banking activities and foreign exchange, and the functions of the Central Bank in terms of money issuance, banking of credit institutions and provision of monetary services to the government. Activities of the State Bank are to stabilize the value of money; ensure the safety of banking operations and the system of credit institutions; ensure the safety and efficiency of the national payment system; and contribute to promoting socioeconomic development under the socialist orientation. The State Bank of Vietnam has 26 affiliated units, 20 of which assist the Governor of the State Bank in performing state management and central bank functions, and 6 of which are non-commercial organizations.	Law on State Bank of Vietnam 2010
Committee for Ethnic Minority Affairs	The Committee for Ethnic Minority Affairs is the government's ministerial-level agency in charge of state management of ethnic affairs nationwide; and state management of public services in accordance with the law under the management of the Committee for Ethnic Minorities.	Decree No. 13/2017/ND-CP

Annex 3. Provincial people's committee mandates

Policy name	Mandates
Decree No. 117/2010/NĐ-CP on organization and management of the special-use forest system	<ul style="list-style-type: none"> • Manage special-use forests in their localities; to implement this Decree; and allocate investment funds for special-use forests under Article 37 of this Decree; • Promulgate according to their competence and implement legal documents on organization and management of special-use forests in their localities under law; • Review and classify special-use forests; identify the area and boundary of each special-use forest zone for placing boundary markers, and allocate forests and grant forestland use right certificates; • Disseminate regulations on special-use forests in their localities; • Inspect and examine the observance of regulations on management of the special-use forest system in their localities; • Direct the establishment of communication systems and databases of special-use forests in their localities.
Prime Ministerial Decision No. 886/QĐ-TTg dated 16 June 2017 on approving the Targeted Programme for Sustainable Forestry Development for 2016–2020	<ul style="list-style-type: none"> • Summarize and develop projects in the area, then send them to the Ministries of Agriculture and Rural Development, Planning and Investment, and Finance for feedback on investment content and capital-balancing ability before approval; • Create and approve annual, three-year, and five-year programme implementation plans for each project, including capital plans, objectives, and tasks, and submit them to the Ministry of Agriculture and Rural Development and other agencies; • Deployment organization; monitoring and evaluating programme implementation results in the province; • Assign and decentralize responsibilities of each level and department in organizing programme implementation on the basis of strengthening decentralization and promoting a sense of responsibility for the grassroots; • Develop mechanisms and policies to guide programme implementation in the province; • Oversee the review and coordination of the district-level Sustainable Forestry Development Programme in the area in order to align it with the province's overall sustainable forestry development plan; • Plan and promote the development of concentrated commodity forestry production areas in the province towards value chain linkage in accordance with the forestry sector's restructuring orientation.
Decision No. 419/QĐ-Ttg approving the National REDD+ Programme and sustainable management of forest resources through 2030	<ul style="list-style-type: none"> • Support the development of provincial interdisciplinary land use planning and plans with full and effective stakeholder participation; • Continue to support the development and replication of natural forest management association and cooperation models between forest owners who are state organizations, local communities and other stakeholders; • Continue to review the area of forest and forestry land currently managed by the commune people's committee in order to organize land allocation and forest allocation to people, with priority given to households and individuals who lack or have no land production, ethnic minorities; • Completing the inter-sectoral and inter-provincial coordination mechanism to strengthen inspection, control, and handling of exploitation and conversion of forest use purposes violations; • Control strictly the planting of replacement forests for projects that convert forests to other uses; revoke permits and terminate projects that do not comply with reforestation regulations or financial contributions.

Annex 3. Continued

Policy name	Mandates
Decree No. 886/QD-Ttg on issuance of the plan for implementation of the National REDD+ Programme through Prime Ministerial Decision No. 419/QD-Ttg for 2018–2020	<ul style="list-style-type: none"> • Support the development of provincial interdisciplinary land use planning and plans with full and effective stakeholder participation; • Continue to test, summarize, and replicate non-deforestation coffee production models; • Continue to test, summarize, and replicate non-deforestation sustainable aquaculture production models; • Continue to test, summarize, and replicate sustainable rubber production models that do not result in deforestation; • Improve water management practices in peatland Melaleuca forests to prevent and control forest fires; • Continue to support the development and replication of natural forest management associations and cooperation models between forest owners who are state organizations, local communities and other stakeholders; • Continue to review the area of forest and land used for forestry purposes that are currently managed by the commune people’s committee in order to organize land and forest allocation to people; • Strengthen the management of agricultural and forestry companies’ forestry land, as well as protection and special-use forest management boards, in accordance with Government Decree No. 118/2014/ND-CP; • Control the planting of replacement forests by projects that convert forests to other uses; revoke permits and terminate projects that do not meet reforestation or financial contributions requirements; • Encourage the planting of new forests and the replanting of coastal forests; • Cooperate with neighbouring countries is encouraged in order to control cross-border illegal logging and trade and to conserve biodiversity.
Prime Ministerial Decision No. 2139/QD-TTg on approving the National Climate Change Strategy	<ul style="list-style-type: none"> • Create and carry out a local strategy implementation plan; • Coordinate the implementation of strategy-approved related activities; • Actively mobilize resources and integrate related activities from other programmes in the area to meet the strategy’s objectives; • Report on the progress of implementing the strategy’s objectives and tasks in the province or city regularly, in accordance with regulations.
Decision No. 1393/QD-Ttg approving the National Green Growth Strategy	<ul style="list-style-type: none"> • Be responsible for developing programmes, action plans, and directing the implementation of the green growth strategy; • Concretize tasks and incorporate them into local 5-year and annual socioeconomic development plans, while also ensuring funding for local implementation.

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Annex 3. Continued

Policy name	Mandates
Decision No. 524/QD-TTg on approval of the Planting a Billion Trees Project for 2021–2025	<ul style="list-style-type: none"> • Organize a review of land use master plans and plans, determine the land fund for planting protection forests and land for new production forests, land planned for planting urban green trees, land for development of scattered green trees in rural areas, and so on, as a basis for formulating and implementing specific afforestation and tree planting programs, plans, and projects annually and for the years 2021–2025; • Allocate local budgets in accordance with budget decentralization, integrate from programmes and projects, and invite organizations and businesses to mobilize legal capital sources to participate, join hands to contribute to tree planting, and care for the community; • Prepare sufficient quality seedlings with tree species and plant standards in accordance with technical standards and specific technical instructions in accordance with approved plans and projects; • Create and organize the implementation of programmes and plans to promote the growth of green trees in the community; • Organize, sustain, and expand the “Tree Planting Festival” movement and annual tree planting by the people; • Launch emulation, and assign targets of tree planting plans to localities, agencies, units, and each residential area; • Create conditions for agencies, organizations, mass organizations, schools, the armed forces, and people of all classes to actively participate in tree planting and afforestation. In the process of planting, tending, protecting and managing forests and trees, organize inspection, direction and supervision, and assign responsibilities to localities, organizations, and mass organizations; • Annually evaluate, learn from experience, solve difficulties and problems quickly, praise and reward, and replicate examples of organizations and individuals that do well; • Strictly handle acts of destroying forests and trees, and synthesize reports and send them to the Ministry of Agriculture and Rural Development for synthesis.
Decision No. 324/QD-TTG on approval of the general programme for sustainable agriculture development in response to climate change in the Cuu Long River Basin to 2030 with vision to 2045	<ul style="list-style-type: none"> • Organize the implementation of the Master Programme in the locality and collaborate with other localities in the region to ensure that the Programme is implemented effectively; • Create and implement projects to carry out the Master Programme; • Developing the local plan’s medium-term and annual targets and tasks; submitting them to the Ministries of Agriculture and Rural Development, Planning and Investment, and Finance in accordance with the law on public investment, the state budget, and other relevant laws; • Manage, evaluate and summarize the implementation of projects under the Master Programme managed by the locality; report on the progress of Master Programme implementation in the locality regularly; and review and summarize the Master Programme in the locality regularly as prescribed.
Decision No. 1670/QD-TTG on approval of climate change response and green growth programme for 2016–2020	<ul style="list-style-type: none"> • Organize the Programme’s implementation in the localities managed by the ministries and localities in accordance with the provisions of the law and the Programme owner’s instructions; • Be responsible for mobilizing, integrating, and allocating funds from the local budget and other lawful capital sources to implement the Programme in order to ensure the project’s effectiveness and completion on time, as well as the ability to mobilize resources before approving investment policies and deciding to invest in Programme projects; • Create goals, tasks, and a list of prioritized projects for implementation in the medium-term plan for the period 2016–2020, as well as annual plans for ministries, branches, and localities based on the principles and criteria for plan allocation, send the Ministries of Planning and Investment and Finance, in accordance with the provisions of the Law on Public Investment, the Law on the State Budget, and other relevant legal documents; • Monitor, examine and evaluate the implementation of objectives and tasks, as well as assume responsibility for the investment efficiency of Programme projects; • Organize the acceptance of the results of project implementation under the Programme managed by the locality; • Report to the Programme owner on the progress of Programme implementation in the locality regularly; • Organize preliminary and final summaries of the Programme in the locality in accordance with regulations.

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Annex 3. Continued

Policy name	Mandates
Land Law No. 45/2013/QH13	<ul style="list-style-type: none"> • In charge of managing unused land on the local uninhabited islands; • Perform state land management in the locality in accordance with the competence prescribed by this law; • Organize administrative boundary determination in the field and keep records on administrative boundaries within the locality; • Organize the implementation and announcement of land survey and assessment results in the community and send the results to the Ministry of Natural Resources and Environment for synthesis; • Organize the implementation of land statistics and inventories, and map the current state of land use in the area; • Organize the development of provincial-level land-use master plans and plans; district-level people's committees shall organize the development of district-level land-use master plans and plans; • Publicize national master plans and land use plans at the agency's headquarters and on the Ministry of Natural Resources and Environment's portal implementation; • Performing local master plans and land use plans; • Prior to land recovery, organize the formulation and implementation of resettlement projects; • Organize the construction, management, and exploitation of information systems and land databases in the community; • Provide land data to the Ministry of Natural Resources and Environment for integration into the national land database; • Direct the review and approval of land use plans; land allocation, land lease in accordance with the approved land use plan; • Recover unused, improperly used land that has been illegally contracted, leased, or lent, encroached upon, or occupied in order to create a land fund for allocation or lease to organizations, households, or individuals. Land allocation and leasing must prioritize households and individuals from ethnic minorities who lack land or production land in the area; • Direct, guide, inspect and organize the implementation of administrative procedures in the community; specify coordination between relevant local agencies to handle administrative procedures for land and other related administrative procedures.
Law on Forestry 2017	<ul style="list-style-type: none"> • Promulgate or submit to competent state agencies for promulgation legal documents on forestry in accordance with their competence, and decisions on programmes and projects for sustainable forestry development in the locality; • Organize the local implementation of forestry legal documents, forestry development strategy, national forestry planning, forestry development programmes, projects, and plans; • Organize the implementation of forest classification and forest type demarcation based on competence; • Allocate forests, lease forests, shift forest use purposes to other uses, and recover forests for organizations; instead, organize afforestation; • Organize a forest survey, inventory, and monitoring forest changes in the area; • Make local forest management records and update the forest database; • Organize forest protection, conservation of forest biodiversity, forest fire prevention and suppression, prevention and elimination of forest-harming organisms, forest development, forest use, and processing and marketing of forest products on a local scale; • Determine the province's forest price range; • Local research and application of advanced science and technology in forestry should be organized; • Propagate, disseminate and educate people on the local forestry law; • Mobilize forces, supplies, vehicles, and equipment from organizations, households, and individuals in the community to respond to forest fire emergencies in accordance with their expertise; inspect, examine, and handle violations of the law; and settle disputes, complaints, and denunciations in the forestry sector in accordance with the law.

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Annex 3. Continued

Policy name	Mandates
Resolution No. 84/NQ-CP on approval of the investment policy for sustainable forestry development programmes for 2021–2025	<ul style="list-style-type: none"> • Preside over the Programme’s implementation in the community; review and propose investment projects for programme implementation; develop annual and 5-year plans, as well as capital needs, and send them to the Ministries of Agriculture and Rural Development, Planning and Investment, and Finance to be summarized and submitted to the Prime Minister; • Allocate local budget capital and mobilize other legal sources of capital to carry out the Programme in the community; • Direct the development of the area’s Programme implementation plan; Synthesize and propose targets and tasks for the Programme’s implementation, and submit them to the Ministry of Agriculture and Rural Development for synthesis and formulation of the Programme’s feasibility study report; • Manage, evaluate, and accept the outcomes of project implementation under local management. Report on the progress of the Programme implementation to the Prime Minister, relevant ministries, and branches regularly, and organize preliminary and final reviews of the Programme in the locality.

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Annex 4. District people's committee mandates

Policy name	Mandates
Land Law No. 45/2013/QH13	<ul style="list-style-type: none"> • Perform state land management in the locality in accordance with the competence prescribed by this Law; • Publicize district-level master plans and land-use plans at the agency's headquarters and on the district-level People's Committees' web portal. And publicize the contents of district-level master plans and land use plans related to the commune, ward, or township at the commune-level People's Committee headquarters; • Implement Local master plans and land-use plans; • Send reports on the results of master plans and land use plans to the immediate superior People's Committee to send reports on the results of master plans and land use plans to the Ministry of Natural Resources and Environment; • Coercion implementation should be organized and complaints about coercion should be resolved in accordance with the law on complaints; the resettlement plan should be implemented before enforcement. Ensure that the necessary conditions and means are in place to serve the coercion; allocating funds for coercive land recovery; • Organize the development and implementation of plans for training, job change, and job search assistance for people whose recovered land is agricultural land, residential land combined with business and services. The training, job change, and job search support plans are developed and approved concurrently with the compensation, support, and resettlement plans; • Organize the collection of opinions and be in charge of receiving and explaining the opinions of people whose land has been recovered; • Prior to land recovery, organize the formulation and implementation of resettlement projects; • Direct, guide inspect and organize the implementation of administrative procedures in the community; specify coordination between relevant local agencies to handle administrative procedures for land and other related administrative procedures.
Law on Forestry 2017	<ul style="list-style-type: none"> • Legal documents on forestry shall be promulgated or submitted to competent state agencies for promulgation in accordance with its competence, and decisions on programmes and projects for sustainable forestry development in the locality shall be made; • Organize the implementation of forestry-related legal documents, programmes, and projects in the community for long-term forestry development; • Organize the implementation of forest classification and forest type demarcation in the locality in accordance with the provisions of the law; • Forest allocation, forest leasing, conversion of forest use to another purpose, forest recovery for households, individuals, and residential communities; preparation of forest management dossiers; organization of afforestation instead; • Organize forest surveys, inventory, and monitor forest changes in the area; • Organize forest management and protection, conservation of forest biodiversity, and prevention and suppression of forest fires; • Propagate, disseminate and educate people the local forestry law; • Direct commune-level people's committees to prepare land and forest allocation projects for forest areas that have yet to be allocated or leased in accordance with the law; • Inspect, investigate and deal with violations of the law; resolve disputes, complaints, and denunciations in the forestry sector on a local level in accordance with the law; • Within 12 months of the effective date of this Law, review the existing natural forest area for inclusion in the planning of special-use forests, protection forests, and production forests.

Annex 5. Commune people's committee mandates

Policy name	Mandates
Land Law No. 45/2013/QH13	<ul style="list-style-type: none"> • Accept responsibility for the management of land used for public purposes that has been designated for management, unallocated land, and land that has not been leased in the community; • Perform state land management in the locality in accordance with the competence prescribed by this law; • Organize administrative boundary determination in the field and keep records on administrative boundaries within the locality; • Manage administrative boundary markers on the field in the locality; if administrative boundary markers are lost, moved, or damaged, they must promptly report them to district, urban district, town, and provincial city people's committees (hereinafter collectively referred to as district-level people's committees); • Organize the implementation of land statistics and inventory, map the current status of land use in the locality, and report to the people's committee of the immediate superior; provincial-level people's committees must report to the ministry of natural resources and environment on the results of land statistics and inventory, as well as mapping the current status of land use in the locality; • In communes, master plans and land-use plans must be implemented; • Report on the results of master plan implementation and land use plans should be sent to the people's committee's immediate superior; • Coordinate with the organization in charge of compensation and ground clearance in the implementation of the land recovery plan, investigation, survey, measurement and tally; • Cooperate with relevant agencies and units to organize the assignment and publicly post the decision on land recovery enforcement; participate in coercion enforcement; coordinate with the organization in charge of compensation, ground clearance, sealing, and moving the property of the person whose land is forcibly recovered; management of land areas with historical-cultural relics and scenic spots; • Unused land should be managed and protected locally, and it should be recorded in cadastral records; • Direct, guide, inspect and organize the implementation of administrative procedures in the community; specify coordination between relevant local agencies to handle administrative procedures for land and other related administrative procedures.
Law on Forestry 2017	<ul style="list-style-type: none"> • Forest management that complies with the law; • Promulgate or submit to competent state agencies for promulgation legal documents on forestry, to decide on programmes and projects to be concluded on sustainable forestry development, forestry, agriculture, and fishery production. Combine, swidden cultivation, and organize local implementation; • Certify dossiers of request for forest allocation or forest lease for organizations, households, individuals and communities in accordance with the law; • Organize the management and protection of forest areas that the state has not allocated or leased; • Organize a forest inventory in the area; • Guide the community in developing and implementing forest protection and development conventions and conventions in the area in accordance with legal provisions; • Coordinate forest fire prevention and suppression efforts; prevent and combat forestry law violations in the community; deal with forestry law violations; and resolve disputes, complaints and denunciations in the community's forestry sector in accordance with the law.

Annex 6. Ministry of Planning and Investment mandates

Policy name	Mandates
Decree No. 117/2010/NĐ-CP on organization and management of the special-use forest system	<ul style="list-style-type: none"> • Balance and allocate investment capital sources for special-use forests and perform relevant tasks under its functions and powers; • Coordinate with the Ministry of Agriculture and Rural Development and the Ministry of Finance in examining and supervising investments in special-use forests.
Prime Ministerial Decision No. 886/QĐ-TTg dated 16 June 2017 on approving the Targeted Programme for Sustainable Forestry Development for the 2016–2020 period	<ul style="list-style-type: none"> • Assume primary responsibility for balancing and allocating development investment capital for Programme implementation, coordinating with the Ministry of Finance, and reporting to the Prime Minister for consideration and decision; • Assume primary responsibility for appraising capital sources and the ability to balance capital for projects funded by the central budget, national public bonds, and bond capital, and coordinate with the Ministries of Finance and Agriculture and Rural Development. The Programme includes government, ODA, and concessional loans from foreign donors; • Coordinate with the Ministries of Agriculture and Rural Development and Finance in guiding organizations and individuals in the Programme's implementation; • Carry out tasks assigned to members of the State Steering Committee on the Targeted Programme for Sustainable Forestry Development for the 2016–2020 period by the Steering Committee's Head.
Decision No. 419/QĐ-TTg approving the National REDD+ Programme and sustainable management of forest resources through 2030	<ul style="list-style-type: none"> • Within the framework of the National Green Growth Strategy, research and develop a green credit and investment mechanism for forest protection and development activities; • Coordinate the development and testing of principles and methods for calculating the total value of forests, listing and describing financial flows, and analysing the financial contributions of related sectors; incorporate forest value into the planning process, financial planning, GDP, and national assets.
Decree No. 886/QĐ-TTg on issuance of the plan for implementation of the National REDD+ Programme through Prime Ministerial Decision No. 419/QĐ-TTg for 2018–2020	<ul style="list-style-type: none"> • Coordinate the development and testing of principles and methods for calculating the total value of forests, listing and describing financial flows, and analysing the financial contributions of related sectors; • Incorporate forest value into the planning process, financial planning, GDP, and national assets.
Decision No. 18/2007/QĐ-TTg on approving Vietnam's forestry development strategy for 2006–2020	<ul style="list-style-type: none"> • Effectively implement the Strategy's contents, balance, calculate and ensure investment capital sources; • Determine the content and targets for monitoring and evaluating the forestry sector • Direct and guide localities in conducting forest statistics and inventories, as well as studying the sector's contributions to the economy and the environment, using criteria appropriate to innovation requirements and trends. • International economic integration of the forestry sector to submit amendments and supplements of the forestry sub-sector to the government in Decree No. 75/CP of 27 October 1973.
Prime Ministerial Decision No. 2139/QĐ-TTg on approving the National Climate Change Strategy	<ul style="list-style-type: none"> • Assume primary responsibility for developing and guiding the implementation of a standard framework for integrating climate change into socioeconomic development strategies, programmes, master plans, and plans, as well as coordinating with ministries, branches, and localities; • Coordinate with the Ministry of Natural Resources and Environment to develop a mechanism for monitoring and evaluating the Strategy's implementation.

Annex 6. Continued

Policy name	Mandates
Decision No. 622/QD-Ttg on issuance of a national action plan for implementation of the 2030 agenda for sustainable development	<ul style="list-style-type: none"> • Review and adjust socioeconomic development strategies, master plans and plans based on science and economic efficiency, taking into account risk and uncertainty factors offered by climate change and sea level rise; • Increase policymakers' capacity to incorporate climate change into development policies and plans.
Decision No. 1393/QD-Ttg on approval of the National Green Growth Strategy	<ul style="list-style-type: none"> • As the focal point for green growth, it is responsible for presiding over and coordinating with relevant ministries and branches, as well as People's Committees of provinces and centrally-run cities, in organizing the implementation of the green growth strategy; • Guide, supervise, evaluate, examine and summarize the strategy's implementation and reporting to the Prime Minister regularly; • Take charge and work with relevant ministries and branches to identify key tasks and projects for each time period and submit for consideration and decision to the Prime Minister; • The Ministry of Planning and Investment will be in charge of identifying and allocating domestic financial sources, as well as coordinating foreign funding sources, mechanisms, and policies, in collaboration with the Ministry of Finance and other relevant ministries and branches.
Decision No. 1670/QD-TTG on approval of climate change response and green growth programmes for 2016–2020	<ul style="list-style-type: none"> • Assume primary responsibility for, and collaborate with, the Ministry of Finance and the Programme owner in, balancing and allocating development investment capital based on medium-term and annual plans to implement the Programme in accordance with the law on public investment and the state budget, and related laws; • Assume primary responsibility for, and coordinate with, the Ministry of Finance in appraising capital sources and the ability to balance capital for projects funded with the central budget, national public bonds, government bonds, ODA, and state concessional loans under the Programme; • Assume primary responsibility for and implement the Green Growth component, as well as to notify the Programme owner of the medium-term public investment plan and the status of the Green Growth component's implementation; • Check and monitor the results of the Programme's implementation in collaboration with the Programme owner.
Resolution No. 84/NQ-CP on approval of the investment policy for sustainable forestry development programmes for 2021–2025	<ul style="list-style-type: none"> • Assume primary responsibility for, and coordinate with, the Ministry of Finance and relevant ministries and branches in evaluating the feasibility report of the Sustainable Forestry Development Programme for the period 2021–2025 in accordance with the Public Investment Law; • Assume primary responsibility for, and coordinate with, the Ministries of Finance, Agriculture and Rural Development in balancing and allocating development investment capital for the Programme's implementation; • Coordinate with the Ministries of Agriculture and Rural Development and Finance in guiding the inspection and supervision of organizations and individuals implementing the Programme.

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Annex 7. Ministry of Finance mandates

Policy name	Mandates
Decree No. 117/2010/NĐ-CP on organization and management of the special-use forest system	<ul style="list-style-type: none"> Allocate regular operating funds for special-use forests and perform relevant tasks according to functions and powers.
Prime Ministerial Decision No. 886/QĐ-TTg dated 16 June 2017 on approving the Targeted Programme for Sustainable Forestry Development for 2016–2020	<ul style="list-style-type: none"> Assume primary responsibility for balancing and allocating non-business capital for programme implementation based on Ministry of Agriculture and Rural Development summaries and submitting to competent authorities for consideration and decision; Oversee the development of regulations governing the financial mechanism, payment, and settlement of state budget capital sources for the Programme's implementation; Work with the Ministry of Planning and Investment to balance and allocate sufficient development investment capital to implement the Programme on time and in accordance with the medium-term and annual investment plans; Coordinate with the Ministries of Planning and Investment and Agriculture and Rural Development in appraising capital sources and capital balancing capabilities for projects funded by the central budget, national public bonds, and government bonds, ODA, and concessional loans from foreign donors under the Programme; Work with the Ministries of Agriculture and Rural Development, and Planning and Investment to guide organizations and individuals in implementing the Programme; Carry out the duties delegated to members of the State Steering Committee on the Targeted Programme for Sustainable Forestry Development for the 2016–2020 period as assigned by the Steering Committee's Head.
Decision No. 18/2007/QĐ-Ttq on approving Vietnam's forestry development strategy for 2006–2020	<ul style="list-style-type: none"> Effectively implement the Strategy's contents by balancing, calculating and ensuring investment capital sources.
Decision No. 1393/QĐ-Ttq on approval of the National Green Growth Strategy	<ul style="list-style-type: none"> Approve estimates and ensure funding for strategy implementation in ministries and branches in accordance with current regulations; Coordinate with the Ministry of Planning and Investment in developing policies to encourage all economic sectors, organizations and individuals to invest in developing Vietnam's green economy.
Decision No. 324/QĐ-TTg on approval of the general programme for sustainable agriculture development in response to climate change in the Cuu Long River Basin to 2030 with vision to 2045	<ul style="list-style-type: none"> Assume primary responsibility for allocating and allocating non-business capital for the Programme's implementation, as well as to coordinate with the Ministries of Planning and Investment and Agriculture and Rural Development; Assume primary responsibility for, and coordinate with, the State Bank of Vietnam and the Ministry of Agriculture and Rural Development in formulating and adjusting agricultural taxation, credit, and insurance policies in order to effectively implement the programme's objectives.
Decision No. 1670/QĐ-TTg on approval of climate change response and green growth programmes for 2016–2020	<ul style="list-style-type: none"> Assume primary responsibility for, and coordinate with, the Ministries of Planning and Investment and Natural Resources and Environment in developing and submitting to the Prime Minister for promulgation a financial mechanism for funding the Programme from the budget (allocation, on-lending) balance and allocate non-business capital to implement the Programme; Coordinate with the Ministry of Planning and Investment in evaluating capital sources, including central budget capital to support new construction projects.

Annex 7. Continued

Policy name	Mandates
Decision No. 419/QD-Ttg approving the National REDD+ Programme and sustainable management of forest resources through 2030	<ul style="list-style-type: none"> • Investigate and propose financial mechanisms to support and encourage the development of sustainable agricultural and fishery production that does not result in deforestation or forest degradation; • Support the development of preferential financial packages and insurance policies for large timber plantations, as well as the conversion of small timber forests to large timber forests.
Resolution No. 84/NQ-CP on approval of the investment policy for sustainable forestry development programmes for 2021–2025	<ul style="list-style-type: none"> • Assume primary responsibility for, and coordinate with, the Ministries of Planning and Investment, Agriculture, and Rural Development in balancing the allocation of non-business capital in accordance with the provisions of the State Budget Law and relevant laws; • Coordinate with the Ministry of Planning and Investment in appraising the Programme Feasibility Report in accordance with the law on Public Investment; • Assume primary responsibility for, and coordinate with the Ministry of Agriculture and Rural Development in guiding the management and use of non-business funds for the implementation of the Programme.

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Annex 8. Ministry of Agriculture and Rural Development mandates

Policy name	Mandates
Decision No. 2730/QĐ-BNN-KHCN on promulgation of the climate change adaptation framework action programme for all bodies involved in agriculture and rural development in the 2008–2020 period	<ul style="list-style-type: none"> • Disseminate, propagate, and thoroughly understand the government’s and industry’s guidelines and viewpoints on climate change mitigation and adaptation activities for cadres, civil servants, public employees in the sector, and the community; • Develop a plan to disseminate the commitments of the Government and the industry to the international community related to climate change; • Create an information system and website for the Climate Change Steering Committee of the sector from the Ministry to localities and businesses in order to provide information, forecast, respond to climate change issues, and ensure orientation, mitigation and adaptation measures are in place; • Organize conferences, seminars, training classes, refresher courses, and knowledge training on climate change, its impacts, and solutions for climate change mitigation and adaptation for officials, civil servants, and public employees from the federal to the local levels; • Use information technology to collect, store and process information. Creating a database storage system for the development and implementation of climate change mitigation and adaptation strategies; • Create a strategic vision for the industry’s adaptation to climate change; • Develop and propose topics, projects, and international funding sources for the industry’s climate change mitigation and adaptation activities; • Organize human resource training activities, as well as the transfer of knowledge and technology on industry climate change mitigation and adaptation; • Enhance coordination and integration with action programmes and action plans to carry out multilateral environmental commitments; • Build capacity of the Sector’s Standing Office of the Steering Committee for the Climate Change Adaptation Programme.
Decree No. 117/2010/NĐ-CP on organization and management of the special-use forest system	<ul style="list-style-type: none"> • Guide and examine provincial-level people’s committees in organizing the implementation of this Decree; • Submit to the Prime Minister for promulgation or promulgate according to its competence legal documents and investment policies applicable to special-use forests, regulations, processes, standards and economic and technical norms, and guide and examine their implementation; • Guide provincial-level people’s committees in inventorying and classifying special-use forests, and identify the specific area and boundary of each special-use forest zone in the field; • Guide and organize the dissemination of laws on nature and biodiversity conservation and sustainable development of special-use forests; • Establish a communication system and store a database of special-use forests.

Annex 8. Continued

Policy name	Mandates
Prime Ministerial Decision No. 886/QĐ-TTg dated 16 June 2017 on approving the Targeted Programme for Sustainable Forestry Development for 2016–2020	<ul style="list-style-type: none"> • Assume primary responsibility for, and coordinate with, concerned ministries and branches, provincial People’s Committees, and centrally run cities in, organizing the Programme’s implementation in accordance with regulations; • Assume primary responsibility for guiding organizations and individuals in implementing the Programme, and coordinate with the Ministries of Planning and Investment and Finance; • Synthesize and develop plans for allocating central budget capital to ministries, branches, provinces, and centrally-run cities for the implementation of the annual, three-year, and five-year programmes, and submit them to the Ministry of Planning and Investment and the Ministry of Finance for synthesis; • Assume primary responsibility for synthesizing and developing plans for assigning specific annual, three-year, and five-year targets and tasks to provinces and centrally-run cities in order to implement the Programme; • Lead and guide relevant ministries, branches, and localities in implementing the Programme effectively for the 2016–2020 period, as well as annual plans to achieve the Programme’s objectives; • Oversee the creation of a monitoring and evaluation system for the Programme, and advise implementing agencies on the monitoring and evaluation process; • Work with the Ministries of Planning and Investment, and Finance to assess capital sources and capital balancing capabilities for projects funded by the central budget, national public bonds, government bonds, and ODA capital and concessional loans from foreign donors; • Assume primary responsibility for, and coordinate with relevant ministries and branches in, reviewing and finalizing mechanisms and policies for Programme implementation; • Develop regulations for the maintenance and repair of forestry works; • Advise the Prime Minister on assigning specific tasks, directing ministries and branches to strengthen coordination, and promoting the role of the Vietnam Fatherland Front and socio-political organizations within the Programme’s implementation; • Assume primary responsibility for inspecting and supervising the Programme’s implementation by localities, as well as coordinating with ministries and branches.

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Annex 8. Continued

Policy name	Mandates
Decision No. 419/QĐ-TTg approving the National REDD+ Programme and sustainable management of forest resources through 2030	<ul style="list-style-type: none"> • Support and establish a commodity information exchange forum to facilitate dialogue and redirect sustainable production that does not result in deforestation and forest degradation; • Continue to test, summarize, and replicate more sustainable and highly adaptive agricultural and fishery production models in aquaculture, coffee, rubber, cassava and other commodity crops to climate change; • Continue to support effective production structure and organization in order to benefit from sustainable production models via information access, production cooperation, and value chain linkage; • Improve water management practices to prevent and control peatland or Melaleuca woodlands forest fires; • Organize a socioeconomic assessment of areas prone to deforestation and forest degradation, as well as areas with the potential to increase forest carbon stocks; • Propose activities to improve forest governance and local livelihoods; • Continue to conduct activities that support jobs and livelihoods for local people who live in and near forests where deforestation and forest degradation are common; • Strengthen capacity and assist with the implementation of the Vietnam Timber Legality Assurance System (VNTLAS) in order to carry out the Voluntary Partnership Agreement on Forest Law Enforcement, Governance, and Trade (FLEGT); • Provide support for the development and operation of state monitoring activities, as well as independent compliance monitoring with the Vietnam Timber Legality Assurance System (VNTLAS); • Support the development and testing of REDD+ safeguards compliance guidelines, as well as related policies and laws; • Support social organizations and professional associations in connecting forest owners, people, and local communities to information on how to effectively manage, protect, develop, and use forests while preventing illegal activities; • Research, select and develop new varieties, test established forestry plant varieties and meet the needs of large timber companies; • Experiment with and develop techniques for converting small timber plantations into large timber-supplying forests, replanting forests after exploitation and planting new forests in the direction of intensive farming with each group of plants in different site conditions; • Support the testing and replication of forms of association and cooperation along the value chain in the development and operation of high-yield large timber plantations; • Assist forest owners in gaining access to consulting services for the development and implementation of plans and plans for sustainable forest management and forest certification; • Build and develop a system of forest certification in Vietnam; • Encourage the development of household-scale certified afforestation models; • Support the planting of new forests and the replanting of coastal forests; • Protect and conserve special-use and protection forests; • Restore and enrich forests with native tree species; • Pilot, evaluate, and replicate a sustainable natural forest management model and forest certification; • Investigate and pilot collaboration between forest owners, people and businesses to contribute to forest protection and conservation through non-timber forest product and forest environmental service business models; • According to the national context, update and improve forest reference emission levels/forest reference levels (FRELs/FRLs); • Improve the National Forest Monitoring System and the Measurement, Reporting and Verification (MRV) system;

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Annex 8. Continued

Policy name	Mandates
Decision No. 419/QD-Ttg approving the National REDD+ Programme and sustainable management of forest resources through 2030	<ul style="list-style-type: none"> • Complete and operate the Security Information System, and provide periodic information summaries to the UNFCCC; • Improve the REDD+ information management system, which includes collecting, organizing, processing, storing, controlling and connecting with relevant data systems both within and outside the forestry sector; • Enhance processes, procedures and mechanisms for responding to, handling, and monitoring REDD+-related inquiries and complaints; • Create a mechanism to encourage local communities, ethnic minorities, women, socio-political organizations, non-governmental organizations and related organizations to participate; • To support the implementation of the National REDD+ Action Programme, the Vietnam REDD+ Fund was established as a non-profit public trust fund under the Vietnam Forest Protection and Development Fund. The REDD+ Fund is funded through a variety of sources, including international grants, contributions, trusts, and proceeds from the sale of carbon credits associated with REDD+ programmes, projects and activities; • Conduct research and develop regulations on financial management from REDD+ results-based payments, forest carbon rights, and benefit-sharing mechanisms from revenue from selling forest carbon credits that are appropriate for various related incentives; • Promote cooperation with neighbouring countries for cross-border control of illegal logging and trade, as well as biodiversity conservation; • Cooperate and share REDD+ implementation experiences with international partners; • Promote communication, raise awareness, and strengthen commitment to participate in monitoring the REDD+ Programme's implementation; • Raise awareness and capacity among REDD+ actors at the national and local levels; • Create a framework for monitoring and evaluating the REDD+ Programme's implementation.
Decree No. 886/QD-Ttg on issuance of the plan for implementation of the National REDD+ Programme through Prime Ministerial Decision No. 419/QD-Ttg for 2018–2020	<ul style="list-style-type: none"> • Review and revise land use master plans and plans for the forestry, agriculture and fisheries sectors, and develop infrastructure to allocate 16.24 million hectares of land for forestry; • Continue to test, summarize and replicate sustainable rubber production models that do not result in deforestation; • Assess the socioeconomic status of areas prone to deforestation and forest degradation, and areas with the potential to increase forest carbon stock; • Continue to conduct activities that support jobs and livelihoods for local people who live in and near forests where deforestation and forest degradation are common; • Continue to maintain livelihood funds so that people can borrow capital for production development, reducing the pressure from illegal impacts that cause deforestation and forest degradation; • Strengthen capacity and assist with the implementation of the Vietnam Timber Legality Assurance System (VNTLAS) in order to carry out the Voluntary Partnership Agreement on Forest Law Enforcement, Governance and Trade (FLEGT); • Support the development and operation of state monitoring activities, as well as independent compliance monitoring with the Vietnam Timber Legality Assurance System (VNTLAS); • Contribute to the creation and testing of a Guide to Compliance with REDD+ safeguards and related policies and laws; • Complete the inter-sectoral and inter-provincial coordination mechanism to improve inspection, control and handling of forest exploitation and use purpose violations; • Support social organizations and professional associations in connecting forest owners, people, and local communities to information on how to effectively manage, protect, develop and use forests while preventing illegal activities; • Research, select and develop new varieties, test established forestry plant varieties, and meet the needs of large timber companies; Concentrate on selecting multipurpose trees that can be grown on both forestry and agricultural land, ensuring soil protection while also exploiting non-timber products;

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Annex 8. Continued

Policy name	Mandates
Decree No. 886/QD-Ttg on issuance of the plan for implementation of the National REDD+ Programme through Prime Ministerial Decision No. 419/QD-Ttg for 2018–2020	<ul style="list-style-type: none"> • Experiment with and develop techniques for converting small timber plantations into large timber-producing dragons; • Replant forests after exploitation and plant new forests in the direction of intensive farming with each group of plants in different site conditions; • Support the testing and replication of forms of association and cooperation along the value chain in the development and operation of high-yield large timber plantations; • Support forest owners in gaining access to consulting services for the development and implementation of plans for sustainable forest management and forest certification; • Build and develop a forest certification system in Vietnam encouraging the development of household-scale certified afforestation models; • Pilot, evaluate and replicate a model of sustainable natural forest management and forest certification; • Protect and conserve special-use and protection forests and restore and enrich forests with native tree species; • Investigate and pilot collaboration between forest owners, people and businesses to contribute to forest protection and conservation through non-timber forest product and forest environmental service business models; • Investigate the potential domestic carbon market, attract investment, provide financial support, and trade forest carbon credits/emissions reductions; • Investigate and broaden the scope and users of forest environmental services; • According to the national context, update and improve forest reference emission levels/forest reference levels (FRELs/FRLs); • Improve the National Forest Monitoring System and the Measurement, Reporting and Verification (MRV) system; • Enhance the REDD+ information management system, which includes data collection, organization, processing, storage, control and integration with relevant data systems both within and outside the forestry sector; • Enhance processes, procedures, and mechanisms for responding to, handling, and monitoring REDD+-related inquiries and complaints; • Create mechanisms to encourage local communities, ethnic minorities, women, socio-political organizations, non-governmental organizations and related organizations to participate; • Set up a REDD+ Fund within the Vietnam Fund for Protection and Development; • Research and develop financial management regulations based on REDD+ results-based payments, forest carbon rights/emission reduction rights, benefit-sharing mechanism from revenue from selling forest carbon credits/reducing emissions in accordance with relevant incentive mechanisms; • Cooperate and share experience with international partners in REDD+ implementation; • Encourage cooperation with neighbouring countries for cross-border control of illegal logging and trade, as well as biodiversity conservation; • Raise awareness and build capacity for REDD+ actors at the national and local levels; • Create a framework for monitoring and evaluating the REDD+ Programme's implementation. <hr/> <ul style="list-style-type: none"> • Support and establish a commodity information exchange forum to facilitate dialogue and redirect sustainable production that does not result in deforestation and forest degradation; • Continue to test, summarize and replicate sustainable rubber production models that do not result in deforestation. <hr/> <ul style="list-style-type: none"> • Support and establish a commodity information exchange forum to facilitate dialogue and redirect sustainable production that does not result in deforestation and forest degradation; • Continue to test, summarize and replicate non-deforestation sustainable aquaculture production models. <hr/> <ul style="list-style-type: none"> • Continue to test, review, and replicate non-deforestation and sustainable coffee production models. Continue to support effective production structure and organization in order to benefit from sustainable production models through information access, production cooperation, and value chain linkage. Encourage communication, raise awareness, and strengthen commitment to participate in the monitoring of the REDD+ Programme's implementation.

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Annex 8. Continued

Policy name	Mandates
Decision No. 18/2007/QĐ-TTg on approving Vietnam's forestry development strategy for 2006–2020	<ul style="list-style-type: none"> • Act as the focal point in charge of, and coordinate with, ministries, branches and people's committees of provinces and centrally-run cities in organizing and implementing the Forestry Development Strategy, as well as taking the Strategy's contents into consideration in the overall socioeconomic development plans of the country, ministries, branches and localities; • Establish subcommittees to coordinate the implementation of the Strategy's programme with members representing relevant agencies, units, communities, businesses and interested and voluntary international partners and projects; • Coordinate with ministries, branches and localities to evaluate and report on the Strategy's implementation on an annual basis to the Prime Minister. Forest protection and development must be prioritized in the Government's year-end report to the National Assembly; • To effectively implement the Strategy's contents, balance, calculate and ensure investment capital sources; • Direct localities to review land use planning and allocate and lease forest land in accordance with the objectives and tasks of the Forestry Strategy, as well as develop a scheme to link forest inventory with national land inventory in accordance with regulations every five years; • Determine the content and targets for monitoring and evaluating the forestry sector; • Direct and guide localities in conducting forest statistics and inventories, as well as studying the forestry sector's contributions to the economy and the environment using criteria appropriate to innovation requirements and trends of the International economic integration of the forestry sector to submit amendments and supplements to the forestry sub-sector to the Government in Decree No. 75/CP of 27 October 1973.
Decision No: 2810/QĐ-BNN-TCLN on approval of the sustainable forest management and forest certification action plan for 2015–2020	<ul style="list-style-type: none"> • Organize awareness-raising training for forest owners, and guide the development, evaluation, and approval of sustainable forest management plans, as well as the issuance of forest certificates to relevant agencies, organizations, and forest owners; • Create an information sharing network and a thematic information section on the General Department of Forestry's website about sustainable forest management and forest certification; • Create guidance documents (a handbook) outlining the steps for forest certification planning and assessment; • Make a Decree on the development of production forests associated with forest product processing and trade and submit it to the government for promulgation; • Formulate and submit for promulgation the Prime Minister's Decision on regulations for natural production forest management and use in accordance with the Sustainable Forest Management Goals; • Create and distribute Ministry of Agriculture and Rural Development Circulars to replace Circular No. 87/2009/TT-BNN dated 31 December 2009 and Circular No. 35/2011/TT-BNN; • To ensure international validity, Vietnam's Code of Principles for Sustainable Forest Management must be completed and promulgated; • Formalize and publish Ministry of Agriculture and Rural Development regulations on the conditions and requirements for agencies and organizations authorized to conduct forest certification activities in Vietnam; • Examine, inspect and license the operations of forest certification organizations in Vietnam in accordance with the provisions of the law and international best practices; • Evaluate and summarize national pilot models for sustainable forest management and forest certification that have been or are being implemented, disseminate experiences, and replicate successful models in a timely manner; • Create three pilot models for sustainable forest management and forest certification for planted forests that will be used as production forests; • Mobilize international organizations, programmes and projects to provide technical and financial assistance in the development of sustainable forest management and forest certification models; • Organize visits, study and exchange experiences on sustainable forest management and forest certification for management organizations and forest owners at home and abroad; • Create and submit for approval to the Ministry of Agriculture and Rural Development the Scheme for Implementing Sustainable Forest Management and Forest Certification for the Period 2015–2020.

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Annex 8. Continued

Policy name	Mandates
Decision No. 622/QĐ-TTg on issuance of a national action plan for implementation of the 2030 agenda for sustainable development	<ul style="list-style-type: none"> • Implement the Project on Community Awareness Raising and Community-Based Disaster Risk Management effectively; • Communicate and raise community awareness about disaster risk reduction; • Increase communities' ability to respond to natural disasters; • Investigate and assess the current status and distribution of marine ecosystems, assess the vulnerability of marine ecosystems, and determine the endangered status of valuable marine species and conduct an overall health assessment of coastal, marine and island ecosystems; • Plan for the protection of existing mangroves, the restoration and natural regeneration of coastal mangroves, and the development of forests in key areas to form a solid coastal green belt from Mong Cai to Ha Tien; • Create and implement conservation programmes for species that have been identified as being in need of protection; • Implement comprehensive solutions to prevent the depletion of aquatic resources in sea areas, as well as gradually restoring and enriching aquatic resources in near-shore waters; • Create and implement co-management models for marine resources and ecosystems; • Improve and restore the environment of polluted and degraded marine and island ecosystems; • Fully implement international laws outlined in the United Nations Convention on the Law of the Sea (UNCLOS) to conserve and sustainably use the ocean and marine resources, concentrating on resource research and investigation, forecasting fishing grounds for fishing, reserve assessment and exploitation limits; • Modernize the management of sea-based fisheries; • Create an appropriate management mechanism to guide the sustainable exploitation, conservation and development of marine resources by innovating and constructing fisheries cooperatives and unions for the benefit of fishermen, protecting the ecological and sustainable environment, connecting communities, developing and stabilizing marine society, and islands; • Form a number of large enterprises and corporations capable of operating offshore fishing and cooperating in ocean exploitation with other countries in the region; • Investigate and disseminate science and technology in the fishing industry; • Implement the seasonal release of high-quality aquatic breeds into the sea and inland bodies of water to replenish, regenerate, and develop aquatic resources; • Develop and implement programmes and projects to protect and restore biological productivity as well as the ability of marine ecosystems to provide nutritional sources, spawning sites and nurse aquatic resources in order to restore aquatic resources near the coast; • Develop and implement mechanisms and policies to manage inland fishing, ranging from resource surveying in river, stream and lake basins to exploitation management in conjunction with aquatic resource protection and environmental protection; • Combat illegal fishing by destroying resources. The use of fishing tools that harm the aquatic environment is strictly prohibited; • Create high-quality human resources for resource research and marine fishing operations; • Consolidate and develop the mechanical engineering industry to build and repair fishing boats, develop ancillary industries serving the fishing vessel mechanics industry, invest in upgrading and modernizing fishing ports, fishing wharfs and storm shelters, logistics services for coastal fisheries, and logistics services on islands; • Manage fishing power in accordance with the ability of marine resources to regenerate; • Access market mechanisms and tools, and implement reasonable administrative and sanction measures to regulate marine resource exploitation within recovery limits, concentrating on resource research and investigation, forecasting fishing grounds for fishing, reserve assessment and exploitation limits;

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Annex 8. Continued

Policy name	Mandates
Decision No. 622/QĐ-TTg on issuance of a national action plan for implementation of the 2030 agenda for sustainable development	<ul style="list-style-type: none"> • Research and evaluate the specificity and representativeness of marine ecosystems, coastal areas, habitation areas, and natural habitats of marine species on the list of prioritized species on a regular or seasonal basis; • Review and consider the satisfaction of criteria for establishing national parks, nature reserves, species and habitat protection areas, and landscape protection areas in accordance with the Biodiversity Law and other relevant laws; • Review, research and supplement the system of marine and coastal conservation zone planning; • Increase marine research and technology transfer capacity in accordance with the International Oceanographic Commission's Guidelines and Standards for Marine Technology Transfer, in order to improve ocean health and increase the contribution of marine biodiversity to national development; • Intensify international cooperation in marine conservation; • Improve the investment mechanism and capacity for running marine protected areas; • Improve mechanisms and policies to assist people who are affected in marine protected areas; • Raise public and local awareness of conservation areas; • Create a plan to phase out subsidies for fishing activities that have been proven to have a negative impact on overfished seafood stocks, phase out all subsidies for illegal, unregulated and unreported fishing vessels; • Put in place a tax policy on resource exploitation for fishing activities in order to promote sustainable fishing; • Provide small-scale fishing households with access to marine resources and markets particularly poor fishing households; • Regulate on the cessation of conversion of natural forests to other uses (except for projects approved by the Prime Minister for special security and defence purposes), unified forest management based on the establishment of a stable national forest area; • Continue to improve forest policy, as well as forest land allocation and leasing. Priority should be given to the allocation and contracting of protective forests to communities, economic organizations, and households for long-term management, protection, and benefit in accordance with approved master plans and plans; • Increase the decentralization of state forest management for district and commune authorities. In the event of deforestation in the area, clearly define the responsibilities and powers of forest owners, authorities at all levels, law enforcement agencies, and villages; • Increase the capacity and effectiveness of forest rangers in protecting forests and responding to forest law violations and natural disasters such as forest fires, forest pests and diseases. Pay close attention to the process of exploitation of forest products in the forest; • Develop policies to make it easier for people who have been allocated or contracted land and forests to exercise their right to use land, use and own forests in accordance with the law in production and business activities that meet the needs of the state commodity economy; • Increase the law's dissemination and education in order to raise awareness and responsibility for forest protection and development at all levels, sectors and individuals; • Mobilize domestic and international resources for sustainable forest management, including conservation and forest regeneration, plan, classify and develop three types of forests, and consolidate and improve the conservation zone system; • Continue to promote strict primary forest protection, implement effective deforestation and illegal forest exploitation prevention measures in order to protect natural forests, special-use forests, and watershed protection forests; • Restoration of mangroves. Implement a national plan for wetland conservation and sustainable use, with a focus on key river basins;

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Annex 8. Continued

Policy name	Mandates
Decision No. 622/QĐ-TTg on issuance of a national action plan for implementation of the 2030 agenda for sustainable development	<ul style="list-style-type: none"> • Determine the scale, scope and implementation of national-scale solutions to protect and restore coral reef and seagrass bed ecosystems; • Replicate models of nature reserve management with community participation and implement a harmonized benefit-sharing mechanism among stakeholders; • Conduct research, develop guidelines and test the economic assessment of biodiversity and ecosystem services; • Finalize policies and organize nationwide implementation of payment for forest environment services, and pilot payment for environmental services policy for marine and wetland ecosystems; • Develop and implement a strategy for nominating protected areas with international titles for conservation, such as wetlands of international importance (Ramsar site), biosphere reserves and ASEAN heritage gardens. Create and publish management guidelines for internationally recognized protected areas and put policies in place to support capacity building for effective management of these zones; • Incorporate biodiversity and ecosystem services into national and regional development strategies, master plans, plans and programmes; • Raise funds from all sources to support the conservation and long-term use of biodiversity and ecosystem services; • Encourage international cooperation in order to widely apply and deploy new financial mechanisms to increase biodiversity resources; • Prevent the extinction of threatened wild species, particularly endangered, valuable and rare species that are prioritized for protection; • Continue to effectively implement the Project on the Protection of Rare and Endangered Aquatic Species' objectives and tasks until 2015, with a vision to 2020; • Regularly investigate, monitor, update and publish the list of endangered precious and rare species prioritized for protection; • Implement conservation programmes for endangered precious and rare species that are prioritized for protection, with a focus on endangered large mammal species such as elephants, tigers, saola and primates; • Investigate and assess the current status of precious and rare endangered wild fauna and flora, and regularly update, compile and republish the Vietnam Red Book; • Increase international cooperation to combat illegal wildlife trade; • Encourage widespread community and media participation in detecting and preventing illegal exploitation, trade and consumption of wild animals and plants; • Put in place an inter-sectoral coordination mechanism between environmental police, market management, customs, forest rangers, and fishery control forces to detect and strictly handle illegal wildlife exploitation, trading and consumption; • Campaign and spread the message that wild animal products should not be consumed or used on a large scale across the country; • Improve collaboration with regional and international law enforcement networks (ASEAN WEN, Interpol) on illegal wildlife trade and transportation; • Raise international support to prevent and address illegal wildlife harvesting, trade and consumption, and strengthen local communities' capacity to develop sustainable livelihoods.
Decision No. 524/QĐ-TTg on approval of the Planting a Billion Trees Project for 2021–2025	<ul style="list-style-type: none"> • As the scheme's standing agency, assume primary responsibility for effectively organizing the scheme's implementation and coordinating with ministries, branches and localities; • Organize, sustain and effectively carry out the annual "Tree Planting Festival in Honour of Uncle Ho" movement; • Direct and guide localities in planting trees concentrated in protection and special-use forests, new production forests and scattered trees in rural areas; • Create and implement a project to help plant one billion national trees; • Investigate and develop tree planting criteria for the national set of criteria for new rural communes; • Inspect, supervise and urge the Project's implementation, organize preliminary and final reviews, serve as the focal point for summarizing the Project's implementation plan and results and report to the Prime Minister.

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Annex 8. Continued

Policy name	Mandates
Decision No. 324/QD-TTG on approval of the general programme for sustainable agriculture development in response to climate change in the Cuu Long River Basin to 2030 with vision to 2045	<ul style="list-style-type: none"> • Assume primary responsibility for organizing and directing the implementation of the Master Programme, integrating it with other relevant National Target Programmes and Public Investment Programmes; inspect and supervise programme implementation; • Review and summarize programme implementation regularly and report to the Prime Minister; • Assume primary responsibility for, and coordinate with relevant ministries and branches in proposing content to amend, supplement and develop new policies, while ensuring the Master Programme's objectives are met.
Decision No. 1670/QD-TTG on approval of climate change response and green growth programmes for 2016–2020	<ul style="list-style-type: none"> • Coordinate with the Ministries of Planning and Investment and Natural Resources and Environment to assess the list of newly opened projects in a timely way in order to resolve the programme's urgent difficulties; • Agree on technical terms, unit prices and investment levels for newly started projects in their respective fields as a basis for the Ministry of Planning and Investment and the Ministry of Natural Resources and Environment to summarize the list and submit a capital allocation report to the Prime Minister; • Inspect and monitor the Programme's implementation results in collaboration with the Ministry of Planning and Investment and the Ministry of Natural Resources and Environment.
Law on Forestry 2017	<ul style="list-style-type: none"> • Organize national forestry planning, receive and explain the contents of the appraisal, and assume primary responsibility for, and coordinate with the Ministry of Finance in submitting appraisals to the Prime Minister for consideration and decision support for forest owners when implementing the Prime Minister's decision to close natural forests; • Proclaim, or submit for promulgation to competent state agencies, forestry strategies, master plans, plans, policies and legal documents, and organize the implementation of those strategies, master plans, plans, policies and legal documents; • Develop national standards, enact national technical laws, and establish economic-technical forestry norms; • Direct, guide and inspect the execution of the Forest Management Regulation, the management regime and the conservation of endangered, valuable and uncommon forest flora and fauna; • Submit a proposal to the Prime Minister to develop national-level protected forests and special-use forests in many provinces; • Consistently direct forest rangers' knowledge and professionalism; • Assume primary responsibility for managing and maintaining forests, and work with relevant ministries and ministerial-level agencies on conserving forest ecosystems and biodiversity in all types of forests; • Set up and maintain a forest database, guide and inspect the forest inventory, monitor forest changes, keep forest management records; • Prevent and combat forest fires, prevent and eradicate organisms that are damaging to forests; • Establish a network of national seed forests and botanical gardens; • Organize and manage payments for forest ecosystem services; • Manage activities related to the issuance of certificates for sustainable forest management and forest valuation; • Manage forest product processing and trading in compliance with legislation; • Organize scientific research and the use of high-tech, advanced-technology and new-technology in forestry, training and development of forestry people's resources; • Raise community knowledge regarding forestry, organize information, communication and education. Propagate, disseminate and elucidate on the Forestry law; • Become the focal centre for worldwide forestry cooperation; • Inspect, investigate and resolve legal infractions, as well as complaints and denials about forestry in compliance with the law.

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Annex 8. Continued

Policy name	Mandates
Resolution No. 84/NQ-CP on approval of the investment policy for sustainable forestry development programmes for 2021–2025	<ul style="list-style-type: none"> • Assume primary responsibility for, and coordinate with, relevant ministries, branches, localities, and agencies in developing Programme feasibility study reports, submitting them to the Ministry of Planning and Investment for review, and submitting them to the Prime Minister for consideration, and approve in accordance with the Public Investment Law and complete by 31 December 2021; • Approve and organize the implementation of component projects directly managed by the Ministry immediately after the Prime Minister approves the Programme Feasibility Report; • Rapidly develop and submit to the Government for promulgation a Decree on policies on investment in forest protection and development, processing and trade in forest products; • Complete and submit to the Prime Minister for consideration and approval the National Forestry Master Plan for the period 2021–2030 with vision to 2050; • Assume primary responsibility for inspecting and supervising programme implementation, and annually (or irregularly) organize a preliminary review, review of the programme’s 5-year implementation results; • Assume primary responsibility for, and coordinate with, ministries, branches, localities and relevant agencies in, summarizing, evaluating and proposing solutions for natural production forest management and protection during forest closure in accordance with regulations. Report to the Prime Minister by 31 December 2021, as required by Article 32 of the Forestry Law; • Assume primary responsibility for, and collaborate with, concerned ministries and branches in, amending, supplementing, and developing new policies, submitting them to competent authorities for promulgation, and ensuring Programme implementation; • Coordinate with the Ministries of Planning and Investment, and Finance to identify and synthesize capital sources for the Programme’s implementation.

Annex 9. Ministry of Natural Resources and Environment mandates

Policy name	Mandates
Decree No. 117/2010/NĐ-CP on organization and management of the special-use forest system	<ul style="list-style-type: none"> • Coordinate with the Ministry of Agriculture and Rural Development in guiding and examining provincial-level people's committees in land management, environmental protection and biodiversity conservation for special-use forests; • Coordinate with the Ministry of Agriculture and Rural Development in guiding and examining the allocation of land or houses and grant of certificates on the right to use land and own houses and other assets attached to special-use forest land.
Decision No. 419/QĐ-TTg approving the National REDD+ Programme and sustainable management of forest resources through 2030	<ul style="list-style-type: none"> • Review and amend forestry, agriculture and fisheries master plans and plans for land use, as well as create infrastructure to allocate 16.24 million hectares of land for forestry; • Manage the organization, implementation and dissemination of environmental and social impact assessment data for development projects with full and effective stakeholder participation; • Support for building capacity to examine and monitor compliance with the project's environmental protection obligations, as outlined in the authorized environmental impact assessment report; • Study and exchange experiences with advanced nations on the forest carbon credit business; • Integrate REDD+ emissions reduction units authorized under the United Nations Framework Convention on Climate Change with the domestic carbon market.
Decree No. 886/QĐ-TTg on issuance of the plan for implementation of the National REDD+ Programme through Prime Ministerial Decision No. 419/QĐ-TTg for 2018–2020	<ul style="list-style-type: none"> • Allocate 16.24 million hectares of land for forestry, review and adjust land use master plans and plans for the forestry, agriculture and fisheries sectors, as well as develop infrastructure; • Assist in the development of provincial multidisciplinary land-use planning and plans with complete and effective stakeholder participation; • Strictly manage the organization, implementation and dissemination of environmental and social impact assessment information for development projects, ensuring that all stakeholders are fully engaged; • Support for building capacity to examine and monitor compliance with the project's environmental protection obligations, as outlined in the authorized environmental impact assessment report; • Support the creation of a Guide to Compliance with REDD+ Safeguards and Related Policies and Laws, as well as its pilot implementation; • Coordinate the development and testing of ideas and methods for calculating forest value strata, listing and documenting financial flows, and examining the financial contributions of associated sectors, incorporating the value of forests into planning, financial planning, GDP and national assets; • Investigate the domestic carbon market's possibilities for attracting investment, providing financial support and trading forest carbon credits/emissions reductions; • The National Forest Monitoring System and the Measurement, Reporting and Verification (MRV) system should be combined and improved.
Decision No. 18/2007/QĐ-TTg on approving Vietnam's forestry development strategy for 2006–2020	<ul style="list-style-type: none"> • Direct localities to review land-use planning and assign and lease forestry land in accordance with the Forestry Strategy's objectives and duties, and design a scheme to link forest inventory with national land inventory in compliance with legislation every five years.

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Annex 9. Continued

Policy name	Mandates
Prime Ministerial Decision No. 2139/QĐ-TTg on approving the National Climate Change Strategy	<ul style="list-style-type: none"> • Perform the functions of the National Committee on Climate Change's standing body, accept primary responsibility for managing and implementing the Strategy, and cooperate with ministries, branches and localities; • Create processes and policies to manage, administer and steer the Strategy's implementation; • Annually, work with the Ministries of Planning and Investment and Finance to summarize and analyse the essential financing needs for climate-change-related initiatives in order to report to the government; • Assist ministries, branches and local governments in developing and implementing the Strategy implementation plan; • Plan inspections, supervision and periodic reviews, as well as assessments and lessons learned for the Strategy's implementation; • Annually summarize and report to the Prime Minister on the results of the Strategy's implementation, and recommend solutions to problems that arise outside of its jurisdiction; • Monitor and evaluate the implementation of the Strategy.
Decision No. 622/QĐ-TTg on issuance of a national action plan for implementation of the 2030 agenda for sustainable development	<ul style="list-style-type: none"> • Conduct research and implement specialized solutions in mountainous locations to successfully prevent natural disasters, flash floods and landslides, and maintain and operate efficiently for a long period; • Increase the scope of investigation, basic scientific research and technological adaptation to climate change; • Encourage research, technology transfer and effective use of modern scientific and technological achievements in order to adapt to climate change, boost economic sector competitiveness, and develop a low-carbon economy in the future; • Develop and implement communication programmes to increase authorities, civil servants, public employees and other sectors of society's understanding and responsibility on climate change concerns; • Develop and adopt a policy to train high-quality human resources in majors related to climate change adaptation and greenhouse gas emission reduction; • Incorporate basic knowledge on climate change response and disaster risk reduction into programmes, educational and training levels at all levels, develop training programmes, develop and adopt a policy to train high-quality human resources in majors related to climate change adaptation and greenhouse gas emission reduction; • Build capacity in the planning and management of climate change, with a special focus on women, youth, local communities and other marginalized groups; • Invest in developing and effectively operating a climate change and sea-level rise monitoring system; • To ensure early warning and forecasting of extreme weather and climate events, modernize the monitoring system and hydrometeorological forecasting technologies; • Increase capacity for early warning and response to climate change by mobilizing financial resources from international cooperation; • Ensure that waste sources that directly pollute and harm the coastal marine environment are strictly controlled. Monitor the impact of marine pollution from the mainland, particularly from river basins and coastal agricultural cultivation areas that use chemicals and pesticides regularly; • Strictly enforce environmental impact assessment requirements, closely monitor dike embankment projects, sea encroachment, and the dumping of soil, sand, gravel and construction materials into the sea, and fully control and prevent the dumping of hazardous waste into the sea in any form; • Make plans to deal with polluting establishments in coastal areas, improving the quality of contaminated and degraded water sources in river basins, coastal estuaries and coastal waterways; • Increase capacity to respond quickly and effectively to oil pollution and environmental incidents at sea and in coastal estuaries, closely inspecting and supervising requirements for conditions and capacity to prevent and respond to incidents involving ships and boats transporting oil and chemicals at sea or passing through our country's waters, as well as storage facilities for petroleum, chemicals and pesticides in coastal and island environments;

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Annex 9. Continued

Policy name	Mandates
Decision No. 622/QD-Ttg on issuance of a national action plan for implementation of the 2030 agenda for sustainable development	<ul style="list-style-type: none"> • Create a method to encourage individuals and communities to take part in the monitoring and management of maritime pollution; • Investigate and assess the environmental load capacity of sea and island areas in high or very high pollution risk zones, and declare parts of sea and islands incapable of receiving garbage; • Establish a national monitoring system for ocean and marine acidification. Measure acidity (pH) regularly; • Intensify scientific research on basic resource exploration and environmental protection in the sea and islands, as well as pollution management in the sea and islands; • Increase the capacity of state management personnel in the areas of marine resources and the environment; • Accelerate the examination and assessment of national resource potentials, reserves, economic values, current status and trends; • Conduct biodiversity conservation planning intelligently, efficiently and sustainably. Plan, manage and use national resources; • Encourage ecosystem and ecosystem service research, as well as quantitative assessment criteria; • Conduct research, formulate standards and conduct pilots for biodiversity offsets; • Conduct research, and catalogue genetic resources, safeguard and develop them; • Conduct research and design rules to regulate methods for accessing genetic resources and sharing benefits derived from genetic resources; • Pilot a model of benefit-sharing derived from genetic resources that focuses on community benefits; • Effectively implement the project on capacity building for the management of access to genetic resources and the equitable and proportionate distribution of benefits deriving from their usage; • Conduct a nationwide investigation of the state of invasive and possibly invasive alien species, with a focus on nature reserves, agroecosystems and forest ecosystems; • Improve technical and professional competence of agencies and units at all levels in biosafety management for genetically modified organisms by strengthening cooperation, exchanging information and learning from experience; • Create and distribute legal documentation outlining legal requirements and compensation for GMO biosafety management actions.
Decision No. 524/QD-TTg on approval of the Planting a Billion Trees Project for 2021–2025	<ul style="list-style-type: none"> • To implement this project, coordinate with the Ministry of Agriculture and Rural Development and local governments. Preside over, direct and guide communities in reviewing master plans and land use plans suited for forest development and tree planting, particularly in climate-affected areas to identify priority places for tree planting; • Reserve a stable, long-term and right-purpose land budget for tree development, maintaining the mandated standards of green land for public usage.
Decision No. 1670/QD-TTG on approval of climate change response and green growth programmes for 2016–2020	<ul style="list-style-type: none"> • Assume primary responsibility for, and cooperate with, relevant ministries and branches, provincial people's committees, and centrally managed cities in coordinating the Programme's implementation in accordance with regulations; • Synthesize and build medium- and long-term plans for the Programme's objectives and tasks, and transmit them to the Ministry of Planning and Investment and the Ministry of Finance for synthesis in line with the Public Investment Law and the State Budget Law, as well as other legal instruments; • Assume primary responsibility for inspecting and supervising the programme's implementation and coordinating with relevant ministries and branches; • Organize preliminary and final evaluations of the programme's implementation results regularly; • Assume primary responsibility for updating, supplementing and formulating new policies, as well as coordinating with relevant ministries and branches to ensure that the Programme's objectives are met; • Coordinate with the Ministry of Planning and Investment, the Ministry of Finance, and central and local ministries and branches in allocating resources, evaluating capital sources and capital balancing ability for Programme projects.

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Annex 9. Continued

Policy name	Mandates
Land Law No. 45/2013/QH13	<ul style="list-style-type: none"> • Accept responsibility for unified state land management in front of the government; • Resolve administrative boundary disputes, provide necessary documents and coordinate with competent state agencies; • Organize the implementation and announcement of the results of the land survey and assessment of the entire country and regions every 5 years and by subject; • Direct the implementation of the land survey and assessment of provinces and centrally-run cities, and synthesize and announce the results of the entire country's land survey and assessment; • Synthesize and report to the Prime Minister, as well as announce the results of annual land statistics and the 5-year land inventory for the entire country; • Detailing land statistics and inventories, as well as mapping the current state of land use • Assume primary responsibility for assisting the government in the development of national master plans and land use plans; • Assist the Appraisal Council in the appraisal of land use master plans and plans, and publicize national master plans and plans on land use at the agency's headquarters and on the Ministry of Natural Resources and Environment's portal; • Summarize the results of the annual implementation of master plans and land use plans for the entire country for submission to the government at the year-end meeting of the National Assembly; • Organize the development, management, and operation of the national land information system and database, and provide electronic public services in the land sector in accordance with government regulations; • Direct and organize the nationwide implementation of specialized land inspection.
Law on Forestry 2017	<ul style="list-style-type: none"> • Coordinate with the Ministry of Agriculture and Rural Development in performing the state management of forestry.
Resolution No. 84/NQ-CP on approval of the investment policy for sustainable forestry development programmes for 2021–2025	<ul style="list-style-type: none"> • Specify the locations and boundaries of forestry land areas to be used for forest development by 2025; • Coordinate with the Ministry of Agriculture and Rural Development in directing the implementation of land allocation associated with forest allocation to organizations, individuals and households in accordance with approved planning.

Annex 10. Mandates of the Vietnam Fatherland Front

Policy name	Mandates
Directive No. 13-CT/TW of the Secretariat on strengthening the leadership of the party in forest management, protection and development	<ul style="list-style-type: none"> • Intensify efforts to mobilize people from all walks of life to actively participate in forest management, protection and development activities, and monitor the Directive's implementation; • Effectively implement the campaign "Everyone participates in forest protection and development" and the annual movement "Tet tree planting in eternal gratitude to Uncle Ho".
Decision No. 524/QD-TTg on approval of the Planting a Billion Trees Project for 2021–2025	<ul style="list-style-type: none"> • Propose to actively participate in the Project's implementation with the motto that planting trees, afforestation, caring for and protecting trees is the responsibility and obligation of all organizations, individuals and households to contribute to the economy and socioeconomic development, environmental protection and long-term national development.
Conclusion No. 56-KL/TW on continuing to implement the Resolution of the 7th Party Central Committee, term XI on proactively responding to climate change, strengthening natural resource management and environmental protection (2019)	<ul style="list-style-type: none"> • Mobilize all classes of people to actively participate in and supervise the implementation of resolutions, policies and laws on natural disaster prevention and control, climate change response, resource management and environmental protection.

Annex 11. Mandate of the State Bank of Vietnam

Policy name	Mandates
Decree No. 886/QD-Ttg on issuance of the plan for implementation of the National REDD+ Programme through Prime Ministerial Decision No. 419/QD-Ttg for 2018–2020	<ul style="list-style-type: none"> • Inspect and supervise commercial banks in the implementation of credit policies for agriculture and rural areas, thereby contributing to the Programme's implementation.

Annex 12. Rights and obligations of forest owners

Rights	Obligations
ALL FOREST OWNERS	
<ul style="list-style-type: none"> • Use forests and own planted production forests; • Enjoy forest products increased as a result of their investments in natural forests or planted special-use or protection forests; • Use forests within the forest allocation or lease terms; • Receive forest environment services and benefit from such services; • Receive technical guidance and other support under regulations to protect and develop forests and conserve biodiversity; • Benefit from state-invested infrastructure facilities serving forest protection and development; • Be compensated by the state for the values of forests and assets which they have lawfully invested in or built by the time of issuance of decisions to recover their forests; • Be provided with financial support by the state when their production forests are damaged due to a natural disaster; • Enter into cooperation and partnerships with organizations and individuals at home and abroad to protect and develop their forests. 	<ul style="list-style-type: none"> • Manage, protect, develop and use forests in a sustainable manner; • Implement regulations on forest change monitoring; • Return their forests when the state recovers them in accordance with the law; • Conserve forest biodiversity, plants and animals; • Prevent and combat forest fires; • Prevent and eliminate forest pests; • Submit to the management, inspection, examination and handling of violations by competent state agencies; • Fulfil their financial and other obligations in accordance with law.
Special-use forest management boards	
<ul style="list-style-type: none"> • Receive financial support from the state; • Harvest forest products; • Lease the forest environment; • Enter into cooperation and partnerships in providing ecotourism, leisure, and recreation services outside strictly protected sub-zones of special-use forests according to sustainable forest management plans approved by competent state agencies; • Carry out scientific, technological, training, practicing and international cooperation activities. 	<ul style="list-style-type: none"> • Submit forest management plans and implement them; • Support residential communities living in buffer zones to stabilize their livelihoods and develop socioeconomic activities; • Contract the protection and development of forests to households, individuals, and residential communities in these forests.
<ul style="list-style-type: none"> • Lease the forest environment services; • Enter into partnerships in providing ecotourism, leisure and recreation services according to sustainable forest management plans approved by the state; • Receive financial support from the state; • Harvest forest products as required by law. 	<ul style="list-style-type: none"> • Submit forest management plans and implement them; • Contract the protection and development of forests to households, individuals and residential communities in these forests.
Economic organizations that are allocated state protection forests or special-use forests	
<ul style="list-style-type: none"> • Receive financial support from the state; • Harvest forest products; • Lease the forest environment; • Enter into cooperation and partnerships in investment in developing ecotourism, leisure and recreation services and combined agroforestry and fishery production according to sustainable forest management plans approved by competent state agencies. 	<ul style="list-style-type: none"> • Submit sustainable forest management plans; • Contract the protection and development of forests to households, individuals and residential communities in these forests under the government's regulations.
Economic organizations that are leased state production forests	
<ul style="list-style-type: none"> • Share benefits from forests under forest lease contracts; • Own trees, animals and other assets associated with the forests in which they have invested; • Harvest forest products. 	<ul style="list-style-type: none"> • Prepare sustainable forest management plans and submit them to the competent state agency for approval and implement the approved plans.

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Annex 12. Continued

Rights	Obligations
Economic organizations that are allocated land by the state to plant protection forests with state budget funds	
<ul style="list-style-type: none"> Organize afforestation according to cost estimates and designs approved by the agency that manages the funds; Harvest forest products in protection forests; and Share benefits from the forests under the state's policies. 	<ul style="list-style-type: none"> As mentioned above with all forest owners.
Economic organizations that are allocated land by the state to plant protection forests with their own funds	
<ul style="list-style-type: none"> Own trees, animals and other assets on the land on which they have planted protection forests; Harvest forest products in their protection forests. 	<ul style="list-style-type: none"> As mentioned above with all forest owners.
Economic organizations that are leased land by the state to plant production forests with their own funds	
<ul style="list-style-type: none"> Own trees, animals and other assets on the land on which they have planted production forests; Harvest forest products in their planted production forests; Transfer or lease out their planted production forests; and Mortgage or contribute as capital the value of their planted production forests. 	<ul style="list-style-type: none"> As mentioned above with all forest owners.
Households and individuals that are allocated protection forests by the state	
<ul style="list-style-type: none"> Be provided by the state with funds for the protection and development of forests; Harvest forest products in their protection forests; Share benefits from the forests under the state's policies; Transfer the allocated forest areas to other households or individuals in the same communes, wards or townships; individuals may bequeath their forest use rights in accordance with law. 	<ul style="list-style-type: none"> As mentioned above with all forest owners.
Households and individuals that are allocated production forests by the state	
<ul style="list-style-type: none"> Harvest forest products and share benefits from the forests under the state's policies; Own trees, animals and other assets associated with the forests in which they have invested; Transfer the allocated forest areas with other households or individuals in the same communes, wards or townships; individuals may bequeath their forest use rights in accordance with law. 	<ul style="list-style-type: none"> As mentioned above with all forest owners.
Households and individuals that are leased production forests by the state	
<ul style="list-style-type: none"> Share benefits from the forests under forest lease contracts; Own trees, animals and other assets associated with the forests in which they have invested; and Harvest forest products. Individuals may bequeath their forest use rights in accordance with law. 	<ul style="list-style-type: none"> As mentioned above with all forest owners.
Households and individuals that are allocated land by the State to plant production forests or protection forests	
<ul style="list-style-type: none"> Own forest trees, animals and other assets on the land on which they have planted production forests with their own funds; Harvest forest products and share benefits from the forests planted with state budget funds; Transfer, donate or lease planted production forests; Mortgage or contribute as capital the value of planted production forests; Individuals may bequeath their rights to own planted production forests or the forest use rights in accordance with law. 	<ul style="list-style-type: none"> As mentioned above with all forest owners.

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Annex 12. Continued

Rights	Obligations
Households and individuals that are leased land by the state to plant production forests	
<ul style="list-style-type: none"> • Own trees, animals and other assets on the land with their planted production forests; • Harvest forest products in planted production forests under Article 59 of this Law; • Transfer, donate or sublease planted production forests; • Mortgage or contribute as capital the value of planted production forests during the land lease term; individuals may bequeath their forest ownership rights in accordance with law. 	<ul style="list-style-type: none"> • As mentioned above with all forest owners.
Residential communities that are allocated forests with spiritual significance, protection forests or production forests by the state	
<ul style="list-style-type: none"> • Be provided with state funds for the protection and development of allocated special-use forests or protection forests; • Receive guidance on combined agroforestry and fishery production and cultivation under forest canopy and cattle raising under the Regulation on Forest Management; • Be supported in the development of forest economy and restoration of forests using indigenous forest trees; • Harvest forest products and share benefits from forests under the state's policies; • Own trees animals and other assets on the land on which they have planted forests with their own funds. 	<ul style="list-style-type: none"> • Prepare and implement village conventions on forest protection and development in accordance with the law and relevant legislation; • Preserve the allocated forest areas; • Refrain from dividing forests to community members; • Refrain from transferring, leasing or donating forest use rights, or mortgaging and contributing as capital the value of forest use rights.
Forest owners being armed units that are allocated special-use forests being protected landscape, protection forests or production forests by the state	
<ul style="list-style-type: none"> • Be provided with state funds for the protection and development of special-use forests or protection forests; • Harvest forest products. 	<ul style="list-style-type: none"> • Preserve the allocated forest areas and refrain from transferring, donating or leasing forest use rights, or mortgaging or contributing as capital the value of forest use rights.
Forestry-related science and technology organizations and training and vocational education institutions	
<ul style="list-style-type: none"> • Harvest forest products in scientific research and experimentation forests, national botanic gardens or national seedling forests; • Enter into cooperation and partnerships with domestic and foreign organizations and individuals in performing science and technology tasks; • Sell products of planted forests, forest seedlings and other forest products under the Regulation on Forest Management. 	<ul style="list-style-type: none"> • Refrain from transferring, donating or leasing forest use rights, or mortgaging or contributing as capital the value of forest use rights; • Perform forestry-related science and technology, training or vocational education tasks.
Foreign-invested enterprises that are leased land to plant production forests by the state	
<ul style="list-style-type: none"> • Own trees, animals and other assets on the leased land in which they have invested in accordance with law; • Harvest forest products in planted production forests under Article 59 of this Law. 	<ul style="list-style-type: none"> • As mentioned above with all forest owners

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

This report identifies the drivers of deforestation and degradation in Vietnam, and then analyses aspects of the social, political and institutional context that might constrain or support the design and implementation of REDD+ in Vietnam. The study also aims to increase understanding of the national and provincial governing bodies, how they interact, their knowledge and capacity to engage in and implement REDD+ and identify gaps in stakeholders' capacity to implement REDD+. The recommendations contained in this report are intended for project investors and organizations who have interest in developing and implementing emission reduction and REDD+ projects in Vietnam.

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