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VIETNAM

Forests and Deltas Program

FINAL REPORT



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Program Information



Project name

Vietnam Forests and Deltas Program (VFD)



Project period:

October 2012 - May 2021



Project donor

United States Agency for International Development (USAID)



GVN counterpart

Management Board for Forestry Projects (MBFP),
Ministry of Agriculture and Rural Development (MARD)



Implementing partner

Winrock International

Total budget

US\$31.4 million

Phase 1

Phase 2

US\$26.5 million

US\$4.9 million



Disclaimer: This map is for illustrative purposes.
It may not be spatially accurate, and is not intended to be used for official purposes.

Acronyms and Abbreviations

AEC	Agriculture Extension Center
APEC	Asia-Pacific Economic Cooperation
CADRE	Community action disaster response
CBDRA	Community-based disaster risk assessment
CBDRM	Community-based disaster risk management
CCAP	Climate Change Action Plan
CO₂	Carbon dioxide
CoP	Community of Practice
CPMU	Central Project Management Unit
CSA	Climate smart agriculture
DARD	Department of Agriculture and Rural Development
DPP	Disaster preparedness plan
DRR	Disaster risk reduction
ER-P	Emissions Reduction Program
ERPD	Emissions Reduction Program Document
ERT	Emergency Response Team
FCPF	Forest Carbon Partnership Facility of the World Bank
FMB	Forest management board
FPD	Forest Protection Department
FPDF	Forest Protection and Development Fund
FPDP	Forest Protection and Development Plan
FPMB	Forest Protection Management Board
FSC	Forest Stewardship Council
GGAP	Green Growth Action Plan
GHG	Greenhouse Gas
GIS	Geographic information system
GVN	Government of Vietnam
HCMA	Ho Chi Minh National Academy of Politics
IPSARD	Institute of Policy and Strategy for Agriculture and Rural Development (within MARD)
KfW	Kreditanstalt für Wiederaufbau, the German Development Bank
kg	Kilogram
LASUCO	Lam Son Joint Stock Corporation
LEAD	Low Emission Asian Development (USAID program)
LOP	Life of Project
M&E	Monitoring and Evaluation
MAB	Man and Biosphere (UNESCO initiative)
MARD	Ministry of Agriculture and Rural Development
MBFP	Management Board of Forestry Projects
MOIT	Ministry of Industry and Trade
MOF	Ministry of Finance
MONRE	Ministry of Natural Resources and Environment
MPI	Ministry of Planning and Investment
NGO	Non-governmental organization

NTP-RCC	National Target Program to Respond to Climate Change
NTFP	Non-timber forest product
ODA	Official development assistance
PEFC	Programme for the Endorsement of Forest Certification
PFES	Payment for Forest Environmental Services
PIM	Project Implementation Manual
PPMU	Provincial Project Management Unit
PPC	Provincial People's Committee
PRAP	Provincial REDD+ Action Plan
REDD+	Reduced Emissions from Deforestation and Forest Degradation
SFM	Sustainable Forest Management
SNV	Netherlands Development Organization (international NGO)
SRD	Centre for Sustainable Rural Development (Vietnamese NGO)
ToT	Training of Trainers
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
USFS	United States Forest Service
USG	United States Government
VFD	Vietnam Forests and Deltas
VND	Vietnamese dong
VNFF	Vietnam Forest Protection and Development Fund (within MARD)
VNFOREST	Vietnam Administration of Forests (within MARD)
VNUF	Vietnam National University of Forestry
WI	Winrock International





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Executive summary





The USAID-funded Vietnam Forests and Deltas (VFD) Program leaves behind a legacy of improved policy, strengthened institutions, and innovative models that have improved natural resource management and increased the resilience of vulnerable communities. This success has been based on a model of partnership and collaboration with Government of Vietnam (GVN) partners, which ensures ownership of project initiatives and enhances the long-term sustainability of VFD's efforts. VFD was implemented in two distinct phases: one from 2012 to 2018, and the second from 2018 to 2021.

This report aims to present a high-level overview of the major accomplishments and lessons learned by VFD, a collaborative technical activity with multiple components over a nearly nine-year period. The report highlights knowledge, impacts, and challenges encountered to take stock of progress, inform future programming, and continue to build on the strong foundation established by this pioneering and innovative activity. For additional in-depth detail on VFD's activities, phases, and components, please refer to the VFD quarterly and annual reports available on the USAID Development Experience Clearinghouse (DEC).

Phase 1: 2012-2018



The first phase, from 2012-2018, included three components, the first of which was Sustainable Landscapes to improve forest and land management in Thanh Hoa and Nghe An provinces. Key activities under Sustainable Landscapes started with developing landscape-level plans like provincial Reduced Emissions from Deforestation and Forest Degradation (REDD+)¹ Action Plans in three provinces, Thanh Hoa province's Green Growth Action Plan, and the Western Nghe An Man and Biosphere Reserve Management Plan. VFD also worked to develop a sustainable finance base for low-emission land use, which included expanding Vietnam's innovative system of payment for forest environmental services (PFES) to an additional 27,806 households and updating policy measures that increased PFES payment rates and expanded PFES to new sectors like industrial water use. Finally, the Sustainable Landscapes component worked at the community level to implement actions that demonstrate emissions reductions. These included piloting forest land allocation for more than 110 households in Thanh Hoa, piloting community forest management strategies in Nghe An, and supporting sustainable livelihoods models that reduce pressure on forests like the non-timber forest product bon bo in Nghe An.



The second component of VFD's first phase was Adaptation, with an emphasis on disaster risk reduction (DRR) and climate-resilient livelihoods. The team facilitated a community-based disaster risk assessment (CBDRA) process in 60 communes in two delta provinces, Nam Dinh and Long An and developed disaster preparedness plans based on the results of these community-led assessments. The success of this work helped operationalize the Prime Minister's Decision 1002 that formalized a community-based disaster risk assessment and management process throughout Vietnam. Building on the results of the CBDRA process, VFD worked with communes to implement a series of disaster response actions. These included providing community action for disaster response (CADRE) training to commune response teams in all 60 communes; conducting 26 emergency drills to test leadership skills and readiness; assessing and upgrading early warning systems as needed by 25 communes; and supporting small-scale mitigation projects and shelter upgrades for vulnerable communities. To enhance community preparedness, VFD led a series of school-based activities to target Grade 4 and 5 teachers and students through 69 Disaster Risk Reduction School Days that provided DRR training to more than 22,000 students and

¹ REDD+, or Reduced Emissions from Deforestation and Forest Degradation, is an international carbon payment system meant to provide financial benefits to those who can reduce deforestation and forest degradation.



teachers at 77 schools. Additionally, VFD introduced five climate-resilient livelihood models for more than 30,000 farmers, including low-emission rice production in Long An and Nam Dinh; integrated fish and rice culture in Nam Dinh; potato cultivation in Nam Dinh; shrimp farming in Nam Dinh; and corn production in Long An. These models provided new alternatives to farmers living in areas where climate change impacts made traditional crops less productive.

The third component of VFD's first phase was Coordination and National Policy. This component linked VFD's technical activities in its four focal provinces to national policy efforts and other development initiatives. VFD promoted interprovincial cooperation on climate change in five provinces of the Red River Delta through two symposia. VFD also collaborated with the Ho Chi Minh Academy to develop climate change curriculum for political leaders that is now used to train 40,000 trainees each year. Additionally, VFD provided technical guidance to the Vietnam National University of Forestry to develop two new curriculum modules for forestry university students and helped develop a series of national policies, including the first-ever national Coastal Forests Decree.



Phase 2: 2018-2021

The second phase of VFD, from 2018-2021, focused specifically on increasing the effectiveness and efficiency of Vietnam's PFES system. This phase utilized a much smaller budget than the first phase of VFD, and targeted three aspects of PFES.



First, VFD introduced new electronic payment methods that increase the transparency and efficiency of the payment process while reducing risks in transacting large amounts of cash. The project used ViettelPay, a mobile phone-based payment tool, to make nearly 12,000 payments in Son La, Lam Dong and Yen Bai provinces. Based on the results of these e-payment processes, VFD and the Vietnam Forest Protection and Development Fund (VNFF) developed national e-payment guidelines to be used by all 45 PFES provinces.



Second, VFD worked with VNFF and provincial forest protection and development funds (FPDFs) to develop modernized monitoring and evaluation (M&E) practices, including monitoring frameworks and data management tools. The centerpiece of this work is a web-based M&E platform developed in collaboration with Microsoft, which allows PFES managers to enter and analyze data and generate reports. As with the e-payment work, VFD's M&E activities culminated with the approval of new national PFES M&E guidelines that will allow PFES provinces to standardize their M&E practices and use common indicators to track progress.




Third, VFD developed policies to expand PFES into underutilized sectors, with a focus on the carbon sequestration and storage services provided by forests. VFD worked closely with VNFF and VNFOREST to conduct detailed technical analysis and develop a framework for piloting "carbon PFES" in Thanh Hoa and Quang Ninh provinces. This work led to a draft policy for these pilots, which was submitted to the Prime Minister's office for review and is now pending approval. Once approved, carbon PFES could roughly double annual PFES revenues to approximately US\$250 million per year, greatly enhancing the financial base for forest protection and development in Vietnam.

VFD as a model of USAID/GVN cooperation

In addition to the technical achievements of VFD, one of the most noteworthy accomplishments was the project team's successful development of a co-management structure that engaged both project staff and Government of Vietnam partners to collaboratively make decisions about programming and budget allocation. As VFD was the first large USAID-funded project working in the environment sector in partnership with the GVN, the development of this management structure required a tremendous amount of time and effort during the 14-month project approval process and throughout the years of implementation. However, thanks to the hard work of the tireless VFD staff, this co-management structure became extremely successful and has been widely recognized as a model for other USAID-funded projects in Vietnam.



Introduction and background



The USAID Vietnam Forest and Deltas Program (VFD) was awarded to Winrock International (Winrock) by the United States Agency for International Development (USAID) as Cooperative Agreement on September 25, 2012. The program was a centerpiece of USAID/Vietnam's emerging strategy to support the GVN in its response to climate change and a key activity in USAID's Global Climate Change Initiative. As VFD was beginning, Vietnam was widely recognized as one of the world's most vulnerable countries to the impacts of climate change, and GVN had established the essential frameworks for achieving considerable long-term impact through new policies for climate change mitigation and adaptation. This included a National Target Program to Respond to Climate Change (NTP-RCC), National Reducing Emissions from Deforestation and Forest Degradation-Plus (REDD+) Program, and nascent Green Growth Strategy. A particular challenge facing Vietnam and VFD was how to develop capacity to synthesize existing data and catalyze local expertise to create provincial-level land-use plans and climate-smart community action plans to meet the goals of these strategies.



Phase 1: 2012 - 2018

The first phase of the project (2012-2018) was implemented by Winrock in direct partnership with Vietnam's Ministry of Agriculture and Rural Development (MARD) and through sub-awards with the American Red Cross, the Center for Sustainable Rural Development (SRD), SNV – Netherlands Development Organization (SNV), and the Vietnam Red Cross. This first phase of VFD supported the acceleration of Vietnam's transition to climate-resilient, low-emission sustainable development by improving forest and natural resource management and engaging communities in creating action plans to address climate risks and vulnerabilities. VFD's approach to implementing its three components prioritized linkages between mitigation and adaptation to deliver a comprehensive, integrated response to climate change. Phase 1 work took place through three components:

Component 1: Sustainable Landscapes (Thanh Hoa and Nghe An provinces)

Supported large low-emissions development planning (green growth) efforts in the forestry and agricultural sectors, including REDD+. This component also provided support on ecosystem services valuation and natural capital accounting as part of evolving ecosystem service payment mechanisms.

Component 2: Adaptation (Long An and Nam Dinh provinces)

Focused on ensuring that government authorities, local leaders, and communities in delta areas develop an improved understanding of climate risks and possess the requisite tools to address risk and reduce vulnerability, including increasing resilience to climate change-related disasters and improving livelihoods.

Component 3: National Policy and Coordination

Provided capacity building on climate change for GVN personnel at all levels; supported development of national policies and guidelines, and promoted sharing of experiences, lessons learned at regional and national levels.

Over the six-year period of Phase 1, VFD anticipated the following key results:



GVN has established effective governance systems by incorporating land-use planning and analysis of climate change impacts into decision making



GVN has established capacity for integrating climate change adaptation and disaster risk reduction actions into sector planning at the both national and local levels



GVN has built a sustainable financial base for improved land use by harnessing multiple financial streams and establishing an equitable benefit sharing system



Local governments and communities are taking actions to reduce the impacts of natural disasters by applying early warning systems and demonstrating practical measures for disaster-resistant housing and water supply



GVN, the private sector, and local communities are taking actions that demonstrate net emission reductions from forests by reducing deforestation and forest degradation



Local governments and communities are taking actions to build resilience to long-term climate change; and adopting climate change resilient agricultural practices

By the numbers – Phase 1



131,125

people receiving USG-supported training in global climate change



642,980

hectares of biophysical significance and/or natural resources showing improved biophysical conditions



1,465,841

hectares of biological significance and/or natural resources under improved management



42

institutions with improved capacity to address climate change

27,806

households receiving benefits through PFES payments

\$152.9 million

in investment in climate change mitigation and/or adaptation leveraged in USD from private and public sources

13,836,748

metric tons of CO2 equivalent of greenhouse gas emissions reduced or sequestered

204,071

individuals implementing climate risk-reducing practices

182

administrative units implementing climate change resilience innovations

66

climate change vulnerability assessments conducted

118

laws, policies, plans, or agreements addressing climate change proposed, adopted, or implemented, including 10 to promote gender equality

9

Vietnamese NGOs receiving capacity building support in management, administration, or technical areas

9,291

households demonstrating climate smart agriculture or sustainable livelihood activities



45

climate adaptation tools, technologies and methodologies developed, tested and or adopted



22

sustainable landscapes tools, technologies and methodologies developed, tested, adopted

Phase 2: 2018 - 2021

As the first phase of VFD ended, due in large part to the gains made in Phase 1 and high interest from GVN partners, USAID/Vietnam worked with Winrock to consider options for a second phase. The original plan was to consider an extension of all Phase 1 activities, including key forestry management initiatives and a focus on adaptation work in the Red River Delta. However, due to reduced US Government prioritization of climate change, the focus for VFD's second phase became supporting Vietnam's Journey to Self-Reliance and domestic resource mobilization in the forestry sector – specifically to improving Vietnam's payment for forest environmental services (PFES) mechanism.

In June 2018, USAID approved an additional three-year cost extension of VFD through May 2021. This Phase 2 of VFD, also referred to as the "VFD PFES Activity," had the overall goal *to support the Government of Vietnam (GVN) to ensure that the PFES system - a critical component of forest programs in Vietnam - is an effective tool in accomplishing the country's environmental and socio-economic goals.* Successful implementation of PFES would increase domestic resources available for forest management; improve application of these resources to improve forest quality and coverage; and enhance local livelihoods for marginalized forest dwelling communities. Phase 2 of VFD's technical focus was on improving the effectiveness and efficiency of Vietnam's PFES mechanism through three approaches:

- Developing **e-payment** solutions for PFES payments to reduce transaction costs, security issues, and opportunities for corruption (Son La and Lam Dong provinces);
- Strengthening **monitoring and evaluation (M&E) systems** for PFES to build an evidence base through which to measure success and inform policy improvements (Son La, Lam Dong, and Thanh Hoa provinces); and
- **Expanding PFES to other sectors**, focusing on carbon PFES, but also considering PFES for ecotourism and PFES for industrial water use (Thanh Hoa and Quang Ninh provinces).

The second phase of VFD was designed to assist GVN's PFES system to become an increasingly effective tool to help the country reach its environmental and socio-economic goals, and to optimize the performance of PFES. After the three-year life of Phase 2, VFD anticipated the following key results:



GVN has institutionalized electronic payment systems in PFES policy and implementation



Forest owners are receiving timely and appropriate PFES payments



VNFF has established a monitoring system for national use



VNFF has developed an evidence base to measure PFES effectiveness



GVN has institutionalized payment for forest carbon sequestration services and revenue streams from new forest environmental services



PFES mechanisms for new forest services contribute to GVN environmental and socioeconomic goals

By the numbers – Phase 2



9,824

people trained in sustainable landscapes



203

institutions with improved capacity to address climate change issues



24

laws, policies, regulations, or standards addressing sustainable landscapes formally proposed, adopted, or implemented

US \$419 million



investment mobilized for sustainable landscapes

53,683,445



tons of greenhouse gas (GHG) emissions, estimated in metric tons of CO2 equivalent, reduced, sequestered, or avoided

230,860,832



projected tons of greenhouse gas emissions reduced or avoided through 2030 from adopted laws, policies, regulations, or technologies related to sustainable landscapes

5,553,400



people receiving livelihood co-benefits (monetary or non-monetary)

11,712

forest owners receiving PFES funds through e-payment process



100%

of USG assisted organizations with improved performance



8

climate mitigation and/or adaptation tools, technologies and methodologies developed, tested or adopted

Activities, results, and lessons learned

Phase 1

An aerial photograph of a lush, green landscape. The foreground and middle ground are dominated by rolling hills with terraced fields, likely used for agriculture. The hills are covered in vibrant green vegetation. In the distance, a valley opens up, showing a small settlement with several buildings and a winding road. Beyond the valley, more hills and mountains are visible under a slightly overcast sky. The overall scene depicts a rural, agricultural region.



Sustainable Landscapes



THANH HOA

In 2012, at the start of VFD, there were two key factors influencing the development of Vietnam's forestry sector. First, as Vietnam established itself as a lower middle-income country, many bilateral donors were phasing out their assistance programs, and most remaining donors and lending institutions began to shift their assistance from grants to loans. Decreasing grant funding increased the pressure on GVN ministries to ensure that loans were used for tangible investments that could generate returns necessary to repay the loan amounts. This was particularly challenging in the forestry and rural development sectors, which had traditionally used donor aid to support forest protection and development efforts. The second factor was the influx of tens of millions of dollars of investment from international donors to support REDD+ readiness around the world. While Vietnam was often seen as a leader in the REDD+ process, many REDD+

readiness investments had seen limited impact in terms of results on the ground. It was in this context that VFD began its work to help Vietnam develop an increasingly self-sufficient forestry sector and implement policies and actions that improved forest and land use and local livelihoods.

VFD's Sustainable Landscapes component focused on strengthening the management, planning, and governance capacity of GVN's partners in Thanh Hoa and Nghe An provinces to successfully manage their forest and natural resources in three areas. First, VFD worked with local leaders to develop and implement



landscape and provincial-level plans that provide the overall framework for green growth, low emissions development, and sustainable forest management. Second, to ensure long term sustainability of these improved policies and related activities, VFD and its local partners established long-term financing mechanisms to support these efforts. Third, to complement the higher-level policy initiatives, VFD engaged local communities and GVN Agriculture Extension Centers (AECs) to reduce pressure on forests and improve sustainable forest management and local livelihoods.

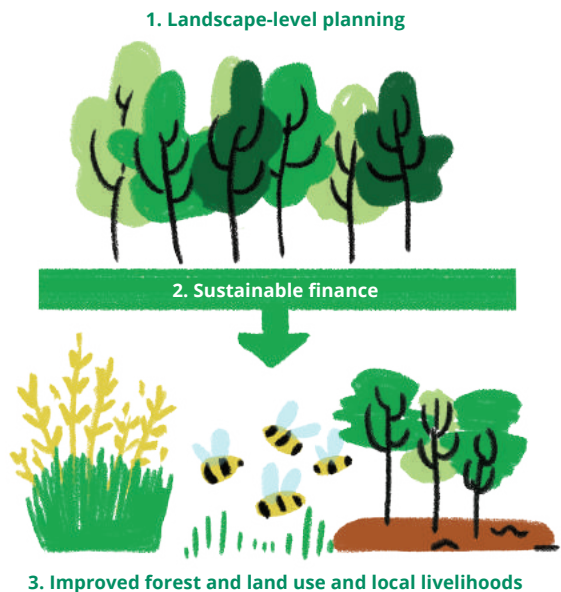


FIGURE 1: THREE LEVELS OF VFD'S SUSTAINABLE LANDSCAPES APPROACH

Main activities and key results

Landscape-level planning

In Vietnam, the government plays the leading role in defining socio-economic development objectives and outlining roles and responsibilities of key stakeholders to meet those objectives. This is especially important in the forestry sector, where all forest land is officially owned by the State. Most often, GVN outlines development objectives and priority activities through sectoral strategies or management plans for a defined geographic area. Given this context, as VFD commenced a scoping process for opportunities to support Thanh Hoa and Nghe An provinces with Sustainable Landscapes, it began to work with provinces to develop landscape or provincial-level plans to establish frameworks for improved forest and land management at scale. To synchronize VFD support with provincial priorities, the project quickly focused in Thanh Hoa on province-wide sectoral planning in green growth and enhancing its bamboo sector. Work in Nghe An focused on improved management of the Western Nghe An Man and Biosphere Reserve and the three protected areas within the reserve. VFD supported both provinces (as well as nearby Quang Binh province) to develop Provincial REDD+ Action Plans (PRAPs) to guide improved forest management and reduced emissions from deforestation and forest

degradation. VFD also supported the development of a benefits sharing mechanism to outline how local forest owners would receive carbon payments and a safeguards system to reduce the risk of unintended adverse social and environmental impacts. This mechanism and the PRAPs became the foundation for Vietnam's Emissions Reduction Program (ER-P), developed and funded by the World Bank's Forest Carbon Partnership Facility (FCPF).

The overarching theme of VFD's partnership with Thanh Hoa was green growth. As a province, Thanh Hoa is widely recognized as a leader in socio-economic development, with the province's annual economic growth rate nearly twice as high as the national average. The province's expansive upland forests and bamboo reserves have played a crucial role in accelerating the province's development. The Thanh Hoa provincial government had committed to pursue a green growth pathway to sustain economic growth while reducing pressures on the ecosystem services upon which the province and its economy so closely depend. This positive sign of progressive planning fell in line with a nascent national Vietnam Green Growth Strategy.





Mr. Nguyen Duc Quyen
Former Vice Chairman,
Thanh Hoa Provincial People's Committee

"We hope that Thanh Hoa Province will serve as a model within Vietnam for our contributions to addressing climate change challenges, harnessing investment for green business, supporting social inclusion and preserving ecosystem services"

The centerpiece of VFD's support was a multi-year process in collaboration with Thanh Hoa and the USAID/Regional Development Mission for Asia (RDMA) Low Emission Asian Development (LEAD) Project to develop a provincial Green Growth Action Plan (GGAP) that was ultimately approved by the Provincial People's Committee in 2016. Rather than more traditional top-down planning processes, VFD utilized a participatory approach that involved a range of stakeholders in green growth planning. Importantly, this inclusive approach brought in important contributions from the private sector, which was an important connection of great interest to the Ministry of Planning and Investment (MPI). As the national government body responsible for guiding green growth in the country and operationalizing the national Green Growth Strategy at the provincial level, MPI was keen to learn from VFD's approach and adopt it for other provinces. In addition, MPI's engagement provided increased confidence for Thanh Hoa leadership and government technical departments to be early adapters of a green growth approach.

Oftentimes, provinces can feel reluctant to be in the first wave to design or implement a new initiative out of concern of being criticized for making mistakes. With MPI actively participating in meetings and events and encouraging further progress, Thanh Hoa stakeholders had the motivation and willingness to

take chances on new approaches because of the national-level government support. Throughout the development of the GGAP, VFD and LEAD held a series of trainings to build institutional capacity for calculating GHG emissions, developing scenarios, and setting ambitious, yet feasible, targets. The resulting Action Plan sought to catalyze provincial policies and leverage investments to support green growth actions in the agriculture, energy, industry, waste, and forestry sectors. The proposed interventions focused on low emission planning, greener production, and promoting healthier and greener lifestyles.

A second key result for VFD and Thanh Hoa, also within green growth, was the development of a Bamboo Sector Modernization Strategy to encourage sustainable forest management and attract investors. Thanh Hoa has the largest area of *luong* bamboo in Vietnam, with over 80,000 hectares of natural bamboo forest and 71,000 hectares of planted bamboo. Despite a rapidly expanding domestic and international market for bamboo products, and new technologies allowing for new applications of value-added bamboo products, investments in Thanh Hoa's bamboo sector had been minimal. The lack of attention to the sector had led to mismanagement and degradation of the province's bamboo forests, as forest owners cut young trees prematurely or replaced bamboo with other species, such as rubber trees that were considered more profitable.



The former US Ambassador to Vietnam, Mr. Ted Osius, visited the bamboo eco-park site groundbreaking in 2016

VFD technical experts guided the province to develop the new Bamboo Sector Modernization Strategy, which was adopted by the province in February 2016. The strategy included detailed measures to support sustainable cultivation, processing, business development, and an enabling policy environment. In order to put the plan into action, VFD targeted support for several key initiatives within the plan. A cornerstone was a partnership with the Lam Son Joint Stock Corporation (LASUCO), a sugar company that had begun to diversify into more sustainable markets with a focus on bamboo. LASUCO developed a bamboo eco-park, which can be used by businesses and tourists as a holiday or meeting venue. The eco-park highlights different uses of bamboo in construction and decoration and is a promotional model for the province and for the potential uses of bamboo products. As an important recognition of the potential of Thanh Hoa and the bamboo sector, the US Ambassador to Vietnam, Mr. Ted Osius, visited the eco-park site groundbreaking in 2016. In addition to the eco-park, VFD and LASUCO worked together to conduct domestic and international market analysis of the potential for the sustainable production of strand woven products. VFD facilitated a study tour to China funded by LASUCO for their staff to learn about strand woven bamboo technology and industries in China. Following the market analysis and the study tour, LASUCO developed an inclusive business plan for strand woven bamboo production and earmarked USD \$10 million to develop a new processing facility on their grounds.

While the Thanh Hoa strategy focused on the province's large bamboo areas, the province also worked to develop a plan to improve its forestry areas. With forest carbon payment mechanisms a high priority for Vietnam, notably the international REDD+ effort, VFD provided technical inputs and direction in the development of PRAPs in Thanh Hoa, Nghe An, and Quang Binh provinces. These PRAPs, which were approved by each province in early 2016, served as the guiding strategy for forest management within the context of climate change mitigation and GHG emissions reductions from the forestry sector. The PRAPs provided key information and inputs for the development of the Emissions Reduction Program Document (ERPD) developed in collaboration with the World Bank's FCPF. The ERPD set a foundation to leverage approximately \$40 million in results-based financing for six north-central provinces. In addition to the PRAP development, VFD worked with FCPF to develop a benefits sharing mechanism and safeguards guidelines that were included in the ERPD.

While Thanh Hoa prioritized the concept of green growth, Nghe An province took a more landscape-driven approach, emphasizing its 1.3 million hectare UNESCO-certified Western Nghe An Man and Biosphere Reserve. This internationally recognized area includes 860,000 hectares of forest that serve as the “green battery” of natural resource-led sustainable development in the province and possess tremendous potential for expanding eco-tourism in the province. To develop a more strategic approach for development and promotion of the landscape, VFD provided technical expertise and support to the Nghe An Department of Agriculture and Rural

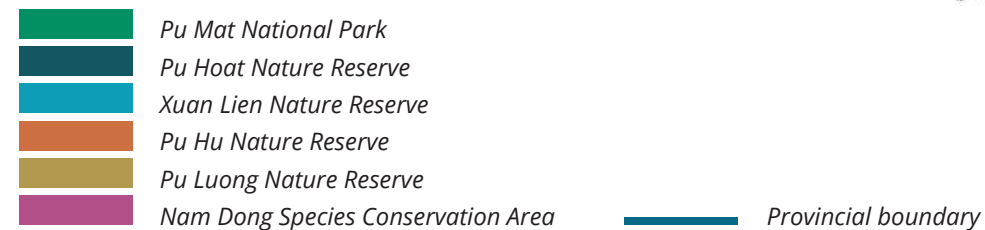
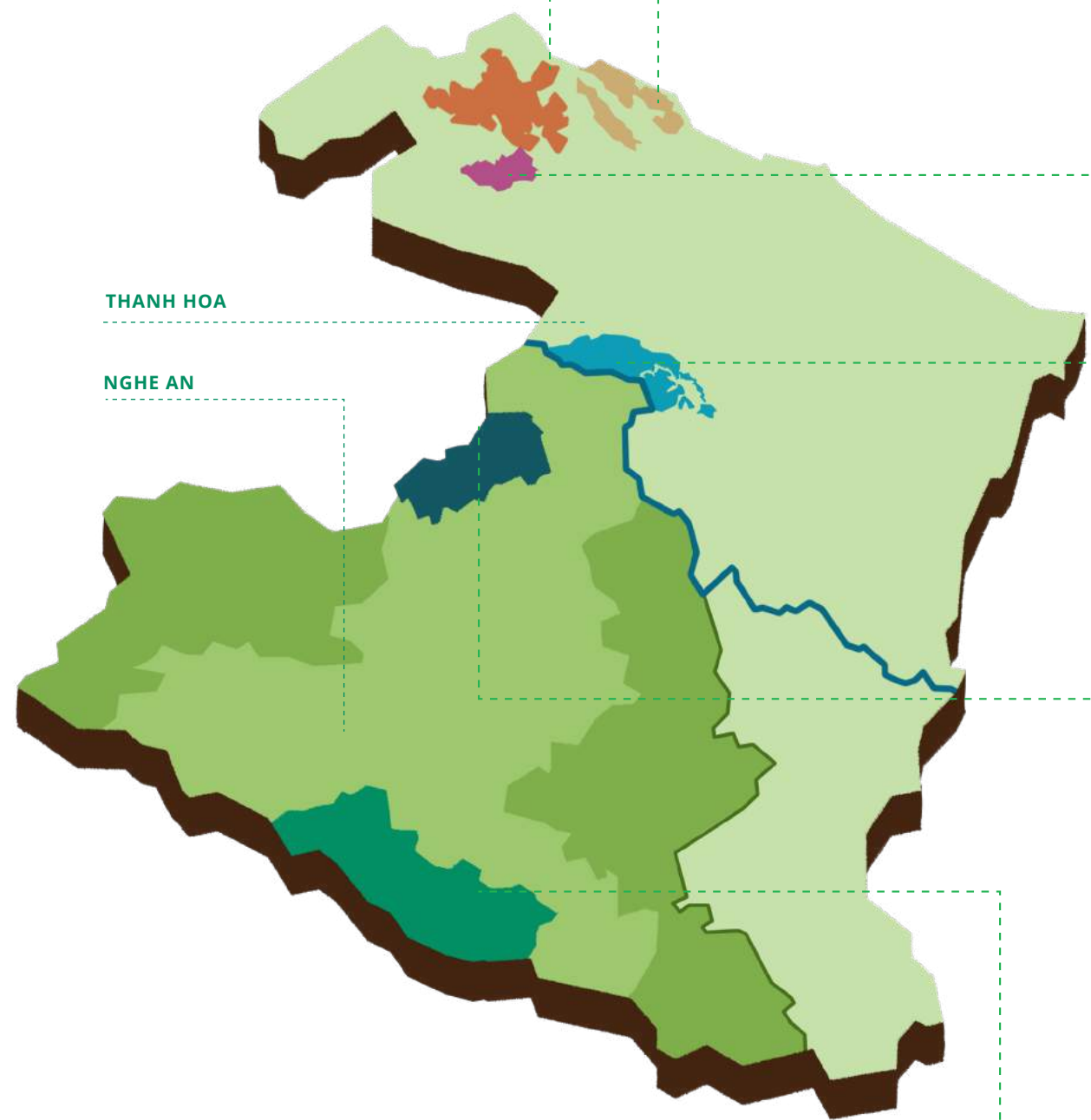
Development to conduct a ten-year review of the Man and Biosphere Reserve to identify potential areas for expansion. Based on the outcomes of the review, the team facilitated a collaborative process to develop the first comprehensive management plan for the reserve. In a significant milestone for the province and the project, in 2017, the Nghe An Provincial People’s Committee (PPC) approved the review documents and management plan, which were submitted for certification renewal by the United Nations Educational, Scientific and Cultural Organization (UNESCO).



Western Nghe An Man and Biosphere Reserve

VFD IMPROVES PROTECTED AREA MANAGEMENT

VFD provided a range of technical assistance to a number of protected areas in Nghe An and Thanh Hoa



Disclaimer: This map is for illustrative purposes. It may not be spatially accurate, and is not intended to be used for official purposes.



Pu Luong Nature Reserve

- Developed environmental education toolkit for nine schools



Pu Hu Nature Reserve

- Trained forest rangers on forest monitoring strategies
- Expanded forest enrichment efforts
- Introduced medicinal plant cultivation to support local livelihoods



Xuan Lien Nature Reserve

- Developed forest co-management model between communities and government
- Developed joint patrol and management strategies



Nam Dong Species Conservation Area

- Developed community-based forestry management (CBFM) plans with three villages



Pu Hoat Nature Reserve

- Biodiversity flagship species survey
- Participatory mapping and boundary marking
- Application of improved forest monitoring tools



Pu Mat National Park

- Communication activities, ecotourism

Financing sustainable landscapes

Developing large-scale sectoral and landscape plans and strategies is a critical first step in Vietnam to establishing a policy framework to which all relevant stakeholders can align. However, action plans and strategies must ensure that the priorities and activities are financed to make them happen. Usually, GVN plans and strategies identify three main categories of funding: state budget, official development assistance (ODA, or donor-funded projects), or Vietnam's PFES mechanism for forestry activities. To address this, VFD's second Sustainable Landscapes focus was to identify private sector partnerships and innovative financing opportunities to enhance the long-term sustainability of the provincial and landscape action plans and strategies. To reduce reliance on donor funding and support Vietnam's Journey to Self-Reliance, VFD targeted activities to improve financing options from two areas: PFES and increased engagement in market-based private sector initiatives.

VFD's first area of focus, the expansion of Vietnam's PFES mechanism, was selected based on several key factors. First, PFES is deeply rooted in the collaboration between USAID and GVN, dating back to the USAID Asia Regional Biodiversity Conservation Project (ARBCP, 2005-2011) that developed the first PFES pilots in Lam Dong province and codified PFES as a national initiative through Decree 99 in 2010. VFD had the opportunity to build on this ground-breaking work and expand PFES in terms of both

geographical and sectoral coverage. The second, and perhaps more important, reason was that PFES was rapidly becoming an increasingly important part of forest sector financing in Vietnam. As GVN's budget resources became stretched, departments responsible for forest management and development prioritized PFES as a valuable source of revenue to complement state budgets. Increasingly, the types of policies and strategies that VFD helped develop in Thanh Hoa and Nghe An prioritized PFES as a funding source, and therefore provinces and localities needed to find ways to expand the mechanism.

VFD first worked to expand the geographic coverage of PFES and accelerate the payment process in Thanh Hoa and Nghe An. This was a key opportunity to put national policy into practice. PFES Decree 99 had been in effect at the national level since 2011, and various policy guidance circulars were issued, but provinces like Thanh Hoa and Nghe An were slow to distribute payments in some areas. This was due to limited capacity to identify eligible forest areas that were providing environmental services (for example in hydropower watersheds) and challenges identifying forest owners who would be eligible to receive PFES payments. In some cases, PFES revenues had been transferred to provincial funds from hydropower plans but were not yet distributed to all forest owners. To address these key gaps, VFD facilitated PFES using both GIS technology and field surveys and worked with PFES managers and forest owners to document the Quan Hoa and Ba Thuoc Districts of Thanh Hoa province and Tuong Duong, Quy Chau, and Quy Hop districts in Nghe An province to confirm payment to these communities. As a result, more than 25,000 households are now receiving PFES payments for the first time.

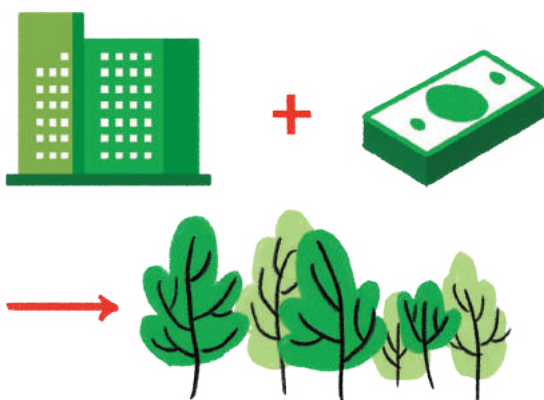
In Thanh Hoa, VFD was the first project to support villages to develop their own regulations for managing PFES to ensure payments are used as intended for forest protection and improving livelihoods. As part of the village-level regulation, VFD guided five local communities who decided to use a portion of PFES payments to generate a women-managed village savings fund for which PFES payments served as seed funding for small loans for investments in livelihoods.



A second area where VFD worked to put policy into practice was the expansion of PFES to include industrial water users, such as beverage companies, food processors, and steel companies. Industrial water use was one of the sectors identified in the national PFES Decree 99 for payment, but provinces were slow to expand to this sector because of uncertainty about how to set payment rates and identify eligible companies. VFD worked with VNFF, PFES managers, and companies in Nghe An, Thanh Hoa, and Ha Tinh provinces to conduct technical analysis to identify payment rates, eligible companies, and potential payment recipients to pilot PFES from industrial water use. These pilots represented the first opportunity for these provinces to expand the PFES revenue base by entering into agreements with industrial water users who would pay into the provincial forest protection and development funds based on an agreed-upon rate for water use. Approximately 35 companies signed contracts with their respective provinces to commit payments to the provincial forest funds by the end of VFD's Phase 1.

Evidence gathered during the pilots provided inputs for the new Decree 156 that guides implementation of Vietnam's Forestry Law, which has enabled other provinces to implement PFES from industrial water use.

To complement these PFES activities on the ground and put policy into practice, VFD worked on a number of important issues related to PFES policy. At the national level, VFD worked with the VNFF to convene Community of Practice (CoP) events for PFES practitioners. The project held four CoP events, providing unique opportunities for diverse stakeholders, including forest owners, GVN PFES managers, and hydropower companies, to discuss the challenges and lessons learned through implementing PFES in their provinces. These CoP events proved to be one of VFD's most successful mechanisms for capacity building and information sharing, because they created an open forum for convening PFES practitioners, participants, and policy makers in a setting that allowed them to freely discuss issues and concerns about PFES and identify solutions. The points raised during these CoP events resulted in targeted activities to improve the policy guiding Decree 99 implementation. One of these areas was payment rate adjustment. After this issue was raised at a CoP event, VFD's technical specialists conducted an economic analysis and drafted new policy that led to a revision of Decree 99 after five years of implementation. This resulted in payment levels being increased from 20 VND/kwh to 36 VND/kwh for hydropower plants and from 40 VND/m³ to 52 VND/m³ for clean water produced by water companies.



Decree 156 guides provinces how to implement PFES from industrial water use



Hydropower plants' payment level increases from 20 VND/kwh to 36 VND/kwh



Clean water companies' payments increase from 40 VND/m³ to 52 VND/m³



Another area of policy improvement identified through a CoP event was the need for improved M&E of PFES impacts. While VNFF and provincial PFES managers were able to quantify preliminary indicators of PFES operations, like the amount of revenue generated and the number of households receiving payments, PFES fund managers did not have more detailed M&E protocols to capture a more complete picture of the impacts of PFES on forests and local communities. To help with this, VFD worked with Son La province and the Center for International Forestry Research (CIFOR) to develop a new M&E framework for PFES in Son La comprised of a comprehensive set of socio-economic, environmental, and operational indicators. This M&E framework, which was completed in 2018, served as a model for other provincial funds and was highlighted at a national PFES M&E workshop in July 2018.

While PFES served as an established financing mechanism to support Vietnam's forests, VFD also worked on innovative sustainable landscapes financing by utilizing private sector initiatives like the Forest Stewardship Council (FSC) certification and exploring linkages between bamboo cooperatives and business associations to support better market access. For example, to complement bamboo processing work in Thanh Hoa province with LASUCO, VFD built the capacity of farmers on sustainable bamboo forest management techniques. VFD also provided technical assistance to 47 bamboo companies to promote clean production methods and waste-to-energy technologies to maximize efficient processing. As a result of VFD's trainings, companies like Xuan Duong Bamboo Cooperative and Tre Xu Thanh began production of charcoal and bio-briquettes from bamboo waste as environmentally friendly options for converting waste to energy.

Demonstration models to reduce pressure on forests

In order to move from policy to practice, VFD worked with provincial partners to identify a series of demonstration models implemented by households and communities to improve forest management, support local livelihoods, and establish more sustainable landscapes.

Livelihood models

Recently, changing climatic conditions and overexploitation of forest resources put stress on existing livelihood options in forest-dependent communities throughout Vietnam. VFD worked with ethnic minority communes in the upland forests of Nghe An and Thanh Hoa provinces to design and implement climate smart livelihood models tailored to the specific local conditions. VFD focused on introducing models that increased resilience of agricultural production systems, supported income diversification strategies, and incentivized sustainable forest management. This package of solutions strengthened the capacity of local communities to cope with climate change while reducing deforestation and forest degradation across the landscape.



EXAMPLES OF VFD LIVELIHOOD INITIATIVES

- **Climate smart rice production**
- **Sloping agriculture land techniques**
- **Indigenous poultry and earthworm raising**
- **Home gardens**
- **Beekeeping**
- **Bio-fertilizer production from agricultural waste**
- **Cattle rearing in buffer zone of protected area to reduce grazing pressure**
- **Improved cook stoves and biogas**
- **Non-timber forest products, such as bon bo and cinnamon**
- **Improved maize production**

Designing effective livelihood interventions required a thorough understanding of the local context. VFD held a series of meetings in the communes to identify issues and priorities, taking into account the specific geographical conditions, climate change threats, market opportunities, and local values and needs. VFD emphasized inclusive and participatory decision-making throughout the process. Every household was encouraged to actively take part in the community meetings to ensure a transparent and collective design process. In some communes, participatory planning for livelihoods was integrated into annual socio-economic development planning. For each commune, VFD and local leaders selected one or more livelihood models alongside measures to support sustainable forest management.



After multiple successful crop cycles, several VFD-supported livelihood models were recognized for their success by local Department of Agriculture and Rural Development (DARDs) and farmer groups. This included the successful climate smart rice work in Ba Thuoc, Thanh Hoa, which was identified as a key model that DARD would like to replicate throughout the province (see below). Similarly, DARD highlighted an improved maize production model in Anh Son, Nghe An as an effective practice that supported improved livelihoods and crop production in the province. This model was successfully replicated by 150 households in Thach Son and Vinh Son communes in 2017.

Participatory and transparent forest management

Vietnam's forest lands are property of the state and have long been under centralized management. However, alarming rates of deforestation and forest degradation in the 1980s made it clear that the system in place was not effectively protecting vital forest areas. Gradually, the important role of local people in forest management became recognized, leading to the adoption of a policy for allocating forest lands to households. Although the policy was promising, implementation has proved challenging. Most of the country's production forests have officially been allocated to local households, but plot delineation remains unclear, leading to conflicts over user rights and ineffective management. To address this issue, VFD developed and tested a model for participatory forest land allocation in Muong Lat district, Thanh Hoa Province. The model focused on securing land use rights and strong stakeholder engagement as a key means to improve forest management. In conjunction with provincial stakeholders and district and local authorities, VFD organized village level meetings to involve representatives from every household. To ensure full participation, meetings were conducted in the local language and led by skilled facilitators. In open discussions, participants identified the key land allocation and forest management issues and brainstormed potential solutions. Many villagers explained that they did not know the limitations of their own plots and some had lost their "red book"

or land use rights certificate. Due to this, conflicts over who had the right to harvest timber and non-timber forest products were common. To address these issues, VFD and local officials outlined a process to reallocate the forest lands in a transparent, equitable, and participatory way. The villagers received training on the use of GPS devices, after which they went into the field to map out the forest area and clearly demarcate the new plots. As a result of this activity, Muong Lat developed a land use proposal and submitted it to the district authority, who approved it and issued new user rights certificates to 110 households.

VFD successfully replicated this forest land allocation model from Muong Lat district by engaging ethnic minority households and government in Tuong Duong district, Nghe An. Through this work, by the end of 2017, 189 households in Tuong Duong received "red book" forest land certificates, which provides a powerful incentive for improved management of these forest areas. This work is especially significant, as the province and district had previously been unable to complete the land allocation process in this area because of challenges engaging the households and local partners effectively. Importantly, the process proved to be replicable by local authorities, with VFD providing technical guidance to Tuong Duong to replicate the process in Xa Luong commune.

Lessons learned

Plans and strategies are important, but ensuring their effective implementation is more important.

Over the life of VFD, the project worked with national and provincial governments and with protected area managers to develop thoughtful plans and strategies to improve natural resource management in their areas. However, some of these plans, such as the

GGAP and PRAPs, were the first ever of their types. Given this context, it became clear that the provinces were not fully prepared to implement the plans due to insufficient capacity, lack of a clear coordination mechanism, and a lack of mobilized resources. Thus, VFD determined that providing focused support to the early implementation stages of these plans was crucial in sustaining momentum.

The importance of market-oriented production.

Many small-scale farmers in rural areas of Nghe An and Thanh Hoa face the challenge of limited market information and direct market access. The prices of their products rely on intermediaries and are unstable due to mismatched supply and demand. As a result, VFD focused not only on supporting farmers with training in better practices to improve product quality, but also helping farmers organize themselves, link to input-output markets through improved access to market information, and establish purchasing agreements with responsible buyers. Some successful examples include:

- 1 Facilitating purchase agreements between Anh Son maize farmers with TH true milk in Nghe An;
- 2 Linking two forestry cooperatives and companies that are their input providers and output purchasers in Thanh Hoa;
- 3 Linking a community bee keeping club in Da Loc to a local market to sell their honey products;
- 4 Fostering collaboration between the Tan Tien medicinal plant cooperative in Ba Thuoc and API Pharma company that provides the inputs and purchases the output products.

At the other end of the spectrum, livelihood models that were driven by local government priorities but lacked strong market linkages, like indigenous poultry raising, did not demonstrate significant benefits to local farmers and in some cases rapidly lost interest of local farmers after project support ended. This highlighted the benefits of strong market linkages that provide short- and long-term benefits to farmers that incentivize continued participation.



Next steps and opportunities to scale up success

VFD's Sustainable Landscapes component covered a range of technical areas from national policy down to specific actions of the group at the household and community level. Several areas stood out as clear opportunities for next steps to scale up success.

First, and perhaps most significantly, VFD's work in Phase 1 on PFES demonstrated the significant potential to expand this unique forest financing mechanism. Over the six years of VFD's Phase 1, PFES annual revenues increased from US\$50 million per year to more than US\$120 million per year, and the number of provinces implementing PFES grew to 44. By the time VFD's Phase 1 ended in 2018, VNFF projected that these numbers would level off, with annual revenues remaining around US\$120 million per year. Therefore, the priority shifted from "growing" PFES to increasing the efficiency and effectiveness of PFES. This shift created a natural progression from VFD's Phase 1 to Phase 2.

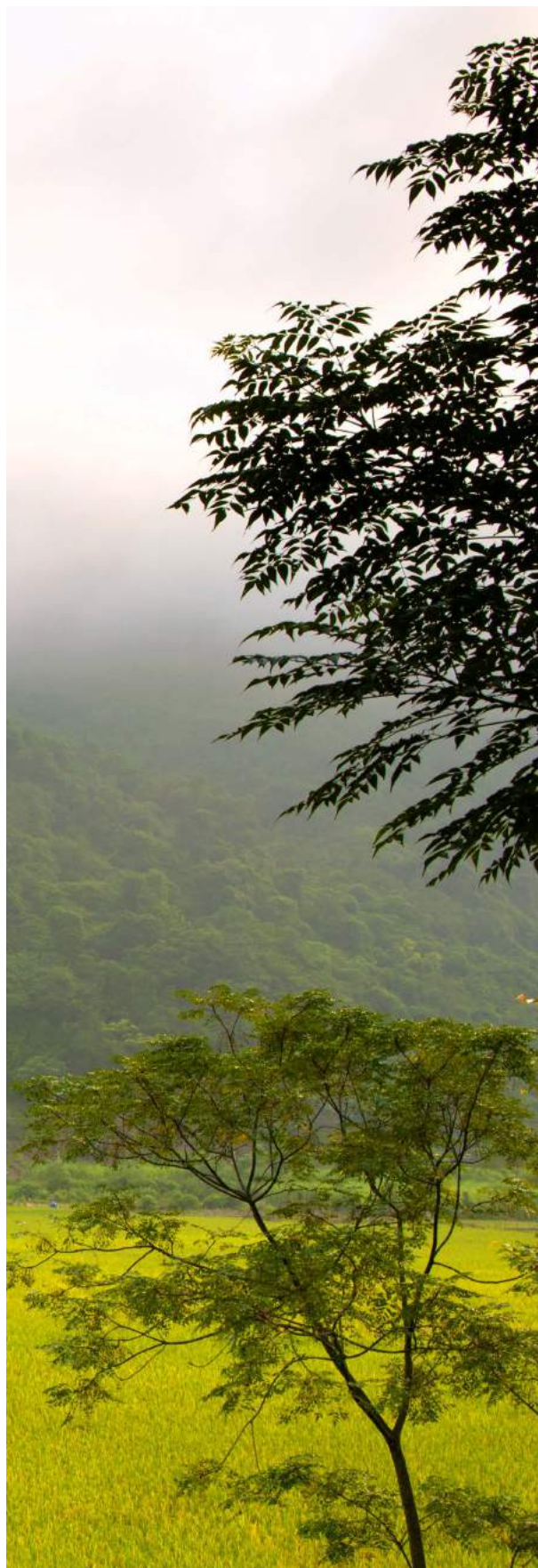
Interestingly, the series of Community of Practice events that VFD supported for forest owners, PFES managers, and companies highlighted two key areas of focus. The first was introducing electronic payments. While many forest owners prefer payment in cash, PFES managers began to recognize the risks and inefficiencies associated with large amounts of cash being transported to rural areas for PFES payments. In addition, companies who were paying into PFES and donors began to ask more questions about the true impact of PFES and looked for empirical evidence that the payments were reaching the intended recipients and creating the intended results. These questions highlighted the lack of a comprehensive M&E system for PFES and the need for provinces to build a foundation of PFES data that could be used to identify where PFES is working well, improvements that may be needed, and policy improvements to be made. Donors and NGOs can continue to support these areas to ensure the impacts of PFES are significant and lasting.

Second, VFD had an opportunity to explore three different methods of reviewing and reissuing forest land use "red book" certificates through the forest land allocation process. This forest land allocation process provides the foundation of forest management and PFES and has significant gaps across

Vietnam. It represents one of the most significant challenges for forest management in the country, and VFD experienced the advantages and disadvantages of different approaches. In Muong Lat, VFD deployed consultants who worked closely with the district over the course of one year resulting in 110 households receiving new "red books." In Tuong Duong, Nghe An, VFD worked directly with local forest protection department officials, training them to complete the review and consultation process for nearly 200 households. This took less time (roughly four months) and at lower cost – but with less consultation and review from community members. In VFD's Phase 2, the project completed a similar review in Bac Yen district, Son La province for more than 1,700 households with technical support from a forestry institute. In some ways, this Son La work was the most thorough in terms of technical review, but also was by far the most expensive. The three different approaches provide an interesting comparison of the tradeoffs between being consultative and participatory, but also time-consuming, with Muong Lat having the lowest number of households completed. Similarly, there were tradeoffs between maximizing local institutions (e.g., forest protection departments) to do the work at a lower cost, but with a slightly more top-down approach with less consultation and participation with local communities, as in the case of Tuong Duong. Finally, there were tradeoffs between conducting the most thorough technical analysis reaching the largest number of households, but with the much higher cost, as was the case of Bac Yen. Given that forest land allocation review has been highlighted as one of the most important activities to improve forest management in Vietnam, projects and local government agencies will have to carefully weigh these costs and benefits to determine which approaches may be most appropriate for their local context.

Finally, Vietnam's new forest strategy highlights the benefits of expanding forest certification efforts and adopting longer rotation periods for forest plantation areas, while producing higher value species and varieties. In VFD's Sustainable Landscapes work, the team regularly observed dense forest plantation areas with small lower-value timber. In response, VFD explored opportunities to introduce improved silvicultural techniques in Thanh Hoa and worked at the national level to help with the first steps of developing a national certification standard with the international Programme for the Endorsement of Forest Certification (PEFC). Introducing these new practices was a fundamental behavior change for smallholder producers who had been following a "plant as many seedlings as possible" approach. Further, they were challenged by limited market access because of their reliance on local buyers who transport their products to local or regional processors. It was only near the end of VFD's Phase 1 that the demonstration sites of these new silvicultural practices began to show positive results, and skeptical farmers who had been waiting to see how the trees would grow began to see with their own eyes the larger, healthier, more valuable trees.

With Vietnam now promoting a more market-oriented approach to economic development, and market-driven forest models being supported through projects such as recent USAID-funded activities like VFD, Vietnam can increase value of the forestry sector. This is also a key priority in the new forest sector strategy 2021-2025. To fully apply these new practices, projects and government agencies should provide support for advocacy and behavior change to better inform plantation owners of the benefits of moving to longer rotation timber and more appropriate planting densities that reduce overcrowding. In addition, private sector partners who are looking for certified wood for their enterprises will benefit from matchmaking with motivated plantation owners who are open to adopting certification standards and practices. Businesses are often willing to invest their own funds for training, input provision, and other support to farmers if it benefits their operations – therefore projects no longer need to expect to provide all financial support and technical assistance.



Adaptation

With one of the longest coastlines in the world, Vietnam is highly vulnerable to the impacts of climate change, particularly sea level rise, saltwater intrusion, storm surge, and flooding from more intense and frequent extreme weather such as typhoons. Vietnam's two primary delta regions, the Red River Delta in the north and the Mekong River Delta in the south, are two areas that are particularly vulnerable, given their importance in agricultural production and related pressures on land availability. The Red River Delta also is one of the most densely populated regions of the country, creating increased risks for its local population.

It was within this context that VFD began to frame its approach for the Adaptation component. As with the project's work on Sustainable Landscapes, it was important that the project help put policy into practice and provide clear, tangible benefits to local communities. To meet these goals, VFD focused on providing communities in Nam Dinh and Long An provinces with improved knowledge, tools, and livelihood opportunities to increase their resilience to both short- and long-term climate-related risks. VFD's approach to climate change adaptation focused on reducing disaster risks through improved community-level DRR capacity and planning, complemented by small scale improvements in infrastructure, as well as emergency response. Through VFD's DRR activities, the communes increased their resilience. By applying climate-resilient livelihood models, communes provided increased benefits to farmers and households in areas where traditional rice production was becoming less viable due to environmental and market changes.



Disclaimer: This map is for illustrative purposes.

It may not be spatially accurate, and is not intended to be used for official purposes.

Main activities and outcomes

Disaster Risk Reduction

VFD benefited greatly from GVN putting in place a clear and effective policy framework to support DRR efforts through a range of new climate change-related policies. The Prime Minister's Decision 1002/QD-TTg of 2009 on "Enhancing community awareness and Community-based disaster risk management" provided direction for a consistent approach for how communities could prepare and respond to disasters. While Vietnam was historically vulnerable to storms from the Pacific Ocean, climate change was increasing the frequency and intensity of such storms, along with the additional challenges of saltwater intrusion and more unpredictable weather patterns. Therefore, VFD focused on Decision 1002, developing a strategy for building local capacity to implement this important national program and ultimately increase local resilience to the impacts of climate change. This strategy focused on equipping communes with the knowledge, skills, and infrastructure via a three-pronged approach that:

- 1** Increased the awareness of commune leadership and community members of climate risks;
- 2** Built capacity of community members to assess and plan for climate impacts; and
- 3** Provided the equipment and materials necessary to make communities more resilient to climate-related shocks.

To achieve these goals, VFD emphasized participatory and capacity-building approaches to reinforce local leadership and ownership, which would improve the sustainability of DRR practices. VFD focused on 60 communes in Nam Dinh and Long An provinces, selected through consultation with the MARD and local government leaders. The selection was based on their high vulnerability to climate change as well as the ability for effective replication in other provinces with unique differences. For example, Long An province has many industrial zones. Therefore, VFD needed to consider each commune's unique challenges and potential replicability of the DRR efforts.

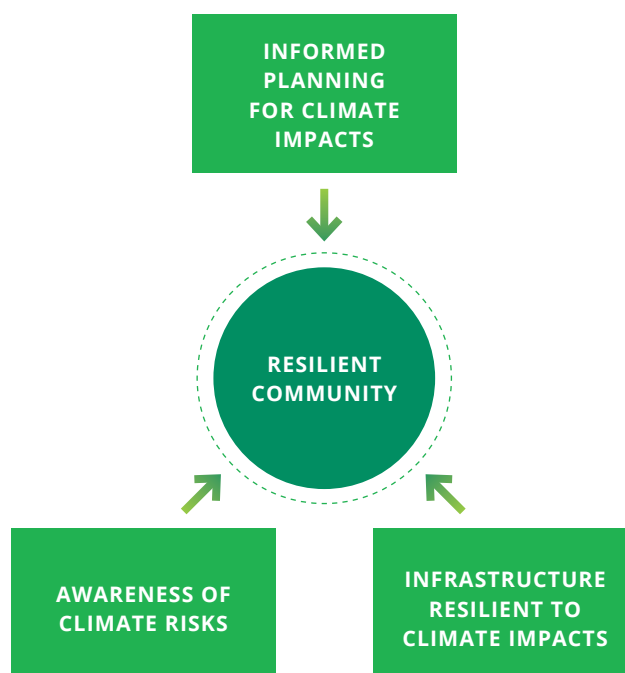


FIGURE 2: VFD'S THREE-PRONGED APPROACH TO BUILD RESILIENCE IN LOCAL COMMUNITIES

The basic framework of VFD's approach to increasing knowledge and awareness of climate risks was a community-based disaster risk assessment (CBDRA) model that builds the knowledge of a wide range of community members to understand climate risks and develop strategies to mitigate these risks. The CBDRA process allows community members to first assess their needs, challenges, and risks before developing targeted disaster preparedness plans (DPPs). To start, VFD worked directly with commune leaders and community members to collect and analyze climate-related data to understand their exposure to climate risk. Each commune conducted a participatory climate vulnerability assessment to understand risks specific to their location and topography. VFD placed particular emphasis on engaging community members from diverse backgrounds, including women, people with disabilities, and the poor, resulting in a more inclusive understanding of climate risk and how different risks impact different community members. The training methodology used role plays and games to illustrate concepts, participatory discussions with question and answer sessions, simulation exercises, and video clips to illustrate concepts for participants. The results of the CBDRA process² were used to develop specific and actionable DPPs in all 60 communes.



COMMUNITY-BASED DISASTER RISK ASSESSMENT (CBDRA) PROCESS

VFD worked with 60 communes to complete a participatory CBDRA process. This included working with the communes to:

- Identify types of natural disasters**

 - **that have occurred and are likely to occur in the community.**
- Identify the community's capacities that can help them become less susceptible to the damaging effects of a natural disaster.**

 - **Identify community vulnerabilities that make them more susceptible to damaging effects of a natural disaster.**
- Identify disaster risks and priorities to find appropriate solutions.**

 - **These solutions must consider the needs of the most vulnerable in the community.**
- Develop a 5-year disaster preparedness plan (DPP) at commune level following the guidance of the Ministry of Agriculture and Rural Development.**

² At times, the terms CBDRA and CBDRM (community-based disaster risk management) are used by some interchangeably. For VFD, the CBDRA process focused on the risk assessment process undertaken by communities, while CBDRM was used more broadly to describe how a community would manage the identified risks and regularly re-assess and readjust management plans. GVN's strategy for DRR largely focuses on CBDRA as a tool for guiding risk reduction efforts; therefore, VFD focused on CBDRA in its approach and training to establish a strong foundation and basis for a broader CBDRM process.

Through their CBDRA processes, nearly all communes identified specific vulnerabilities in their local infrastructure. For example, some communes identified that their most effective evacuation routes were either inaccessible or dangerous due to missing or damaged footbridges. Other communes identified that their locally identified storm shelter, often a meeting hall or other infrequently used building, lacked the necessary facilities to accommodate large numbers of community members for long periods of time in the case of a severe storm. Therefore, based on the prioritized needs of the community, VFD supported a series of small-scale DRR projects aligned with commune plans to reduce climate risks. By the end of Phase I, VFD and local communities improved facilities and conditions for 10 community shelters and implemented 23 small-scale mitigation projects. These small-scale mitigation projects included improving drainage canals to reduce flooding, building flood-resistant footbridges to increase accessibility to evacuation routes, and increasing improved water and sanitation facilities at local storm shelters. For each of these small-scale projects, communities provided the majority of necessary funding themselves, with VFD providing only small supplemental funding and oversight. All small-scale construction and renovation activities complied with USAID policies and guidelines for minimizing risk of environmental impacts from small-scale construction.

FROM TRAINING TO APPLICATION IN NAM DINH

In 2016, Nam Dinh successfully demonstrated practical application of the skills they had learned in preparing for the first storms of the 2016 typhoon season and were recognized by local leaders for their early and effective preparations that minimized storm damage.

HAI HOA SUCCESS STORY

The 800 fishermen of Hai Hoa commune in Nam Dinh province are often victimized by coastal storms, which can damage their fishing boats, equipment, and livelihoods. Hai Hoa's CBDRA prioritized improving the pathway from the beach to the local wharf so that fishermen had a clear path to move their boats to safety before storms hit. The idea of improving the pathway had been discussed for many years, but had never been done because of an inability to organize the community in an effective way and to mobilize local funds for the improvements.

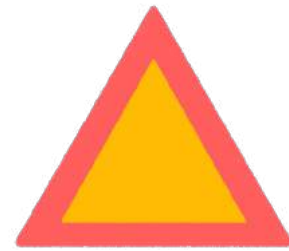
Using the CBDRA as a guide, VFD helped build agreement and commitment from local residents and leaders, and the Hai Hoa Commune Authority succeeding in mobilizing local resources to resurface the first 300 meters of the pathway. Then, Hai Hoa generated additional capital from local aquaculture businesses to fund completion of the remaining one kilometer pathway.



**CADRE
TRAINING TOPICS**



First aid and basic life support



Incident command systems and triage



Locating missing people



Basic search, rescue, and recovery skills



Water emergencies



Local disaster response drill

With community-led disaster preparedness plans in place, and improved infrastructure under development, VFD's next step was to build complementary, actionable skills. To achieve this, VFD applied the CADRE model, which provides training to community members on effective, safe, and immediate disaster response in their own communities. This empowers community members to take on leadership roles and provides actionable skills that can be used prior to the arrival of professional emergency services. Training using CADRE was a particularly successful facet of VFD's work, with nearly 50 Emergency Response Teams (ERTs) trained and provided with equipment such as life vests, life buoys, safety helmets, flashlights, FM radios, and first aid kits. To further build community capacity, VFD conducted an audit of existing early warning systems for each commune. Gaps and needs were identified, and VFD provided necessary equipment and supplies to upgrade early warning systems. Once communities and specialized ERTs were trained in disaster response, VFD conducted 26 emergency drills in Nam Dinh and Long An to apply the new skills and help communities feel more confident in their preparations. Drills ranged from focusing on ERT members up to larger exercises engaging nearly 500 participants from across a single district.

A final component of VFD's approach to DRR was to focus on working with youth. More than half of Vietnam's population is under the age of 25, and therefore youths are a key demographic to ensuring wide understanding of climate change risks and steps necessary for effective disaster preparedness. VFD focused on primary school systems as a key point of engagement for students and for teachers, ultimately reaching over 10,000 students in 49 institutions through school-based events that not only gave pupils awareness of disaster and climate issues, but also equipped them with practical skills. The events included play-based activities, performances, and role-plays to put into practice the lessons they were learning about disaster

preparedness and adapting to climate change. Some schools practiced evacuations, linking with local ERTs and early warning system tests. Following trainings, post-tests administered to fourth and fifth graders showed that they significantly improved their disaster preparedness knowledge. To complement increased knowledge and awareness, VFD funded first aid and rescue supplies, as well as upgrades to sanitation and drainage systems to ensure that schools remain resilient. VFD completed 111 small-scale projects at 77 schools, such as repair of electricity systems, construction of protection fences, upgrade of drainage systems, and improvements to water and sanitation facilities, all of which improved the climate resiliency of these educational institutions.



VFD's "Safe Schools" program to train youth in disaster risk reduction

Climate-resilient livelihoods



At the start of VFD, farmers in rice growing areas were threatened by the dual factors of climate change and changing market dynamics. As an essential crop for Vietnamese food security, rice provides income for people living in agricultural areas, especially in the Red River and Mekong River Deltas. Since the 1990s, Vietnam effectively transformed from a country with food insecurity issues to become the second largest rice exporter in the world. However, climate change and its associated impacts were reducing available areas for rice production. For example, according to the Asian Development Bank (ADB), a sea level rise of just one meter could inundate 5,000 square kilometers in the Red River Delta and up to 20,000 km in the Mekong Delta³. While sea level rise can seem like an abstract threat the future, saltwater intrusion was already impacting farmers in the delta regions. In the VFD province of Nam Dinh, increased salinity reduced rice

productivity by 20-25%, causing farmers to increase their fertilizer use, in some cases by as much as 50%. This in turn degraded soils and created additional negative environmental impacts.

In addition to climate change, Vietnamese farmers also had changing local and international market conditions. First, Vietnam's rice was generally inconsistent in quality, and it lost market share to Thailand and Cambodia, where higher value varieties were becoming more profitable and farmers were producing more consistent quality rice at scale. Second, Vietnamese farmers began to explore other more profitable agricultural options, such as aquaculture. Farmers in the coastal areas of delta provinces were shifting from rice to shrimp and/or fish culture due to the higher potential profit and reduced rice production in increasingly saline soils.

³ Hai, Le Trong, 2012, *The Rice Situation in Viet Nam*:

<https://www.adb.org/sites/default/files/project-document/73083/43430-012-reg-tacr-04.pdf>





Within these challenging environmental and market dynamics, VFD worked with local government partners like AECs to introduce new approaches to farmers for growing more climate-resistant and environmentally friendly varieties of rice. In areas where rice was no longer viable or profitable, VFD supported farmers exploring alternatives to rice that provided livelihood benefits and reduced environmental impacts. To institutionalize these models, VFD worked closely with the AECs both in the development and delivery of training materials, with AEC staff serving as the lead trainers and monitors of the application of new production practices.

Local farmer champions developed demonstration plots that served as proofs of concept for the new models and allowed farmers to learn from each other. Given that farmers are often creatures of habit, these

demonstration plots were extremely useful in showing a clear picture of the benefits of the new practices. For example, low-emission rice demonstration plots included different seed density levels so that farmers could see the results of planting at different seed densities. This was particularly important because traditional farming approaches emphasized a “more is better” approach. While this makes sense intuitively, research had showed that lower seed densities can actually result in higher yields because individual plants have more space to grow. Additionally, it has lower costs because farmers can use less seed. While it was difficult to convince farmers of this message in a classroom training setting, the demonstration plots showed clear evidence that reduced seed use could still be productive.

TABLE 1. VFD CLIMATE-RESILIENT LIVELIHOOD MODELS

Livelihood Model	Province(s)	Rationale and Approach	Results
<p>Low-emission rice</p>	Long An, Nam Dinh	<ul style="list-style-type: none"> • Rice remains an important crop and local livelihood for farmers in the delta regions. • VFD's model reduces seed, fertilizer, pesticide, and water use. • Emphasizes use of certified (higher quality) seed and application of integrated pest management practices. 	<ul style="list-style-type: none"> • Productivity increases by 0.77 tons per hectare compared to traditional methods. • Additional profit of VND 3.88 million (\$US168) per hectare per harvest. • 32% average reduction in nitrogen fertilizer; 42% average decrease in use of phosphate fertilizer.
<p>Potato</p>	Nam Dinh	<ul style="list-style-type: none"> • Alternative to rice in more inland areas. • Uses disease-resistant seed and organic fertilizer products. 	<ul style="list-style-type: none"> • Average potato productivity increased by 18-20% in comparison with traditional cultivation techniques. • Reduced chemical fertilizer volume.
<p>Environmentally friendly white-leg shrimp</p>	Nam Dinh	<ul style="list-style-type: none"> • Alternative to rice in coastal areas. • Shrimp culture can be highly profitable, but high risk as shrimp are sensitive to disease and water quality and entire stocks can be lost overnight. • Shrimp culture is also vulnerable to storms and flooding, as one storm can wash away an entire crop. • New model reduces chemical inputs, integrates more efficient feeding plans, and more effective water quality monitoring. 	<ul style="list-style-type: none"> • Increased profits of VND 30,000,000 (US\$1,320) per pond per harvest. • More stable water quality in shrimp ponds, resulting in quicker growth and less disease.

Livelihood Model	Province(s)	Rationale and Approach	Results
<p data-bbox="199 461 368 528">Rice-fish intercropping</p> 	<p data-bbox="512 461 632 488">Nam Dinh</p>	<ul data-bbox="735 461 1078 898" style="list-style-type: none"> • Creates a sustainable ecosystem where fish eat pests that normally harm rice and naturally fertilize the rice to promote healthier growth. • Provides two sources of income. • Reduces production costs, reduces chemical inputs. • Results in higher quality and higher value products. 	<ul data-bbox="1134 461 1441 786" style="list-style-type: none"> • Farmers applying rice-fish model increased incomes by VND 69.4 million/year (US\$3,060) compared to traditional methods. • Used 135 kg less nitrogen fertilizer per hectare and 270 kg less NPK fertilizer per hectare.
<p data-bbox="252 981 316 1008">Corn</p> 	<p data-bbox="512 981 608 1008">Long An</p>	<ul data-bbox="735 981 1078 1346" style="list-style-type: none"> • Alternative to rice. • Corn production is increasingly profitable as feed source for growing high-value livestock industry in Vietnam. • Improved cultivation techniques reduce disease and increase use of organic fertilizers. 	<ul data-bbox="1134 981 1417 1301" style="list-style-type: none"> • Reduction of 23-26% in nitrogen fertilizer use. • Increase in productivity of 10 tons/hectare. • New market access to feed for dairy cattle, also allows for reduced harvesting and drying costs.

To improve uptake, VFD used farmer-led methodologies that not only provided actionable examples to follow, but also established a sustainable support network for farmers wishing to apply the models after VFD. For example, VFD established 90 farmer interest groups in Nam Dinh to provide outreach and technical support to 2,700 rice farmers. Farmer field schools provided opportunities for farmers to see and practice techniques in an applied, rather than academic setting. Participatory research methods allow farmers to view outcomes from different agricultural techniques, offering opportunities for learning and adapting. These presented a compelling rationale to switch to more effective, profitable, and environmentally-sound techniques.

Lessons learned



Training and Capacity Building

Building relationships and establishing trust with local stakeholders facilitates more rapid activity implementation and improves sustainability. For example, initially VFD worked directly with schools to implement DRR programs. While there was some success with this approach, the next year VFD developed partnerships with provincial education authorities, resulting in a joint agreement that provided opportunities to build capacity of the provincial educational system on climate change adaptation and ensure long-term continuation of climate change awareness programs. Similarly, VFD found that a training-of-trainers approach for CBDRM, CADRE, and school-based climate change awareness raising is effective to both build expertise of the training cohort that will remain after VFD and expand the reach of VFD's programs to more communities. It is also cost effective.

Vietnam's social organizations, such as women's unions and farmer's associations can also play an important role in sustainably scaling activities. When social organizations are established as owners of specific agricultural models, they have the ability to demonstrate the models and disseminate information to relevant local audiences.

The importance of on-site demonstration of agriculture models

VFD quickly recognized the importance of on-site demonstration sites of innovative practices when working with communities on new agricultural methods. VFD therefore prioritized having demonstration sites run by local farmers, with periodic technical support from VFD and agricultural extension agents. The demonstration sites of climate smart rice and maize, for example, showcased significant visible increases in productivity, which helped convince other local farmers to try these practices on their farms. Local farmers approached their peers who participated in the on-site demonstrations to learn about the innovative practices. The on-site demonstrations also attracted the attention of provincial decision-makers, who looked for opportunities to replicate the models elsewhere.

Next steps and opportunities to scale up success

Support market-driven livelihood models that increase resilience of vulnerable communities

While VFD's livelihood models demonstrated progress in terms of improved yields and reduced inputs over traditional models, new products sometimes lacked consistent markets. In particular, the corn model struggled one year, when market dynamics resulted in a huge volume of international corn flooding the market in southern Vietnam. This caused a drastic drop in prices and decreased benefits to farmers, despite having secured contracts with a buyer from the livestock feed sector. Although the buyer honored the contracts, both the buyer and farmers lost confidence in the corn market as a result of the experience. Applying learning from market systems approaches is important to reduce such risks. Connecting farmers and processors directly to each other, as well as to buyers, to share information about quality requirements, standards and certification, supply and demand forecasts, and pricing is essential. Future efforts to expand VFD livelihood models, or to introduce new models, can use market systems approaches to ensure farmers maximize benefits and minimize risks.


Engage producer groups and nascent cooperatives to link with higher value markets

As with other livelihood activities in VFD's Sustainable Landscapes component, working with producer groups and emerging cooperative-based models provides great impact to farmers and households. While individual farmers may be able to apply new models and individually increase their production, their access to larger and higher-value markets is often limited unless they can aggregate with other producers to achieve greater volumes and meet expectations of larger-scale buyers. Vietnam has prioritized the introduction of new cooperative models and approaches, which can provide great opportunity to increase benefits for rural farmers. New programs can focus on linking farmers groups and building the capacity of cooperatives so that such groups can work together to access inputs, create cost efficiencies in production, and aggregate higher quality products to access larger and higher-value markets both domestically and internationally.



National Policy and Coordination





VFD's original project design only contained two technical components: Sustainable Landscapes and Adaptation. However, during the GVN project approval process, MARD requested to add a third component focused on national policy and coordination. While the original two technical components largely focused on interventions at the provincial level, this National Policy and Coordination Component (known simply as "Component 3") would be beneficial to national stakeholders like MARD departments working on policy development and other donor-funded projects and initiatives working on similar activities that would benefit from VFD playing a coordination and convening role. This Component 3 then provided a unique opportunity to link policy to practice, with activities in the field from the Adaptation and Sustainable Landscapes components informing the development of national policies and strategies. In turn, pilot or demonstration activities related to new national policy priorities were implemented in the field, providing practical opportunities to inform further policy development and engagement.

In addition to the technical and policy benefits of this component, its addition to the project also provided a key incentive and motivation to MARD counterparts at the central level to both advocate for project approval with the approving authorities and increase their ownership and engagement in the project. In this way, it provided an invaluable focus of collaboration and partnership between the VFD team and central government counterparts at MARD.

Main activities and key results

Component 3 focused on three main themes:



CAPACITY BUILDING

- Climate change capacity building for universities and government officials



POLICIES AND GUIDELINES

- National forestry law and other policy development
- Strategy review and development



COORDINATION AND LESSONS LEARNED

- Documentation and best practices related to climate smart agriculture
- Climate change solutions in Red River Delta

Climate change curriculum development for future professionals

Any part of climate change planning requires preparation for both short-term needs and longer-term priorities. As part of VFD's effort to support Vietnam's longer-term planning, VFD developed a series of training curricula to support the country's future cadre of leaders and climate change professionals. This work focused on two key institutions: the Ho Chi Minh National Academy of Politics (HCMA) and the Vietnam National University of Forestry (VNUF).

The HCMA is Vietnam's official training institution for all government leaders from all levels. Government officials are required to take periodic short courses to be eligible for certain promotions, and HCMA also offers programs lasting approximately six-months for those leaders who are preparing for longer-term roles within government. Given the important role that HCMA plays in reaching a wide-ranging group of stakeholders, the VFD team met with HCMA leaders early to discuss opportunities for project support to improve awareness and understanding of the impacts of climate change. They also identified ways that GVN leaders could consider climate change in the development of new policies and plans. This came at a critically important time in Vietnam's socio-economic development. Most Vietnamese were

Ho Chi Minh Academy developed teaching guidelines on climate change expected to reach an average of

40,000

trainees each year



keenly aware that climate change posed a risk to the country, but they were unclear on exactly what risks might be most important and did not know how to respond to these risks. VFD therefore seized the opportunity to develop a curriculum based on a series of key topics such as basic climate change principles, opportunities for climate change response, and impacts of climate change on business and socio-economic development.

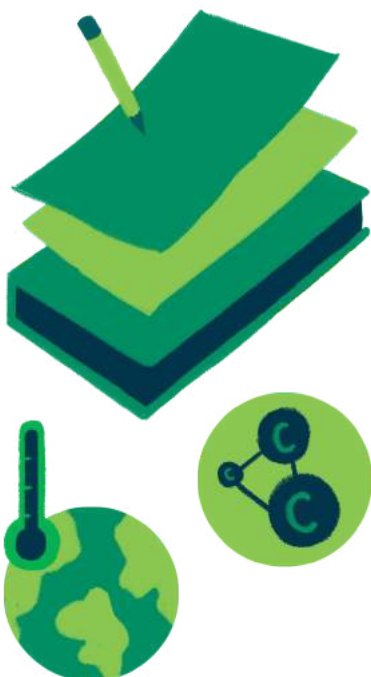
VFD staff worked with HCMA leaders and lecturers, and technical specialists from within Vietnam and from the US Forest Service to develop a comprehensive training program for leaders and key personnel of the GVN to pro-actively address climate change-related challenges in the future. This training

program, which was formally adopted by the HCMA in 2017 to be integrated into professional on-the-job training for all of Vietnam's future leaders, including a student handbook, a teachers' guidebook, and a series of reference materials including slide decks for lecturers. In 2017, the materials were rolled out through a series of Trainings of Trainers (ToT) in both Hanoi and at the HCMA's southern campus. Based on feedback from these ToT sessions, the guidebook was refined, and both the student handbook and teachers' guidebook were finalized for publishing. The materials have a great potential to provide valuable information and teaching guidelines on climate change and are expected to reach an average of 40,000 trainees each year.

VNUF led a series of TOTs to roll out the training curricula to

90
professors and lecturers

3,400
students are expected to receive training each year



In addition to targeting current and future GVN leaders and policy makers, VFD and its MARD partners prioritized support to future climate change professionals specifically within the forestry sector. Given the important role that forests play in both climate change mitigation and increasing resilience as part of climate change adaptation, VFD worked closely with the Vietnam National University of Forestry (VNUF) and technical advisors from the US Forest Service to develop two training curricula for forestry students: one on basic climate change and the other on forest carbon and emissions management. This activity built on previous USAID investments through the USAID LEAF program, which had previously developed a series of climate change curriculum modules in English for universities in Southeast Asia and the Pacific and adapted select parts of the curriculum to the local context and in Vietnamese. In early 2017, the course materials were approved by VNUF's rector for inclusion in the official curriculum for four VNUF faculties. After approval of the materials, VNUF led a series of ToTs to roll out the training curricula to 90 professors and lecturers throughout the VNUF system. The first students received training using the materials in late 2017, and approximately 3,400 students are expected to receive training with these materials each year. As with the HCMA curriculum materials, the process of developing the VNUF curriculum greatly benefited from the strong technical input and recommendations from US Forest Service technical specialists, who reviewed materials as they were developed and participated in workshops and meetings to provide feedback and ensure technical quality. This activity was yet another strong example of the close collaboration between VFD and the US Forest Service. It also showed how climate change programs can benefit from close coordination between government, universities and research institutions, NGOs, and technical experts to share diverse perspectives and approaches that can inform curriculum and policy development.

Supporting the development of important national natural resource management policies

A second pillar of the National Policy and Coordination component was to support policy development at the national level. This linked closely with the natural feedback loop VFD established between work on national policy in Component 3 and activities taking place in provinces through the Sustainable Landscapes and Adaptation components. As new policies were developed at the national level, with or without VFD's support, VFD's collaboration with provincial governments and local communities allowed those policies to be put into practice. Likewise, based on VFD's activities in the provinces, emerging priorities and policy gaps could be identified and shared with national institutions to address such gaps with improved policy measures.

One of the most important areas of policy improvement for VFD related to PFES policy and implementation. After the approval of the national PFES Decree 99/2010/ND-CP in 2010 and launch of PFES nationwide in 2011, there had been little policy update. As PFES expanded throughout more and more provinces, VFD used its professional networks and fora like the Community of Practice events to identify key challenges and gaps in PFES policy. In the early stages of VFD, identified gaps included a lack of policy incentives to address companies that were either late with payments into provincial funds or simply did not make the required payments. Also, there was steady debate and discussion about whether the payment rates stipulated in Decree 99 were reasonable and appropriate given the true value of the forest environmental services being provided. To address these issues, VFD worked with MARD and VNFF to review implementation of PFES and subsequently proposed revisions to update payment rates and other important modifications to the PFES mechanism, such as penalties for companies that make late payments into the fund and/or miss payments. These updates were codified through the issuance of Decree 147/2016/ND-CP in 2016. Decree 147 nearly doubled payment rates to hydropower companies from VND20/kWh to VND36/kWh and set penalties for late or missed payments. This ensured the collection of an estimated US\$15 million in back-payments to 2011 and upwards of US\$10 million in

new payments annually into provincial forests funds across the country. The update also created more flexibility in the use of PFES funds, such as allowing five percent of payments to be used for drought and natural disaster response.

A second major initiative of VFD addressed a policy gap related to coastal forest management. Due to GVN institutional structures and mandates, coastal forests often were neglected or overlooked in policy and forest management guidelines. This was due to a number of factors, including a traditional focus on forests as a source of timber, resulting in policies that focused on upland forests, as well as overlapping mandates in which forests such as mangroves that grow in tidal areas were often classified as marine resources and therefore separate from forest lands. Given the increasing emphasis on the benefits of coastal forests and the role that they play in increasing coastal reliance, providing storm and wind breaks from typhoons, and serving as a valuable carbon sink to mitigate climate change, Vietnam had prioritized development of a cohesive coastal forest decree. Finalizing the policy, however, had proven difficult for GVN and other donors because of the challenges of coordinating across ministries and clarifying roles and responsibilities. In this same context, the World Bank had added a powerful incentive to pass such a policy by linking a potential US\$150 million investment in a new coastal forest modernization program to a number of steps, including the development of a coastal forests decree. VFD therefore stepped into this challenging role and worked closely with MARD policy-makers to conduct a series of analyses and consultative discussions that resulted in the development of a new national decree on "Protection and Management of Vietnam's Coastal Forest," to strengthen co-management mechanisms, establish private sector investment modalities, and mandate conservation and restoration planning from the central level. The new Decree 119/2016/ND-CP was officially approved by the Prime Minister in August 2016 and created an important foundation for new activities and investment in coastal areas in Vietnam. MARD and



VFD held a national workshop in late 2016 chaired by the Vice Minister of MARD to officially launch the decree. The new policy created an important foundation for new activities and investment in coastal areas in Vietnam. This included the World Bank's new US\$150 million program on coastal forest modernization that was approved in 2017, based in part on VFD's support with the coastal forest decree and technical assistance provided by VFD to MARD on data collection and safeguards mechanism development.

A final key policy outcome of VFD involved collaboration with the Vietnam Forestry Administration to develop a new policy on the management of natural production forests. These

production forests account for over 60% of all natural forests in the country, but are unique in that most production forests in Vietnam were historically managed as plantation forests. Based on VFD technical analysis and policy drafting support, Decision No. 49/2016/QĐ-TTg on natural production forest management was approved in 2016. This passage of this policy symbolized a shift away from traditional forest management thinking that valued forest stocks as a source of timber and economic exploitation. It helped move Vietnam towards management of forests for non-timber forest products and maintenance of critical ecosystem services, such as water retention and carbon sequestration services.

Improving coordination with national stakeholders to promote sharing of experiences and lessons learned



2016 Red River Delta Symposium in Hai Phong city

Finally, VFD played a critical role in coordinating and convening different development initiatives to more effectively share lessons learned and enhance linkages between different development activities. The biggest success was VFD's facilitation of an inter-provincial network in the Red River Delta to improve a coordinated response to climate change. Early on, VFD recognized that the Red River Delta faced many significant climate change risks, such as typhoons, storm surge, and salinity intrusion, and yet the vast majority of donor support focused on the Mekong Delta. This provided an opportunity for VFD and USAID to step into a key gap, define a clear role, and help bring more visibility and investment to this under-resourced region. Like many of VFD's activities in Component 3, the work began from activities in one of the project's technical components – this time climate change planning in Nam Dinh within the Adaptation component. While working with Nam Dinh to identify climate change risks and

develop a Climate Change Action Plan (CCAP), it quickly became apparent that working in Nam Dinh in isolation from the other provinces of the Red River Delta would be ineffective. The VFD team then began to reach out to other provinces in the northern delta region and MARD counterparts to set a strategy to engage all provinces in the region in developing a more comprehensive approach to addressing climate change.

To start, VFD worked with the respective PPCs in each of the five provinces (Nam Dinh, Ninh Binh, Thai Binh, Hai Phong, and Quang Ninh) to establish task forces to review climate change risks, identify priorities for each province's CCAP, and begin to operationalize their inter-provincial coordination. To supplement this, VFD organized a study tour for provincial leaders to learn from Danang's innovative climate committee about how the city was developing its own action plans for responding to climate change. To facilitate

dialogue and advocacy from the Red River Delta, VFD successfully organized two Red River Delta Symposia, the second of which in 2016 highlighted a joint investment proposal for inter-provincial collaboration on common climate change challenges and prioritized mangrove protection and restoration for GVN submission to donors and investment banks. The U.S. Ambassador joined the 2016 Symposium, where the Government Office, MPI, and Ministry of Natural Resources and the Environment (MONRE) demonstrated strong GVN support to the inter-provincial effort. KfW, the German Development Bank, announced that it would allocate up to US\$13 million for climate change programs in the Red River Delta. The regional cooperation and joint proposal bore even greater results in 2017, when the World Bank approved a new US\$150 million coastal forest program based in part on the strong commitment of the Red River Delta provinces.



Mr. Le Quoc Doanh

Vice Minister of MARD highlights the benefits of the Red River Delta Symposium

“The symposium is a place for us to share the challenges faced by the Red River Delta provinces, and is the first step for us to be able to work together more closely on issues relating to climate change from government to non-governmental organizations, private sector, and farmers as well. Through this symposium, we will better understand the main vulnerabilities of the region and will look for solutions to address them in a coherent way.”

A second area of coordination was around climate smart agriculture (CSA). With climate change a top priority for GVN overall and MARD in particular, a wide range of NGOs, donor-funded projects, and GVN initiatives focused on how to improve livelihoods of local farmers within the context of climate change. This created a deluge of information about different CSA practices, resources available for practitioners and policy makers, and different models for various contexts. To help consolidate and summarize this diverse set of information, VFD worked closely with MARD’s International Cooperation Department to complete a best practice assessment and documentation of CSA measures/practices in Vietnam. This helped form the basis of an international resource mobilization strategy for sustainable CSA development and implementation that Vietnam used following the Paris Agreement to support its agriculture sector. In 2017, the results

of this review, along with several VFD-supported livelihoods models, were presented at an Asia-Pacific Economic Cooperation (APEC) event on food security in Can Tho City. VFD continued to build on this review in 2018 by working with MARD’s Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD) to develop a web-based portal that allows visitors to access a map and database of CSA best practices across the country. The portal is hosted on MARD’s website and accessible to any CSA practitioners interested in learning more about CSA models throughout Vietnam. This tool provides access to a wide range of data about improved CSA models that support more sustainable land use practices around the country.

Lessons learned

A national policy and coordination component increases project ownership and engagement by national government partners

VFD's National Policy and Coordination component provided a wide range of technical benefits, including opportunities to influence and develop national policy like the valuable coastal forests decree. It also enabled VFD to work with influential institutions like the Ho Chi Minh Academy and Vietnam National University of Forestry to develop new curricula to empower future leaders and forest managers in Vietnam. However, the addition of this component at the project approval stage ended up providing greater benefits beyond just the technical outputs and impacts – namely, it created a package of activities owned by MARD project managers at the central level. Unlike activities in the Sustainable Landscapes and Adaptation components that were mostly influenced by provincial government partners, Component 3 work allowed MARD at the central level to identify priority areas where the project could help them achieve their goals. This increased the project ownership by MARD partners, while incentivizing and motivating them to work with the VFD team to identify opportunities for project activities that can provide positive impact. While planning activities and monitoring implementation under this component required an additional layer of coordination and communication with MARD partners that at times proved to be challenging, it is likely that VFD never would have been able to achieve the high level of visibility, appreciation, and success at the national level as it did without having this component added to the project.

It is impossible to address climate change within administrative boundaries

One key lesson from VFD's work in the Red River Deltas was that it is impossible to develop effective climate change strategies within one province, while ignoring neighboring provinces that are often dealing with the same issues and whose plans may directly impact the ability to, for example, manage flood waters. Within the Red River Delta landscape, each province's strategies, plans, and responses have to be closely coordinated. This has proven to be a success of the Mekong Delta, where provinces are able to coordinate requests to increase water flows from upstream areas during drought conditions. VFD's Red River Delta Symposium proved to be a valuable mechanism to both coordinate provinces and to be a catalyst to advocate for and secure increased climate change funding for the region.

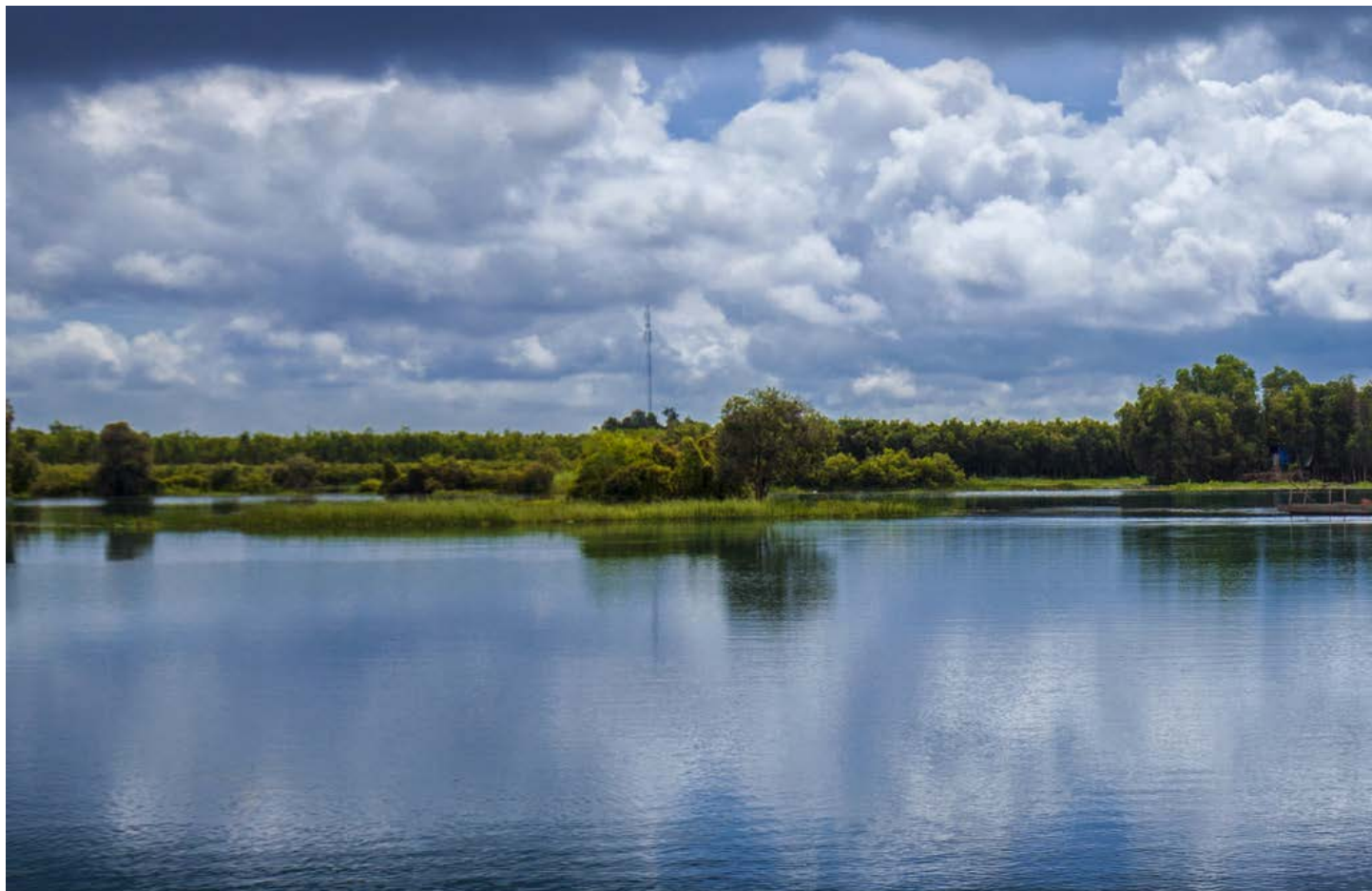


Capacity building

A scaffolding approach to capacity building proved to be very successful for VFD, most notably in the development of basic climate change curriculum with HCMA. Instead of providing training and pre-developed materials, which could have simply created dependency and lack of ownership, VFD applied a scaffolding approach by encouraging HCMA to independently and critically develop a syllabus relevant to the context of their disciplines. Initially, HCMA lecturers were challenged by the process and had to do additional research on climate change. VFD provided additional support for the lecturers by inviting top experts on climate change in Vietnam and from the US Forest Service to provide technical expertise, as well as experts in facilitation and active learning. These experts brought knowledge and tools as needed and worked in consultation with the HCMA lecturers. As the HCMA key lecturers gained confidence and competency, the scaffolding of the advisors could be gradually reduced. At the end of the process, they were able to carry out climate change education to leaders with quality, autonomy, and confidence, thereby increasing the sustainability of these outcomes.



Next steps and opportunities to scale up success



One of the most exciting results of VFD was the ability to bring together the five provinces of the Red River Delta to build an inter-provincial collaboration to address climate change challenges facing the region. Unlike the heavily resourced Mekong Delta, which benefits from a series of official and unofficial collaborative bodies that enable provinces in the Mekong to collectively negotiate with upstream countries and companies to release water during times of drought, the Red River Delta had so far lacked this type of collective action. By working first with each of the five provinces' PPCs to develop their respective provincial CCAPs and then convening the provinces to collectively highlight their shared challenges and needs in two Red River Delta Symposia, VFD was able to amplify their shared voice to successfully mobilize funding from donors like the World Bank and KfW to support their priorities

of mangrove protection and restoration. Given that USAID/Vietnam adaptation funding effectively ended with the first phase of VFD in 2018, the project has had limited opportunities to follow up directly to continue to build on this promising start in the Red River Delta. However, as evidenced by ongoing communication with local leaders, levels of local enthusiasm for regional cooperation remain high. Therefore, other projects and initiatives have an opportunity to breathe life into Red River Delta Symposia and interprovincial collaboration on climate change. With anticipated increased interest in climate change and resilience as the US Government reengages in the Paris Agreement and prioritizes climate change as a global threat, this Red River Delta network stands ready to engage in new initiatives to assist this vulnerable and under resourced region.



A second key opportunity comes from the operational and management perspective of implementing USAID-funded programs in Vietnam. As discussed above, the addition of a national level policy and coordination component to VFD during the project approval provided great benefits both in terms of technical results and strengthening relationships and commitment with key national-level government partners. Given that most projects are designed primarily with an emphasis on achieving results based on a technical results framework, these relationship benefits are often overlooked but are nonetheless vital. Given that two new USAID-funded environment programs (Sustainable Forest Management and the Biodiversity Conservation Activity) are still in their early stages working with MARD counterparts, and additional projects are expected to start in the coming years, it will be extremely beneficial for them to establish feedback mechanisms like VFD's Component 3 to link policy development at the national level and field work in the provinces. New policies can be rolled out in project areas, and gaps identified in field work can be shared with the national level to inform new policy development initiatives.

Gender

Gender mainstreaming was a fundamental principle of VFD, reflecting USAID's Gender Equality and Female Empowerment Policy as well as Vietnam's Ministry of Agriculture and Rural Development's Gender Equality Action Plan 2010-2015. VFD's early analysis in the program's target provinces indicated significant gender gaps in access to resources as well as power to participate and to make decisions, especially in the forestry sector and in disadvantaged mountainous areas. As a result, VFD made several targeted interventions to address these gaps.



First, the project made a strategic decision to partner with women's unions at the provincial and local levels. This approach emphasized local capacity building to improve knowledge and skills of women's unions and establish lasting support networks for local groups to receive technical support after VFD ended. Two key areas where women's unions proved strong partners were in climate resilient livelihoods activities, where women's unions served as both training recipients and as facilitators of training events, and disaster risk management activities, where women's unions served as key local leaders in disaster preparedness drills and ERTs. VFD also worked through women's unions as a strong channel for amplifying VFD's communication activities to advocate for improved disaster preparedness and highlight improved livelihood options for local women. For example, in Nghe An, women played a key role in the success of the non-timber forest product (NTFP) bon bo model and community forest management, with 60-80% of participants who were women. Women also served as agents to introduce and supply improved cook stoves, which use less wood and therefore reduce fuelwood extraction in rural villages. Sales agents established by women unions sold more than 1,500

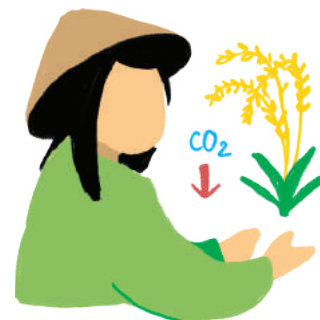
improved stoves. Based on this success, other projects like "EnDev" began collaborating with VFD and the Thanh Hoa and Nghe An women's unions, with EnDev further promoting improved cook stoves by providing an incentive of US\$5 per stove sold in the two provinces. Additionally, in Long An and Nam Dinh, women's unions were active players in communicating the low emission rice models.



In Nghe An, women played a key role in the success of the NTFP bon bo model and community forest management, with 60-80% of participants who were women



Sales agents established by women unions sold more than 1,500 improved stoves



In Long An and Nam Dinh, women's unions were active players in communicating the low emission rice models



Furthermore, in response to the realization that agriculture extension staff in Long An had poor awareness of the division of labor and women's roles in rice value chains, VFD supported an in-house training on gender analysis in the rice value chain. The training was followed by a gender analysis conducted in four communes of Can Duoc and Tan Thanh districts by the trainees, which helped them understand the impacts of gender norms and roles in the local community, particularly concerning access to and control of resources, labor division, and the decision-making power of men and women in the rice value chain.



At the national level, VFD provided technical support to organizers of the Asia and Pacific Regional conference on Gender and DRR, with participation of 300 participants from Vietnam and twenty-two countries across the Asia-Pacific region. The conference sought to identify actions to ensure that implementation of the Sendai Framework⁴ in the region was gender responsive and inclusive. The program also collaborated with the Disaster Management Center (DMC) and UNWOMEN in developing and piloting national guidelines on gender mainstreaming in CBDRA and CBDRM.



In Thanh Hoa province, VFD developed a useful model for how communities can jointly receive, manage, and benefit from PFES payments in a way that does not exacerbate gender inequality. In areas where PFES payments are made only at the household level, often times the husband receives the payment and decides how to spend it. The PFES village regulation created a framework for the community as a whole, including both women and men, to decide how PFES payments should be used. As a part of this process, five villages decided to use the PFES payments as seed money for a women-led savings funds. These funds involved 145 women from five villages and were financed by VND 107 million (US\$ 4,713) from PFES funds and VND 311 million (US\$ 13,700) from members' personal savings. In addition to the economic benefits for women, the initiative has created significant change in the communities, with members of the women's savings groups now managing and operating the funds themselves successfully – a role traditionally played by men in the village. The village management boards and citizens highly appreciated the impact of the women's saving funds and recognized the women's leadership abilities. This activity was scaled up to a greater impact in VFD's Phase 2.



In Tien Lang district, Hai Phong province, VFD worked with the USAID Tenure and Global Climate Change (TGCC) project to build capacity and enhance participation of women in community-based coastal spatial planning. Women played an important role in decision-making to identify current land use practices and identify priority future needs. The inputs contributed to the development of a proposed coastal spatial plan to meet community needs and also provide important coastal protection benefits. VFD and TGCC documented the significant changes and lessons learned in gender integration in community

based spatial coastal planning through two gender briefs^{5,6} that provide perspectives on the differentiated character of land and resource rights, natural resource use, and power dynamics in decision-making. They also highlight successful women pioneers in roles where women have traditionally been underrepresented. The briefs also feature men who demonstrate significant changes in attitudes that were then transferred into specific actions to benefit women. Their stories inspire initiatives to empower women and create transformative change leading to gender equality among coastal communities.

⁴ *The Sendai Framework for Disaster Risk Reduction (2015-2030) is endorsed by the UN General Assembly as the key international agreement on disaster risk reduction.*

⁵ *Gender Brief #1: Why gender matters in sustainable coastal resource management within Vietnam's mangrove forests*

⁶ *Gender Brief #2: Positive Steps towards Gender Equality in Participatory Coastal Spatial Planning.*

Phase 2





In the first six years of the activity, VFD's project team and local partners made significant achievements in the areas of sustainable landscapes, disaster risk reduction in delta areas, climate smart agriculture, and national policy and coordination. In 2018, the project transitioned into a new phase focused specifically on improving the efficacy and efficiency of Vietnam's payment for forest environmental services (PFES) mechanism. The focus on PFES resulted from close consultation between USAID and GVN and linked respective strategic priorities. For USAID, it meant a pivot away from explicit climate change programming, while for GVN it emphasized expanding non-state budget support to the forestry sector. For both, it presented an opportunity to support Vietnam's Journey to Self-Reliance.

After the passage of the national PFES Decree 99 in 2010, Vietnam's PFES mechanism became an international model for how to incentivize forest protection and management by having downstream water users pay for forest conservation in upstream watersheds. With this mechanism established and annual revenues approaching US\$100 million, VFD began work with MARD in 2018 to improve the PFES mechanism to make transactions more efficient, more effectively monitor and evaluate progress, and expand to new sectors and forest environmental services.

E-payment



In 2018, as the second phase of VFD began, the system of PFES payment distribution to forest environmental service providers in Vietnam was functional. However, there were a number of opportunities to optimize the system to be more efficient, transparent, and secure. At that time, the PFES service user, or “buyer,” made payments into the central or provincial forest protection and development fund. From there, payments were distributed to forest-owner organizations, households, or communities through a series of transfers, as outlined in Figure 3, below.

Some of these payments (at the higher levels) were completed via bank transfer, but the vast majority of payments to forest-owner households and community groups were made in cash. Completing cash transactions required a team from the forest management board (FMB), local forest protection department (FPD), forest protection and development

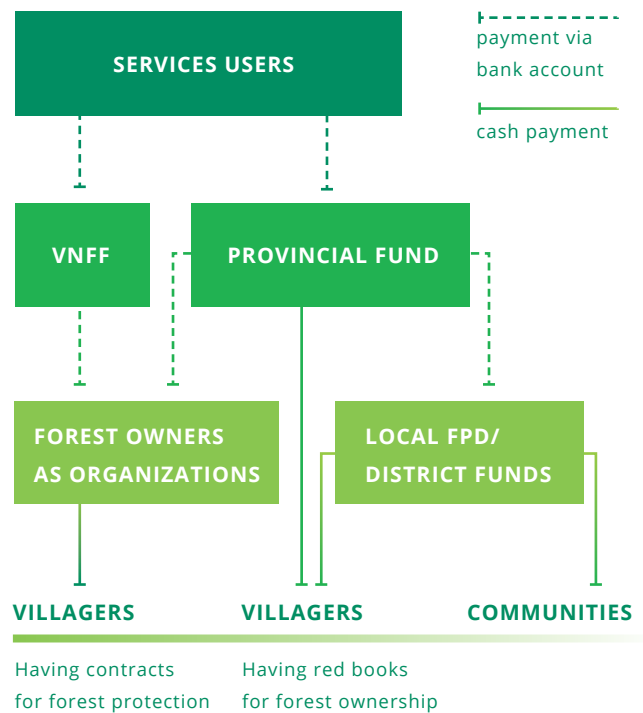


FIGURE 3: COMMON PFES PAYMENT FLOWS AT THE BEGINNING OF VFD PHASE 2



fund (FPDF), or service provider, such as a local bank, to travel to a commune center or village with cash in hand, make payments to households, and record the transactions. This process created security risks for the teams carrying cash long distances to rural areas, as well as for households and communities that had just received a large influx of cash. This system was also inefficient, with significant labor and travel that increased transaction costs. On top of the risks, inefficiencies, and high transaction costs, there was a greater risk of the payment teams demanding kickbacks or other “fees” from recipient households, which reduced confidence in the system and lowered the amount of revenue going to forest protection and local households.

This context provided the framing for VFD Phase 2 to collaborate with VNFF, provincial funds, forest owners, and financial service providers to develop tailored electronic payment solutions designed

to increase transparency; reduce provincial fund and/or FMB staff time, travel, and security risk; and streamline the payment and record-keeping process. All stakeholders recognized that payment mechanisms must be designed in alignment with the specific local context and forest owners’ needs. For example, many households receiving PFES live in relatively remote areas with limited access to financial services, and many forest-owning households are from ethnic minority groups or other marginalized communities who may have limited basic and financial literacy. VFD planned to focus on “last mile” payments to ensure that a broad group of beneficiaries were safely able to access the funds with the lowest transaction costs and risks.

Main activities and key results

VFD's e-payment work began in 2018, starting with a thorough review of different e-payment options available to provincial FPDFs. By late 2018, VFD and officials from the Son La and Lam Dong provincial funds decided to prioritize resources on training and implementation of ViettelPay. This e-payment mechanism was seen as the most promising because of its wide geographic coverage. This differs from banks, which require customers to be physically close to a bank branch or be available on the limited days when bank staff travel to commune or village meeting areas. ViettelPay was also free, unlike banks or many other e-payment options with more complex fee structures. Lastly, ViettelPay was easy to use, unlike banks, which require a user to complete forms to open an account opening, which can be especially difficult for rural households with limited literacy. Each province identified pilot areas, and VFD and ViettelPay staff conducted a series of trainings for provincial FPDF staff and forest owners. In FY19, the first VFD-supported e-payments via ViettelPay were made to 530 households in Son La and to 1,951 households in Lam Dong province. One notable positive impact of the initial e-payments in Son La and Lam Dong was that the tool was usable by local ethnic minority communities, many of whom have limited literacy skills.

As both Son La and Lam Dong rolled out e-payments to forest owner households in late 2019, the project worked closely with Viettel and provincial funds in Son La and Lam Dong to expand the use of ViettelPay from just forest owner households to forest owner community groups. One of the initial limitations of ViettelPay was that it is designed for a payment to be transferred to one phone number, which meant that only one person could receive information about the payment and have access to the funds. For forest owner community groups with payments being shared by multiple households, this was a major constraint to receiving e-payments. To ensure that forest owner community groups could receive e-payments, VFD and Viettel developed a modified version of the tool that required multiple "administrators" to approve payment withdrawal. These controls reduced the risk of an unscrupulous leader who might take all the PFES payments. The tool was finalized, and testing began in early FY20 in 32 villages in Son La.



2019

530
1,951

The first VFD-supported e-payments via ViettelPay were made to households in Son La and to households in Lam Dong province



E-payment by the numbers

32 villages in Son La received PFES funds through ViettelPay community accounts in 2020

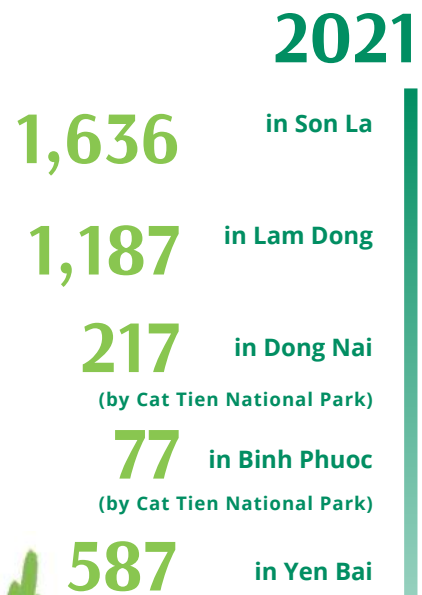
87 provincial fund directors and accountants

105 participants from

60 provincial fund technical staff were introduced the E-payment guidelines

25 provinces across Vietnam participated in a Community of Practice (COP) for e-payment in July 2019

4 evaluations of e-payment in Son La, Lam Dong, Thanh Hoa, and Yen Bai provinces



HOUSEHOLDS RECEIVING PFES FUNDS THROUGH VIETTELPAI

To increase cross-provincial collaboration and build a network for sharing e-payment experiences, VFD, the US Forest Service (USFS), and VNFF held a Community of Practice (COP) for e-payment in July 2019, bringing together 105 participants from 25 provinces across Vietnam that applied different e-payment tools. The event provided an opportunity for forest owners, PFES managers, and other stakeholders from the provinces to learn from each other, share challenges, and identify solutions to obstacles. As with previous VFD COP events, the forum created a unique connection between provinces, allowing participants to remain connected after the event to share ongoing experiences, information, and opportunities for improving e-payment. One unanticipated outcome of the event was the creation of a Zalo instant messaging group for all COP participants. Originally created to share meeting materials with participants, the group remained active after the event, and it continued to be used throughout 2021

for participants to ask each other questions, seek feedback, and remain connected in an informal support network on PFES e-payment. This highlighted the commitment of PFES practitioners to improve the PFES mechanism and the simple but effective role that ordinary communications technology can play in linking PFES practitioners around the country.

As PFES e-payment continued to expand throughout Vietnam in FY20, VFD conducted a series of four evaluations of e-payment in Son La, Lam Dong, Thanh Hoa, and Yen Bai provinces to identify strengths and weaknesses of different PFES e-payment models being implemented in the four provinces. VFD and VNFF visited Son La (ViettelPay and bank transfer), Lam Dong (ViettelPay and bank transfer), Thanh Hoa (VietPost and bank transfer) and Yen Bai (ViettelPay and bank transfer). The field trips identified several lessons learned and differences in implementation of e-payment in the different provinces. These included:



CoP event for e-payment in July 2019



Mr. Le Van Thanh
Deputy Director of VNFF

“These new e-payments guidelines that VFD helped develop are aimed to help provinces comply with the Ministry’s policies, and guide local forest funds in each step of implementing e-payment. New e-payments will help provincial funds save money, time and human resources, and will help create more transparency in PFES payments.”

- Some e-payment service providers still paid forest owners in cash, which runs contrary to the fundamental objectives of e-payment to reduce transaction costs, increase transparency, and accelerate the payment process. For example, VietPost and some banks received an electronic transfer from the provincial fund and then delivered cash to forest owners – at times requiring provincial fund staff to join for monitoring purposes. In these cases, the only advantage to the provincial funds was reduced responsibility for the final transfer. ViettelPay remained one of the few, if not the only, e-payment mechanism that resulted in an electronic transfer being delivered to each forest owner using the service.
- Service providers seemed to have different policies in different locations. For example, the Vietnam Bank of Social Policy opened bank accounts for forest owners in Son La to access PFES, while in Yen Bai the same bank reported that they were not allowed to open personal accounts. Meanwhile, Viettel in Son La and Lam Dong actively collaborated with the respective provincial funds, but Viettel in Yen Bai said they could not support the Yen Bai provincial fund without more direction from its headquarters.
- Though guidelines for making PFES payment via bank account had been available for approximately one year, many provincial fund staff and forest owners in Yen Bai were not aware such guidelines existed. This highlighted the need for an effective communication and dissemination strategy for any PFES policy guidelines once they were complete.

Based on the findings of the four provincial e-payment evaluations, and VFD’s own experience developing and implementing e-payment processes in Son La and Lam Dong, the team developed national e-payment guidelines for use by provincial FPDFs. The guidelines were developed in close consultation with VNFF and provincial funds, and in late FY2020 VNFF officially approved the e-payment guidelines for nationwide adoption. This was a noteworthy accomplishment that provides essential guidance to all 45 PFES provinces on how to effectively implement e-payment in a structured and coordinated way. Prior to the development of these guidelines, provinces were learning by doing and testing their own approaches to transition to e-payment. To institutionalize the newly approved e-payment guidelines, VFD held two events to officially launch and introduce the guidelines to 45 provincial funds and key forest owner organizations. The first event in Vung Tau in October 2020 targeted 87 provincial fund directors and accountants, and the second in Quy Nhon in December 2020 was a technical training for 60 provincial fund technical staff.

Lessons learned

The transition to e-payment methods requires ongoing behavior change communications and support

Despite clear advantages such as time-savings and increased transparency recognized by provincial funds and organizational forest owners, complex barriers remain to full adoption and roll out of e-payment for PFES in some areas. Some provinces recognized ViettelPay as their most effective tool for e-payment in workshops and meetings but remain hesitant to issue official recommendations or written guidance. A number of factors contribute to this reluctance, including lobbying and incentives offered to decision-makers by other e-payment providers such as banks. In addition, cash remains a preferred method of conducting transactions in many areas, and some provincial funds are reluctant to be seen as imposing a non-cash payment on local communities. However, it is noteworthy that with each round of successful e-payments, the understanding and appreciation seems to grow in communities. Therefore, VFD anticipates that while behavior change will take time, support will grow as time passes and additional successful e-payment are completed.

Establishing e-payment mechanisms highlights issues in documentation of land ownership

In one round of opening e-payment accounts, the Lam Dong fund could only open accounts for 79% of their forest owner households. The remaining households (around 300) were unable to open their accounts due to unclear land ownership because the name on the forest landowner red book certificate did not match the name of actual current owner. Red books are issued to local forest owners as part of the Government of Vietnam's approach to allocating forest land to local households and communities and demonstrate proof of ownership and responsibility to maintain forest cover. In order to open e-payment accounts, forest owners must provide personal ID, a registered mobile phone number, and proof of forest land ownership. When

receiving PFES by cash, individuals only need to provide personal ID, so there is no check on whether the land is owned by the same individual as is named in the red book. The need for accurate updated forest land ownership data as documented in red books is a challenge in all four VFD provinces and highlights a need to build on VFD's support to improve the accuracy of red book data and documentation.

Ethnic minority households are able to effectively use new technologies like ViettelPay for PFES e-payment but require targeted communications and training

One notable positive impact of the initial e-payments in Son La and Lam Dong was that the tool was accessible to and used by local ethnic minority communities. One of the early concerns about ViettelPay was that it would be difficult to use by ethnic minority communities, many of whom have limited Vietnamese literacy and experience working with new technology. Indeed, provincial fund and Viettel staff experienced challenges when first introducing the tool to illiterate and non-Vietnamese speaking households. However, VFD utilized a targeted strategy combining training sessions using trainers from the community and a series of visual training materials and keychains with key reference information to target communities with limited literacy. Following these trainings using more visual materials and a second round of e-payment, many ethnic minority households demonstrated their ability to use the tool and expressed a high level of confidence to be able to continue using e-payment in the future. This is an important lesson, as some other provinces in Vietnam have tried to roll out e-payment in rural areas without specific communications and training for ethnic minority households and have experienced issues with ethnic minority communities being unable to access the e-payment tool. VFD has proven that ethnic minority households are able to use these new technologies if they receive effective support.

Next steps and opportunities to scale up success



By the final year of VFD implementation, e-payment advanced significantly in the 45 provinces implementing PFES. At the beginning of Phase 2 in 2018, MARD announced a requirement for provincial FPDFs to move from cash payment to e-payment, and provinces were just beginning to try different tools such as bank payment and payment via post office. VFD's engagement with ViettelPay and work with Son La and Lam Dong provinces served as a successful demonstration of the benefits of ViettelPay and e-payment, and by the end of FY2020, approximately 13 provinces were using ViettelPay for PFES e-payments – demonstrating the replicability of the tool and impact of VFD's work. However, a number of important next steps remain important to ensuring sustainability, expansion, and continued impact, including:

Continue engagement with VNFF and provincial funds to promote non-cash payment.

Many provincial funds continue to use payment methods that involve an electronic transfer from the fund to the service provider, but the service provider in turn still makes a cash payment to forest owners. Such processes meet the MARD requirement for making an electronic payment because the provincial fund has transferred payment electronically, but these payment practices dilute the benefits of e-payment, as transaction costs remain high (sometimes even higher due to duplicative travel of a service provider like VietPost and provincial fund staff), reduce efficiencies, and do not add transparency to the payment process. However, provincial funds may prefer such methods because they pass off responsibility for the final payment to forest owners and put the risk of completing payments effectively and on time onto the service provider. Future projects and initiatives can promote the benefits of true non-cash payment along the entire payment process from fund to forest owner to improve payment processes.

Although consumers have begun using electronic payment methods for different transactions, local households and communities need more time to fully adopt these tools.

Cash is still preferred in Vietnam, especially in rural areas. While electronic transaction methods are common in urban areas, they have not yet become common practice for forest communities. Towards the end of VFD, more vendors and restaurants in rural areas offered payment via ViettelPay. The increased availability of e-payment will lead to a gradual increase in household and community recognition of the benefits of ViettelPay, as more households and communities share their experience adopting this and other emerging e-payment tools.

VNFF and provincial funds will need to provide continued support as more electronic payment options become available.

Vietnam is now showing a sudden burst of new e-payment and e-wallet options, including MoMo, Zalopay, and Moca. Consumer preferences and additional services provided by these new providers will create new opportunities for PFES e-payment as well as challenges for PFES funds that may not be flexible enough in their operations to utilize new services as they emerge. Some provincial funds have expressed interest in being able to offer a "menu" of e-payment options in the future for forest owners to choose from based on popular providers, but so far most funds are simply working with one provider for one area. Some funds have been forced to sign relatively long-term contracts with the providers, which could limit their flexibility to start offering other options in the future. Projects can continue to work with provincial funds to better understand the e-payment market and ensure that internal accounting systems are set up to be flexible enough to apply multiple and/or new options.

PFES Monitoring & Evaluation (M&E)

Although PFES successfully generated revenue and established a sustainable financing mechanism for forest protection in Vietnam, significant questions remain about the ultimate impact of PFES.

Notably, what is the extent to which successful introduction and gradual expansion of PFES contributes to improved forest quality and cover and improved livelihoods? When VFD Phase 2 began in 2018, VNFF and MARD monitored only a small number of high-level indicators, including the amount of revenue generated, number of households receiving payments, number of payments made, and forest cover under PFES. These indicators were insufficient to assess the effectiveness of the PFES system in meeting its goals of improving forest quality and socio-economic outcomes.

To address this, VFD partnered with MARD and VNFF to develop a robust monitoring system to gather data on a comprehensive range of environmental, social, and operational PFES indicators and efficiently report that data to inform decision-making on policy measures and improve the effectiveness of PFES. This began in 2018, when VFD engaged in a stakeholder-driven process at the local, provincial, and national levels to ensure that high-quality, relevant, and actionable data was systematically collected to demonstrate whether PFES was achieving its goals. VFD's PFES M&E built on work in Phase 1 with Son La province to develop a set of indicators to assess PFES outcomes and results and outline data sharing requirements between different departments to effectively gather data on these indicators.



Disclaimer: This map is for illustrative purposes.

It may not be spatially accurate, and is not intended to be used for official purposes.

Main activities and key results

The goal of VFD’s PFES M&E activities was to support VNFF and provincial FPDFs to establish and operate their own comprehensive M&E system to enable more effective planning and decision-making. The aim of the system was to help VNFF and FPDF staff work together to achieve the overall goal of PFES - to protect forests, improve forest quality, and contribute to socio-economic development. To achieve the goal, VFD took several steps:

- 1 Assess the current PFES M&E processes including related government policies, available M&E personnel in each province, current M&E activities, and the main challenges with the current approaches;
- 2 Develop an improved system in coordination with VNFF, including an M&E results framework, tools, guidelines, software, and M&E plans;
- 3 Train leaders and staff to understand the M&E system; and
- 4 Implement the system by collecting, analyzing, and reporting data.

MAIN COMPONENTS OF VFD PFES M&E SYSTEM

M&E Framework, including goals, objectives, indicators

Tools and templates for data collection and management

M&E Guidelines defined indicators, data sources, timelines

M&E Platform for data entry and management, developed with Microsoft

M&E Plan outlined detailed roles and responsibilities for implementing M&E system



99 FPDF technical staff from 45 provinces in Vietnam were trained on how to implement the M&E guidelines



1 web-based M&E platform to support VNFF and provincial FPDFs in managing their M&E data



1,700 households across 22,000 hectares of forest benefited from the red book activity

M&E Concepts, Frameworks, and Guidelines

VFD's PFES M&E activities introduced new M&E concepts, built awareness of the benefits of M&E, and developed tools and frameworks to enable provincial FPDFs to collect data to build an evidence base demonstrating PFES success. In the early stages, VFD realized that VNFF and FPDF lacked fundamental knowledge on the concepts of M&E. They perceived M&E as primarily an audit function related to financial oversight as opposed to a management tool that could be used for learning and increased effectiveness. Building belief in the value of M&E required increased trust and culture change within VNFF and provincial FPDFs. Collecting, analyzing, and reporting data required confidence that staff would not be punished for underperformance and understanding that an improved knowledge of PFES functionality would help them perform even better. Initially, it proved quite challenging to change the mindset of fund staff. However, through a series of small meetings, workshops, and demonstrations of existing M&E functions and processes, VFD built trust and awareness of how improved M&E practices can benefit VNFF and FPDF staff.

SAMPLE INDICATORS

- Funds used for forest protection
- Number of forest violations in PFES areas
- Percentage of payments made through e-payment
- Percentage of payments made in a timely manner
- Ratio of ethnic minority households receiving benefits
- Ratio of poor households receiving benefits

As VFD built momentum and buy-in for the idea of PFES M&E, VFD helped three provincial funds (Son La, Lam Dong, and Thanh Hoa) each develop their own PFES M&E framework that articulated province-specific PFES goals, intermediate objectives, and indicators to assess performance. The completed frameworks equipped provinces with a systematic approach for the first time, and provided guidance on specific data collection methods, responsible parties, and reporting protocols. The M&E frameworks represented a significant advance for provinces that previously had previously only collected, analyzed, and reported data on an ad hoc basis, without any consistent process for data collection and management.

Building on the three pilot provincial M&E frameworks from Lam Dong, Thanh Hoa, and Son La, VFD worked closely with VNFF to develop national M&E guidelines to serve as the guiding directive for M&E across the 45 PFES provinces. The process was highly collaborative and incorporated multiple rounds of feedback from relevant departments in VNFF and provinces. The guidelines were approved by VNFF in September 2020 and represented a major accomplishment in the PFES program. The guidelines ensure that, for the first time, all 45 provinces that participate in PFES will use a consistent process of monitoring, evaluation, and reporting with common indicators that provide a comprehensive picture of PFES performance. To ensure that VNFF and FPDFs were able to fully institutionalize and implement the M&E guidelines, VFD took a two-pronged approach to sensitize provincial leaders and increase political will to apply PFES M&E, while also providing practical training to FPDF technical staff on how to understand M&E tools and approaches. VFD held a national rollout workshop in October 2020 to introduce the M&E guidelines to leaders from all 45 provinces in Vietnam and then provided technical training for 99 FPDF technical staff on how to implement the guidelines.

Data collection, management platform, and analysis

One major challenge of establishing a M&E system is efficient storage and management of data. Vietnam's PFES system requires an additional layer of complexity because each PFES province needs to collect, analyze, and report on distinct provincial indicators in addition to standard national indicators. It was clear that a flexible centralized database was needed to balance the complexity of managing a large amount of data with a simple, standardized interface that would allow for easy data entry and analysis by both the provincial and national levels.

VFD, with support from Microsoft, developed a web-based M&E platform to support VNFF and provincial FPDFs in managing their M&E data. It also enabled them to digitize reporting and standardize M&E data practices across the country. The M&E platform enables VNFF and provincial FPDFs to customize their indicators and reporting forms, while also meeting their standard reporting requirements on a national level. The platform also can quickly generate automated reports that provide rapid analysis without additional demands on fund staff.

Once the database was developed, VFD and Microsoft trained staff in the three pilot provinces on how to use the new M&E platform and worked with fund leaders to develop and implement data collection plans. By the end of 2020, staff from all three provinces successfully entered data into the platform, and the provinces prepared to use the platform for generating automated and custom reports, and to analyze PFES data to make conclusions about policy impact and necessary adjustments to improve PFES outcomes. Through the end of the project, VFD continued to work closely with Microsoft specialists and VNFF to ensure the platform worked well and updated it to integrate additional tools and reporting functions related to data entry and mapping functionality. VNFF and VFD completed the roll-out of the platform in early 2021 to provide additional coaching and training to VNFF and provincial fund staff who oversee operations and management of the platform.

Winrock and Microsoft joined forces in 2018 to develop a new web-based platform for PFES monitoring and evaluation. As part of a Microsoft initiative to educate government agencies on the advantages of cloud-based data management solutions, Microsoft provided a grant to VFD and access system developers to program the new platform. They also worked with VFD staff to train PFES managers on its use.



Ms. Lo Thi Thu Hang
M&E officer
Son La Forest Protection
and Development Fund

Ms. Lo Thi Thu Hang often encountered many difficulties when reviewing the province's PFES data. It was very time-consuming to check and filter separate huge datasets for more than 40,000 forest owners and their associated payment data. When the new M&E platform was launched in her province, Hang was very excited to see how it could simplify her work. Through VFD's training, she learned how the platform can help aggregate data and generate reports with a few key strokes. This is much quicker and easier than when she had to do such tasks manually in the past. She and her team see the quality of their reports improving with more accurate data on forest owners, forest cover, and payment rates. "The new M&E platform developed by VFD has many advantages," says Hang. "It's automatic, quick, and effective. It's the first time we have an M&E system that can help us in filtering data and reducing errors."

PFES Mapping

In Phase 2, VFD and its GVN partners noted that one of the major challenges to an effective PFES mechanism is the quality of PFES maps, which provide the foundation to the entire PFES payment process. PFES maps are used by provincial PFES managers to identify the area of forest land assigned to different forest owners, which in turn informs who gets PFES payments and how large the payments are. Improving the quality of PFES maps is complex because it requires integration of spatial and non-spatial data such as forest status, quality, and owner, as well as land tenure status.

To ensure that VNFF and the FPDFs in Lam Dong, Thanh Hoa, Son La, and Quang Ninh had adequate capacity to update PFES maps moving forward, VFD conducted GIS trainings for FPDF staff, VNFF, and organizational forest owners. Based on the training, trainees were able to understand the role PFES maps

play in the PFES process; collect and clean data from a variety of sources (watersheds, forest resource monitoring, geospatial data) to build PFES maps; and validate the data through processing and analyzing satellite images. The updated information is easier to access and more accurate for VNFF to analyze on a national level.

One of the key documents related to PFES mapping, and indeed to much of forest management in Vietnam, is the forest owner's forest land use certificate, or "red book." Red books are issued to local forest owners as part of the Government of Vietnam's approach to allocating forest land to local households and communities. Red book recipients have clear access rights to the forest area, but also clear responsibilities to protect the forest and not allow clearing of any trees. In many areas, the forest land allocation process was conducted nearly



20 years ago, without modern methods to clearly identify forest areas for each forest owner. As time has passed, with unclear boundaries, movements of households, and land use changes, many red books have become outdated or even forgotten. For PFES managers who rely on a red book as a clear documentation to validate a PFES payment, unclear forest land allocation presents a tremendous obstacle to developing an accurate PFES map and making accurate PFES payments.

VFD and Son La province identified Bac Yen district as having both a high need for red book review and strong leadership committed to dealing with the challenging situation of approaching households to collect old red books, review forest area, and reallocate updated red books. VFD worked with forest owners and villages in five communes to review old red books, identify inconsistencies with the current situation, and develop corrected maps. Once approved by local authorities, the updated red books were issued, benefitting 1,700 households across 22,000 hectares of forest.



Mr. Le Van Ky
Chairman of Bac Yen
District People's
Committee, Son La
province

“We were very happy about the red book review in Bac Yen. This activity brings many benefits to the people. First is the accuracy of PFES data of forest owners – with accurate ownership data, there will be no more conflict. One other benefit is that the land now is assigned to the community in a large total area, which will make it more attractive for forestry investment. This will help increase the forest coverage in the coming years. Then people will have even more resources besides PFES revenue. I think this is the biggest benefit to the people of Bac Yen.”



Lessons learned

Poor quality data significantly interferes with provincial funds' ability to make accurate PFES payments and ensure effective PFES administration.

Over the course of Phase 2, VFD continued to discover fundamental issues that provincial FPDFs face in data management and workflows. In working closely with the different provincial funds, VFD staff regularly observed errors in current PFES data. With approximately 300,000 records in Son La, it is impossible to check the errors manually. The impact of these errors becomes clear when provincial fund staff must calculate payment for all forest owners, which could take weeks or months for Son La staff to complete manually. In response, VFD developed tools for FPDFs to check and highlight errors automatically for revision, improving efficiency and accuracy of information. In addition, VFD developed a tool that allows staff to transfer and calculate data into the new government form for payment, which saves staff weeks of working time, allowing them to focus on other needed services.

Data quality can also impact the effectiveness of e-payment. In Son La, VFD, Viettel and the provincial fund were able to open more than 740 ViettelPay accounts for the first round of e-payments in December 2018. However, when the payment process was initiated, only 530 accounts successfully received the payment transaction. This was because most accounts were opened based on a list submitted by forest owners, which differed from the provincial fund's list of PFES recipients. Based on this experience, VFD has worked closely with provincial funds and local partners to take more time for quality control and data checking of payment information prior to initiation of e-payments.

Improved data sharing within provincial departments required for PFES M&E.

When VFD began working closely with the Son La provincial FPDF to develop an improved M&E system for the province to monitor PFES effectiveness, it quickly became clear that the system would only be as effective as the data that was entered and analyzed. One of the major challenges was how to collect clean, accurate datasets from other departments in the province, particularly for forest cover and socio-economic indicators. To address this, VFD worked closely with the provincial fund and Provincial People's Committee (PPC) to develop a PPC-issued policy on data sharing responsibilities and procedures. While the policy was an important step in improving data sharing, implementation required a strong commitment from each department. VFD and the Son La Fund held a provincial consultation workshop in early 2018 to provide a platform for relevant stakeholders to discuss the decision and appropriate datasets for sharing.



Next steps and opportunities to scale up success

Reflecting on the progress made in improving PFES M&E systems and practices, it is clear the project achieved several key milestones, improved practices in target provinces, and made important strides in enhancing the M&E of PFES in Vietnam. This progress highlights the need for several important next steps to further institutionalize improved M&E practices throughout the PFES management system in Vietnam. More importantly, VFD's experience will enhance the ability of PFES managers to use M&E data for decision making and policy improvements.

Support full national roll-out and application of the PFES M&E platform developed with Microsoft.

By the end of VFD, three provinces (Son La, Lam Dong, and Thanh Hoa) had successfully begun using the M&E platform to manage data and generate reports. Two of the provinces expressed concern about using their data in the platform for reports because of low confidence in the quality of the data. For example, Lam Dong was still in the process of updating their PFES and wanted to get updated data on forest owners before confirming their full PFES was accurate for official reports. This first step with three provinces leaves the vast majority of Vietnam's 45 PFES provinces not yet trained on or using the M&E platform. However, VFD's experience has shown that the M&E platform can be scaled up and utilized to promote effect information sharing and learning. In the final months of the project, VFD worked to introduce the platform to additional provinces, and coordinated with new USAID projects to identify strategies for their continued support to improve application of the platform nationwide.

In the future, VFD expects that VNFF will support a comprehensive nationwide PFES map database, with data accessible to forest owners and policy-makers as well as universities and others interested in studying the success of PFES. This type of spatial database can be integrated within the new VFD-supported PFES M&E platform in a future update.



Further outreach is needed to shift mindsets from M&E as an audit function to an ongoing process and management tool.

In most discussions with PFES managers, especially at the provincial level, M&E is presented as being for the purpose of auditing financial transactions – a “check” that occurs one time and is then complete. VFD's approach to M&E awareness raising has been to present it as a management tool supported by ongoing data collection, analysis, and reporting. After nearly three years of work, a relatively small sub-set of M&E “champions” within the national and provincial funds have grasped this concept and begun to apply it to their work. However, in larger fora such as the M&E guidelines national workshops in 2020, VFD's team was regularly reminded of the fact that the broad population of PFES managers still work with the approach that M&E serves as an audit. Therefore, projects and initiatives should work with VNFF to develop strategies to more effectively message M&E concepts at the national level to shift mindsets and practice on this important topic.



Expanding PFES to new sectors

Vietnam's national PFES Decree 99 outlines five environmental services that can be sources of PFES payments: soil protection and associated reduced sedimentation; regulation and maintenance of water sources for production and social life; protection of natural landscapes and biodiversity for tourism; provision of spawning grounds and water for aquaculture; and carbon sequestration. PFES for the first four services has been implemented and/or piloted in Vietnam, but PFES for carbon sequestration services has remained an untapped source of revenue for forest protection and development. MARD and VNFF have identified the development and implementation of carbon PFES as a top priority. This results from its potential to significantly expand the PFES revenue stream and increase the resources available for forest protection and management in Vietnam, and MARD and VNFF have highlighted it in their Forestry Development Strategy 2021-2030.

To address this, one of VFD Phase 2's core focus areas was to develop a policy to pilot carbon PFES and use the results to inform the development of a national carbon PFES policy. VFD planned to work within the

new Forestry Law framework and build on its PFES experience in Vietnam to design a system that could facilitate the flow of payments to forest communities to offset emissions from large industries, while being flexible enough to align within a future GVN carbon tax or emissions trading scheme. Once piloted and analyzed, the mechanism would be developed as policy for national application.

Concurrently, VFD coordinated with VNFF and target provinces to identify opportunities for expanding PFES revenues from other underutilized sectors. This was originally envisioned to include PFES for eco-tourism in Lam Dong, which had limited success to date in generating revenue and achieving PFES goals. It was also intended to support expansion of PFES for industrial water use (such as beverage companies and textile factories) that VFD and local partners successfully piloted in Nghe An, Thanh Hoa, and Ha Tinh provinces. A key target for the expansion of industrial water use was Quang Ninh, which has a large industrial base and was a strategic focus for both carbon PFES and industrial water use.

Main activities and key results

Carbon PFES

VFD's first step in developing the carbon PFES policy was to complete a scoping assessment and "justification report" to present to the Prime Minister's office. This was done in support of the issuance of the Prime Minister's decision to authorize carbon PFES pilots at the provincial level. VFD and VNFF decided to focus at the level of Prime Minister because of the complexity of working across a range of participating Ministries required to implement carbon PFES, including the Ministries of Agriculture and Rural Development, Natural Resources and the Environment, Industry and Trade, and Construction. A clear approval from the highest levels of Government would ensure that relevant GVN Ministries, departments, and local companies would more actively engage in a pilot process.

In 2018, VFD mobilized a multi-sectoral team of experts to conduct a comprehensive assessment of the potential for carbon PFES based on environmental, economic, and social factors. Based on the results of this assessment, the team planned to design a pilot process and draft the policy documents for the Prime Minister's approval. The team began work in October 2018 and led two kick-off workshops in VFD's two focal carbon PFES provinces, Thanh Hoa and Quang Ninh. The provincial kickoff workshops were opportunities to present the overall concept of carbon PFES to relevant government departments and companies, share the plan for the scoping process, and receive initial feedback. During the workshops, participating companies were largely aware of efforts to reduce emissions as well as the role that forests can play in this process. They voiced their general support for the initiative but highlighted the need for clear and accurate methodologies for calculating emissions and ensuring that the initiative had support from the central government. The initial workshops also provided an opportunity to gather perspectives and ideas for a capacity building and awareness raising process that VFD could support to improve understanding and enthusiasm about carbon PFES.

Carbon PFES achieved a key milestone in February 2019 when the Prime Minister issued an official letter authorizing MARD to work with relevant ministries to develop a pilot decision for carbon PFES. This provided a foundation for the policy development process and demonstrated strong support from the government to pilot the carbon PFES mechanism. This letter was a critical first step to appoint MARD to lead the policy development process in collaboration with other key Ministries.

Soon after, a second key milestone was reached with the establishment of a carbon PFES "editing group" with representatives from the Government Office, Ministry of Finance, Ministry of Justice, Ministry of Industry and Trade, Ministry of Natural Resources and Environment, MARD, VNFOREST, VFD and the USAID-funded Green Annamites project. The Editing Group played a key role in providing comments and feedback from the different ministerial perspectives to the carbon PFES policy development process and ensuring that the final policy meets the needs of these diverse stakeholders.

Throughout 2019, VFD, VNFOREST, and VNFF held a series of technical meetings to review progress of the carbon PFES design and comment on drafts of the Prime Minister's decision to pilot and periodically update drafts of the technical justification report and draft decision. Meanwhile, at the provincial level, VFD held workshops in both Thanh Hoa and Quang Ninh, each chaired by the Vice Chairman of the respective PPC and the Director of VNFOREST. The workshops engaged potential private sector buyers from the cement and thermal power plant sector to learn about carbon PFES and provide feedback to improve the draft decision and supporting policy documents.

As momentum continued to build towards finalization of the draft policy for the Prime Minister's approval, VFD held two key events to gather further input and deepen understanding of the potential benefits of the proposed policy. First, VFD and VNFOREST held

a national carbon PFES consultation workshop chaired by the MARD Vice Minister. This involved more than 120 participants from various ministries and government departments related to carbon PFES, companies that are potential payers for carbon PFES, and provincial representatives from the four planned pilot provinces (Quang Ninh, Thanh Hoa, Quang Nam, and Thua Thien Hue). At the workshop, VNFOREST presented the draft decision, and VFD presented international experience with carbon pricing mechanisms. The discussion phase of the workshop allowed for participants to contribute comments on the draft decision and provide ideas for developing the pilot payment mechanism. At the workshop, the Vice Minister confirmed MARD's support for carbon PFES policy and announced that MARD would soon be finalizing the draft policy materials to submit to the Prime Minister's office for final approval.

Secondly, VFD and USFS organized a study tour for 20 GVN officials to the United States and Canada to learn from established carbon payment mechanisms in California and British Columbia. The participants were selected from the carbon PFES editing team, VNFOREST, and the four pilot provinces. During the study tour, the team met with policy-makers, government regulators, companies that pay into the respective systems, and forest managers who benefit from carbon payments. This provided participants with an opportunity to see these systems working in a local context and consider important lessons that Vietnam can incorporate into carbon PFES. Participants highly appreciated how both California and British Columbia have reduced emissions while maintaining high rates of economic growth. This was a very exciting observation for many participants because of their concern that implementing a carbon PFES system



Carbon PFES study tour to the US and Canada in 2019

could have a negative impact on local businesses and the economy. As a result of the study tour, VNFOREST and editing group members gained knowledge and improved their understanding of carbon payment mechanisms and the benefits of different PFES policies. VNFOREST also recognized the benefits of learning from international actors, and they expanded the draft policy materials to include a short report summarizing international examples of successful carbon payment mechanisms. This is expected to strengthen the justification for the carbon PFES policy in Vietnam by demonstrating successes elsewhere.

In late 2019, VNFOREST officially submitted all carbon PFES draft policy materials to the MARD Vice Minister for his review and approval. Following the Vice Minister's approval, MARD formally submitted the draft decision and supporting documents to the Prime Minister's office for his approval. Stakeholders expressed optimism that approval of the pilot decision could come as early as the first months of 2020, with the pilot phase beginning soon thereafter.

Unfortunately, 2020 brought the global COVID-19 pandemic, which caused nearly all policy initiatives in Vietnam to halt while the country focused on an effective response to the pandemic. Over the course of 2020, though Vietnam stabilized many sectors of its economy, carbon PFES was pushed down the agenda. GVN was concerned about instituting new policies at a time when they could be misperceived as

increasing the operating costs of thermal power plants and cement manufacturers and negatively impacting these companies' competitiveness while increasing costs of consumers. Additionally, the Prime Minister made a public commitment to ensuring that fuel and electricity costs would not increase, which also decreased the likelihood that carbon PFES would be approved in the near term.

VFD adapted to these new and unexpected circumstances by working closely with VNFF to consider alternative approaches to create a policy framework for implementing carbon PFES in the future. One solution was to work within the framework of MARD's emerging new Forest Sector Strategy and highlight carbon PFES as a new initiative that provinces can begin to implement on their own. Though this approach would lack the powerful endorsement and direction of the Prime Minister, it could provide a policy framework that motivated provinces could follow in the absence of a national pilot decision. VFD worked closely with VNFF to complete a comprehensive review of the first ten years of PFES and identified several key recommendations to be included in the new Forest Sector Strategy. These included: (1) maintaining a strategic focus on carbon PFES; and (2) revising payment levels for upstream versus downstream hydropower plants so that payments are more equitable within the same river system and reflect the actual value of forest services.

PFES from Industrial Water Use

One of the key impacts of the first phase of VFD was the successful pilot of PFES from industrial water use in three provinces. This demonstrated a proof of concept and, importantly in Vietnam, gave confidence to other provinces and national PFES managers that this underutilized sector could be further expanded in other provinces. VFD and VNFF identified Quang Ninh as an excellent candidate for application of PFES from industrial water use due to the large number of industrial operations in the province and its desire to expand its PFES review base.

In 2020, VFD facilitated a series of meetings between VFD, the Quang Ninh PPMU, and CPMU to develop a roadmap for industrial water use policy development

that showed how it linked with other existing PFES mapping initiatives related to aquaculture and tourism. Based on the agreed-upon roadmap, VFD surveyed 49 companies to gather data on their water usage and related information. VFD determined that 26 companies qualified to make PFES payments based on their industrial water use. VFD's GIS specialists developed watershed maps for the qualified companies to create a basis for calculating payment rates. The team also outlined the proposal for the province's industrial water use mechanism, which was integrated into a new overall provincial PFES plan together with other payment mechanisms (such as ecotourism, aquaculture, etc.) and was submitted to the Quang Ninh PPC in early 2021.

Lessons learned



Major policy initiatives that intersect across sectors and Ministries require collaborative planning approaches

Unsurprisingly, the carbon PFES policy development process was one of the most challenging activities for VFD's PFES work. The challenges occurred from both the technical and political perspectives.

There was a need to identify clear and rigorous, yet easily understood methodologies for calculating emissions and carbon sequestration by forests. At the same time, there were political complexities involving the intersection of carbon PFES with a range of sectors and ministries, such as the Ministry of Industry and Trade (MOIT), the Ministry of Planning and Investment (MPI), and the Ministry of Finance (MOF). Some participating ministries had seemingly competing goals. For example, MOIT focuses on management, oversight, and support to coal fired power plants, while the Ministry of Natural Resources and Environment is tasked with environmental protection efforts. Meanwhile, the Ministry of Agriculture and Rural Development takes the lead on carbon PFES policy development and planning to manage the revenues generated from these other sectors. Further complicating the situation is the sensitivity of the Government Office to approving any policies that may result in increases to electricity prices, given heightened concern raised about recent electricity and fuel prices. These challenges required VFD to work carefully with each ministry and department to identify benefits and tradeoffs to achieve an effective compromise. In addition, carbon payment mechanisms are a new and innovative approach in Vietnam. Therefore, VFD's initial work focused heavily on awareness raising and consensus building with the central government and other ministries, listening to concerns and questions, and developing clear explanations and responses to justify the implementation of carbon PFES.

Without significant political will, major policy initiatives such as carbon PFES can be delayed – especially during sensitive economic and political periods

Carbon PFES is a complex policy initiative, with implications for economic growth, environmental protection, and institutional networking. Because of this, it remains challenging to build the political will to approve a pilot policy. While it is important to note that such sensitivities are common in any country or jurisdiction that has developed a carbon payment mechanism, it has been notably challenging to do so in Vietnam. As noted above, due to the COVID-19 economic context, the Prime Minister's Office has been hesitant to approve any new policy that may be perceived as increasing costs for companies and/or impacting electricity prices for consumers. Additionally, the Party congress in early 2021 added to these economic and political sensitivities.

Different classifications of companies can impact eligibility for PFES

Ha Tinh's efforts to expand PFES for industrial water use uncovered the challenge of at least one company that is not classified as an "industry producer" under its registration. This raised questions about its ability to legally pay into PFES for industrial water use. This delayed payment collection from this company in the province, and the provincial fund and PPC worked to develop a new decision to clarify which types of producers will have to pay for PFES. A similar challenge was encountered in Nghe An, where a milk company was registered as an "agricultural producer," making it ineligible to pay for PFES from industrial water use. It is expected that future updates to PFES policy will help to clarify some of these classification challenges, permitting ease of implementation of the PFES system.

Next steps and opportunities to scale up success

Carbon PFES provides a tremendous opportunity to significantly increase PFES revenues, with some calculations from VNFF predicting that adding payments from cement manufacturers and thermal power plants could nearly double annual PFES revenues. In addition to the revenue increases, carbon PFES would create a unique carbon pricing mechanism to help Vietnam reach its greenhouse gas emissions goals and meet its international commitments like the Paris Agreement. Several key steps remain to make this a reality.



Work with GVN policy makers to secure approval of the pilot decision

In early 2021, MARD was assigned to further develop carbon pricing mechanisms to address climate change – indicating that carbon PFES was still very much on the government’s policy agenda, despite the ongoing competing priority of the COVID-19 response and mitigating the pandemic’s economic impacts. Other projects such as the USAID-funded Sustainable Forest Management project can work with VNFF and relevant government departments to advocate for approval of the pilot decision. Should the Prime Minister’s approval be further delayed, there are other options that VNFF and VFD have pursued, such as integrating carbon PFES into the new forest sector strategy. However, the Prime Minister’s approval would more effectively motivate provincial stakeholders to fully engage in the pilot process.



Support provincial pilots of carbon PFES. Vietnam’s model of “pilot-evaluate-develop national policy” has proven effective for PFES development in the past and appears to be the preferred model of developing a carbon PFES mechanism for the country

With the Prime Minister’s approval of the pilot decision (or, if certain provinces are sufficiently enthusiastic about piloting without PM approval), projects can support provinces to develop and implement pilots of the mechanism. This could involve developing contracts or agreements between companies and provincial funds, establishing monitoring systems for emissions and corresponding payments, and working with provincial funds to identify strategies for investment of carbon PFES funds. For example, some provinces have formed and announced plans to use carbon PFES revenues to supplement PFES in hydropower watersheds where payment rates are quite low. Other provinces are interested in using carbon PFES revenues to support mangrove and other protection and enhancement efforts for carbon-rich forests. It is expected that this pilot phase would last one to two years, after which projects could work with VNFF and provinces to evaluate the success of the pilot.



Develop national carbon PFES policy

The original goal was to have a national carbon PFES policy developed and in place by the end of VFD’s activities in 2021. This could take the form of a new decree to update Decree 156 on implementation of the Forestry Law (including PFES) or a standalone decree focused on carbon PFES. Given the delays in the pilot process due to COVID-19, VNFF and VNFOREST will likely seek support from projects and technical experts to draft this policy once the pilot stage is complete and evaluated.

Cross-cutting

Gender



A village meeting in Son La

Gender integration was a priority for VFD, which worked to ensure that any gender gaps were addressed to ensure equitable benefits from project activities. Early in Phase 2, VFD developed a strategic approach to identify how best to use project resources to ensure inclusivity and gender equity. The strategy was informed by a gender analysis that examined gender gaps and inequalities in PFES overall and provided several key recommendations on actionable steps VFD could take to address these gaps.

One main takeaway from the gender analysis was the benefits of replicating the women's savings group model that VFD launched in Thanh Hoa in Phase 1. Women's savings funds can be of particular importance in areas where PFES payments are made to villages, as opposed to individual households. Unfortunately, in many cases when villages receive PFES payments, some village leaders make decisions on how to allocate the money and use it for different purposes without consulting the community. In such situations, the PFES money is not always used in a transparent way that benefits local people. Often, women are especially marginalized, left out of

decision-making processes, and miss out on benefits from the PFES revenues. The women's savings groups provide a unique opportunity for women to be the decision-makers in the management and use of PFES funds at the village level, ensuring that their voices are heard and that the payments bring equitable benefits to men and women in the community.

To address this challenge, VFD worked with 12 communities in Thanh Hoa and Son La provinces to develop village regulations that introduce a more transparent, collaborative process to make decisions about how to use the PFES funds. As a part of these regulations, the villages established women's savings groups that provide loans to group members with the goal of investing in women-led micro-enterprises aimed at improving livelihoods. Each women's savings group was established with clear roles assigned to each member to monitor receipts and distribution. VFD provided basic training on financial management, meeting facilitation, and record keeping to help the group get started. The project then joined the groups' monthly meetings to monitor progress and provide support for any issues that might arise. During these



Ms. Giang Thi Ca

Head of the Nam Nghiep village women's union in Son La

"This is a very meaningful activity for women in our village, because women here usually aren't respected much. Most of them rely on their husband. With this new access to loans, we have a chance to save money and invest in things like livestock that can help improve our living condition and the local economy."

meetings, the women's savings group members review loan requests from community members, approve disbursement of loans, and accept repayments – all in a fully open and transparent manner. Most loans are used for agricultural livelihoods, such as purchasing new livestock or seeds. Some families use loans for school fees or medical needs to support their families. Though the initial seed funding for the savings fund comes from PFES, members can also invest their own money into the fund to gain additional "shares" and earn interest over the course of the year. By the end of the project, all 12 villages were operating their women's savings groups independently, and both Thanh Hoa and Son La provinces were looking to expand the practice to other villages. This is a strong indication of the long-term sustainability and commitment of the groups, which are empowering women to manage community PFES funds for the first time and choose what local livelihood activities to invest in. The savings fund managers also make sure to keep both men and women informed of PFES payments and investments and involve both men and women in forest protection activities.

Though VFD's village regulation activities were relatively small in terms of the overall portion of allocated project resources, counterparts in Son La and Thanh Hoa recognized its large impact. The village regulations provide two benefits: first, a structure for communities to more effectively organize their forest protection efforts, and second, a mechanism to engage women as leaders in managing PFES revenues and empowering them as decision makers in how to distribute these funds. Based on the demand for more support in this area, VFD developed a package of materials, including village regulation guidelines that give step-by-step instructions for local groups to develop and implement their own village regulations; a video summary of the guidelines and successes in Thanh Hoa and Son La; and a summary brochure to promote the model. These guidelines were highlighted at a PFES Community of Practice early in 2021, which helped to build an active network of provinces to further scale up the village regulation and women's savings groups with provincial funds and communities who are interested in applying the models in the future.

Communications



As VFD began its PFES work in Phase 2, the team quickly identified communications as a key area of focus both for the VFD team in its work and as an important skill that VNFF and provincial FPDFs could greatly improve. For VFD, good communications were imperative to effectively introduce e-payment and expand its use; promote improved M&E efforts and encourage PFES managers to use M&E data for decision making; and advocate for advancement of new carbon PFES policies. As such, the team used creative communications techniques such as integrating role plays and game show scenarios into training events. The team also established communities of practice to encourage more open discussion between PFES stakeholders. Based on the success of these non-traditional methods, provincial funds began to ask VFD for more support to learn how they could apply similar methods to their communications efforts with local forest owners and companies paying into PFES. To meet this demand, VFD focused on two specific areas:

- Targeted communications training for VNFF and provincial fund staff; and
- Facilitation support for the Lam Dong FPDF to develop a new, five-year communications strategy.

The communications trainings focused on the desire of fund staff to move from more traditional communications approaches like lectures towards more effective strategic communications techniques. To understand the more traditional practices, VFD joined some provincial fund-led outreach events, where they observed fund staff simply reading the national PFES decree verbatim. To increase awareness about PFES with local forest owners, VFD designed a two-step training process focused on key principles of behavior change communications, effective messaging, and selection of appropriate communications channels. The first step of the communications training program consisted of basic communications training for local partners, including FPDF, Sub-FPDFs, CPMU, and PPMUs in Lam Dong and Thanh Hoa provinces. These sessions targeted a broad group of participants from across the PFES management community in an

effort to expose as many people as possible to key concepts and basic approaches. Following this initial training, VFD organized a second communications training for a more focused group of PFES managers to equip them with advanced communication and facilitation skills required to effectively share their work through village meetings, community events, and other means of reaching their target audience. Participants joined from three provincial funds (Lam Dong, Son La, Thanh Hoa) and two forest management boards utilizing PFES (Cat Tien National Park and Da Nhim Forest Protection Management Board). As part of the trainings, participants identified how to use the newly acquired skills in their daily work.

In order to complement this training for individuals, VFD also worked with Lam Dong provincial fund at the institutional level to develop a PFES communication strategy for the period 2020-2025. Lam Dong was selected as the pilot province for this because of its large communications budget, interest in a focused strategy, and established internal structure with staff assigned for communications. The goal was to support the Lam Dong fund's internal communications team in drafting, developing, and refining the strategy on their own, with VFD's facilitation and guidance. Over a series of months, including a series of internal strategy development sessions and review workshops

facilitated by VFD, the Lam Dong fund successfully developed a strategy that clearly identified the objectives and target groups for communications; identified main channels, effective materials and tools to be developed; and outlined methods to improve awareness and change attitudes and behaviors of the target groups. Importantly, the strategy highlighted women as a key audience for PFES communications. Through community events and other outreach activities, VFD worked with the provincial fund to identify specific ways to improve communications and outreach to women, including targeted communications campaigns and meetings with women-only participants. As women have often been inadvertently missed in previous PFES outreach efforts, it is now an identified priority to more intentionally and inclusively engage women. This is supported by numerous stakeholders, including GVN, the private sector, community leaders, and development partners.

Once Lam Dong completed its provincial communications strategy, VFD developed a technical guidance document to enable other provinces to replicate the process of developing a targeted communications strategy. VFD and VNFF showcased the guidance document on the VNFF website so that all PFES provinces could follow it as they develop their own strategies in the future.

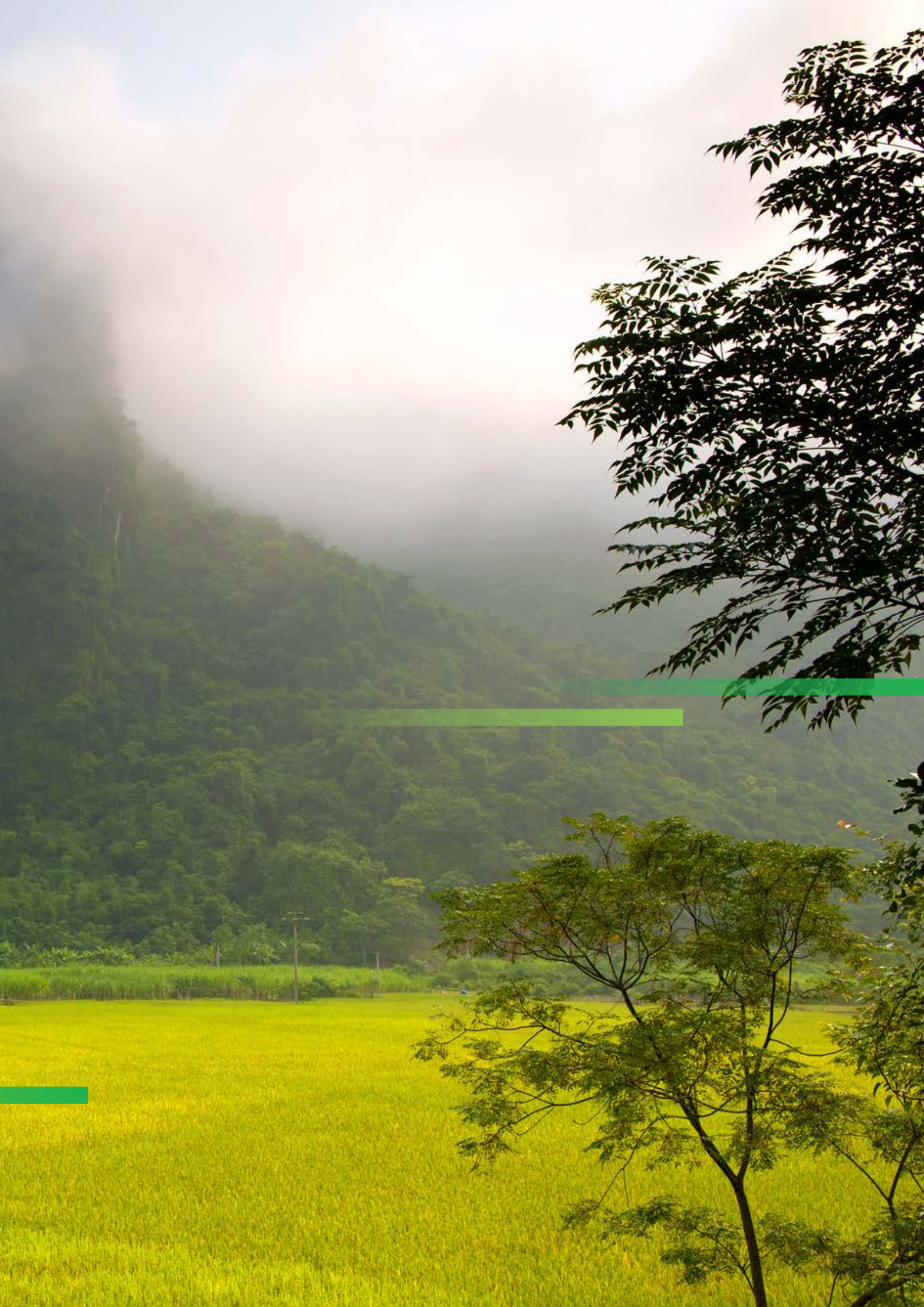
Lesson Learned

Provincial Forest Protection and Development Funds have communications budgets – but need assistance in planning how best to use them.

One consistent challenge with PFES around the country is ensuring a clear, common understanding of the PFES program, payments, and responsibilities of forest owners. This comes from inconsistent communications from provincial FPDF staff to forest owners – some of whom are still not clear why they receive a periodic payment and whom it is coming from. Provincial funds such as Lam Dong and Son La have a dedicated communications budget, but they have struggled to identify the best ways to use these funds. Traditionally, they have installed signboards on the side of rural roads or responded to requests from provincial leaders to prepare brochures or other simple materials about PFES, but they have not had a clear strategy for how to distribute them. VFD's targeted communications strategy development support for Lam Dong's provincial fund provides a clear model for how provinces can more effectively target their communications budget resources to achieve greater impact.

Project management





Co-management structure with Government of Vietnam

VFD’s successful co-management structure was foundational to the project’s success. When VFD started in 2012, project staff prepared a “Detailed Project Document” for GVN’s approval. This document is required to establish a legal basis for the project to implement activities and defines the provinces where the project could work. More than a year after the project began, on December 24, 2013, MARD approved the document with Decision 3040/QD-BNN-HTQT, and VFD held its official national launch on January 17, 2014. The prolonged period between the start date and GVN approval caused significant delay in implementation of the project’s activities.

It was clear that for the project to succeed, VFD needed to create a true partnership with GVN, particularly with counterparts at MARD. Though MARD had experience managing a range of overseas development assistance (ODA) projects in the past, the most common mechanism was for MARD to directly receive the donor funding and manage the funds themselves. USAID’s system of an independent “implementing partner” like Winrock, responsible for managing the budget, required a new mindset and cooperation for the project to work effectively. After a long period of collaborative debate and discussion, a co-management structure was developed to meet MARD’s needs, GVN’s project management requirements, and USAID’s regulations and expectations. This structure became a model of cooperation for VFD, as shown in Figure 4.

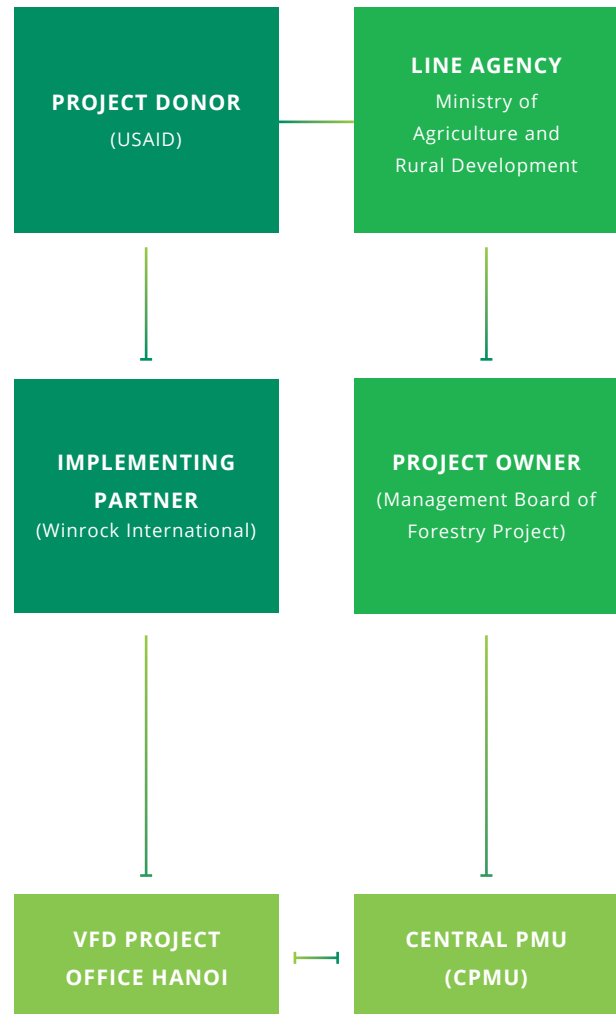


FIGURE 4: VFD CO-MANAGEMENT STRUCTURE

Lesson Learned

Engaging provincial and national partners in the project planning process provides great benefits.

VFD’s collaboration with the CPMU, PPMUs, and technical partners like VNFF was effective at prioritizing activities that aligned well with both VFD and GVN priorities and developing clear annual workplans. Through regular meetings, VFD worked closely with the CPMU to review project results and progress. Based on the progress made, the team identified remaining gaps and developed clear workplans that focused on the most critical activities necessary for achieving the project’s goals. After

Per the GVN requirements for USAID projects, GVN and VFD created official administrative units (Project Management Units, or “PMUs”) in the project provinces and at the central level. The central PMU (CPMU) and provincial PMUs (PPMU) were a critical point of engagement for identifying and prioritizing project activities in coordination with provincial and national priorities. The VFD team worked in constant communication with the CPMU and PPMUs to provide them with the necessary deliverables to ensure GVN was informed of project progress and in compliance with GVN rules and regulations for ODA projects. Table 1 shows the roles and responsibilities of the VFD project and the CPMU/PPMUs.

Role	VFD Project	Project Management Units
Planning	<ul style="list-style-type: none"> • Cooperate with CPMU/PPMU on annual workplan development • Submit annual workplan to USAID and CPMU • Submit quarterly workplans and updates to CPMU 	<ul style="list-style-type: none"> • Cooperate with VFD team in annual workplan development • Submit MBFP annual workplan for approval • Submit quarterly workplan updates to MBFP
Implementation	<ul style="list-style-type: none"> • Responsible for implementation of the approved work plan 	<ul style="list-style-type: none"> • Monitor and supervise project implementation organized by VFD team
Reporting	<ul style="list-style-type: none"> • Reports to USAID • Reports to CPMU (ODA forms) 	<ul style="list-style-type: none"> • Reports to MBFP and related GVN organizations

TABLE 1. ROLES OF VFD AND PROJECT MANAGEMENT UNITS

The fundamental principle of the co-management structure was close coordination and communication so that the entire project functioned as one team. Over the course of implementation, VFD continued to build trust with the CPMU/PPMUs, facilitate true participation and voice in the work-planning process, and ensure that VFD was able to implement activities without unanticipated bureaucratic delays. By the end of VFD, the project had an effective and efficient working relationship with GVN.

the gap analysis was complete at the national level, VFD and the CPMU organized workshops in project provinces to present the initial workplan framework and overarching activities to provincial partners including PPMU, FPDF, FPD, DARD and related organizations. These provincial workshops provided an excellent opportunity for partners to understand the overall plan and give feedback on how best to achieve specific tasks. After these annual province-level consultations, VFD and the CPMU finalized a

consolidated annual workplan that was shared and discussed at a national workshop with all PPMUs. This step-by-step approach ensured ownership and commitment of the local partners in each activity proposed, and VFD has found it to be a successful method for building a shared vision for workplanning.

Collaboration with US Forest Service

In addition to the GVN management structure, VFD cultivated a close working relationship with the U.S. Forest Service (USFS) in a number of technical areas. This collaboration was built on the formal agreement between USAID and USFS that allows USAID funding to be used by USFS to support projects. One of the great advantages of the collaboration with USFS was their flexibility and ability to support project needs in a number of different ways.

One means of support was deployment of USFS experts to provide targeted technical support to specific activities. For example, in VFD Phase 1, USFS mobilized GIS analysis and mapping specialists to identify potential biodiversity corridors for the Western Nghe An Man and Biosphere reserve. This support included both remote technical guidance and desk analysis from the United States, as well as time spent in Nghe An visiting field sites, working with local GIS specialists and protected area managers, and presenting final results of the analysis to provincial leaders. Another example of technical expert support was with climate change curriculum development with both the Ho Chi Minh Academy and Vietnam National University of Forestry. In this case, USFS technical expertise was used for over more than a year to help review draft curriculum materials, provide feedback and guidance on development of technical topics, and participate in review workshops in Hanoi.

In addition to the USFS technical experts, the agency used their valuable networks in coordination with Winrock International to develop a beneficial study tour (see page 82, above for details about the tour) to the United States and Canada to learn more about carbon payment mechanisms. USFS and Winrock worked closely to develop a series of meetings and site visits with forest managers, government regulators, and companies that are payers in these local payment systems.

USFS also helped VFD develop the PFES Community of Practice model, first created and launched in Phase 1. USFS experts facilitated the first event and assisted in the development of Community of Practice Guidelines to help other practitioners follow similar models. Throughout VFD Phase 1 and Phase 2, USFS remained an active partner in providing technical and financial support to hold a series of Community of Practice events around topics like e-payment, PFES M&E, and mechanisms for managing PFES revenue at a village level.



Mr. Huynh Van Thuong
National Coordinator
of USFS in Vietnam

The study tour to the US and Canada helped the GVN participants better understand the carbon PFES concept. Before the trip, working with Ministries was quite challenging because so far they just heard about carbon PFES, but had no real experiences on how carbon payment mechanisms actually worked. They were cautious and passive. When they saw carbon payment systems in the US and Canada, they saw the detailed steps needed to implement carbon PFES in Vietnam. After the study tour, they were more active in initiating ideas and group discussions that made the decision-making process quicker. This really helped get the pilot policy finished faster than we expected.

Budget management

VFD effectively managed its budget throughout the life of the project and did not experience any cost overruns. VFD's management developed annual workplan budgets in close coordination with the CPMU and ensured that overall spending was in line with budgeted amounts. Overall spending was reported to USAID as required in the cooperative agreement.



Lessons learned and best practices

GVN project approval is never simple.

In securing project approval for VFD's Phase 2, the team was reminded of the lengthy, challenging process of getting GVN's final approval of the Detailed Project Document (DPD). Though the project experienced this challenge at the start of Phase 1 of VFD in 2012, VFD and the CPMU anticipated that the extension approval would be much smoother. By this time, VFD and CPMU leaders knew each other well and coordinated to get the necessary documentation in place. However, the approval process was still lengthy, and navigating it required significant patience and diplomacy. Although approval was received from the Prime Minister for the extension of VFD in April 2018, VFD was still working with the CPMU and ICD to reach agreement on a final version of the DPD at the end of Fiscal Year (FY) 18 (with a seventh version of the project document submitted in September). While waiting for the final approval, VFD proactively engaged VNFF, CMPU, and related stakeholders to undertake technical preparations including meeting, scoping, planning, defining models, designing of mechanisms, and devising tools for field implementation. This proactive approach allowed VFD to rapidly move into full implementation when the DPD was finally approved early in FY19.

Flexibility and adaptive management are critical during uncertain times.

The impact of the unprecedented COVID-19 pandemic on VFD's activities in FY20 was significant. Particularly as the first outbreaks were reported in Vietnam, and then worldwide, there was tremendous uncertainty about how best to manage teams, partnerships, and activities. At times, the situation seemed to be changing daily or even hourly. VFD worked carefully to maintain clear and effective communication within the team and with external partners to triage work that was possible and put on hold activities that could not be continued. The team prioritized the health and well-being of staff and partners, while aiming to continue to provide support where appropriate on important activities. When the second wave of COVID-19 hit Vietnam in July, both the country and the project were more resilient and able to find solutions to continue as much "normal" activity as possible. The team learned to work effectively remotely, using tools like Microsoft Teams for video calls and DocuSign for e-approvals. VFD staff worked throughout the year to maintain close communication and coordination with GVN partners and local counterparts in an attempt to maintain as close to a normal working process as possible.

Flexibility was also necessary with the project's approaches to support carbon PFES policy development. The development of new innovative, complex policies like carbon PFES depend on high-ranking decision makers who must consider a wide range of factors. This is particularly difficult when there are major stressors on the local economy, as happened in FY20 with COVID-19. Originally, VNFOREST saw a clear path to the Prime Minister's approval of the new carbon PFES policy; however, as that became less likely due to the government's concerns about increasing costs on Vietnamese companies, VFD and VNFOREST had to regroup and rethink the approach. As a result, VFD and VNFOREST shifted focus from the Prime Minister's decision towards a strategy of integrating carbon PFES into the new strategic plan of MARD. The logic of this shift was that if it is possible to integrate carbon PFES as a strategic goal of MARD, it would become a more achievable target of MARD in the foreseeable future and give more visibility to encourage MARD to get additional support from the central government for carbon PFES.



Strong commitment and political will is required for activities to be successful and have lasting impact.

Over the life of the project, VFD worked to build relationships and develop commitment of local partners to adopt and maintain innovative approaches to improving the efficiency and effectiveness of PFES. In cases where local partners were not willing or able to take leadership to ensure that new approaches were followed, the new models may not last and/or prove not to be as successful. The project experienced several key examples of this at the local level.

For instance, in Son La, VFD and the Son La PPMU had planned to open 4,800 ViettelPay household accounts and make payments to these accounts by mid-2020. However, over the course of 2020, the Son La fund showed reluctance to sign an agreement with Viettel to make the payment transfers, which delayed the entire process. The delays seemed related to the provincial fund considering other payment mechanisms that would offer other incentives for using their service. By the end of the year, VFD had facilitated further discussion between the Son La fund and Viettel, and the fund re-committed to reaching 3,100 households using ViettelPay. This change in target had an impact for how VFD managed their indicator targets and allocated resources for field activities.

VFD experienced the same challenge with village regulation and women's savings groups. In some cases, even though village regulations were approved by the commune people's committee, the local management boards still hold the decision-making power on the ability to use PFES funds for the women's savings groups. For example, in the cases of Nam Nghiep and Phay, both villages approved regulations and received 2020 PFES payments of more than VND 1 billion. However, the village management boards were not willing to contribute a portion of the PFES revenue to women's saving groups as outlined in the village regulations. This required further facilitation between VFD, provincial funds, and the local village management boards before the village leaders finally agreed to release the funds. These delays impacted the project's goal of completing one full year of savings fund operations before completing the final review.



Next steps to enhance the legacy of VFD

VFD has been a cornerstone of development efforts in the forestry, agriculture, and rural development sectors for more than eight years. Importantly, it has also become a central hub in the strong relationship between USAID and MARD, as recognized by both the USAID Mission Director and Vice Minister of MARD in the project’s closing workshop in April 2021. As VFD closes, USAID, MARD, and other key partners are focused on opportunities the enhance the legacy of VFD.

The principle of sustainability was built into VFD’s activity design. The goal of all VFD interventions was to ensure that new practices and policies could be institutionalized in a way that local partners could implement and improve them after the project ended. Key final products like national

PFES e-payment and M&E guidelines are now being applied nationally to provide impact at scale. Important policies and strategies like Decree 156 on implementation of the forestry law and the GGAP in Thanh Hoa province are being successfully applied. Vietnam’s national CBDRM process as codified in Decision 1002 is seeing positive impacts in how communities in Long An and Nam Dinh provinces are preparing for and responding to natural disasters and climate change impacts. Local Agriculture Extension Centers, whose staff served as trainers on VFD’s rollout of improved livelihood models, continue to apply improved techniques in trainings and support local communities. These outcomes are already having clear positive impacts, and expectations are high that they will be sustained well into the future.



Red book allocation in Son La

As mentioned above, a number of key opportunities remain for new USAID programs and other development initiatives to build on VFD’s legacy and increase its impact. First, management of Vietnam’s forests overall and implementation of PFES specifically can be greatly strengthened by a comprehensive and large-scale review of forest land allocation. VFD experienced first-hand the challenges that many localities are dealing with due to the many changes that have occurred with forest owners and forest area since forest land “red book” certificates were issued – in some areas more than 20 years ago (see Phase 2). Without clearly identified forest owners and/or accurately identified forest area, many local communities lack clear responsibilities for forest protection efforts. Moreover, PFES managers lack clear data to give them confidence in making accurate PFES payments to the correct forest owners. VFD worked in three areas to review and reallocate “red books:” in Muong Lat district, Thanh Hoa province with an external consultant; Tuong Duong district, Nghe An province working with local Forest Protection Department officials; and Bac Yen district, Son La province with a technical research institute. There were advantages and disadvantages of the different approaches that can be considered by future projects, but it is clear that accurate “red book” allocation is a critical gap in strengthening forest management in Vietnam that, when done well, is highly appreciated by local government and forest owners.



Carbon PFES planning team in Quang Ninh

Second, carbon PFES provides a tremendous opportunity to both increase PFES revenues and address climate change and GHG emissions. In hindsight, VFD was able to make significant progress in introducing the concept of a carbon payment mechanism; convene important policy-makers in a carbon PFES editing group; conduct the necessary analysis to design an appropriate carbon PFES pilot policy; and move that draft policy through the necessary first approvals up to the final approval from the Prime Minister's office. Unfortunately, the timing of the COVID-19 pandemic and the sensitivities about perceived potential economic impacts of a new payment mechanism, the draft policy remains unapproved by the Prime Minister's office at the end of VFD (see Phase 2). However, with new projects starting that have mandates to continue supporting the carbon PFES policy development process, policy advocacy efforts can and should continue. While the economic sensitivities of the COVID-19 pandemic likely will continue for some time, new projects can consider creative ways to strengthen linkages between carbon PFES and climate change

agreements. VFD also laid the foundation for carbon PFES to be emphasized in Vietnam's new Forestry Development Strategy in a way that allows motivated provinces to begin carbon PFES efforts on their own.

Third, M&E as a management tool remains a new concept in Vietnam. While VFD was able to complete important first steps of awareness raising, system development and guidelines creation, much more work is needed to help truly institutionalize M&E in a way that can change attitudes and behaviors about what is M&E and how to use it as a management tool (see Phase 2). Even in some provinces where VFD has focused, many managers see M&E as simply an audit function that takes place once a year and results in a summary report. VFD has promoted M&E as an ongoing process that provides information that can be used to inform decision-making and policy improvements. This fundamental difference in the conceptual approach of M&E remains at a basic behavior change level and will require additional targeted efforts to ensure true buy-in and application at all levels.

Finally, in addition to the significant technical achievements and learnings of VFD, one of the most significant achievements of VFD was the development of a successful co-management approach between USAID, Winrock International, and MARD. Repeatedly, in both internal reflections by VFD team members and partners, and through learned events like the one facilitated by the USAID Learns program in March 2021, this successful collaboration was highlighted as one of the greatest achievements of VFD. The co-management approach empowers GVN partners by building buy-in and sustainability. It is based on trust and compromise, as all parties work together to find common ground in planning and communicating

results – all while ensuring compliance with USAID and GVN regulations and supporting their respective priorities. To the extent possible, other ODA projects can use this approach as a model for building strong collaboration and successful project implementation. While VFD applied this co-management model with MARD, it be applied with other GVN partners and project owners, but it can take time to build the necessary trust and confidence to make it work. This can be particularly challenging with other GVN departments and Ministries that are more familiar with other ODA project management mechanisms where the GVN partner has full decision-making authority over budget management and allocation.

VFD has been an important step in Vietnam's ongoing Journey Towards Self Reliance. The project has highlighted the benefits of close collaboration between USAID, GVN, and implementing partners like Winrock International, as well as other partners who contributed to VFD's success. Thanks to the power of these relationships, VFD's legacy can continue to benefit the people of Vietnam long into the future.

Annex: Monitoring and evaluation results

Phase 1



Indicator 3.0.1: Number of people receiving training in global climate change as result of USG assistance

Component		2014	2015	2016	2017	2018	Total
Sustainable Landscapes (SL)	Total	835	7,707	11,857	10,928	263	31,590
	Male	191	5,658	7,706	6,910	208	31,590
	Female	644	2,049	4,151	4,018	55	21,126
Adaptation (AD)	Total	7,820	23,358	31,561	34,853	246	97,838
	Male	3,702	13,087	17,424	17,171	117	97,838
	Female	4,118	10,271	14,137	17,682	129	51,917
Cross-Cutting (CC)	Total	623	319	368	387	-	1,697
	Male	272	192	254	120	-	1,697
	Female	351	127	114	267	-	917
Total		9,278	31,384	43,786	46,168	509	131,125

Indicator 3.0.2: Number of hectares of biophysical significance and/or natural resources showing improved biophysical conditions as a results of USG assistance

	2014	2015	2016	2017	2018	Total
Total	0	62,591	261,659	642,980	0	642,980

*SL: Sustainable Landscapes

AD: Adaptation

Indicator 3.1.1: Number of institutions with improved capacity to address climate change issues as a result of USG assistance

#	Name of institutions	Component	Province	Year of appraisal
1	Nghe An Department of Natural Resources and Environment	SL	Nghe An	2014
2	Nghe An Water Resources Management Department	SL	Nghe An	2014
3	Nghe An Department of Forestry	SL	Nghe An	2014
4	Ca River basin Committee	SL	-	2014
5	Thanh Hoa Department of Agriculture and Rural Development	SL	Thanh Hoa	2014
6	Vietnam Forest Protection and Development Fund	SL	National	2015
7	Nam Dinh Agriculture Extension Center	AD	Nam Dinh	2014
8	Nam Dinh Red Cross	AD	Nam Dinh	2014
9	Long An Red Cross	AD	Long An	2014
10	CFSC LA	AD	Long An	2014
11	Thanh Hoa Forest Protection and Development Fund	SL	Thanh Hoa	2015
12	Thanh Hoa Agriculture Extension Center	SL	Thanh Hoa	2015
13	Nghe An Agriculture Extension Center	SL	Nghe An	2015
14	Thanh Hoa Department of Planning and Investment	SL	Thanh Hoa	2015
15	Xuan Lien Nature Reserve	SL	Thanh Hoa	2015
16	Pu Hoat Nature Reserve	SL	Nghe An	2015
17	Thanh Hoa Green Growth Task Force	SL	Thanh Hoa	2015
18	Thanh Hoa Bamboo Task Force	SL	Thanh Hoa	2015
19	Long An Agriculture Extension Center	AD	Long An	2015
20	Nam Dinh Department of Agriculture and Rural Development	AD	Nam Dinh	2015
21	Long An Department of Agriculture and Rural Development	AD	Long An	2015
22	Long An Irrigation Departments LA	AD	Long An	2015
23	Y Yen District Agriculture Extension Station	AD	Nam Dinh	2015
24	Giao Thuy District Agriculture Extension Station	AD	Nam Dinh	2015
25	Hai Hau District Agriculture Extension Station	AD	Nam Dinh	2015
26	Nghia Hung District Agriculture Extension Station	AD	Nam Dinh	2015
27	Can Duoc District Agriculture Extension Station	AD	Long An	2015
28	Tan Thanh District Agriculture Extension Station	AD	Long An	2015
29	Long An Department of Natural Resources and Environment	AD	Long An	2015
30	Hydrometeorology Station	AD	Long An	2015
31	Pu Luong Nature Reserve	SL	Thanh Hoa	2016
32	Tuong Duong Protection Forest	SL	Nghe An	2016
33	Thanh Hoa Women's Union	SL	Thanh Hoa	2017
34	Da Loc Community Training and Education Center	SL	Thanh Hoa	2017
35	Ba Thuoc District Plant Protection Station	SL	Thanh Hoa	2017
36	Trung Ly Commune People's Committee (Muong Lat district)	SL	Thanh Hoa	2017
37	Nghe An Biological Resources and Environment Center (NABREC)	SL	Nghe An	2017
38	Nghe An Forest Protection and Development Fund	SL	Nghe An	2017
39	Institute of Water Resources Planning (IWRP)	SL	National	2017
40	The National Center for Water Resources Planning and Investigations (NAWAPI)	SL	National	2017
41	Nam Dinh Aquaculture Breeding Center	AD	Nam Dinh	2017
42	Nam Dinh Aquaculture Breeding Center	AD	Nam Dinh	2017

Indicator 3.1.2: Number of hectares of biological significance and/ or natural resources under improved natural resource management as a result of USG assistance

	2014	2015	2016	2017	2018	Total
Number of hectares	-	156,325	730,231	579,285	-	1,465,841

Hectares reported include PRAP areas in Thanh Hoa, Nghe An, and Quang Binh provinces; the Western Nghe An Man and Biosphere Reserve; and PFES areas in Thanh Hoa

Indicator 3.2.2: Number of households receiving benefits / incentives and economic rewards through sustainable natural resource management as a result of USG assistance

	2014	2015	2016	2017	2018	Total
Number of households	0	19,326	-	1,836	6,644	27,806

Households were from newly-paid PFES areas in Thanh Hoa and Nghe An provinces

Indicator 3.3.1: Amount of investment leveraged in U.S. dollars, from private and public sources, for climate change [natural resource management, biodiversity conservation and/or climate change adaptation and mitigation] as a result of USG assistance

	2014	2015	2016	2017	2018	Total
Total (thousand USD)	0	1,260	747	150,852	-	152,859

Funding came from support generated from other programs, including the World Bank's Forest Sector Modernization and Coastal Resilience Project, and other investment in VFD landscapes

Indicator 3.3.2: Quantity of GHG emissions, measured in metric tons of CO2 equivalent, reduced or sequestered as a result of USG assistance

	2014	2015	2016	2017	2018	Total
Total	0	207,403	1,288,163	7,576,221	4,764,961	13,836,748

Indicator 4.0.1: Number of stakeholders (individuals) with increased capacity to adapt to the impacts of climate change as a result of USG assistance

	2014	2015	2016	2017	2018	Total
a) Implementing risk-reducing practices/actions	5,728	24,586	21,527	152,230	-	204,071
b) Using climate information in decision making	-	-	2,495	162,280	-	164,775
c) With increased knowledge of climate change impacts and response actions	156	18,645	23,347	21,703	-	63,851
Total	5,884	43,231	47,369	336,213	-	432,697

Indicator 4.1.1: Number of climate vulnerability assessments conducted as a result of USG assistance

	Name of assessment	Component	Location			Year of completion
			Commune	District	Province	
1	Vulnerability and Capacity Assessment	AD	Giao Hai	Giao Thuy	Nam Dinh	2014
2	Vulnerability and Capacity Assessment	AD	Giao Long	Giao Thuy	Nam Dinh	2014
3	Vulnerability and Capacity Assessment	AD	Quat Lam town	Giao Thuy	Nam Dinh	2014
4	Vulnerability and Capacity Assessment	AD	Hai Dong	Hai Hau	Nam Dinh	2014
5	Vulnerability and Capacity Assessment	AD	Hai Hoa	Hai Hau	Nam Dinh	2014
6	Vulnerability and Capacity Assessment	AD	Hai Phuc	Hai Hau	Nam Dinh	2014
7	Vulnerability and Capacity Assessment	AD	Nghia Binh	Nghia Hung	Nam Dinh	2014
8	Vulnerability and Capacity Assessment	AD	Nghia Hai	Nghia Hung	Nam Dinh	2014
9	Vulnerability and Capacity Assessment	AD	Nghia Thang	Nghia Hung	Nam Dinh	2014
10	Vulnerability and Capacity Assessment	AD	Long Hoa	Can Duoc	Long An	2014
11	Vulnerability and Capacity Assessment	AD	Long Huu Dong	Can Duoc	Long An	2014
12	Vulnerability and Capacity Assessment	AD	Long Huu Tay	Can Duoc	Long An	2014
13	Vulnerability and Capacity Assessment	AD	My Le	Can Duoc	Long An	2014
14	Vulnerability and Capacity Assessment	AD	Phuoc Dong	Can Duoc	Long An	2014
15	Vulnerability and Capacity Assessment	AD	Phuoc Tuy	Can Duoc	Long An	2014
16	Vulnerability and Capacity Assessment	AD	Tan An	Can Duoc	Long An	2014
17	Vulnerability and Capacity Assessment	AD	Tan Chanh	Can Duoc	Long An	2014
18	Vulnerability and Capacity Assessment	AD	Tan Lan	Can Duoc	Long An	2014
19	Commune Climate Change Assessment and Socio-Economic Development Plan	SL	Hach Dich	Que Phong	Nghe An	2015
20	Commune Climate Change Assessment and Socio-Economic Development Plan	SL	Nam Giai	Que Phong	Nghe An	2015
21	Commune Climate Change Assessment and Socio-Economic Development Plan	SL	Nam Nhoong	Que Phong	Nghe An	2015
22	Commune Climate Change Assessment and Socio-Economic Development Plan	SL	Que Son	Que Phong	Nghe An	2015
23	Commune Climate Change Assessment and Socio-Economic Development Plan	SL	Tien Phong	Que Phong	Nghe An	2015
24	Commune Climate Change Assessment and Socio-Economic Development Plan	SL	Yen Thang	Tuong Duong	Nghe An	2015
25	Community-based Disaster Risk Assessment	AD	Rang Dong	Nghia Hung	Nam Dinh	2015
26	Community-based Disaster Risk Assessment	AD	Thinh Long	Hai Hau	Nam Dinh	2015
27	Community-based Disaster Risk Assessment	AD	Bach Long	Giao Thuy	Nam Dinh	2015
28	Community-based Disaster Risk Assessment	AD	Giao Phong	Giao Thuy	Nam Dinh	2015
29	Community-based Disaster Risk Assessment	AD	Giao Xuan	Giao Thuy	Nam Dinh	2015
30	Community-based Disaster Risk Assessment	AD	Hai Chinh	Hai Hau	Nam Dinh	2015
31	Community-based Disaster Risk Assessment	AD	Hai Loc	Hai Hau	Nam Dinh	2015
32	Community-based Disaster Risk Assessment	AD	Nam Dien	Nghia Hung	Nam Dinh	2015
33	Community-based Disaster Risk Assessment	AD	Nghia Phuc	Nghia Hung	Nam Dinh	2015
34	Community-based Disaster Risk Assessment	AD	Tan Thanh	Tan Thanh	Long An	2015
35	Community-based Disaster Risk Assessment	AD	Bac Hoa	Tan Thanh	Long An	2015
36	Community-based Disaster Risk Assessment	AD	Hau Thanh Dong	Tan Thanh	Long An	2015
37	Community-based Disaster Risk Assessment	AD	Kien Binh	Tan Thanh	Long An	2015
38	Community-based Disaster Risk Assessment	AD	Nhon Hoa Lap	Tan Thanh	Long An	2015
39	Community-based Disaster Risk Assessment	AD	Nhon Hoa	Tan Thanh	Long An	2015
40	Community-based Disaster Risk Assessment	AD	Tan Hoa	Tan Thanh	Long An	2015

	Name of assessment	Component	Location			Year of completion
			Commune	District	Province	
40	Community-based Disaster Risk Assessment	AD	Tan Hoa	Tan Thanh	Long An	2015
41	Community-based Disaster Risk Assessment	AD	Tan Lap	Tan Thanh	Long An	2015
42	Community-based Disaster Risk Assessment	AD	Tan Ninh	Tan Thanh	Long An	2015
43	Disaster Preparedness and Climate Change Adaptation Plan	AD	Nhon Ninh	Tan Thanh	Long An	2016
44	Disaster Preparedness and Climate Change Adaptation Plan	AD	Tan Binh	Tan Thanh	Long An	2016
45	Disaster Preparedness and Climate Change Adaptation Plan	AD	Hai Ly	Hai Hau	Nam Dinh	2016
46	Disaster Preparedness and Climate Change Adaptation Plan	AD	Can Duoc town	Can Duoc	Nam Dinh	2016
47	Disaster Preparedness and Climate Change Adaptation Plan	AD	Hau Thanh Tay	Tan Thanh	Nam Dinh	2016
48	Disaster Preparedness and Climate Change Adaptation Plan	AD	Hai Chau	Hai Hau	Nam Dinh	2016
49	Disaster Preparedness and Climate Change Adaptation Plan	AD	Nghia Hung	Nghia Hung	Nam Dinh	2016
50	Disaster Preparedness and Climate Change Adaptation Plan	AD	Nghia Loi	Nghia Hung	Nam Dinh	2016
51	Disaster Preparedness and Climate Change Adaptation Plan	AD	Tan Thanh town	Tan Thanh	Long An	2016
52	Disaster Preparedness and Climate Change Adaptation Plan	AD	Long Son	Can Duoc	Long An	2016
53	Disaster Preparedness and Climate Change Adaptation Plan	AD	Nghia Thanh	Nghia Hung	Nam Dinh	2016
54	Disaster Preparedness and Climate Change Adaptation Plan	AD	Nghia Lam	Nghia Hung	Nam Dinh	2016
55	Disaster Preparedness and Climate Change Adaptation Plan	AD	Hai Xuan	Hai Hau	Nam Dinh	2016
56	Disaster Preparedness and Climate Change Adaptation Plan	AD	Long Khe	Can Duoc	Long An	2016
57	Disaster Preparedness and Climate Change Adaptation Plan	AD	Tan Trach	Can Duoc	Long An	2016
58	Disaster Preparedness and Climate Change Adaptation Plan	AD	Long Dinh	Can Duoc	Long An	2016
59	Disaster Preparedness and Climate Change Adaptation Plan	AD	Long Cang	Can Duoc	Long An	2016
60	Disaster Preparedness and Climate Change Adaptation Plan	AD	Long Trach	Can Duoc	Long An	2016
61	Disaster Preparedness and Climate Change Adaptation Plan	AD	Phuoc Van	Can Duoc	Long An	2016
62	Disaster Preparedness and Climate Change Adaptation Plan	AD	Hai Trieu	Hai Hau	Nam Dinh	2016
63	Disaster Preparedness and Climate Change Adaptation Plan	AD	Giao Huong	Giao Thuy	Nam Dinh	2017
64	Disaster Preparedness and Climate Change Adaptation Plan	AD	Giao Thanh	Giao Thuy	Nam Dinh	2017
65	Disaster Preparedness and Climate Change Adaptation Plan	AD	Giao Lac	Giao Thuy	Nam Dinh	2017
66	Disaster Preparedness and Climate Change Adaptation Plan	AD	Giao An	Giao Thuy	Nam Dinh	2017

Indicator 4.2.1: Number of climate mitigation and/or adaptation tools, technologies and methodologies developed, tested and/or adopted as a result of USG assistance

#	Name of tool, technology or methodology	Component	Province	Year reported
1	Forest Management Board Tracker Tool for Management Effectiveness and Capacity Building	SL	National	2015
2	Ecosystem Services Assessment Toolkit and Application of INVEST	SL	National	2015
3	Behavior Change and Communication - BCC Tools (PFES and Livelihoods)	SL	National	2015
4	PFES Watershed Boundary Measurement Tool	SL	National	2015
5	PFES Forest Owner Identification Tool	SL	National	2015
6	Drivers of Deforestation and Degradation Assessment (Drivers Assessment; Fuel wood Assessment)	SL	National	2015
7	Commune Land Use Planning - Socio-Economic Development Plan - Climate Change Guidelines	SL	National	2015
8	Monitoring Reporting and Verification of Rice Emissions	SL	National	2015
9	Siting Tool (Application of High Conservation Value Assessment & Climate Change Vulnerability)	SL	National	2015
10	Forest Cover Change and Carbon Assessment Tools (Tools Applied: Forest Cover Change Assessment; Agriculture Mapping Tool; Emission Level and Activity Data; Reference Level Tool; Carbon Accounting Tool)	SL	National	2015
11	Estimation of GHG Gas Emissions (Application of LEAP Energy Emission Tool; ALU Tool for Agriculture Emissions; MACC Curves)	SL	National	2015
12	Conservation Assessment and Community Mapping Tools (Flagship Species Assessment Tool; Community Mapping Tool; M&E transect Tool)	SL	National	2015
13	PFES Community of Practice Tool	SL	National	2015
14	Climate change educational game: Instruction on Evading the Storm	AD	National	2015
15	Climate change educational game: Boat	AD	National	2015
16	Climate change educational game: Catching the Phrase	AD	National	2015
17	Climate change educational game: FFDM	AD	National	2015
18	Climate change educational game: Gender and Climate	AD	National	2015
19	Climate change educational game: Grab it!!!	AD	National	2015
20	Climate change educational game: Keeping your job	AD	National	2015
21	Climate change educational game: Paying Predictions	AD	National	2015
22	Climate change educational game: Ready	AD	National	2015
23	Climate change educational game: VIS-à-VIS	AD	National	2015
24	Climate smart corn model	AD	Long An	2015
25	Climate smart rice model	AD	Long An	2015
26	Climate smart potato model	AD	Nam Dinh	2015
27	Post VCA (Vulnerability and Capacity Assessment) success criteria scorecard	AD	National	2015
28	Effective VCA process criteria scorecard	AD	National	2015
29	CBDRM (Community-Based Disaster Risk Management) and CBDRA (Community-Based Disaster Risk Assessment) tool for commune levels	AD	National	2015
30	Guidelines for DRR/CCA (Disaster Risk Reduction/Climate Change Adaptation) integration in local Socio-Economic Development Plan	AD	National	2015
31	Water Accounting Toolkit	SL	National	2016
32	Guidelines for Early Warning System (EWS) development	AD	National	2015
33	Guideline for development of small-scale project	AD	National	2015
34	Assessment of Potential for Public-Private Collaboration in Disaster Risk Reduction and Climate Change Adaptation with Businesses in Industrial Zones	AD	Long An	2015
35	Participatory land allocation guidelines	SL	National	2016
36	Monitoring of biophysical health conditions	SL	National	2016
37	Climate smart rice model	AD	Nam Dinh	2016
38	Guidelines for drills emergency drills	AD	National	2016
39	Guidelines for school event	AD	National	2016

#	Name of tool, technology or methodology	Component	Province	Year reported
40	Investigation of water resource and climate change in Long An province	AD	Long An	2016
41	Agricultural development and climate change adaptive agricultural livelihoods in Long An	AD	Long An	2016
42	Investigation of erosion and climate change impacts in Long An	AD	Long An	2016
43	The stakeholder engagement in mangrove forest governance for climate change adaptation and disaster risk reduction in North and North Central Coast of Vietnam	AD	National	2016
44	Management effectiveness of Cat Ba Biosphere Reserve to adapt to Climate Change	AD	National	2016
45	Management effectiveness of Red River Delta Biosphere Reserve to adapt to Climate Change	AD	National	2016
46	Climate smart shrimp model in Nam Dinh	AD	Nam Dinh	2016
47	Climate Change information center website	AD	Nam Dinh	2016
48	Technical guideline for rice - fish cultivation	AD	National	2016
49	Investigation of Climate Change awareness for students in Long An	AD	Long An	2016
50	Agricultural development and climate change adaptive agricultural livelihoods in 3 coastal districts of Nam Dinh	AD	Nam Dinh	2016
51	Guideline for establishment and operation of future agriculture club	AD	National	2016
52	Solutions for the proper exploitation and utilization for production and domestic purposes of water from ponds established by excavating soil to enhance the flooding residential area in Long An province in the context of climate change and sea level rise	AD	Long An	2016
53	Banking resilience study in Long An	AD	Long An	2016
54	Agriculture restructuring study in Nam Dinh	AD	Nam Dinh	2016
55	Community Based Forest Management Tool	SL	Nghe An	2017
56	Forest Degradation Monitoring Tool	SL	National	2017
57	Tablet Based Forest Monitoring Tool	SL	National	2017
58	Forest Stewardship Council (FSC) tool for sustainable forest management	SL	National	2017
59	Co-Management models guideline in Xuan Lien Nature Reserve	SL	Thanh Hoa	2017
60	Web-based tool on Climate Smart Agriculture (CSA) for coastal areas and Red river delta	AD	National	2017
61	Climate Change Information Center (CCIC) website	AD	Long An	2017
62	Guideline for establishment and operation of Farmer Interest Groups	AD	National	2017
63	Disaster Risk Reduction communication tool package	AD	Nam Dinh	2017
64	Disaster Risk Reduction communication tool package	AD	Long An	2017
65	Communication tool package for climate adaptive livelihood models	AD	Long An	2017
66	Climate change curriculum	AD	Vietnam National University of Forestry	2017
67	Climate change risk assessment tool for private sector in Long An	AD	Long An	2017

Indicator 4.2.3: Number of administrative units/institutions implementing targeted climate change resilience innovations

#	Name of administrative unit/institution	Province	Year of appraisal
1	Vietnam Red Cross in Nam Dinh	Nam Dinh	2015
2	Vietnam Red Cross in Long An	Long An	2015
3	Provincial Department of Information and Communications	Nam Dinh	2015
4	Cat Ba Biosphere Reserve	Hai Phong	2015
5	Red River Delta Biosphere Reserve	-	2015
8	Agriculture Extension Center in Giao Thuy	Nam Dinh	2015
9	Agriculture Extension Center in Hai Hau	Nam Dinh	2015
10	Agriculture Extension Center in Nghia Hung	Nam Dinh	2015
11	Agriculture Extension Center in Duc Hoa	Long An	2015
12	Agriculture Extension Center in Duc Hue	Long An	2015
13	Agriculture Extension Center in Can Duoc	Long An	2015
14	Agriculture Extension Center in Tan Thanh	Long An	2015
16	Vietnam Red Cross in Giao Thuy	Nam Dinh	2015
17	Vietnam Red Cross in Nghia Hung	Nam Dinh	2015
18	Vietnam Red Cross in Can Duoc	Long An	2015
19	Vietnam Red Cross in Tan Thanh	Long An	2015
20	Kien Binh Commune People's Committee, Tan Thanh district	Long An	2015
21	Nhon Hoa Lap Commune People's Committee, Tan Thanh district	Long An	2015
22	Tan Hoa Commune People's Committee, Tan Thanh district	Long An	2015
23	Tan Lap Commune People's Committee, Tan Thanh district	Long An	2015
24	Tan Ninh Commune People's Committee, Tan Thanh district	Long An	2015
25	Tan Thanh Commune People's Committee, Tan Thanh district	Long An	2015
26	Bac Hoa Commune People's Committee, Tan Thanh district	Long An	2015
27	Hau Thanh Dong Commune People's Committee, Tan Thanh district	Long An	2015
28	Nhon Hoa Commune People's Committee, Tan Thanh district	Long An	2015
29	Long Hoa Commune People's Committee, Can Duoc district	Long An	2015
30	Long Huu Dong Commune People's Committee, Can Duoc district	Long An	2015
31	Long Huu Tay Commune People's Committee, Can Duoc district	Long An	2015
32	My Le Commune People's Committee, Can Duoc district	Long An	2015
33	Phuoc Dong Commune People's Committee, Can Duoc district	Long An	2015
34	Phuoc Tuy Commune People's Committee, Can Duoc district	Long An	2015
35	Tan An Commune People's Committee, Can Duoc district	Long An	2015
36	Tan Chanh Commune People's Committee, Can Duoc district	Long An	2015
37	Tan Lan Commune People's Committee, Can Duoc district	Long An	2015
38	Bach Long School	Nam Dinh	2015
39	Giao Hai School	Nam Dinh	2015
40	Giao Long School	Nam Dinh	2015
41	Giao Phong School	Nam Dinh	2015
42	Giao Xuan School	Nam Dinh	2015
43	Hai Dong School	Nam Dinh	2015
44	Hai Hoa School	Nam Dinh	2015
45	Hai Loc School	Nam Dinh	2015
46	Hai Phuc School	Nam Dinh	2015
47	Nam Dien School	Nam Dinh	2015
48	Nghia Binh School	Nam Dinh	2015

#	Name of administrative unit/institution	Province	Year of appraisal
49	Nghia Hai A School	Nam Dinh	2015
50	Nghia Hai B School	Nam Dinh	2015
51	Nghia Phuc School	Nam Dinh	2015
52	Nghia Thang School	Nam Dinh	2015
53	Quat Lam School	Nam Dinh	2015
54	Rang Dong School	Nam Dinh	2015
55	Thinh Long A School	Nam Dinh	2015
56	Thinh Long B School	Nam Dinh	2015
57	Department of Agriculture	Nam Dinh	2016
58	Department of Plant Protection	Nam Dinh	2016
59	Nhon Ninh Commune People's Committee, Tan Thanh district	Long An	2016
60	Tan Binh Commune People's Committee, Tan Thanh district	Long An	2016
61	Hai Ly Commune People's Committee, Hai Hau	Nam Dinh	2016
62	Can Duoc Town People's Committee, Can Duoc district	Long An	2016
63	Hau Thanh Tay Commune People's Committee, Tan Thanh district	Long An	2016
64	Nghia Hung Commune People's Committee, Nghia Hung district	Nam Dinh	2016
65	Nghia Loi Commune People's Committee, Nghia Hung district	Nam Dinh	2016
66	Hai Chau Commune People's Committee, Hai Hau district	Nam Dinh	2016
67	Tan Thanh Town People's Committee, Tan Thanh district	Long An	2016
68	Long Son Commune People's Committee, Can Duoc district	Long An	2016
69	Nghia Thanh Commune People's Committee, Nghia Hung district	Nam Dinh	2016
70	Nghia Lam Commune People's Committee, Nghia Hung district	Nam Dinh	2016
71	Hai Xuan Commune People's Committee, Hai Hau district	Nam Dinh	2016
72	Long Khe Commune People's Committee, Can Duoc district	Long An	2016
73	Tan Trach Commune People's Committee, Can Duoc district	Long An	2016
74	Long Dinh Commune People's Committee, Can Duoc district	Long An	2016
75	Long Cang Commune People's Committee, Can Duoc district	Long An	2016
76	Long Trach Commune People's Committee, Can Duoc district	Long An	2016
77	Phuoc Van Commune People's Committee, Can Duoc district	Long An	2016
78	Hai Trieu Commune People's Committee, Hai Hau district	Nam Dinh	2016
79	Long Huu Dong 1 School	Long An	2016
80	Phuoc Dong 2 School	Long An	2016
79	Tan Chanh 2 School	Long An	2016
80	Tan Lan 1 School	Long An	2016
81	Nguyen Van Tien School	Long An	2016
82	Nhon Hoa School	Long An	2016
83	Kien Binh School	Long An	2016
84	Da Bien School	Long An	2016
85	Bac Hoa School	Long An	2016
86	Tan Thanh B School	Long An	2016
87	Tan Thanh A School	Long An	2016
88	Tan Ninh A School	Long An	2016
89	Tan Ninh B School	Long An	2016
90	Hau Thanh Dong School	Long An	2016

#	Name of administrative unit/institution	Province	Year of appraisal
91	Nhon Hoa Lap A School	Long An	2016
92	Nhon Hoa Lap B School	Long An	2016
93	Tan Lap A School	Long An	2016
94	Tan Lap B School	Long An	2016
95	Tan Hoa A School	Long An	2016
96	Dinh Van Phu School	Long An	2016
97	Giao Xuan School	Nam Dinh	2016
98	Giao Phong School	Nam Dinh	2016
99	Bach Long School	Nam Dinh	2016
100	Nghia Phuc School	Nam Dinh	2016
101	Nam Dien School	Nam Dinh	2016
102	Rang Dong Town School	Nam Dinh	2016
103	Hai Loc School	Nam Dinh	2016
104	Hai Chinh School	Nam Dinh	2016
105	Thinh Long A School	Nam Dinh	2016
106	Thinh Long B School	Nam Dinh	2016
107	Long An Province People's Committee	Long An	2017
108	Bach Long Commune People's Committee, Giao Thuy district	Nam Dinh	2017
109	Giao Phong Commune People's Committee, Giao Thuy district	Nam Dinh	2017
110	Giao Xuan Commune People's Committee, Giao Thuy district	Nam Dinh	2017
111	Hai Chinh Commune People's Committee, Hai Hau district	Nam Dinh	2017
112	Hai Loc Commune People's Committee, Hai Hau district	Nam Dinh	2017
113	Nam Dien Commune People's Committee, Nghia Hung district	Nam Dinh	2017
114	Nghia Phuc Commune People's Committee, Nghia Hung district	Nam Dinh	2017
115	Rang Dong Commune People's Committee, Nghia Hung district	Nam Dinh	2017
116	Thinh Long Commune People's Committee, Hai Hau district	Nam Dinh	2017
117	Giao Hai Commune People's Committee, Giao Thuy district	Nam Dinh	2017
118	Giao Long Commune People's Committee, Giao Thuy district	Nam Dinh	2017
119	Hai Dong Commune People's Committee, Hai Hau district	Nam Dinh	2017
120	Hai Hoa Commune People's Committee, Hai Hau district	Nam Dinh	2017
121	Hai Phuc Commune People's Committee, Hai Hau district	Nam Dinh	2017
122	Nghia Binh Commune People's Committee, Nghia Hung district	Nam Dinh	2017
123	Nghia Hai Commune People's Committee, Nghia Hung district	Nam Dinh	2017
124	Nghia Thang Commune People's Committee, Nghia Hung district	Nam Dinh	2017
125	Quat Lam Commune People's Committee, Giao Thuy district	Nam Dinh	2017
126	Nam Dinh Department of Agriculture and Rural Development	Nam Dinh	2017
127	Nam Dinh Aquaculture Breeding Center	Nam Dinh	2017
128	Nam Dinh Agriculture Extension Center	Nam Dinh	2017
129	Long An Agriculture Extension Center	Long An	2017
130	Giao Huong Commune People's Committee, Giao Thuy district	Nam Dinh	2017
131	Giao Thanh Commune People's Committee, Giao Thuy district	Nam Dinh	2017
132	Giao Lac Commune People's Committee, Giao Thuy district	Nam Dinh	2017
133	Giao An Commune People's Committee, Giao Thuy district	Nam Dinh	2017
134	Giao Lac School	Nam Dinh	2017
135	Giao An School	Nam Dinh	2017
136	Giao Huong School	Nam Dinh	2017

#	Name of administrative unit/institution	Province	Year of appraisal
137	Giao Thanh School	Nam Dinh	2017
138	Hai Chau School	Nam Dinh	2017
139	Hai Ly School	Nam Dinh	2017
140	Hai Trieu School	Nam Dinh	2017
141	Hai Xuan School	Nam Dinh	2017
142	Nghia Loi School	Nam Dinh	2017
143	Nghia Hung School	Nam Dinh	2017
144	Nghia Lam School	Nam Dinh	2017
145	Nghia Thanh A School	Nam Dinh	2017
146	Nghia Thanh B School	Nam Dinh	2017
147	Giao Hai Commune People's Committee, Giao Thuy district	Nam Dinh	2017
148	Giao Long Commune People's Committee, Giao Thuy district	Nam Dinh	2017
149	Hai Chau Commune People's Committee, Hai Hau district	Nam Dinh	2017
150	Hai Ha Commune People's Committee, Hai Hau district	Nam Dinh	2017
151	Hai Trung Commune People's Committee, Hai Hau district	Nam Dinh	2017
152	Nghia Binh Commune People's Committee, Nghia Hung district	Nam Dinh	2017
153	Nghia Tan Commune People's Committee, Nghia Hung district	Nam Dinh	2017
154	Yen Khanh Commune People's Committee, Yen district	Nam Dinh	2017
155	Yen Minh Commune People's Committee, Yen district	Nam Dinh	2017
156	Long Cang School	Long An	2017
157	Can Duoc School	Long An	2017
158	Long Trach 1 School	Long An	2017
159	Tan Trach School	Long An	2017
160	Phuoc Van School	Long An	2017
161	Long Dinh School	Long An	2017
162	Hau Thanh Tay School	Long An	2017
163	Ho Van Hue School	Long An	2017
164	Nhon Ninh B School	Long An	2017
165	Nhon Ninh A School	Long An	2017
166	Tan Binh School	Long An	2017
167	Long Khe School	Long An	2017
168	Long Trach 2 School	Long An	2017
169	Long Son School	Long An	2017
170	Tan Thanh School	Long An	2017
171	Long An Department of Agriculture and Rural Development	Long An	2017
172	Long An Irrigation Division	Long An	2017
173	An Thanh Commune People's Committee, Ben Luc district	Long An	2017
174	Binh Tinh Commune People's Committee, Tan Tru district	Long An	2017
175	Duc Tan Commune People's Committee, Tan Tru district	Long An	2017
176	Mi Le Commune People's Committee, Can Duoc district	Long An	2017
177	My Binh Commune People's Committee, Tan Tru district	Long An	2017
178	My Phu Commune People's Committee, Thu Thua district	Long An	2017
179	Nhut Chanh Commune People's Committee, Ben Luc district	Long An	2017
180	Phuoc Dong Commune People's Committee, Can Duoc district	Long An	2017
181	Tan Thanh Commune People's Committee, Thu Thua district	Long An	2017
182	Tan Trach Commune People's Committee, Can Duoc district	Long An	2017

Indicator 4.3.1: Number of laws, policies, strategies, plans, agreements, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance

#	Name of law, policy, strategy, plan, agreement or regulation	Component	Level	Year reported
1	ERPIN - Support to Development of a Emission Reduction Project Inception Note for Submission to the World Bank	SL	National	2014
2	Decree on PFES Payments Compliance Mechanism	SL	National	2015
3	Review and Revise Decree 99	SL	National	2015
4	Provincial Cross-Border Water Payments Decree	SL	National	2015
5	Thanh Hoa Provincial Task Force for Green Growth	SL	Provincial	2015
6	Thanh Hoa Green Growth Strategy / Action Plan 2016-2020	SL	Provincial	2015
7	Thanh Hoa Provincial Bamboo Development Strategy Task Force	SL	Provincial	2015
8	Interprovincial Agreement between Nghe An and Thanh Hoa on Management Mechanism for Pu Hoat and Xuan Lien Nature Reserves	SL	Provincial	2015
9	Decision on PFES provincial guideline in Nghe An	SL	Provincial	2015
10	Commune SEDP: Hanh Dich Commune, Que Phong District, Nghe An Province	SL	Sub-provincial	2015
11	Commune SEDP: Nam Giai Commune, Que Phong District, Nghe An Province	SL	Sub-provincial	2015
12	Commune SEDP: Nam Nhoong Commune, Que Phong District, Nghe An Province	SL	Sub-provincial	2015
13	Commune SEDP: Que Son Commune, Que Phong District, Nghe An Province	SL	Sub-provincial	2015
14	Commune SEDP: Tien Phong Commune, Que Phong District, Nghe An Province	SL	Sub-provincial	2015
15	Commune SEDP: Yen Thang Commune, Que Phong District, Nghe An Province	SL	Sub-provincial	2015
16	Prioritized Action Plan for Cat Ba Biosphere Reserve over the period from June 2015 to June 2017	AD	Sub-provincial	2015
17	Prioritized Action Plan for Red River Delta Biosphere Reserve over the period from June 2015 to June 2017	AD	National	2015
18	DPP for Giao Hai Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-Provincial	2015
19	DPP for Giao Long Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2015
20	DPP for Quat Lam Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2015
21	DPP for Nghia Binh Commune People's Committee, Nghia Hung district, Nam Dinh province	AD	Sub-provincial	2015
22	DPP for Nghia Hai Commune People's Committee, Nghia Hung district, Nam Dinh province	AD	Sub-provincial	2015
23	DPP for Nghia Thang Commune People's Committee, Nghia Hung district, Nam Dinh province	AD	Sub-provincial	2015
24	DPP for Hai Dong Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2015
25	DPP for Hai Hoa Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2015
26	DPP for Hai Phuc Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2015
27	DPP for Long Hoa Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2015
28	DPP for Long Huu Tay Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2015
29	DPP for Long Huu Dong Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2015
30	DPP for My Le Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2015
31	DPP for Phuoc Dong Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2015
32	DPP for Phuoc Tuy Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2015
33	DPP for Tan An Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2015
34	DPP for Tan Chanh Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2015
35	DPP for Tan Lan Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2015
36	DPP for Nhon Hoa Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2015
37	DPP for Kien Binh Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2015
38	DPP for Hau Thanh Dong Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2015
39	DPP for Bac Hoa Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2015
40	DPP for Tan Thanh Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2015
41	DPP for Tan Ninh Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2015
42	DPP for Nhon Hoa Lap Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2015
43	DPP for Tan Lap Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2015
44	DPP for Tan Hoa Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2015

#	Name of law, policy, strategy, plan, agreement or regulation	Component	Level	Year reported
45	DPP for Hai Loc Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2015
46	DPP for Hai Chinh Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2015
47	DPP for TT Thinh Long Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2015
48	DPP for Nghia Phuc Commune People's Committee, Nghia Hung district, Nam Dinh province	AD	Sub-provincial	2015
49	DPP for Nam Dien Commune People's Committee, Nghia Hung district, Nam Dinh province	AD	Sub-provincial	2015
50	DPP for Rang Dong Commune People's Committee, Nghia Hung district, Nam Dinh province	AD	Sub-provincial	2015
52	DPP for Giao Phong Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2015
53	DPP for Bach Long Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2015
54	National Support to develop Curriculum for Forest Law and Protection Training for Ranger Station Leaders	SL	National	2016
55	Action Plan Outline for Nghe An Forest Sector Reform Plan	SL	Provincial	2016
56	Thanh Hoa Bamboo Sector Development Plan 2016-2020	SL	Provincial	2016
57	Provincial REDD+ Action Plan - Thanh Hoa Province	SL	Provincial	2016
58	Provincial REDD+ Action Plan - Nghe An Province	SL	Provincial	2016
59	PFES village regulation - Nghe An Province	SL	Provincial	2016
60	Provincial REDD+ Action Plan - Quang Binh Province	SL	Provincial	2016
61	Management Plan for Pu Hoat Nature Reserve	SL	Sub-provincial	2016
62	Management Plan for Tuong Duong	SL	Sub-provincial	2016
63	Decree on National Production Forest Management	SL	National	2016
64	National Support to Decree on Coastal Forest Protection and Development (Decree No. 119/2016/ND-CP dated August 23, 2016, policies on sustainable management, protection and development of coastal forests to cope with climate change)	SL	National	2016
65	PFES benefit sharing mechanism in Thanh Hoa	SL	Provincial	2017
66	FCPF - Emission reduction program	SL	National	2017
67	Forestry Law (2 chapters)	SL	National	2017
68	Decision on establishment of Bee Keeping Association - Thanh Hoa province	SL	Provincial	2017
69	Decision on establish Forestry Cooperative in Nghe An	SL	Provincial	2017
70	Land allocation plan in Tuong Duong - Nghe An province	SL	Provincial	2017
71	Nghe An Forest Protection and Development Plan	SL	Provincial	2018
72	Anh Son district Forest Protection and Development Plan - Nghe An province	SL	Provincial	2018
73	Western Nghe An Man and Biosphere Reserve management plan	SL	Provincial	2017
74	Data sharing mechanism policy in Son La	SL	National	2018
75	Circular on sustainable forest management - MARD	SL	National	2018
76	Letter from MARD to PPCs for enforcing E-payment mechanism	SL	National	2018
77	Decision 29 in Ba Thuoc to implement CSR model in all communes - Thanh Hoa	SL	Provincial	2018
78	Provincial climate change adaptation plans (CCAP) for Long An	AD	Provincial	2016
79	Agriculture restructuring plan for Nam Dinh (DARD Nam Dinh)	AD	Provincial	2015
80	Communication plan for Cat Ba Islands Biosphere Reserve (2016 – 2017)	AD	Sub-provincial	2016
81	Communication plan for the provincial trans-boundary coastal wetland biosphere reserve in Red River Delta (2016 - 2017)	AD	National	2016
82	Policy brief: The stakeholder engagement in mangrove forest governance for climate change adaptation and disaster risk reduction in North and North Central Coast of Vietnam	AD	Sub-National	2016
83	DPP for Nhon Ninh Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2016
84	DPP for Tan Binh Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2016
85	DPP for Hai Ly Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2016
86	DPP for Can Duoc Town People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
87	DPP for Hau Thanh Tay Commune People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2016
88	DPP for Hai Chau Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2016

#	Name of law, policy, strategy, plan, agreement or regulation	Component	Level	Year reported
89	DPP for Nghia Hung Commune People's Committee, Nghia Hung district, Nam Dinh province	AD	Sub-provincial	2016
90	DPP for Nghia Loi Commune People's Committee, Nghia Hung district, Nam Dinh province	AD	Sub-provincial	2016
91	DPP for Tan Thanh Town People's Committee, Tan Thanh district, Long An province	AD	Sub-provincial	2016
92	DPP for Long Son Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
93	DPP for Nghia Thanh Commune People's Committee, Nghia Hung district, Nam Dinh province	AD	Sub-provincial	2016
94	DPP for Nghia Lam Commune People's Committee, Nghia Hung district, Nam Dinh province	AD	Sub-provincial	2016
95	DPP for Hai Xuan Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2016
96	DPP for Long Khe Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
97	DPP for Tan Trach Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
98	CDPP for Long Dinh Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
99	DPP for Long Cang Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
100	DPP for Long Trach Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
101	DPP for Phuoc Van Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
102	DPP for Hai Trieu Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2016
103	DPP for Giao Huong Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2017
104	DPP for Giao Thanh Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2017
105	DPP for Giao Lac Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2017
106	DPP for Giao Anc Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2017
107	DPP for Hai Xuan Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2016
108	DPP for Long Khe Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
109	DPP for Tan Trach Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
110	DPP for Long Dinh Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
111	DPP for Long Cang Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
112	DPP for Long Trach Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
113	DPP for Phuoc Van Commune People's Committee, Can Duoc district, Long An province	AD	Sub-provincial	2016
114	DPP for Hai Trieu Commune People's Committee, Hai Hau district, Nam Dinh province	AD	Sub-provincial	2016
115	DPP for Giao Huong Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2017
116	DPP for Giao Thanh Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2017
117	DPP for Giao Lac Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2017
118	DPP for Giao An Commune People's Committee, Giao Thuy district, Nam Dinh province	AD	Sub-provincial	2017

*SEDP: Socio-Economic Development Plan

DPP: Disaster Preparedness Plan

Indicator 4.3.2: Number of households that have demonstrated or applied climate smart agriculture, sustainable livelihood, or community forestry activities as a result of USG assistance

#	Type of livelihood model	Component	Province	Year of appraisal	Number of households
1	Bon bo model	SL	Nghe An	2016	236
2	Chicken raising model	SL	Nghe An	2016	62
3	Public-Private Partnership for medicinal plant development	SL	Thanh Hoa	2016	2
4	Bee keeping model	SL	Thanh Hoa	2016	10
5	Mushroom model using agriculture residues	SL	Thanh Hoa	2016	20
6	Chicken raising model in Muong Lat district	SL	Thanh Hoa	2016	60
8	Climate smart rice production model	SL	Thanh Hoa	2016	293
9	Home garden model	SL	Thanh Hoa	2016	80
10	Model to improve economic and environmental effectiveness of bio-slurry management	SL	Thanh Hoa	2017	472
11	Climate smart rice production model	SL	Thanh Hoa	2017	538
12	Public-Private Partnership for medicinal plant development	SL	Thanh Hoa	2017	63
13	Bon bo model	SL	Nghe An	2017	758
14	Maize cultivation as the feed for dairy cows	SL	Nghe An	2017	400
15	Summer-fall rice crop model	AD	Long An	2016	222
16	2014-2015 rice model	AD	Long An	2016	186
17	Winter-spring rice crop model 2015-2016	AD	Long An	2016	88
18	Corn model in My Thanh Dong commune	AD	Long An	2016	79
19	Corn model in Hoa Khanh Tay and Hiep Hoa communes	AD	Long An	2016	45
20	Climate smart rice production model	AD	Nam Dinh	2016	720
21	2016 summer-fall rice crop model	AD	Nam Dinh	2017	891
22	Climate smart rice production model	AD	Nam Dinh	2017	2,532
23	Potato model	AD	Nam Dinh	2017	171
24	2016 summer-fall rice crop model	AD	Long An	2017	214
25	Climate smart rice production model	AD	Long An	2017	494
26	2016-2017 rice model	AD	Long An	2017	204
27	Climate smart rice production model	AD	Long An	2017	342
28	Corn model	AD	Long An	2017	93
Total					9,291

Indicator F.0.1: Number of Vietnamese NGOs receiving capacity building support or technical assistance in management, administration, or technical areas

#	Name of Vietnamese NGO	Detailed support	Year of appraisal
1	Center for Marinelife Conservation and Community Development (MCD)	<ul style="list-style-type: none"> • Training on Financial management • Training on Proposal writing • Review on organizational governance • 1st Organizational Capacity Assessment • BOT formation • Succession plan • Review on Financial management system 	2015
2	Center for Sustainable Rural Development (SRD)	<ul style="list-style-type: none"> • Training on Financial management • Training on Proposal writing • Review on organizational governance • 1st Organizational Capacity Assessment • 2nd Organizational Capacity Assessment • BOT formation • Succession plan • Training on Balance Score Card to improve M&E tools 	2015
3	Center of Research and Development in Upland Areas (CERDA)	<ul style="list-style-type: none"> • Training on Financial management • Training on Proposal writing • Review on organizational governance • 1st Organizational Capacity Assessment 	2016
4	People and Nature Reconciliation (Pan Nature)	<ul style="list-style-type: none"> • Training on Financial management • Training on Proposal writing-Review on organizational governance • 1st Organizational Capacity Assessment 	2016
5	Live & Learn Center for Environment and Community	<ul style="list-style-type: none"> • Training on Financial management • Training on Proposal writing • 1st Organizational Capacity Assessment 	2016
6	Green Innovation and Development Center (Green ID)	<ul style="list-style-type: none"> • Training on Financial management • Training on Proposal writing • 1st Organizational Capacity Assessment 	2016
7	Red River Delta NGO Network	<ul style="list-style-type: none"> • Training on improving awareness in CC and CC responses • Training on Climate Change Advocacy • Training on writing CC response project proposal 	2016
8	Central NGO Network	<ul style="list-style-type: none"> • Training on improving awareness in Climate Change and Climate Change responses • Training on Climate Change Advocacy • Training on writing Climate Change response project proposal • Training on REDD and PFES 	2016
9	Southern NGO Network	<ul style="list-style-type: none"> • Training on improving awareness in Climate Change and Climate Change responses 	2016

Indicator F.0.2: Number of NGOs capable of receiving direct support from USAID due to USG assistance

#	Name of NGO	Year of appraisal
1	Center for Sustainable Rural Development (SRD)	2015
2	Center for Marinelife Conservation and Community Development (MCD)	2015
3	Vietnam Red Cross	2015

Indicator G.0.1: Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources (assets, credit, income or employment)

	2014	2015	2016	2017	2018	Total
Total	0	38.7%	44.0%	56.0%	29.0%	49.5%

Indicator G.0.2: Number of laws, policies, or procedures drafted, proposed and adopted to promote gender equality at the regional, national or local level

#	Name of policy	Component	Level	Year of publication
1	Guidelines of Community of Practice for PFES	SL	National	2016
2	Village regulations on PFES management	SL	National	2016
3	Operational mechanism of village saving fund managed by women in Thanh Hoa	SL	Provincial	2017
4	Social Safeguards (Forest Carbon Partnership Facility)	SL	National	2017
5	Community-based forest management in Tuong Duong district, Nghe An province	SL	Sub-provincial	2017
6	Community-based forest management in Muong Lat district, Thanh Hoa province	SL	Sub-provincial	2017
7	Co-management model in Xuan Lien Nature Reserve, Thanh Hoa province	SL	Sub-provincial	2017
8	Western Nghe An Man and Biosphere Reserve Management Plan	SL	Sub-provincial	2017
9	Nghe An Forest Protection and Development Plan	SL	Provincial	2017
10	Guideline on Gender and Social Inclusion in Community-based Disaster Risk Management (CBDRM) and Community-based Disaster Risk Assessment - Disaster Management Center (CBDRA - DMC)	AD	National	2017
11	Guidelines for lower secondary future farmers' club	AD	National	2017

Phase 2



Indicator EG 13-1: Number of people receiving training in sustainable landscapes as result of USG assistance

Component		2019	2020	2021	Total
E-payment	Total	4,481	2,409	887	7,777
	Male	3,520	1,707	787	6,014
	Female	961	702	100	1,763
PFES M&E	Total	1,065	327	99	1,491
	Male	405	225	62	692
	Female	660	102	37	799
Carbon PFES	Total	118	0	0	118
	Male	108	0	0	108
	Female	10	0	0	10
Cross-cutting	Total	163	148	127	438
	Male	138	84	76	298
	Female	25	64	51	140
Total		5,827	2,884	1,113	9,824

Indicator EG 13-2: Number of institutions with improved capacity to address sustainable landscape issues

#	Institution Name	Component	Institution Level	Province	Year of appraisal
1	Lam Dong Forest Protection and Development Fund	Multiple Component	Sub-national	Lam Dong	2019
2	Son La Forest Protection and Development Fund	Multiple Component	Sub-national	Son La	2019
3	Thanh Hoa Forest Protection and Development Fund	Multiple Component	Sub-national	Thanh Hoa	2019
4	Cat Tien National Park	Multiple Component	Sub-national	Lam Dong	2019
5	Management Board of Phuoc Hai village, Phuoc Cat 2 commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
6	Management Board of Be De village, Dong Nai Thuong commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
7	Management Board of Bi Nao village, Dong Nai Thuong commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
8	Management Board of Brum village, Gia Vien commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
9	Management Board of Bu Gia Ra village, Dong Nai Thuong commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
10	Management Board of Bu Sa village, Dong Nai Thuong commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
11	Management Board of Cao Sinh village, Gia Vien commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
12	Management Board of Da Co village, Dong Nai Thuong commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
13	Management Board of Da Nha village, Quoc Oai commune, Da Teh district	E-payment	Sub-national	Lam Dong	2020
14	Management Board of Group 1, Phuoc Cat 2 commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
15	Management Board of Group 2, Phuoc Cat 2 commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
16	Management Board of Phuoc Son village, Phuoc Cat 2 commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
17	Management Board of Phuoc Thai village, Phuoc Cat 2 commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
18	Management Board of Tan Xuan village, Gia Vien commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
19	Management Board of Thanh Tien village, Gia Vien commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
20	Management Board of Van Minh village, Gia Vien commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
21	Management Board of Village 1, Tien Hoang commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
22	Management Board of Village 3, Phuoc Cat 2 commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
23	Management Board of Village 3, Tien Hoang commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
24	Management Board of Village 4, Phuoc Cat 2 commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
25	Management Board of Village 4, Tien Hoang commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
26	Management Board of Village 5, Tien Hoang commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
27	Management Board of Village 6, Quoc Oai commune, Da Teh district	E-payment	Sub-national	Lam Dong	2020
28	Management Board of Village 6, Tien Hoang commune, Cat Tien district	E-payment	Sub-national	Lam Dong	2020
29	Management Board of Huoi Khoang village, Chieng Ban commune, Mai Son district	E-payment	Sub-national	Son La	2020
30	Management Board of Ot village, Chieng Ban commune, Mai Son district	E-payment	Sub-national	Son La	2020
31	Management Board of Thay village, Chieng Ban commune, Mai Son district	E-payment	Sub-national	Son La	2020
32	Management Board of Tho village, Chieng Ban commune, Mai Son district	E-payment	Sub-national	Son La	2020
33	Management Board of Khoang Bien village, Chieng Dong commune, Mai Son district	E-payment	Sub-national	Son La	2020
34	Management Board of Lieng village, Chieng Dong commune, Mai Son district	E-payment	Sub-national	Son La	2020
35	Management Board of Lo Um village, Chieng Dong commune, Mai Son district	E-payment	Sub-national	Son La	2020
36	Management Board of Na Khoang village, Chieng Dong commune, Mai Son district	E-payment	Sub-national	Son La	2020
37	Management Board of Nghiu Co village, Chieng Dong commune, Mai Son district	E-payment	Sub-national	Son La	2020
38	Management Board of Buot Van village, Chieng Kheo commune, Mai Son district	E-payment	Sub-national	Son La	2020
39	Management Board of Co Tinh village, Chieng Kheo commune, Mai Son district	E-payment	Sub-national	Son La	2020
40	Management Board of Lon Keo village, Chieng Kheo commune, Mai Son district	E-payment	Sub-national	Son La	2020
41	Management Board of Buom Khoang village, Chieng Luong commune, Mai Son district	E-payment	Sub-national	Son La	2020
42	Management Board of Chi village, Chieng Luong commune, Mai Son district	E-payment	Sub-national	Son La	2020
43	Management Board of Lu village, Chieng Luong commune, Mai Son district	E-payment	Sub-national	Son La	2020
44	Management Board of Mat Sang village, Chieng Luong commune, Mai Son district	E-payment	Sub-national	Son La	2020
45	Management Board of Mon village, Chieng Luong commune, Mai Son district	E-payment	Sub-national	Son La	2020
46	Management Board of Oi village, Chieng Luong commune, Mai Son district	E-payment	Sub-national	Son La	2020
47	Management Board of Po In village, Chieng Luong commune, Mai Son district	E-payment	Sub-national	Son La	2020
48	Management Board of Tang village, Chieng Luong commune, Mai Son district	E-payment	Sub-national	Son La	2020
49	Management Board of Y Luong village, Chieng Luong commune, Mai Son district	E-payment	Sub-national	Son La	2020
50	Management Board of Ban village, Chieng Mai commune, Mai Son district	E-payment	Sub-national	Son La	2020

#	Institution Name	Component	Institution Level	Province	Year of appraisal
51	Management Board of Co Sau village, Chieng Mai commune, Mai Son district	E-payment	Sub-national	Son La	2020
52	Management Board of Dam Hoa village, Chieng Mai commune, Mai Son district	E-payment	Sub-national	Son La	2020
53	Management Board of Lung Và village, Chieng Mai commune, Mai Son district	E-payment	Sub-national	Son La	2020
54	Management Board of Na Dong village, Chieng Mai commune, Mai Son district	E-payment	Sub-national	Son La	2020
55	Management Board of Pon + Thuy Loi village, Chieng Mai commune, Mai Son district	E-payment	Sub-national	Son La	2020
56	Management Board of Puon + Na Doc village, Chieng Mai commune, Mai Son district	E-payment	Sub-national	Son La	2020
57	Management Board of Tat Ban village, Chieng Mai commune, Mai Son district	E-payment	Sub-national	Son La	2020
58	Management Board of Vay village, Chieng Mai commune, Mai Son district	E-payment	Sub-national	Son La	2020
59	Management Board of Bo Ly village, Chieng Sung commune, Mai Son district	E-payment	Sub-national	Son La	2020
60	Management Board of Cang A village, Chieng Sung commune, Mai Son district	E-payment	Sub-national	Son La	2020
61	Management Board of Lanh village, Chieng Sung commune, Mai Son district	E-payment	Sub-national	Son La	2020
62	Management Board of Na Chay village, Chieng Sung commune, Mai Son district	E-payment	Sub-national	Son La	2020
63	Management Board of Nong Son village, Chieng Sung commune, Mai Son district	E-payment	Sub-national	Son La	2020
64	Management Board of Ta Dung village, Chieng Sung commune, Mai Son district	E-payment	Sub-national	Son La	2020
65	Management Board of Phat village, Chieng Sung commune, Mai Son district	E-payment	Sub-national	Son La	2020
66	Management Board of Buc village, Chieng Sung commune, Mai Son district	E-payment	Sub-national	Son La	2020
67	Management Board of Cang village, Chieng Sung commune, Mai Son district	E-payment	Sub-national	Son La	2020
68	Management Board of Khieng village, Chieng Ve commune, Mai Son district	E-payment	Sub-national	Son La	2020
69	Management Board of Pung village, Chieng Ve commune, Mai Son district	E-payment	Sub-national	Son La	2020
70	Management Board of Suon Me village, Chieng Ve commune, Mai Son district	E-payment	Sub-national	Son La	2020
71	Management Board of Tham village, Chieng Ve commune, Mai Son district	E-payment	Sub-national	Son La	2020
72	Management Board of Vuong Me village, Chieng Ve commune, Mai Son district	E-payment	Sub-national	Son La	2020
73	Management Board of Co Noi village, Co Noi commune, Mai Son district	E-payment	Sub-national	Son La	2020
74	Management Board of Hua Tat village, Co Noi commune, Mai Son district	E-payment	Sub-national	Son La	2020
75	Management Board of Lech village, Co Noi commune, Mai Son district	E-payment	Sub-national	Son La	2020
76	Management Board of Nhap village, Co Noi commune, Mai Son district	E-payment	Sub-national	Son La	2020
77	Management Board of Hao village, Muong Bang commune, Mai Son district	E-payment	Sub-national	Son La	2020
78	Management Board of It Co village, Muong Bang commune, Mai Son district	E-payment	Sub-national	Son La	2020
79	Management Board of Gian Bon village, Muong Bang commune, Mai Son district	E-payment	Sub-national	Son La	2020
80	Management Board of Luong Mat village, Muong Bang commune, Mai Son district	E-payment	Sub-national	Son La	2020
81	Management Board of Phang Hum Co village, Muong Bang commune, Mai Son district	E-payment	Sub-national	Son La	2020
82	Management Board of Lan Lanh village, Muong Bon commune, Mai Son district	E-payment	Sub-national	Son La	2020
83	Management Board of Na Vien village, Muong Bon commune, Mai Son district	E-payment	Sub-national	Son La	2020
84	Management Board of O village, Muong Bon commune, Mai Son district	E-payment	Sub-national	Son La	2020
85	Management Board of Pon village, Muong Chanh commune, Mai Son district	E-payment	Sub-national	Son La	2020
86	Management Board of Bong village, Muong Chanh commune, Mai Son district	E-payment	Sub-national	Son La	2020
87	Management Board of Cang Muong village, Muong Chanh commune, Mai Son district	E-payment	Sub-national	Son La	2020
88	Management Board of Hom village, Muong Chanh commune, Mai Son district	E-payment	Sub-national	Son La	2020
89	Management Board of Huoi Mo village, Muong Chanh commune, Mai Son district	E-payment	Sub-national	Son La	2020
90	Management Board of Na Ca village, Muong Chanh commune, Mai Son district	E-payment	Sub-national	Son La	2020
91	Management Board of Nong Ten village, Muong Chanh commune, Mai Son district	E-payment	Sub-national	Son La	2020
92	Management Board of Na Bo village, Na Bo commune, Mai Son district	E-payment	Sub-national	Son La	2020
93	Management Board of Na Huong village, Na Bo commune, Mai Son district	E-payment	Sub-national	Son La	2020
94	Management Board of Na Pat village, Na Bo commune, Mai Son district	E-payment	Sub-national	Son La	2020
95	Management Board of Bo Duoi village, Na Bo commune, Mai Son district	E-payment	Sub-national	Son La	2020
96	Management Board of Ot Cha (Na Ot + Pa Cha) village, Na Ot commune, Mai Son district	E-payment	Sub-national	Son La	2020
97	Management Board of Hat Set village, Na Ot commune, Mai Son district	E-payment	Sub-national	Son La	2020
98	Management Board of Lung Cuong village, Na Ot commune, Mai Son district	E-payment	Sub-national	Son La	2020
99	Management Board of Xa Kia village, Na Ot commune, Mai Son district	E-payment	Sub-national	Son La	2020
100	Management Board of Lo Den village, Na Ot commune, Mai Son district	E-payment	Sub-national	Son La	2020

#	Institution Name	Component	Institution Level	Province	Year of appraisal
101	Management Board of Bit village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
102	Management Board of Den village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
103	Management Board of Ket Hay village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
104	Management Board of Ket Na village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
105	Management Board of Na Hien village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
106	Management Board of Na Nhung village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
107	Management Board of Pa Ban village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
108	Management Board of Pa No village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
109	Management Board of Pen village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
110	Management Board of Ta Luc village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
111	Management Board of Ta Vat village, Phieng Pan commune, Mai Son district	E-payment	Sub-national	Son La	2020
112	Management Board of Dom village, TT Hat Lot commune, Mai Son district	E-payment	Sub-national	Son La	2020
113	Management Board of Tieu Khu 6 village, TT Hat Lot commune, Mai Son district	E-payment	Sub-national	Son La	2020
114	Management Board of Bo village, Chieng An commune, Son La city	E-payment	Sub-national	Son La	2020
115	Management Board of Co village, Chieng An commune, Son La city district	E-payment	Sub-national	Son La	2020
116	Management Board of Hai village, Chieng An commune, Son La city	E-payment	Sub-national	Son La	2020
117	Management Board of Hin village, Chieng An commune, Son La city	E-payment	Sub-national	Son La	2020
118	Management Board of Group 2, Chieng An commune, Son La city	E-payment	Sub-national	Son La	2020
119	Management Board of Hòm village, Chieng Co commune, Son La city	E-payment	Sub-national	Son La	2020
120	Management Board of Ngoai village, Chieng Co commune, Son La city	E-payment	Sub-national	Son La	2020
121	Management Board of Group 4, Chieng Co commune, Son La city	E-payment	Sub-national	Son La	2020
122	Management Board of Group 4, Chieng Coi commune, Son La city	E-payment	Sub-national	Son La	2020
123	Management Board of Lom Tong village, Chieng Den commune, Son La city	E-payment	Sub-national	Son La	2020
124	Management Board of Pang village, Chieng Den commune, Son La city	E-payment	Sub-national	Son La	2020
125	Management Board of Lsu village, Chieng Le commune, Son La city	E-payment	Sub-national	Son La	2020
126	Management Board of Ca Lap village, Chieng Ngsn commune, Son La city	E-payment	Sub-national	Son La	2020
127	Management Board of Co Puc village, Chieng Ngan commune, Son La city	E-payment	Sub-national	Son La	2020
128	Management Board of Hip village, Chieng Ngan commune, Son La city	E-payment	Sub-national	Son La	2020
129	Management Board of Nong La village, Chieng Ngan commune, Son La city	E-payment	Sub-national	Son La	2020
130	Management Board of Khoang village, Chieng Ngan commune, Son La city	E-payment	Sub-national	Son La	2020
131	Management Board of Pat village, Chieng Ngan commune, Son La city	E-payment	Sub-national	Son La	2020
132	Management Board of Gio village, Chieng Sinh commune, Son La city	E-payment	Sub-national	Son La	2020
133	Management Board of Heo village, Chieng Sinh commune, Son La city	E-payment	Sub-national	Son La	2020
134	Management Board of Na Can (Group 10), Chieng Sinh commune, Son La city	E-payment	Sub-national	Son La	2020
135	Management Board of Phung village, Chieng Sinh commune, Son La city	E-payment	Sub-national	Son La	2020
136	Management Board of Noong Duc village, Chieng Sinh commune, Son La city	E-payment	Sub-national	Son La	2020
137	Management Board of Sang village, Chieng Sinh commune, Son La city	E-payment	Sub-national	Son La	2020
138	Management Board of Group 5, Chieng Sinh commune, Son La city	E-payment	Sub-national	Son La	2020
139	Management Board of Tong village, Chieng Xom commune, Son La city	E-payment	Sub-national	Son La	2020
140	Management Board of Group 6, Quyet Tam commune, Son La city	E-payment	Sub-national	Son La	2020
141	Management Board of Group 11, Quyet Tam commune, Son La city	E-payment	Sub-national	Son La	2020
142	Cat Tien National Park	Multiple Component	Sub-national	Lam Dong	2020
143	Da Nhim Forest Management Board	Multiple Component	Sub-national	Lam Dong	2020
144	Lam Dong Forest Protection and Development Fund	Multiple Component	Sub-national	Lam Dong	2020
145	Management Board of Ban village, Huy Thuong commune, Phu Yen district	E-payment	Sub-national	Son La	2020
146	Management Board of Cang village, Quang Huy commune, Phu Yen district	E-payment	Sub-national	Son La	2020
147	Management Board of Chat Moi village, Gia Phu commune, Phu Yen district	E-payment	Sub-national	Son La	2020
148	Management Board of Chi village, Chieng Luong commune, Mai Son district	PFES M&E	Sub-national	Son La	2020
149	Management Board of Cot Moc village, Tuong Tien commune, Phu Yen district	E-payment	Sub-national	Son La	2020
150	Management board of Da Nghit village	E-payment	Sub-national	Lam Dong	2020
151	Management board of Dachais village	E-payment	Sub-national	Lam Dong	2020
152	Management Board of Khoai Lang village, Muong Thai commune, Phu Yen district	E-payment	Sub-national	Son La	2020

#	Institution Name	Component	Institution Level	Province	Year of appraisal
153	Management Board of La village, Gia Phu commune, Phu Yen district	E-payment	Sub-national	Son La	2020
154	Management board of Lieng Bong village	E-payment	Sub-national	Lam Dong	2020
155	Management Board of Lin village, Gia Phu commune, Phu Yen district	E-payment	Sub-national	Son La	2020
156	Management Board of Lu village, Chieng Luong commune, Mai Son district	PFES M&E	Sub-national	Son La	2020
157	Management Board of Lun village, Muong Sang commune, Moc Chau district	PFES M&E	Sub-national	Son La	2020
158	Management Board of Mo Cong village, Phong Lai commune, Thuan Chau district	PFES M&E	Sub-national	Son La	2020
159	Management Board of Mo Nghe 1 village, Quang Huy commune, Phu Yen district	E-payment	Sub-national	Son La	2020
160	Management Board of Mo Nghe 2 village, Quang Huy commune, Phu Yen district	E-payment	Sub-national	Son La	2020
161	Management Board of Na Kham village, Gia Phu commune, Phu Yen district	E-payment	Sub-national	Son La	2020
162	Management Board of Na Puc village, Tuong Tien commune, Phu Yen district	E-payment	Sub-national	Son La	2020
163	Management Board of Na Xa village, Quang Huy commune, Phu Yen district	E-payment	Sub-national	Son La	2020
164	Management Board of Nam Nghiep village, Ngoc Chien commune, Muong La district	PFES M&E	Sub-national	Son La	2020
165	Management Board of Nhot 1 village, Gia Phu commune, Phu Yen district	E-payment	Sub-national	Son La	2020
166	Management Board of Nhot 2 village, Gia Phu commune, Phu Yen district	E-payment	Sub-national	Son La	2020
167	Management Board of Oi village, Chieng Luong commune, Mai Son district	PFES M&E	Sub-national	Son La	2020
168	Management Board of Pa Quan village, Trung Ly commune, Muong Lat district	PFES M&E	Sub-national	Thanh Hoa	2020
169	Management Board of Pa village, Tuong Tien commune, Phu Yen district	E-payment	Sub-national	Son La	2020
170	Management Board of Phay village, Ngoc Chien commune, Muong La district	PFES M&E	Sub-national	Son La	2020
171	Management Board of Poong village, Quang Chieu commune, Muong Lat district	PFES M&E	Sub-national	Thanh Hoa	2020
172	Management Board of Say Tu village, Huy Ha commune, Phu Yen district	E-payment	Sub-national	Son La	2020
173	Management Board of So Luon village, Muong Sang commune, Thuan Chau district	PFES M&E	Sub-national	Son La	2020
174	Management Board of Suoi Giong village, Quang Huy commune, Phu Yen district	E-payment	Sub-national	Son La	2020
175	Management Board of Suoi Ngang village, Quang Huy commune, Phu Yen district	E-payment	Sub-national	Son La	2020
176	Management Board of Suoi Quoc village, Muong Thai commune, Phu Yen district	E-payment	Sub-national	Son La	2020
177	Management Board of Suoi Tau village, Muong Thai commune, Phu Yen district	E-payment	Sub-national	Son La	2020
178	Management Board of Tao village, Gia Phu commune, Phu Yen district	E-payment	Sub-national	Son La	2020
179	Management Board of Tao village, Trung Ly commune, Muong Lat district	PFES M&E	Sub-national	Thanh Hoa	2020
180	Management Board of Tat village, Tuong Tien commune, Phu Yen district	E-payment	Sub-national	Son La	2020
181	Management Board of Thin village, Tuong Tien commune, Phu Yen district	E-payment	Sub-national	Son La	2020
182	Management Board of Tro 2 village, Huy Ha commune, Phu Yen district	E-payment	Sub-national	Son La	2020
183	Management Board of Vi village, Gia Phu commune, Phu Yen district	E-payment	Sub-national	Son La	2020
184	Management board of Village 1, Dasar commune	E-payment	Sub-national	Lam Dong	2020
185	Management board of Village 2, Dasar commune	E-payment	Sub-national	Lam Dong	2020
186	Management board of Village 3, Dasar commune	E-payment	Sub-national	Lam Dong	2020
187	Management board of Village 5, Dasar commune	E-payment	Sub-national	Lam Dong	2020
188	Management board of Village 6, Dasar commune	E-payment	Sub-national	Lam Dong	2020
189	Na Meo Border Guard	PFES M&E	Sub-national	Thanh Hoa	2020
190	Pu Hu Nature Reserves	PFES M&E	Sub-national	Thanh Hoa	2020
191	Pu Nhi Border Guard	PFES M&E	Sub-national	Thanh Hoa	2020
192	Quan Son Management Board	PFES M&E	Sub-national	Thanh Hoa	2020
193	Quang Chieu Management Board	PFES M&E	Sub-national	Thanh Hoa	2020
194	Quang Ninh Forest Protection and Development Fund	Multiple Component	Sub-national	Quang Ninh	2020
195	Son La Forest Protection and Development Fund	Multiple Component	Sub-national	Son La	2020
196	Tam Chung Management Board	PFES M&E	Sub-national	Thanh Hoa	2020
197	Tam Thanh Management Board	PFES M&E	Sub-national	Thanh Hoa	2020
198	Ten Tan Border Guard	PFES M&E	Sub-national	Thanh Hoa	2020
199	Thanh Hoa Forest Protection and Development Fund	Multiple Component	Sub-national	Thanh Hoa	2020
200	Trung Ly Border Guard	PFES M&E	Sub-national	Thanh Hoa	2020
201	Vietnam Forest Protection and Development Fund	Multiple Component	National	-	2020
202	Xuan Lien Nature Reserves	PFES M&E	Sub-national	Thanh Hoa	2020
203	Management Board of Thai village, Muong Thai commune, Phu Yen district	PFES M&E	Sub-national	Son La	2020
204	Management Board of Chieu village, Muong Thai commune, Phu Yen district	PFES M&E	Sub-national	Son La	2020

Indicator EG 13-3: Number of laws, policies, regulations, or standards addressing sustainable landscapes formally proposed, adopted, or implemented as supported by USG assistance

#	Law or Policy	Component	Level	Year reported
1	Coordination mechanism in Thanh Hoa	Multiple Component	Sub-national	2019
2	Decision 494 on establishing editing group for Carbon PFES	Carbon PFES	National	2019
3	Document 301 on e-payment piloting in Lam Dong	E-payment	Sub-national	2018
4	MoU on e-payment piloting in Son La	E-payment	Sub-national	2019
5	Decree 156 on industrial water use	Multiple Component	National	2018
6	M&E guideline for Lam Dong FPDF	PFES M&E	Sub-national	2019
7	M&E plan for Son La FPDF	PFES M&E	Sub-national	2019
8	M&E guideline for Thanh Hoa FPDF	PFES M&E	Sub-national	2019
9	Village Regulation for forest protection	PFES M&E	Other	2020
10	Village Regulation for women's savings funds	PFES M&E	Other	2020
11	Approval of M&E guidelines	PFES M&E	National	2020
12	Approval of E-payment guidelines	E-payment	National	2020
13	Communication plan for Lam Dong FPDF	Cross-Cutting	Sub-national	2020
14	Wood processing draft decree	Cross-Cutting	National	2020
15	Sustainable Forest Management Plan for Na Meo border post	PFES M&E	Sub-national	2020
16	Sustainable Forest Management Plan for Pu Nhi border post	PFES M&E	Sub-national	2020
17	Sustainable Forest Management Plan for Quang Chieu border post	PFES M&E	Sub-national	2020
18	Sustainable Forest Management Plan for Tam Chung border post	PFES M&E	Sub-national	2020
19	Sustainable Forest Management Plan for Tam Thanh border post	PFES M&E	Sub-national	2020
20	Sustainable Forest Management Plan for Ten Tan border post	PFES M&E	Sub-national	2020
21	Sustainable Forest Management Plan for Trung Ly border post	PFES M&E	Sub-national	2020
22	Sustainable Forest Management Plan for Pu Hu Nature Reserve	PFES M&E	Sub-national	2020
23	Sustainable Forest Management Plan for Xuan Lien Nature Reserve	PFES M&E	Sub-national	2020
24	Sustainable Forest Management Plan for Quan Son protection forest management board	PFES M&E	Sub-national	2020

Indicator EG 13-4: Amount of investment mobilized (in USD) for sustainable landscapes as supported by USG

	2019	2020	2021	Total
Total (million USD)	128	121.8	169.4	419.2

Includes investment mobilized from PFES nationwide

Indicator EG 13-5: Number of people receiving livelihood co-benefits (monetary or non-monetary) associated with the implementation of USG sustainable landscapes activities

	2019	2020	2021	Total
Direct beneficiaries	10,073	21,737	14,575	46,385
Indirect beneficiaries	1,655,327	1,922,263	1,929,425	5,507,015
Total	1,665,400	1,944,000	1,944,000	5,553,400

Includes beneficiaries receiving benefits from PFES

Indicator EG 13-6: Greenhouse gas (GHG) emissions, estimated in metric tons of CO₂ equivalent, reduced, sequestered, or avoided through sustainable landscapes activities supported by USG assistance

	2019	2020	2021	Total
Total (ton of CO₂)	16,896,081	18,466,182	18,321,182	53,683,445

Emissions calculated based on PFES area nationwide, using the USAID AFOLU Carbon Calculator

Indicator EG 13-7: Projected greenhouse gas emissions reduced or avoided through 2030 from adopted laws, policies, regulations, or technologies related to sustainable landscapes as supported by USG assistance

	2019	2020	2021	Total
2019 – 2020 (ton of CO ₂)	34,222,078	0	0	34,222,078
2021 – 2025 (ton of CO ₂)	93,036,150	0	0	93,036,150
2026 – 2030 (ton of CO ₂)	103,602,604	0	0	103,602,604
Total	230,860,832	0	0	230,860,832

Emissions calculated based on PFES area nationwide, using the USAID AFOLU Carbon Calculator

Indicator 8: Number of forest owners/contractors receiving PFES funds through e-payment process as a result of USG assistance

Province	2019	2020	2021	Total
Lam Dong	1,951	2,451	1,187	5,589
Son La	530	2,808	1,636	4,974
Binh Phuoc (by Cat Tien National Park)	0	83	77	160
Dong Nai (by Cat Tien National Park)	0	185	217	402
Yen Bai	0	0	587	587
Total	2,481	5,527	3,704	11,712

Indicator 9: Number of climate mitigation and/or adaptation tools, technologies and methodologies developed, tested and/or adopted as a result of USG assistance

#	Tool	Component	Province	Year of completion
1	Automated PFES data calculation and compiling tool	PFES M&E	Thanh Hoa	2019
2	PFES map checking tool	PFES M&E	Thanh Hoa	2019
3	PFES survey tool	PFES M&E	Thanh Hoa	2019
4	M&E platform (piloted in Son La, Thanh Hoa, Lam Dong)	PFES M&E	National	2019
5	CPFES mapping tool (for Thanh Hoa and Quang Ninh)	Carbon PFES	National	2019
6	Webpage tool for data sharing on PFES mapping layers	Carbon PFES	Quang Ninh	2020
7	CPFES Data Management System	Carbon PFES	Quang Ninh	2020
8	PFES Monitoring and Evaluation Platform (version 2.0)	PFES M&E	National	2021

Indicator CBLD-9: Percentage of USG assisted organizations with improved performance

#	Organization	Organization level	Province	Year of appraisal
1	Vietnam Forest Protection and Development Fund	National	-	2020
2	Son La Forest Protection and Development Fund	Sub-national	Son La	2020
3	Thanh Hoa Forest Protection and Development Fund	Sub-national	Thanh Hoa	2020
4	Lam Dong Forest Protection and Development Fund	Sub-national	Lam Dong	2020
5	Quang Ninh Forest Protection and Development Fund	Sub-national	Quang Ninh	2020
6	Cat Tien National Park	Sub-national	Lam Dong	2020
7	Da Nhim Management Board	Sub-national	Lam Dong	2020
Total				100%



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