



## Climate Smart Livelihoods to Support Sustainable Forest Management

### Introduction

Over the past years, changing climatic conditions and overexploitation of forest resources are putting stress on the livelihoods of forest-dependent communities throughout Vietnam.

The USAID-funded Vietnam Forests and Deltas Program is working 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. Interventions focus on introducing resilient agricultural production systems, supporting income diversification strategies, and incentivizing sustainable forest management. This package of solutions helps to strengthen the capacity of local communities to cope with climate change challenges while reducing deforestation and forest degradation across the landscape.

### A participatory selection process

Designing effective livelihood interventions requires a thorough understanding of the local context. A series of meetings were held 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. Emphasis was placed on inclusive and participatory decision-making. Every household was encouraged to actively take part in

the community meetings to ensure a transparent and collective design process. For each commune one or more livelihood models were selected, and combined with measures to support sustainable forest management.

In some communes the livelihood models were derived as part of a participatory planning process which integrated climate change adaptation and natural resource management into commune socio-economic development planning.

### Selected climate smart livelihood models

- Climate smart rice production
- Sloping agriculture land techniques
- Indigenous chicken raising combined with earth worm raising
- Agroforestry
- 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



## Farmer field schools

To support the implementation of the selected climate smart livelihood models, training courses were provided in collaboration with six district Agricultural Extension Centers. A farmer field school approach was adopted, enabling the participants to work in a familiar environment and learn by observing, analyzing and trying out new ideas on their own fields. Through the trainings the community members gained technical knowledge and capacity to establish climate smart livelihood models, and awareness was raised about climate change and the importance of forest protection.

Gender plays an important role in all of the livelihood programs. Rural women in Vietnam are key stewards in agricultural cultivation and forest-based livestock activities. Their decisions determine the way household lands are managed and have a strong impact on food security and climate resilience. For this reason, women are involved both as trainers and key beneficiaries of the climate smart livelihood interventions.

## The way forward

Effectively addressing climate change challenges requires concerted action by a large variety of stakeholders and sectors, across the wider landscape. After designing and piloting climate smart livelihood interventions at the local level, proven success models are upscaled to the provincial level. The USAID Vietnam Forests and Deltas Program builds institutional capacity for upscaling by involving government stakeholders in the pilots, developing guidelines, organizing trainings, collaborating with mass organizations like Women's Unions and Farmers' Unions, and supporting enabling policies.

## "Bon bo" agroforestry in Nghe An

One of the livelihood models introduced in Nghe An consists of an integrated agroforestry system. In this system, the medicinal plant *Alpinia Bracteata*, locally referred to as "bon bo", is planted under the forest cover. Bon Bo belongs to the ginger family and grows naturally in Vietnam's forest. It is traditionally used to treat a variety of ailments including toothache, bronchial infections, sore throat and diabetes. Through trainings, the villagers learned how to collect seedlings from the forest, and set up and maintain sustainable agroforestry farms.

The project plans to provide trainings on market access to support the villagers in selling their produce to China. It is expected that the plantations will yield around 1 ton of bon bo per hectare per year, which can be worth 1500 to 2000 USD on the Chinese market.

The bon bo agroforestry model has been set up in 5 villages so far, involving 286 people, of which around 200 are women. The aim is to reach up to 600 households by replicating this model in other villages.

*"The bon bo livelihood model is very suitable for this location and our local traditions. The plants grow well and the cultivation methods we learned through the trainings are easy to apply. I believe this model can help to protect our forests now and in the future"*

– Ms. Vi Thi Nhan, inhabitant of Ban Ve Village



## Improved Management and Protection Of Pu Hoat Nature Reserve, Nghe An



### Introduction

In the northwestern part of Vietnam's Nghe An province lies the 75,000 hectare Pu Hoat Nature Reserve, which was established in 2013. The forested upland reserve is rich in biodiversity, providing habitats for a broad and diverse range of animals and plants. Despite the reserve's protected area status, unsustainable exploitation of natural resources due to lack of law enforcement is threatening wildlife populations and leading to loss and degradation of the forest areas.

The USAID-funded Vietnam Forests and Deltas Program is working in close collaboration with the protected area staff to implement models and tools for improved management and protection of this new reserve. As a first step, field surveys and community mapping exercises were undertaken in order to gain a thorough understanding of the biodiversity values of the area, analyze threats, and identify community forest use patterns. The outcomes allowed to define conservation priorities and design tailored interventions.

### Assessment of biodiversity, threats and community forest use

To design effective interventions for safeguarding the integrity of the Pu Hoat Nature Reserve, it is important to understand the current situation and key issues. Field surveys and community meetings were conducted in order to obtain data on biodiversity, threats and community forest use. Based on the findings, recommendations were made for improving forest management and protection.

### Biodiversity flagship species survey

To assess the reserve's conservation significance, a field survey was conducted to determine the occurrence of a number of easily identifiable flagship species – rare, threatened or endemic species with high conservation importance. The findings indicate the existence of relatively large populations of primates, bears, deer and other key species. The survey provides insight in which biodiversity hotspots should be prioritized for regular species monitoring and forms the basis for developing conservation action plans.

### Community forest use & threats

Community meetings were organized in 10 villages to gain insight in community forest use patterns and identify key threats to wildlife and forest protection. Through participatory mapping techniques, group discussions and interviews, data was collected from 254 individuals. The results show that forest products are often collected beyond the community forests due unclear park boundaries. Key threats identified include hunting and trapping animals, illegal timber logging, unsustainable collection of non-timber forest products, and swidden agriculture.

These findings highlight the urgent need to strengthen conservation efforts, notably through improving law enforcement, establishing community-based conservation models, and creating alternative livelihood options.



## Capacity building of forest rangers

Based on the identified issues and conservation needs, trainings were developed for the reserve staff. A total of 25 forest rangers received formal and on-the-job training on a broad range of topics including biodiversity conservation, protected area management, engaging communities, interview methods, participatory mapping, flagship species and threat monitoring, and forest fire control. A key part of the training program consisted of practical learning sessions on the use of GPS and other tablet-based tools in monitoring activities. These tools can strongly support conservation efforts as they allow for more efficient and accurate data collection and analysis. The trainings also included a study tour to three protected areas in Hue and Quang Binh provinces, in order to facilitate knowledge exchange.

*“The Pu Hoat Nature Reserve Management Board has noticed a remarkable improvement in the capacity of officials who received training through the program, notably in GIS mapping and biodiversity monitoring. Trained staff are applying their new knowledge and skills in their day-to-day work which helps to improve natural resource management and enhance forest protection.”*

*– Mr. Nguyen Thanh Chung - official from Pu Hoat Nature Reserve*

## Involving communities in conservation

Local communities can play a key role in conservation efforts, as they often contribute to the overexploitation of forest resources, while at the same time being dependent on the sustainable management of these resources for their livelihoods. To ensure all communities understand their rights and responsibilities it is important that the

boundaries of the reserve and of community lands are well understood. In six communes, the USAID Vietnam Forests and Deltas Program worked with the reserve staff and the village leaders to set up and implement participatory boundary mapping exercises. Using maps and GPS devices, villagers set out to demarcate the boundaries of their lands, which allowed them to detect problem areas and resolve any disputes.

Once the boundaries were clear, the villagers received training on where forest products can and cannot be harvested, how to harvest these in a sustainable way, and how to report violations of forest law. In villages in the buffer zones, alternative livelihood options are being introduced, notably home gardens and grass planting for livestock. Plans are underway for implementing community based forest management schemes, which will reward households financially for protecting forest areas. The program will continue to support community engagement in conservation activities in order to achieve improved forest quality while enhancing the wellbeing of local population groups.

## Interprovincial cooperation for impacts at scale

Key sustainability issues of illegal logging and wildlife hunting are not limited to Pu Hoat Nature Reserve, but go beyond the park boundaries. Effectively addressing these threats requires combining multiple sources of information on biodiversity and forest cover in surrounding forest areas and developing joint management structures. Of particular importance is the neighboring Xuan Lien Nature Reserve in Thanh Hoa province. To increase collaboration between the two reserves, the USAID Vietnam Forests and Deltas Program facilitated an interprovincial agreement between Nghe An and Thanh Hoa which was approved in September 2015. This agreement represents a key step towards addressing transboundary issues and achieving sustainable landscapes.



## Moving Towards REDD+ Action

### Introduction

Thanh Hoa and Nghe An provinces, in the North Central Region of Vietnam, both have a high forest cover which extends over more than half of their land area. These forests play a key role in biodiversity conservation and provide essential ecosystem services to local populations. However, agricultural expansion, logging and infrastructure development are putting pressure on the forest areas. To reduce emissions from deforestation and forest degradation while continuing to improve the livelihoods of local communities, ways need to be found to balance the objectives of the forestry, agriculture and energy sectors across the landscape.

The USAID-funded Vietnam Forests and Deltas Program supports the provincial governments of Thanh Hoa and Nghe An as well as other provinces in the North Central Region in sustainable land use planning and climate change action under the REDD+ framework. Specifically, support is provided for developing Provincial REDD+ Action Plans (PRAPs), facilitating access to sustainable finance, and piloting REDD+ interventions on the ground.

#### What is REDD+?

Reducing Emissions from Deforestation and forest Degradation (REDD+) is a framework through which developing countries are incentivized to support sustainable management and protection of forests and enhancement of forest carbon stocks.

### Provincial REDD+ Action Plans

Achieving sustainable landscapes requires careful planning. To support subnational planning processes, the USAID Vietnam Forests and Deltas Program is leading the development of PRAPs for three North Central provinces; Thanh Hoa, Nghe An and Quang Binh. Support is provided by conducting assessments on forest cover and the drivers of deforestation, and by building institutional capacity for refining the PRAP process. To ensure full stakeholder engagement a variety of participatory methods are introduced, including multi-stakeholder meetings and focus group discussions at the community level.



The resulting PRAPs outline the long term strategies of the provinces to reduce greenhouse gas emissions from forest related sources and enhance forest carbon stocks. The plans integrate the development visions of all relevant stakeholder groups and will support global commitments to mitigate climate change.





*"The Thanh Hoa REDD+ Action Plan has helped to define and clarify the priorities and orientation for our province in the coming years: The provincial forestry development strategy needs to focus on developing adequate responses to climate change, accessing carbon finance and ensuring sustainable livelihoods for forest-dependent people."*

*– Mr. Nguyen Duc Quyen - Standing Vice Chairman of Thanh Hoa Province*

## Access to REDD+ finance

The USAID Vietnam Forests and Deltas Program is supporting provincial efforts to harness REDD+ financing. The program played a critical role in the development of an Emission Reductions Program Document for six North Central provinces, submitted to the World Bank's Forest Carbon Partnership Facility. The support has involved catalyzing agreement on the outline for the PRAPs, providing capacity building trainings, and coordinating technical studies to support the development of social safeguards and benefit distribution mechanisms for future REDD+ payments. This work is helping to build a foundation for better forest management and offers the potential to leverage an estimated 50 million USD through the Carbon Fund by 2020, which would be one of the first REDD+ payment successes in the region.

## Piloting REDD+ strategies

If the Emission Reductions Program Document is approved, the World Bank's Carbon Fund will provide performance-based payments based on the tons of CO<sub>2</sub>

equivalent reduced compared to the business-as-usual scenario. In order to receive such payments, the provinces will have to demonstrate that they are reducing emissions from forest related sources or enhancing or conserving forests carbon stocks. In Nghe An and Thanh Hoa, the USAID Vietnam Forests and Deltas Program is piloting various emission reduction strategies on the ground to determine whether they are suitable for meeting the Carbon Fund's financing requirements.

Successful models will be upscaled to the provincial level in order to achieve meaningful emission reductions from the forestry sector, while sustaining economic growth and enhancing local livelihoods.

Some of the models and approaches which are being tested include:

- Participatory forest land allocation to address issues related to land tenure.
- Improved management and protection of special use forests to maintain forest ecosystems and protect biodiversity.
- Community based forest management to enhance forest protection and bring greater benefits to local people.
- Sustainable livelihood strategies in buffer zones to reduce pressure on neighboring forest areas.
- Improved strategies for maintaining seed stock quality for carbon stock enhancement.
- Sustainable bamboo forest management through collaboration with the private sector.