



Briefing paper

Coffee agroforestry for restoration in the Srepok River Basin, Viet Nam

Lessons from the Working Landscapes programme

Coffee agroforestry for restoration in the Srepok River Basin, Viet Nam

Lessons from the Working Landscapes programme

Takeaways

- > Expansion of coffee monocultures on the slopes of the Srepok River Basin has resulted in land degradation. Research by Tropenbos Viet Nam and partners showed that diverse coffee agroforests can help to restore these lands, while increasing smallholders' resilience.
- > Tropenbos Viet Nam collaborated with government extension agencies to provide trainings on coffee agroforestry, with special attention to women in communities of ethnic minorities. This inspired the government's Department of Agriculture and Rural Development to provide similar trainings in many more communities.
- > Tropenbos Viet Nam facilitated government agencies to host restoration dialogues, resulting in the joint identification of areas where coffee agroforestry can be used for restoration. They also facilitated meetings between agroforestry farmers and fruit processing enterprises, increasing farmers' possibilities to sell their produce.
- > Tropenbos Viet Nam learned that the mindsets and approaches within government agencies can be influenced by actively engaging government officials from the very start of interventions.
- > To upscale sustainable coffee agroforestry, it is necessary to further increase the economic attractiveness of agroforestry, e.g., through the national Payments for Forest Environmental Services (PFES) programme.

Introduction

In Viet Nam, the Working Landscapes programme (Box 1) focusses on the Srepok River Basin landscape, located in the Central Highlands, and measuring around 1,530,000 hectares. With a forest cover of approximately 45%, and some large areas of primary forests remaining, it is one of Viet Nam's most forested regions, with a high level of biodiversity. The forested hills are home to communities of various ethnic minorities, but these areas are rapidly encroached upon, mostly by farmers from elsewhere. The rate of deforestation is high. The expansion of coffee plantations is one of the main drivers of deforestation. Moreover, when coffee is cultivated in non-shade monocultural

systems on slopes, it results in depleted water levels and degraded soils. This adds to the already large area of degraded lands in the landscape.

As part of the Working Landscapes programme, Tropenbos Viet Nam has been promoting diversified coffee-based agroforestry practices, both in existing non-shade monoculture fields as well as on previously degraded lands. Together with stakeholders in the Srepok River Basin landscape and beyond, they have focussed on the conditions for the widespread adoption of diverse coffee agroforestry, with particular attention to the role of women in communities of ethnic minorities.



Box 1. The Working Landscapes programme

The Working Landscapes programme (2019 – 2023) is financed by the Ministry of Foreign Affairs of the Netherlands and implemented by the Tropenbos International (TBI) network — a network of autonomous organizations in Colombia, DR Congo, Ghana, Indonesia, Suriname, Viet Nam and the Netherlands, with partners in Bolivia, Ethiopia, the Philippines and Uganda. TBI members and partners offer practical, locally owned and evidence-based solutions to achieve climate-smart landscapes, where local people manage forests and trees sustainably, contributing to climate change mitigation, adaptation, improved livelihoods and biodiversity conservation. The programme is built around three strategic priorities, i.e., sustainable land-use, inclusive landscape governance, and responsible business and finance. These are considered the pillars of climate-smart landscapes. As part of the programme, several TBI members have been supporting agroforestry as a sustainable and more resilient alternative to conventional modes of agrocommodity production.

Knowledge of sustainable land-use practices

The Srepok River Basin landscape has been experiencing serious ground water depletion and soil degradation in the last decades, with negative consequences for agricultural production and local livelihoods. Under the Working Landscapes programme, Tropenbos Viet Nam started working with Thuy Loi University to study the relationships between water shortage, forest loss and agricultural land-use. The research suggested that shifting from non-shade coffee monocultures to diverse coffee agroforests will not only help to restore a healthy water cycle in the landscape, but will also improve the micro-climate, provide alternative sources of income, and increase the resilience of coffee farmers. Furthermore, they found that coffee agroforestry has great potential to help restore degraded lands in the landscape.

These findings highlighted a common-concern as an entry point for the rest of the Working Landscapes programme in Viet Nam and were used to convince stakeholders in the landscape to embrace coffee agroforestry for restoration. Tropenbos Viet Nam then started collaborating with Tây Nguyên University and the provincial Department of Agriculture and Rural Development (DARD) to assess different agroforestry systems suited for degraded lands. The assessment resulted in a recommended model of coffee combined with indigenous fruit and timber tree species. Tropenbos Viet Nam discussed the outcomes of the

assessment with provincial and district government agencies, which resulted in the DARD offices in Lắk and Krông Bông — two districts with large areas of degraded lands — signing decrees that formally endorse the recommended coffee-based agroforestry models. The decrees opened the door for Tropenbos Viet Nam to work together with local DARD officers, who provide extension services in the villages and are trusted by the local people.

To persuade farmers to establish mixed systems on degraded lands, Tropenbos Viet Nam then worked with the district DARD and district extension centres to set up field models and provide trainings on diverse coffee agroforestry systems. There was a focus on women in communities of ethnic minorities, because they are seldom reached by training and extension services. In the view of Tropenbos Viet Nam, women can play an important role in restoration through agroforestry, because they are often the ones who are already planting and caring for trees in home gardens. As a result of the trainings provided by Tropenbos Viet Nam and district extension officers, a growing number of women farmers started combining coffee and indigenous tree species in agroforestry systems. Inspired by the results, the district level DARD then instructed local extension stations to continue supporting women farmers with developing the coffee agroforestry model.



Box 2. Preventing encroachment of coffee farmers in forest areas

In the view of Tropenbos Viet Nam, achieving a climate-smart landscape requires not only the widespread adoption of coffee-based agroforestry practices, but also the halting of illegal expansion of coffee on forest lands. Expansion of coffee farms often takes place on forest lands that the government has allocated to certain actors (as part of a national forest land allocation programme), but which are de facto left unmanaged and uncontrolled. To resolve this situation, Tropenbos Viet Nam supports the allocation of forest lands to communities of ethnic minorities, which often have a long-standing relation to the forest, and a direct interest to manage it sustainably. Community forest allocation will enable these communities to benefit from their forests, while also preventing illegal conversion for coffee plantations.

Government support and planning

According to Tropenbos Viet Nam, a barrier to upscaling coffee agroforestry has been the lack of guidance from the government related to what type of land-use systems are best suited for different areas in the landscape, specifically on the degraded slopes. To draw attention to this, Tropenbos Viet Nam facilitated the DARD and the Department of Environment and Natural Resources (DONRE) to host restoration dialogues at the provincial level, with a wide range of stakeholders from the Srepok River Basin landscape, including representatives of farmers, women groups, NGOs, companies, universities and local government agencies. One of the main outcomes of these dialogues was the joint identification of areas where coffee agroforestry could be used for restoration, resulting in a detailed map prepared by Tâỵ Nguyễn University.

Tropenbos Viet Nam also worked with DONRE to facilitate participatory land-use planning at both the district and province level. One of the roles of Tropenbos Viet Nam was to provide scientific information concerning the social and environmental outcomes of different land use options. These joint activities will result in detailed land-use plans that are based on local conditions and needs, and which will provide a basis for government efforts promoting restoration through agroforestry, as well as for the provision of loans for initiatives related to coffee agroforestry.

Economic feasibility

Diverse agroforestry systems as recommended by Tropenbos Viet Nam and the DARD combine coffee with indigenous fruit and timber tree species. Incorporating these trees into a coffee plantation has long-term benefits, as it helps to spread risks, reduces water usage, and maintains the environmental integrity of the land-use system, ensuring its productivity in the long-term. However, many coffee farmers in the landscape are poor and have short-term needs that need to be met. Recognizing this, Tropenbos Viet Nam has been working with farmers to mix coffee not only with trees, but also with non-timber forest products (NTFPs), such as edible mushrooms and medicinal plants that are native to the area (e.g., *Codonopsis* sp., *Panax notoginseng*, *Coscinium fenestratum*, and *Ganoderma lucidum*). These only take one to three years before they can be harvested, and have much marketing potential, especially in nearby towns and cities.

Another barrier to the economic feasibility of diverse coffee agroforestry has been the lack of local possibilities to process fresh fruits. During the harvesting season of a certain fruit tree species, there is an abundance of fruits, flooding the market, and lowering prices. Access to processing facilities would help to add value locally and increase the shelf life. However, developing processing facilities requires relatively large upfront investments, which are unattainable to individual farmers. Tropenbos Viet Nam therefore explored the possibilities to develop such facilities through farmers' cooperatives, but found that the necessary adminis-



trative procedures were complex and time consuming. Looking for more efficient ways to enable local farmers to process their fruits, Tropenbos Viet Nam started organizing and facilitating meetings between communities and other landscape stakeholders to discuss possibilities for local farmers to sell their produce to fruit processing factories, and to learn about quality requirements for post-harvest processing techniques.

According to Tropenbos Viet Nam another promising way to increase the economic feasibility of diverse coffee agroforestry is through the existing national Payments for Forest Environmental Services (PFES) programme. Through the PFES system, the users of forest environmental services pay those who maintain the services. The system is currently primarily focused on the environmental services that forests provide for water companies, electricity companies, certain industries, and ecotourism. It means, among others, that the general public pays PFES fees as part of their electricity and water bills and as part of tickets to enter ecotourism areas. These fees are transferred to the government's Forest Protection and Development Fund, which uses them to compensate the actors who manage the forest resources. The government is now also exploring options for additional sources for the PFES funds. In the view of Tropenbos Viet Nam, coffee production could be included in the PFES system, to create incentives for smallholders to invest in agroforestry. As monoculture coffee farms benefit from environmental services provided by the natural forest, PFES fees would need to be paid for coffee produced in non-shade monocultures, but not for coffee produced in agroforestry systems. Tropenbos Viet Nam has been discussing the practical possibilities of integrating coffee into the PFES system with government agencies. This resulted in a request from the government to provide more detailed quantitative information about the environmental services.

Future priorities for scaling

- Viet Nam is a pioneer in an innovative approach to forest management through its national PFES programme. There are possibilities to expand this system, so it will act as an incentive for agroforestry practices on degraded lands, but revising the current PFES policy requires further studies and discussions between state agencies and other stakeholders.
- Detailed spatial plans have been developed, indicating areas that can be restored through coffee agroforestry. These plans now need to be implemented in a participatory manner.
- Action researchers and government extension agencies need to work together to monitor the uptake of agroforestry practices, and the impacts on livelihoods and the environment, with particular attention to the role of women in communities of ethnic minorities.
- Restoration through coffee agroforestry needs to be incorporated in local and national climate action plans and other climate policy frameworks (such as the Nationally Determined Contribution).
- Alternative value chains need to be further developed, for certified sustainable coffee produced in agroforests (with a focus on international markets), as well as for NTFPs (with a focus on local and national markets).
- The forest land allocation programme needs to be used to improve tenure security of local communities of ethnic minorities, which is expected to help prevent further expansion of coffee plantations at the expense of natural forests.

Published by: Tropenbos Viet Nam, Hue City, Viet Nam & Tropenbos International, Ede, the Netherlands, 2023. The text may be reproduced for non-commercial purposes, citing the source.

Contributors: Tran Nam Thang, Nguyen Thi Quynh Thu, and Tran Huu Nghi (Tropenbos Viet Nam).

Suggested citation: Tropenbos Viet Nam. 2023. Coffee agroforestry for restoration in the Srepok River Basin, Viet Nam - Lessons from the Working Landscapes Programme. Briefing paper. Ede, the Netherlands: Tropenbos International. Hue City, Viet Nam: Tropenbos Viet Nam.

Issue date: February 2023

Cover photo: Coffee agroforestry plot in Viet Nam. ©stock.adobe.com

This briefing paper has been produced within the framework of the Working Landscape programme funded by the Ministry of Foreign Affairs of the Netherlands.

The opinions and views expressed in this publication do not necessarily reflect those of the Ministry of Foreign Affairs of the Netherlands.

