



REPORTING 2025 EVIDENCE



Innovative Payment for Ecosystem Services Scheme Fosters the Adoption of Sustainable Silvopastoral Practices in Northern Laos

OVERVIEW OF THE RESULTS

A participatory, equity-focused Payment for Ecosystem Services (PES) model enabled 315 smallholder families in northern Laos to adopt silvopastoral systems in 2024 and 2025. Co-designed with farmers and local authorities, the initiative addressed soil erosion and loss of ecosystem services undermining farm productivity, feed shortages, and investment risks. By combining incentives, research-based decision-support tools, and strengthening native seed systems, the model provides a scalable pathway for climate-resilient agriculture and sustainable livelihoods.

GEOGRAPHIC SCOPE: SUB-NATIONAL



COUNTRY: Lao
People's Democratic
Republic

SDG TARGETS



1.5 – build the resilience of the poor and those in vulnerable situations



2.4 – ensure sustainable food production systems



15.3 – combat desertification, restore degraded land and soil

PRINCIPAL CGIAR IMPACT AREA(S)



Impact Area 2: Poverty Reduction, Livelihoods, and Jobs



Impact Area 4: Climate Adaptation and Mitigation



Impact Area 5: Environmental Health and Biodiversity

CONTRIBUTING EXTERNAL PARTNERS:

- Forestry Research Center, National Agriculture and Forestry Research Institute
- Local Village Authorities and Farmer Groups
- Provincial and District Agriculture and Environment Offices of Phonxay and Nonghet

HIGHLIGHTS

- **Scaled adoption:** 308 households implemented silvopastoral practices across 180 hectares, establishing 33.8 km of living fences with 53,380 planted trees, and protecting another 17,885 trees on pasturelands.
- **Targeted PES incentives:** US\$42,573 in in-kind rewards distributed (~\$138 per household; ~\$0.60 per tree), reducing farmers' upfront investment costs and risk, and encouraging farmer-led uptake.
- **Strong ecological performance:** Tree survival rates of 72–81% demonstrate effective management and long-term viability.
- **System strengthening:** Seed propagation guidelines developed for 178 native tree species, addressing critical supply constraints.
- **Digital tools deployed:** MyFarmTrees and Diversity for Restoration (D4R) tools improved silvopasture design, monitoring, and farmer incentives.
- **Institutional uptake:** National Agriculture and Forestry Research Institute (NAFRI) expanded from research to national training and dissemination.
- **Inclusive co-design:** Competitive group tenders engaged women, youth, and poorer households, ensuring equitable participation and local ownership.

ELABORATION OF OUTCOME/IMPACT STATEMENT

In 13 villages across two upland districts in Northern Laos, 308 smallholder families adopted silvopastoral practices in 2024 and 2025, establishing 33.8 km of living fences through 53,380 trees planted, and protecting 17,885 existing trees across 180 hectares of pasturelands to provide ecosystem services [1]. This practice change was supported by a participatory Payment for Ecosystem Services (PES) model using competitive tenders that integrated farmer preferences and social equity criteria—including gender, youth, and poorer household inclusion—to overcome initial investment barriers and reduce farmers' investment costs and risks.

The intervention was grounded in earlier co-design workshops in Nonghet and Phonxay districts, where farmers, District Agriculture and Forestry Offices (DAFO) staff, traders, and model farmers jointly identified key challenges such as dry season feed shortages, soil erosion, and labor constraints, and prioritized locally relevant silvopastoral interventions [2]. This planning directly informed the selection of supported, farmer-preferred silvopastoral practices, incentive models, and extension support.

Farmers collaborated with District Agriculture and Environment Offices to transition toward integrating trees into pasturelands. They submitted group tenders specifying conservation actions and desired in-kind incentives (e.g., barbed wire, forage seeds, and other agricultural inputs), with conditional rewards delivered at the group level to encourage practices yielding both private and public benefits. In total, US\$42,573 worth of PES were provided as in-kind rewards across the two years (~ US\$138 per household and ~US\$0.60 per planted and protected tree). High seedling survival rates (72–81%) demonstrate effective adoption and management [1].

The project also strengthened the native tree seed system, by finalizing seed propagation guidelines for 178 native tree species, addressing critical gaps identified in a 2024 supply-chain assessment [2,7,8].

Concurrently, actionable digital tools for designing, incentivizing, and monitoring silvopastoral practices were developed and deployed.

Lao PDR modules of the MyFarmTrees digital monitoring platform and Diversity for Restoration (D4R) design tool were developed and refined through household surveys and provincial validation workshops, improving species lists, distribution maps, and trait databases for 70 priority trees to support local decision-making. MyFarmTrees enables farmers to geo-reference planted trees and link survival data to conditional PES rewards via blockchain-verified records. D4R allows farmers and extension agents to select locally appropriate tree species by filtering for specific traits (e.g., fodder, timber, soil improvement) and stress tolerances (e.g., drought, erosion risk) [5,6].

Institutional partnerships and national capacity were significantly strengthened. The National Agriculture and Forestry Research Institute (NAFRI)'s role evolved from research implementation to leading training and dissemination for other major projects, such as the Climate Protection through Avoided Deforestation (CliPAD), Implementation of Governance of Forest Landscapes and Livelihood (I-GFLL), and World Wildlife Fund (WWF), signaling enhanced trust and ownership [1,5]. Public recognition through national media (Vientiane Times) has fostered a supportive environment for future policy integration [3,4].

Together, this synergy of participatory design, equity-focused incentives, practice change, tailored tool development, and institutional strengthening provides a robust, replicable foundation for scaling silvopasture as a core strategy for climate resilience and sustainable livelihoods in upland farming systems of Laos.

EVIDENCE

1. Final Technical Report on Silvopastoral Intervention
2. Final Report on Identification and Implementation
3. Vientiane Times Article-14 January 2026. [here](#)
4. Farmers receive reward materials for ecosystem services through silvopastoral farming activities [here](#)
5. Laotian farmers and local government staff provided with digital tools and training to integrate trees in livestock farming systems for productivity and resilience at Lao People's Democratic Republic [here](#)
6. Diversity for Restoration (D4R) tool for Lao People's Democratic Republic: online catalogue and decision support tool for selecting multipurpose tree species for mixed farming systems [here](#)
7. My Farm Trees: Digital platform with blockchain to incentivize farmer- and community-led tree-based restoration of degraded landscapes: Laos country module [here](#)
8. Handbook on Tree Seed Production and Propagation Techniques in Laos [here](#)



Alie Peter Galeon, Alliance of Bioversity International & CIAT. Lao PDR-Silvopastoral practices



Alie Peter Galeon, Alliance of Bioversity International & CIAT. Lao PDR-Living fences

CONTACT PERSON/ AUTHORS

Jaalonon, Riina; Scientist; r.jalonon@cgiar.org

Adam Drucker; Honorary Research Fellow

Simone Vongkhamho; Director, Forestry Research Centre;

Bounthavy Chaleunsouk; Researcher

Nout Xaypheng; Researcher

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