



CGIAR  
SCALING FOR  
IMPACT



Photo by Alliance Bioversity-CIAT

## Innovation Name

Public-Private Incentives for Scaling Agroecology Innovations

## Location (Country/Region)

Ethiopia



## Lead centres

Alliance Bioversity and CIAT

## Contributing Initiative/s/ Bilateral project/s

Scaling for Impact, Multifunctional Landscapes, Agroecology Transitions - PSii

## Innovation Type

Practice

## Current Innovation Readiness Level



Proven Innovation

## Current Innovation Use Level



End-Users/Beneficiaries (I)

## Scaling Dimensions Achieved

Scaling Out

## Challenge Addressed

- Policy & Regulatory Framework
  - Lack of supportive legal frameworks
- Institutional Capacity:
  - Weak coordination among institutions
  - Limited institutional capacity or mandate
- Access to Finance & Markets
  - Market imperfections or failures
- Infrastructure & Services
  - Insufficient advisory or extension services
- Knowledge & Information Systems
  - Weak research-to-practice linkages

## Enabling Environment Methods

business model canvas workshops, stakeholder mapping and network analysis, individual interviews with private sector stakeholders, participatory needs assessments, on-farm demonstrations and producer field schools

## SDG Targets



## CGIAR Impact Areas



## SUCCESS STORY

# Empowering Wheat Farmers: Public-Private Incentives for Scaling Agroecology Innovations

Wheat is a cornerstone of food security in Ethiopia, yet the drive for national self-sufficiency through intensive, monocultural cluster farming has led to severe soil degradation and high production costs. Smallholder producers in regions like Doyogena face a “silent crisis” where the scarcity and high price of synthetic fertilizers and quality seeds force trade-offs that limit long-term productivity. These challenges are further compounded by a lack of technical knowledge regarding soil health and poor market connectivity, leaving farmers vulnerable to climate variability and unfair pricing.

To address these systemic issues, the Private Sector Incentives and Investments (PSii) project, under the Agroecology-TRANSITIONS program, implemented a co-creation approach in the Doyogena district. By fostering multi-stakeholder partnerships between extension systems, farmer unions, and private sector actors like millers and seed producers, PSii introduced “best-fit” bundles of agroecological (AE) solutions. These strategies—ranging from business model workshops to on-farm demonstration plots—were designed to bridge the knowledge gap and create an enabling environment for sustainable intensification.

The project’s core interventions focused on rehabilitating soil health through bundled practices, such as site-specific fertilizer application and the integration of crop rotations with legumes like faba beans to naturally enhance nitrogen fixation. Additionally, the project scaled an integrated home garden model that combines poultry and avocado production with improved manure and compost management. These practices have already begun to yield tangible results, with producers reporting improved soil quality, more stable yields, and the ability to cultivate multiple crops on a single plot.

The success of the PSii project is underpinned by its focus on strengthening market and policy linkages. By establishing local platforms that connect producers directly with processors and traders, the project ensures that sustainable farming translates into economic gain. Furthermore, the active involvement of local politicians and agricultural offices has built institutional ownership, encouraging neighboring districts to replicate these bundled AE practices. This holistic approach not only secures immediate livelihoods but also builds a resilient, long-term foundation for Ethiopia’s wheat value chain.

## Context and Ambition

Wheat is Ethiopia's second most important staple crop after teff. In the national pursuit of self-sufficiency, the government has heavily promoted wheat cluster farming. This drive for increased wheat yields created a system based on intensive, monocultural production, which introduced severe challenges hindering the adoption of AE practices.

Given the directive for cluster farming, producers were initially hesitant to adopt the proposed AE solution of crop rotation with legumes. The land had been cultivated with wheat year after year due to existing market structures, and the idea of rotation was not warmly welcomed, requiring extensive advocacy and awareness to demonstrate how it minimizes fertilizer use and halts yield decline. Furthermore, the cluster model has a logistical challenge for adoption of certain AE practices. For example, even when producers were willing to adopt organic amendments, the cluster model presented severe logistical barriers. Compost was deemed not viable for cluster wheat farming because plots were often far from households, creating immense transportation challenges and confusion over who would contribute to materials and labor within the cooperative structure.

The key barrier includes the incentives needed to sustain AE practices that were missing, resulting from wide-ranging policy, institutional, and market fragmentation. This lack of alignment created a challenging environment where even producers who understood the soil benefits struggled to commit to long-term adoption. Adoption and scaling were challenged by institutional fragmentation and a lack of coordination among value chain actors (producers, extension services, private sector processors, and research institutions). This undermined opportunities to scale innovations effectively. Furthermore, smallholder producers remained poorly connected to markets, restricting access to fair prices, while private businesses in the wheat value chain had never had the issue of obtaining agro-ecologically produced wheat. This meant the private sector lacked awareness and necessary business models to incentivize producers' shift toward sustainable production methods.

*"I appreciate the work done so far on the field. From this single plot of land, I can raise three different types of crops and utilize them, and my neighbors can benefit from this valuable practice as well. I want to acknowledge the expertise of the trainers who have provided excellent training. The agro-ecology of our area is conducive to good work, and I am very happy with the progress we've made and with the trainers' support."*

– Degefe Dalelo, producer Doyogena, district

These combined barriers – from deep-seated technical misconceptions and producer resistance to the logistical challenges of the cluster system and unaligned markets – created a context in which traditional interventions struggled to achieve long-term impact.

## Objectives and Goals

The PSii project aimed to strengthen the enabling environment for scaling AE transitions in Ethiopia's wheat sector by:

- Promote a bundled package of AE practices that enhance soil health, yield stability, and environmental sustainability.
- Build multi-stakeholder partnerships across government, private sector, research institutions, and producer organizations to co-design and scale solutions.
- Facilitate private sector engagement through targeted incentives and investment opportunities to improve input supply, market access, and value addition.
- Enhance local capacity through training, demonstration fields, and knowledge exchange to institutionalize AE practices within district agricultural systems.

The overarching goal is to catalyze a transition toward sustainable, inclusive, and climate-resilient wheat production systems, contributing to improved food security and producer livelihoods.

## Creating the Enabling Environment for Scale

To overcome the structural and institutional barriers limiting the scaling of AE practices in Ethiopia's wheat sector, the PSii project implemented a series of practical and systemic solutions that addressed both policy and market-level bottlenecks:

- Multi-stakeholder partnership platforms: The project fostered collaboration among producer cooperatives, government agencies, research institutions, and private sector actors. These platforms enabled joint planning, experience sharing, and coordination of actions for scaling AE practices.



Intercropping of Haricot bean during the short rainy season at Selam Cluster. March 2025. Photo by Alliance Bioversity-CIAT





Awareness creation and training for wheat producers, district agricultural offices, and seed providers May 2025.

Photo by Alliance Bioversity-CIAT

- **Capacity development and demonstration fields:** Training sessions and field demonstrations were organized to showcase fava bean-wheat rotation and AE practices. 585 producers and local officials participated, strengthening practical knowledge and peer-to-peer learning.
- **Private sector engagement and mapping:** A targeted mapping exercise identified key private actors and analyzed their incentives and potential roles in advancing AE transitions. This facilitated business linkages between producers and processors and encouraged private investment in sustainable input supply chains.
- **Local policy alignment and political engagement:** Local officials now promote the training as a model for other districts, with agricultural officials from neighboring areas expressing strong interest in adopting these AE practices.
- **Market linkage strengthening:** The project supported the creation of local market platforms connecting smallholder producers with processors and buyers, reducing information asymmetry and improving price negotiation capacity – key market incentives for sustaining AE adoption.

These interventions collectively improved coordination, built institutional ownership, and created the enabling conditions for scaling AE innovations within the wheat value chain in the Doyogena District of Central Ethiopia.

### The Intervention and Actions

Training sessions and multi-stakeholder workshops were perhaps the most critical enabling innovation employed by the PSii project, transforming simple capacity building. To overcome the pervasive institutional fragmentation and lack of coordination among value chain actors, the project strategically designed training sessions to function as essential partnership platforms. Since June 2023, the PSii project conducted five different training and awareness creation sessions that brought together a diverse

range of actors, including producer organizations, district agricultural offices, and seed providers. This direct dialogue was instrumental in building trust and aligning disparate objectives.

Nutritional training and demand creation sessions were organized to promote legume-based diets and stimulate interest in cultivating faba beans and other leguminous crops. These crops were introduced not just as nutritious food sources, but also as vital components of farm-based AE practices. The training, held in October 2024, focused on post-harvest management, balanced meal preparation, and the broader nutritional benefits of incorporating legumes into local diets, creating a strong pull factor for sustainable production.

Awareness and advocacy events held in April and May 2025 brought together 54 participants, including 40 producers from Adoye and Selam clusters and 14 experts, to explore the environmental and economic benefits of legumes like vetch and haricot beans for soil health, water conservation, and income diversification to break away from the dominant monocropping systems and tackle soil degradation caused by excessive chemical fertilizer use.

Furthermore, recognizing that seed scarcity was a major barrier to adoption, the project provided financial support to enable producers to purchase quality seeds. Through a co-financing arrangement (split 50/50 between PSii and producers), 1,500 kg of haricot bean seeds were distributed to 20 producers across 15 hectares in the Selam cluster, while vetch seeds were provided for 10 hectares in the Adoye cluster. This targeted input support helped producers overcome the initial cost hurdle and successfully initiated crop rotation during the short rainy season. Building on this momentum, efforts were made to establish sustainable linkages with research institutes to ensure access to certified faba bean seeds, a crucial step for scaling legume-based rotations once the practice gained acceptance among cluster producers.

## Results and Impact

The PSii project's collaborative approach has generated tangible results in strengthening the enabling environment for AE transitions in Ethiopia's wheat sector. Producers, local institutions, and private actors are increasingly adopting and promoting AE practices that improve productivity, soil fertility, and resilience.

Through participatory training and field demonstrations, more than 585 producers directly benefited from the bundled AE practices, fava bean-wheat rotation, organic soil amendments, desho grass planting, soil bund construction, and home gardening. The positive impact is evident in the words of Degefe Dalelo, a producer from Doyogena district highlighted: *"I appreciate the work done so far on the field. From this single plot of land, I can raise three different types of crops and utilize them, and my neighbors can benefit from this valuable practice as well. I want to acknowledge the expertise of the trainers who have provided excellent training. The agroecology of our area is conducive to good work, and I am very happy with the progress we've made and with the trainers' support."*

The participation of local politicians and agricultural officers in AE training has also expanded institutional ownership and policy visibility. Neighboring districts have expressed strong interest in replicating the approach, signaling early policy diffusion, and the potential for wider geographic scaling.

Producers implementing the bundled AE practices have already reported improved soil quality and more stable crop yields. This is likely due to the nitrogen-fixing properties of fava beans, contributing to enhanced soil health and sustainability. According to Erun Armias, Doyogena district agricultural office Farm division head, *"Our farmers ingeniously cultivate three different crops on the same plot of land. This not only maximizes yield but also enhances soil fertility. The canopy of potato plants aids in nitrogen fixation, while haricot beans also contribute to this process. The leaves of these crops further enrich the soil, ensuring fertility for the upcoming wheat season."*

Additionally, private sector stakeholders (seed suppliers, millers, and fertilizer providers) have begun to explore collaborative business opportunities aligned with AE principles, such as localized seed production and sustainable input distribution.

Together, these outcomes illustrate a significant behavioral and institutional shift from isolated interventions toward coordinated, multi-actor engagement that integrates agroecology into Ethiopia's wheat innovation system.

## Reflection and Learning

The PSii experience in Ethiopia's wheat value chain offers several important lessons on how to create an enabling environment for scaling AE innovations. First, multi-stakeholder collaboration proved essential for ownership and sustainability. Scaling agroecology requires coordination across diverse actors' government agencies, research institutions, private companies, and producer organizations. By establishing inclusive platforms that facilitate dialogue and co-decision-making, the project was able to build trust, align incentives, and ensure long-term institutional commitment.

In addition, bundling complementary practices significantly accelerated adoption and impact. Producers were more likely to embrace integrated packages of AE practices when they observed the benefits for productivity, soil fertility, and income diversification. This demonstrates that combining practices creates synergies that reinforce adoption.

Moreover, local political engagement enhanced legitimacy and replication. The active participation of district-level politicians and agricultural officers not only increased local policy support, but also facilitated horizontal scaling as successful experiences were promoted across administrative boundaries. This underscores the importance of involving decision-makers early to amplify the impact of interventions. Equally important was private sector engagement, which acted as a catalyst for sustainability. By involving processors, seed suppliers, and input distributors from the design phase, the project ensured that market incentives complemented environmental goals. Strengthened market linkages and targeted private investment further supported the continuation of AE adoption beyond the project cycle.

Furthermore, participatory co-design bridged scientific research and local knowledge. Combining evidence-based recommendations with producers' experiential insights allowed for context-specific adaptation of AE practices, enhancing both technical effectiveness and social acceptance. Similarly, demonstration and peer learning emerged as powerful mechanisms for

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- Zerihun Ermias , Doyogena district agricultural office Farm division head





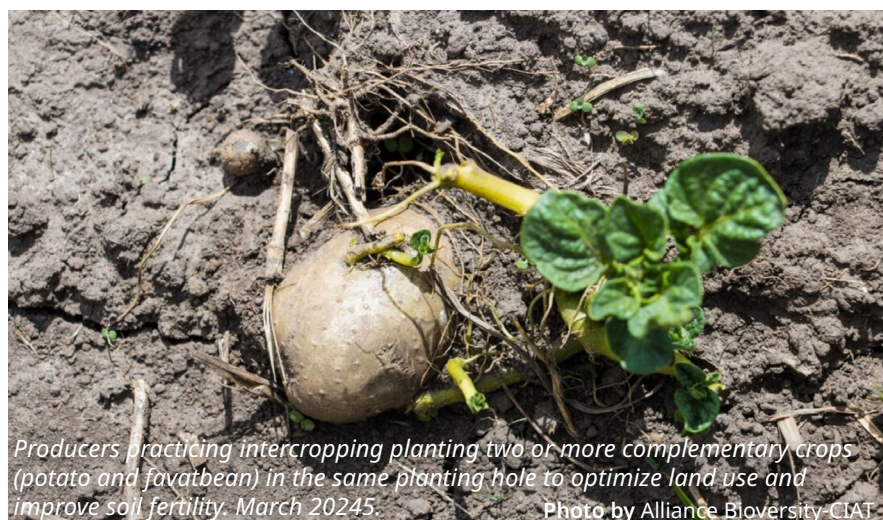
## Partners

- Doyogena Woreda Agricultural Office
- Ministry of Agriculture
- Wachemo University
- Haramaya University



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*Producers practicing intercropping planting two or more complementary crops (potato and javabean) in the same planting hole to optimize land use and improve soil fertility. March 20245.*

Photo by Alliance Bioversity-CIAT

scaling. Visible field results and producer-to-producer exchanges helped overcome scepticism and created a multiplier effect, with demonstration sites functioning as hubs of continuous learning for producers, extension agents, and local authorities alike.

Finally, continuous learning and adaptive management were key to sustaining progress. Regular reflection sessions, monitoring, and feedback loops enabled the project to adjust interventions to evolving conditions, maintain stakeholder engagement, and capitalize on emerging opportunities for scaling.

AE transitions are complex and multifaceted, demanding transdisciplinary research and collaborative engagement across the agricultural innovation ecosystem. Context-specific solutions, both on- and off-farm, must be co-designed and co-implemented, leveraging incentives to scale best practices effectively. The PSii project's success in agroecology smart landscapes (ASLs) demonstrates the critical role of inclusive multi-stakeholder partnerships. These partnerships, encompassing producer collectives, value chain actors, national research institutions, government representatives, and other key stakeholders, are essential for developing, testing, adapting, and scaling AE innovations. The project highlights the need for structured, ongoing collaboration across all sectors and scales to achieve resilient and environmentally sustainable AE transitions.

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