CGIAR

INITIATIVE ON
Agroecology

CGIAR Initiative on Agroecology

ANNUAL TECHNICAL REPORT 2022

CGIAR Technical Reporting 2022

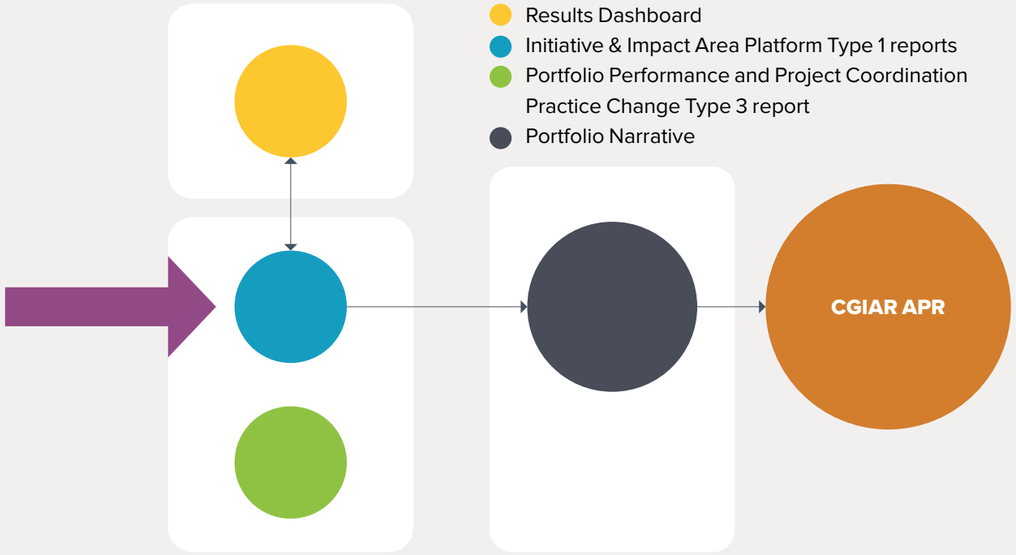
CGIAR Technical Reporting has been developed in alignment with the CGIAR Technical Reporting Arrangement.

This Initiative report is a Type 1 report and constitutes part of the broader CGIAR Technical Report. Each CGIAR Initiative submits an annual Type 1 report, which provides assurance on Initiative-level progress towards End of Initiative outcomes.

The CGIAR Technical Report comprises:

- **Type 1 Initiative and Impact Area Platform reports, with quality assured results reported by Initiatives and Platforms available on the CGIAR Results Dashboard.**
- **The Type 3 Portfolio Performance and Project Coordination Practice Change report, which focuses on internal practice change.**
- **The Portfolio Narrative, which draws on the Type 1 and Type 3 reports, and the CGIAR Results Dashboard, to provide a broader view on portfolio coherence, including results, partnerships, country and regional engagement, and synergies among the portfolio's constituent parts.**

The CGIAR Technical Report constitutes a key component of the CGIAR Annual Performance Report (APR).



US$	2022	2023	2024
Proposal Budget from initial submission	US$8,997,332	US$11,701,334	US$12,301,334
Approved 2022 Budget	US$6,761,539		
Actual 2021 final Budget allocation (US$)	US$6,384,699		

2022 Disbursement Target based on Approved FinPlan

Section 1 Fact sheet

Initiative name	Transformational Agroecology across Food, Land, and Water Systems
Initiative short name	Agroecology
Action Area	Systems Transformation
Geographic scope	Burkina Faso, India, Kenya, Lao People's Democratic Republic, Peru, Tunisia, Zimbabwe
Start date	Jan. 1, 2022
End date	Dec. 31, 2024
Initiative Lead	Marcela Quintero – m.quintero@cgiar.org
Initiative Deputy	Chris Dickens – c.dickens@cgiar.org
Measurable three-year End of Initiative outcomes (WP-Os)	**General End-of-Initiative outcome:** Contextually relevant agroecological principles applied by farmers and communities across a wide range of contexts and supported by other food system actors by 2024.
	WP1-O: Private sector actors, policymakers, and female and male small-scale farmers collaborate with researchers in an international network of agroecological living labs (ALLs) that promote integration of research and innovation processes to facilitate co-design and testing of context-specific agroecological innovations and broader learning of the biophysical and socioeconomic conditions required for agroecological transitions. **Target**: At least 225 national and international researchers collaborating with FSAs (at least 5,500 farmers, 54 policymakers, 25 private-sector companies) across seven countries to co-design and test context-specific agroecological innovations. This work will raise awareness and provide access to a range of tools that around 2.2 million additional small-scale farmers, national research centers in the seven target countries and beyond, and private sector companies from other regions will use for supporting agroecological transitions.
	WP2-O: Researchers, policymakers, communities, investors, farmers, and other FSAs use knowledge gained from science-based assessments implemented in all seven ALLs to implement agroecological innovations that are sustainable and enhance resilience. **Target:** The results of a minimum of 100 farm-level assessments are socialized in the corresponding target countries with stakeholders and used in ALLs to inform the agroecological transition pathway/innovations.
	WP3-O: Investors, private sector, NGOs, and farmers participate equitably in partnerships to co-develop business models, linking agroecological innovations to markets and investment. **Target:** At least seven strategic business partnerships linking agroecological innovations to markets established and functioning. Investors, public sector, and farmer organizations co-design or adapt financial mechanisms that support agroecological innovations. Target: At least three financial mechanisms that support adoption of agroecological innovation.

	WP4-O: National and regional policymakers and sectoral organization representatives co-develop and promote recommendations to effectuate the horizontal (across sectors) and vertical (across scales) policy integration required to mainstream agroecological principles. **Target:** At least four vertical or horizontal policy recommendations co-developed and promoted. Local organizations and authorities co-develop, strengthen, or adjust local institutions and governance mechanisms to better support agroecological transitions in each ALL. Target: At least four local institutions and governance mechanisms co-developed, strengthened, or adjusted.
	WP5-O: Scientists, funders, policymakers, business partners, and civil society reorient or adjust their strategies and action plans based on knowledge gained from scientific studies underpinning behavior change mechanisms and capacities of farmers, business partners, and consumers to implement agroecological transformation. **Target**: Evidence of CGIAR and its partners' science reflected in at least seven strategies/action plans per identified stakeholder group.

Contribution to global targets	**Environmental Health and Biodiversity** • Stay within planetary and regional environmental boundaries: consumptive water use in food production of less than 2,500 km^3 per year (with a focus on the most stressed basins), zero net deforestation, nitrogen application of 90 Tg per year (with a redistribution towards low-input farming systems) and increased use efficiency, and phosphorus application of 10 Tg per year. • Maintain the genetic diversity of seeds, cultivated plants, and farmed and domesticated animals, and their related wild species, including through soundly managed genebanks at the national, regional, and international levels. **Gender Equality, Youth, and Social Inclusion** • Close the gender gap in rights to economic resources on, access to ownership of, and control over land and natural resources for over 500 million women who work in food, land, and water systems. • Offer rewardable opportunities to 267 million young people who are not in employment, education, or training.
OECD DAC Climate marker adaptation score*	**Score 2:** Principal: The activity is principally about meeting any of the three CGIAR climate-related strategy objectives — namely, climate mitigation, climate adaptation and climate policy, and would not have been undertaken without this objective.
OECD DAC Climate marker mitigation score*	**Score 1:** Significant: The activity contributes in a significant way to any of the three CGIAR climate-related strategy objectives — namely, climate mitigation, climate adaptation and climate policy, even though it is not the principal focus of the activity.
OECD DAC Gender equity marker score*	**Score 1A:** Gender accommodative/aware: Gender equality is an objective, but not the main one. The Initiative/project includes at least two explicit gender-specific outputs, and (adequate) funding and resources are available. Data and indicators are disaggregated by gender and analyzed to explain potential gender variations and inequalities.
Website link	https://www.cgiar.org/initiative/agroecology//

*The Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) markers refer to the OECD DAC Rio Markers for Climate and the gender equality policy marker. For climate adaptation and mitigation, scores are: 0 = Not targeted; 1 = Significant; and 2 = Principal.
The CGIAR GENDER Impact Platform has adapted the OECD gender marker, splitting the 1 score into 1A and 1B. For gender equality, scores are: 0 = Not targeted; 1A = Gender accommodative/aware; 1B = Gender responsive; and 2 = Principal.
These scores are derived from Initiative proposals, and refer to the score given to the Initiative overall based on their proposal.

Section 2 Initiative progress on science and towards End of Initiative outcomes

Food systems actors from all sectors in Zimbabwe discuss agroecological transitions including business models, financial mechanisms, policy integrations and behavioral change strategies. Photo credit: CIMMYT Zimbabwe

Overall summary of progress against the theory of change

Over the past year, the Agroecology Initiative has put in place the elements needed to generate science-based evidence on the performance of agroecological innovations in providing food system actors (FSAs) with improved social equity and agricultural productivity as well as economic gains and increased environmental protection. Such evidence is critical for achieving the Initiative's expected outcome, which is for farmers and communities across a wide range of contexts to trust and apply agroecological principles together with other FSAs.

A first key element required to assess agroecological innovations is to **establish agroecological living landscapes (ALLs) in selected territories**. The Initiative and its 34 partners (including 8 CGIAR Centers, the 2 international research centers CIRAD and CIFOR-ICRAF, and 22 other external partners) have selected at least one ALL in all seven target countries. This was based on extensive engagement with FSAs to ensure that the research is relevant to local priorities and contexts. Analysis of collected data on the 1,346 FSAs engaged so far in co-developing agroecological innovations in the seven target countries shows that 42% are female and 58% male. Tunisia has engaged the most FSAs (532), followed by Kenya (299), Zimbabwe (228) and India (123). Farmers are the biggest group (622), followed by national agricultural research systems or NARS (170), private sector actors (145), and extensionists (85). The Initiative's 24 external partnerships, 11 agreements with implementing partners, and 3 with scaling partners involve the transfer of resources that enable partner organizations to implement project-related activities. Four other agreements are in the final stages of development.

Initiative staff and partners of seven countries and five work packages coordinate work plans. Photo credit: Manuel Narjes, Alliance Bioversity-CIAT

In each ALL, holistic visioning exercises led to co-developing the most viable agroecological transition pathways and identifying innovations that can be co-designed and tested for potential adoption by ALL members. Flexible guidelines produced with country-team researchers ensure that each step in this process takes into account the best knowledge of local contexts as well as the state of the art in multi-stakeholder engagement.

Prior knowledge and various context-specific assessments made it possible to select the ALLs in a timely manner. The analysis included an initial site-scoping exercise informed by subnational stakeholder consultations and an assessment of the agroecological context carried out in key areas of target countries that considered the current state of agriculture, the social structure, business models, and policies that might impact agroecological adoption.

An assessment framework provides the second key element required for generating evidence on the effectiveness of agroecological principles. This includes a set of performance metrics to facilitate the evaluation of agroecological approaches across the food chain and down to the farm level. The framework encompasses environmental, social, economic, and political aspects as well as indicators that are sensitive to agroecological principles. Some of the indicators are global, intended for application to every ALL, while others are local, aimed at capturing nuances appropriate to each ALL. This combination of global and localized indicators makes the assessment framework innovative as part of a comprehensive approach for gathering science-based evidence. Through a transdisciplinary effort across Work Packages (which are all on track, with no significant delays), the Initiative also developed a holistic framework for monitoring, evaluation, learning, and impact assessment (MELIA). This encompasses the monitoring and evaluation of Initiative targets, agroecological innovations in the ALLs, as well as behavior changes leading to the achievement of outcomes. The framework includes a baseline of FSAs for future impact assessment.

Applying agroecological principles in the ALLs involves actions at different scales (farm, value chain, territory, and nation) and in different spheres, including farm practices, business models, and policies. **Liaising with value chain actors** is particularly important for determining which changes in farms and markets are crucial for fostering agroecological transitions. So far, the Initiative has conducted value chain analysis in five countries, with the aim of identifying business models that can be improved in support of agroecology as well as opportunities to create a more enabling environment for agroecology within selected value chains. First results were achieved with the cacao value chain in Peru, where researchers have designed a tool for holistic business model assessment and piloted its use with a cacao producer cooperative. In addition, researchers have developed **a policy tracking tool** and completed

the assessment of policies and institutions relevant to agroecological transitions in four countries. In five countries, they have analyzed experiences with behavior change, and incorporated gender and social inclusion into the ALLs' visioning process. All these analyses and tools have involved the co-development of 54 outputs and 7 intermediate outcomes, including 2 innovation developments and 3 policy changes reported in 2022, and constitute essential elements for generating science-based evidence on agroecological innovations.

The Initiative builds scientific evidence on the outcomes of agroecological transitions in the sites where the transitions are already more advanced (e.g., India) to learn from those experiences, adapt them to other contexts and scale them out efficiently, reaching a critical mass for system transformation.

The Initiative is putting agroecology on the map within CGIAR, with more than 100 researchers from 8 centers contributing to international dialogues around agroecology and working on a new unifying agenda, enhancing researchers' capacities and synergies with other CGIAR Initiatives through internal seminars. With Excellence in Agronomy, NATURE+ and Sustainable Intensification, a joint conceptual paper on differences and synergies is under development. As part of the Transformative Partnership Platform for Agroecology (TPP), launched in 2021, the Initiative is connected to a wider community focused on closing knowledge and implementation gaps in agroecology. The Initiative also contributes to the scientific working group of the Agroecology Coalition and cooperates with partners for scaling and impact, including the German Agency for International Cooperation (GIZ GmbH) and Biovision. It also engages with the EU Directorate-General for International Partnerships (INTPA) and joint France–CGIAR Initiative to map capacities and evidence generated around agroecological principles and their efficacy, and participates in the United Nations Food Systems Summit (UNFSS). Collaboration with projects like GIZ PROSOL on innovations in mixed crop-livestock systems in Tunisia has proved extremely productive.

Tree nursery at the Drylands Natural Resource Centre (DNRC) in Mbumbuni, Makueni County, Kenya. DNRC produces, donates, and sells high-quality seedlings of numerous indigenous and a few exotic tree species. Photo credit: CIFOR-ICRAF

Initiative-level theory of change diagram

This is a simple, linear, and static representation of a complex, non-linear, and dynamic reality. Feedback loops and connections between this Initiative and other Initiatives' theories of change are excluded for clarity.

EOI — End of Initiative outcome

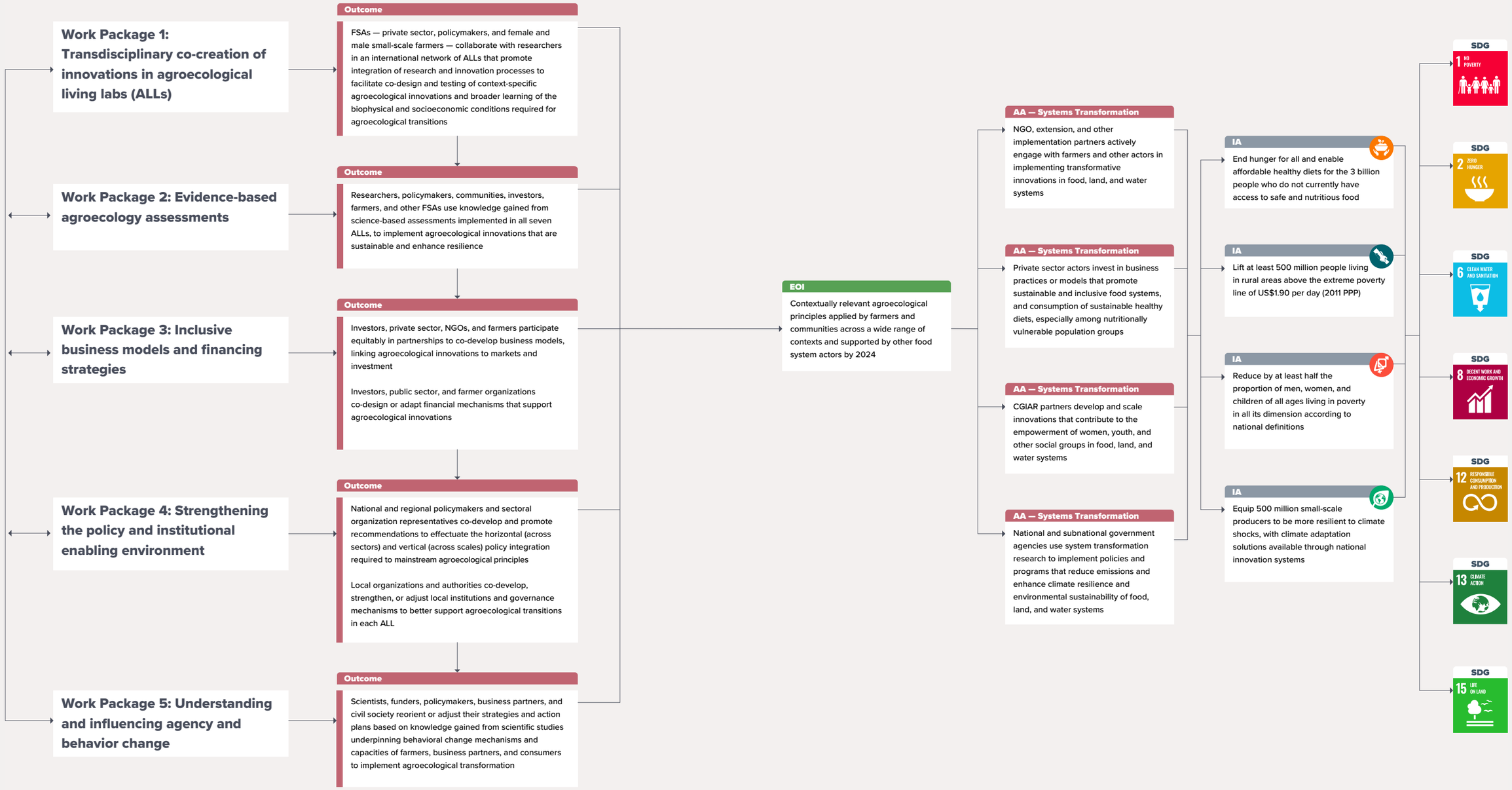
AA — Action Area

IA — Impact Area

SDG — Sustainable Development Goal

- Nutrition, Health, and Food Security
- Poverty Reduction, Livelihoods, and Jobs
- Gender Equality, Youth, and Social Inclusion
- Climate Adaptation and Mitigation
- Environmental Health and Biodiversity

Teams from CGIAR's three Action Areas — System Transformation, Resilient Agrifood Systems' and Genetic Innovation — worked to develop an improved set of Action Area outcomes in October 2022. Since this was near the end of the reporting cycle for 2022, it was decided not to update the theories of change based on these new Action Area outcomes.
The exception to this is Genetic Innovation — for this Action Area, as the new outcomes had already been widely discussed among the relevant Initiatives, and with its advisory group of funders and other stakeholders, the decision was made to update their outcomes in time for the 2022 reporting cycle.

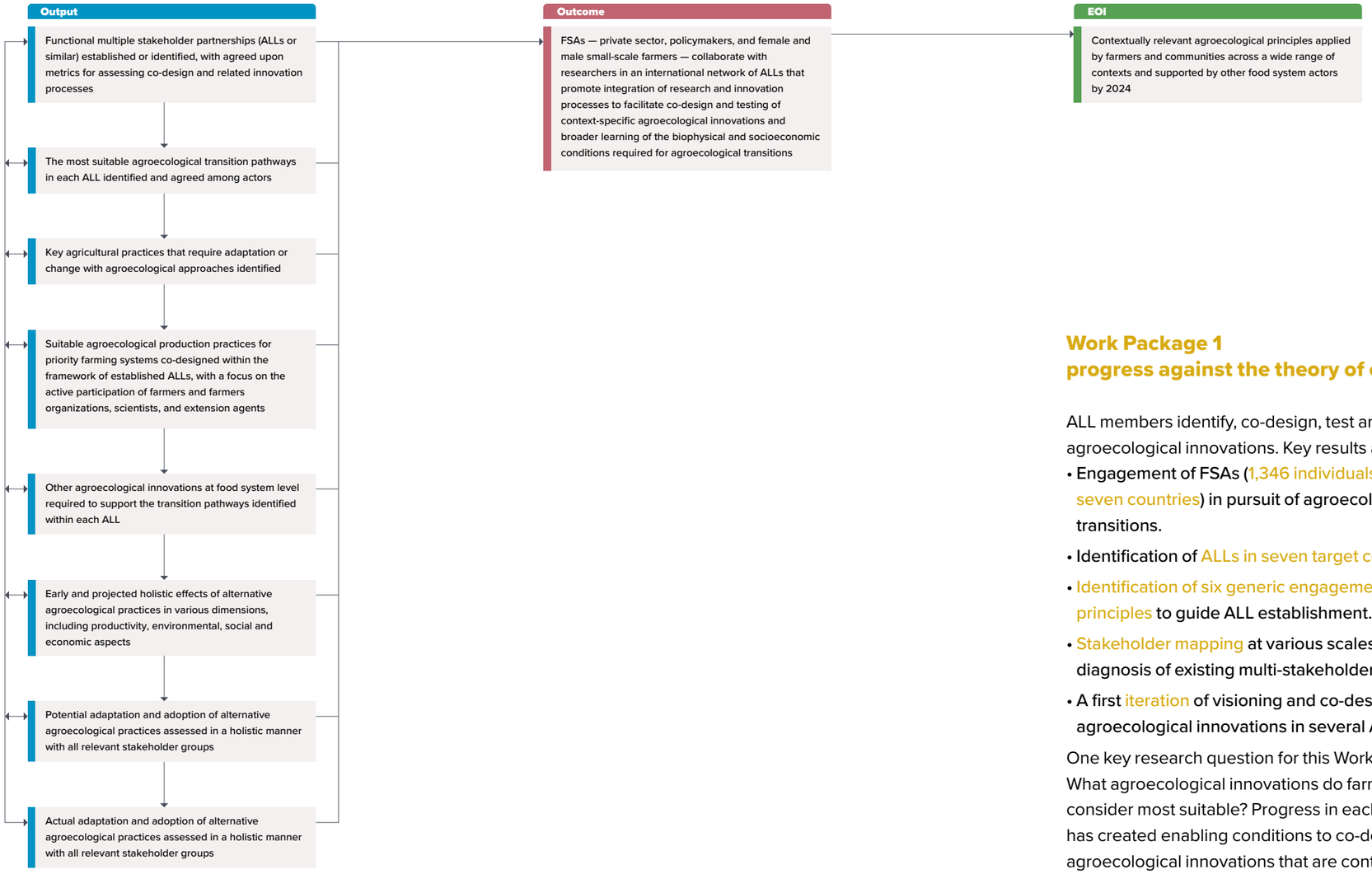


Progress by End of Initiative outcome

WP1-O	Based on stakeholder mapping results and building on existing partnerships and experiences, a diversity of local and national FSAs (1,346 individuals involved so far, 42% female, 58% male) have played a critical role in supporting the emergence of the ALLs. Engagement principles, visioning, and codesign guidelines enable the country teams to work together with stakeholders in developing technical and social innovations at the most suitable scales to contribute to agroecological transitions.
WP2-O	Science-based assessment of the agroecological context of the ALLs highlights their remarkable biophysical and socio-cultural diversity. Therefore, each ALL must have a unique starting point for its agroecological transition. Based on knowledge from these assessments, Initiative participants co-create transition pathways that are unique rather than promote silver bullet approaches that ignore contextual diversity. To monitor agroecological innovation in the ALLs, the Initiative is developing a holistic assessment framework, based on a review of widely used instruments and indicators formatted to reflect local nuances.
WP3-O	The Initiative is identifying opportunities to integrate agroecology into business models through rapid agroecological value chain analyses in the ALLs. Engagement with stakeholders around the ALLs shows that private and public sector actors want to be involved in participatory value chain and business model analyses. Early experience with 42 private entities so far also confirms that business models are a suitable mechanism for scaling agroecological innovations. The Initiative has identified a potential financial mechanism associated with carbon markets and is analyzing their feasibility for Peru.
WP4-O	A paper prepared by Initiative researchers demonstrates the importance of mechanisms such as strategies, policies, and programs for promoting agroecology. It also suggests that the type of mechanism best suited for this purpose varies from place to place. The Initiative has contributed to a national agroecology strategy in Kenya, while participating in national dialogues in Tunisia and Zimbabwe. In Peru, the Initiative was invited to conduct research on agroecology and support policy development and to help revise a regional strategic plan on biotrade.
WP5-O	According to a 2022 brief co-authored by Initiative researchers, empowering women and other marginalized stakeholders is critical for enabling agroecology to improve social well-being. The Initiative conceptualized the drivers of behavior change and agency, aimed at identifying what can trigger actors to behave differently in support of agroecological transformation. Experience in target countries underlines the importance of: (1) transparent behavior assumptions in theories of change (2) institutional innovations in sustaining behavior change; and (3) gender equality and social inclusion considerations supporting change across diverse groups.

Section 3 Work Package-specific progress

Work Package 1:
Transdisciplinary co-creation of innovations in agroecological living labs (ALLs)



Work Package 1 progress against the theory of change

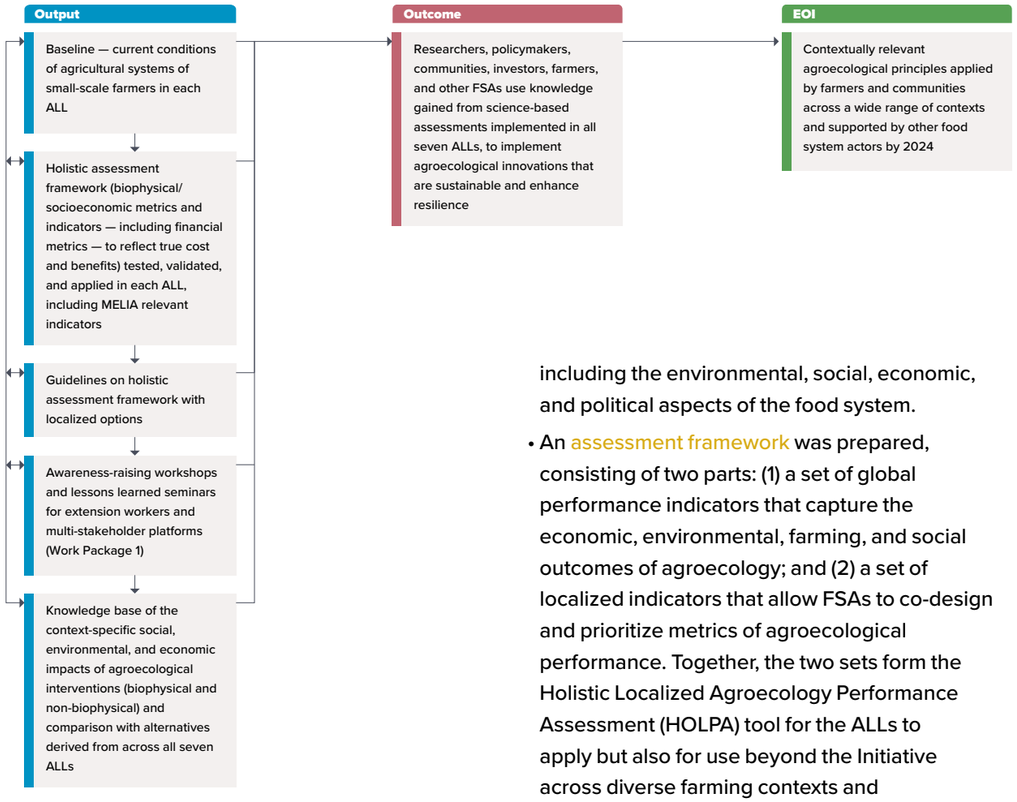
ALL members identify, co-design, test and adopt agroecological innovations. Key results are:

- Engagement of FSAs (1,346 individuals across seven countries) in pursuit of agroecological transitions.
- Identification of ALLs in seven target countries.
- Identification of six generic engagement principles to guide ALL establishment.
- Stakeholder mapping at various scales and diagnosis of existing multi-stakeholder Initiatives.
- A first iteration of visioning and co-design of agroecological innovations in several ALLs.

One key research question for this Work Package is: What agroecological innovations do farmers consider most suitable? Progress in each ALL has created enabling conditions to co-design agroecological innovations that are context-specific, locally relevant, and acceptable to farmers and other FSAs. Following are the initial priorities and preferences that each ALL found incorporates most of the agroecological principles and is most appropriate for its agroecological transition:

1. **Kenya:** Soil, water, and pest management innovations; producer networks; and policies.
2. **Burkina Faso: I**nclusive membership in the Dairy Innovation Platform (women, youth, and remote farmers); innovations on dairy farms (forage production, manure recycling, and smart rationing); and business models in milksheds.
3. **Tunisia:** Resilience of crop-livestock systems, valorization of olive products in agroforestry systems, and diversification through honey and carob production, and marketing.
4. **Zimbabwe:** Technical and institutional innovations in cereals, legumes, livestock, vegetables, and cotton.
5. **India:** Reduced reliance on external inputs, improved water and soil management, and large- scale territorial adoption of natural farming.
6. **Lao PDR:** Water and land management, low-input agriculture, and aquatic food production.
7. **Peru:** Integrated management and diversification of organic cacao-based systems.

Work Package 2:
Evidence-based agroecology assessments



Work Package 2 progress against the theory of change

With growing global interest in agroecology, evaluating its performance across scales and contexts is vital. Following are key results that respond to the research questions posed by this Work Package:

- Context documents for each ALL are mostly completed or in the final stages: A guideline was produced to assist countries in describing the basic agroecological context of their ALLs, including the environmental, social, economic, and political aspects of the food system.
- An assessment framework was prepared, consisting of two parts: (1) a set of global performance indicators that capture the economic, environmental, farming, and social outcomes of agroecology; and (2) a set of localized indicators that allow FSAs to co-design and prioritize metrics of agroecological performance. Together, the two sets form the Holistic Localized Agroecology Performance Assessment (HOLPA) tool for the ALLs to apply but also for use beyond the Initiative across diverse farming contexts and agroecological activities.

The framework builds on existing tools, although further development was needed, as these do not represent comprehensively all the environmental, social, farming, and economic aspects of sustainability. Moreover, existing assessment frameworks do not adequately capture local conditions, particularly those in the Global South, as most frameworks were designed in the Global North under very different conditions (i.e., farming, social, economic, and environmental conditions, funding and skills for implementation, technical knowledge, etc.).

Work Package 3:
Inclusive business models and financing strategies

Work Package 3 progress against the theory of change

Inclusive business models constitute, with Work Package 4, one of the two adaptive scaling strategies of this Initiative that are conducive to agroecological transitions.

Following are key results intended to support the development of business models that apply agroecological principles but at the same time are economically and financially sustainable:

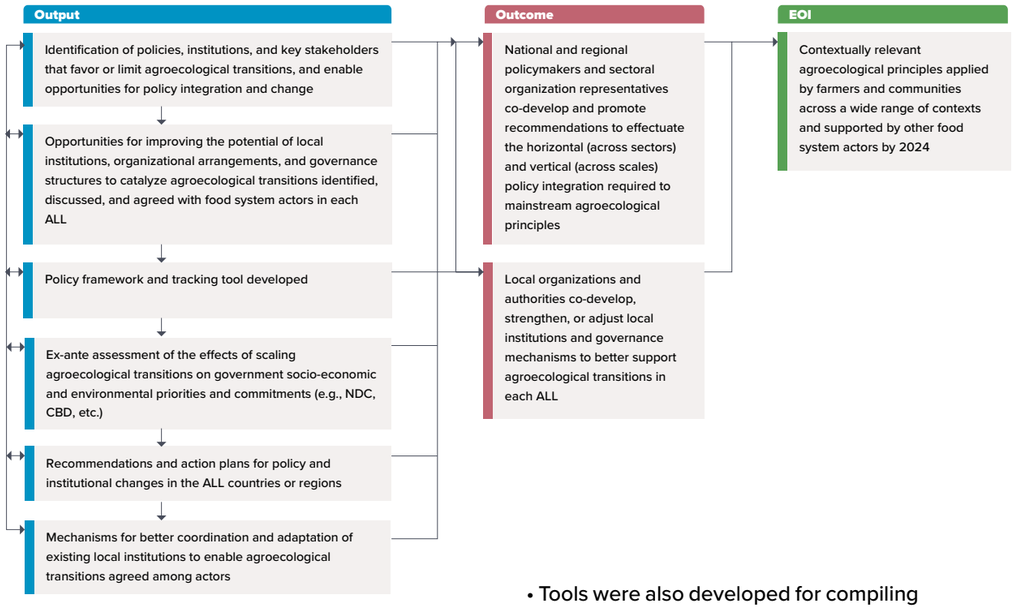
- A roadmap was developed for prioritizing and analyzing value chains; the Work Package has proposed that country teams upgrade business models.
- A rapid agroecological value chain analysis (RAVCA) guideline that integrates the 13 agroecological principles was applied in Kenya, Peru, Tunisia, and Zimbabwe, where the prioritized value chains will serve to identify inclusive business models as a strategy for scaling agroecology.
- A holistic business model assessment tool that integrates Biovision's Business Agroecological Criteria Tool (B-ACT) with a traditional business model canvas was developed and applied in Peru, Zimbabwe, and Tunisia.

Four country teams identified, mapped, and analyzed value chains that show potential to be agroecologically upgraded through co-designed business models.

The Work Package piloted its tool for holistic business model assessment in Peru to determine the agroecological status of an organic cacao producers' cooperative (Colpa de Loros) and to prepare a roadmap for considering the carbon market as an alternative financial mechanism for the cooperative.

Multilocational and contextualized dissemination of forage mixtures; small-scale on farm forage biomass management, Tunisia. Photo credit: ICARDA

Work Package 4:
Strengthening the policy and institutional enabling environment

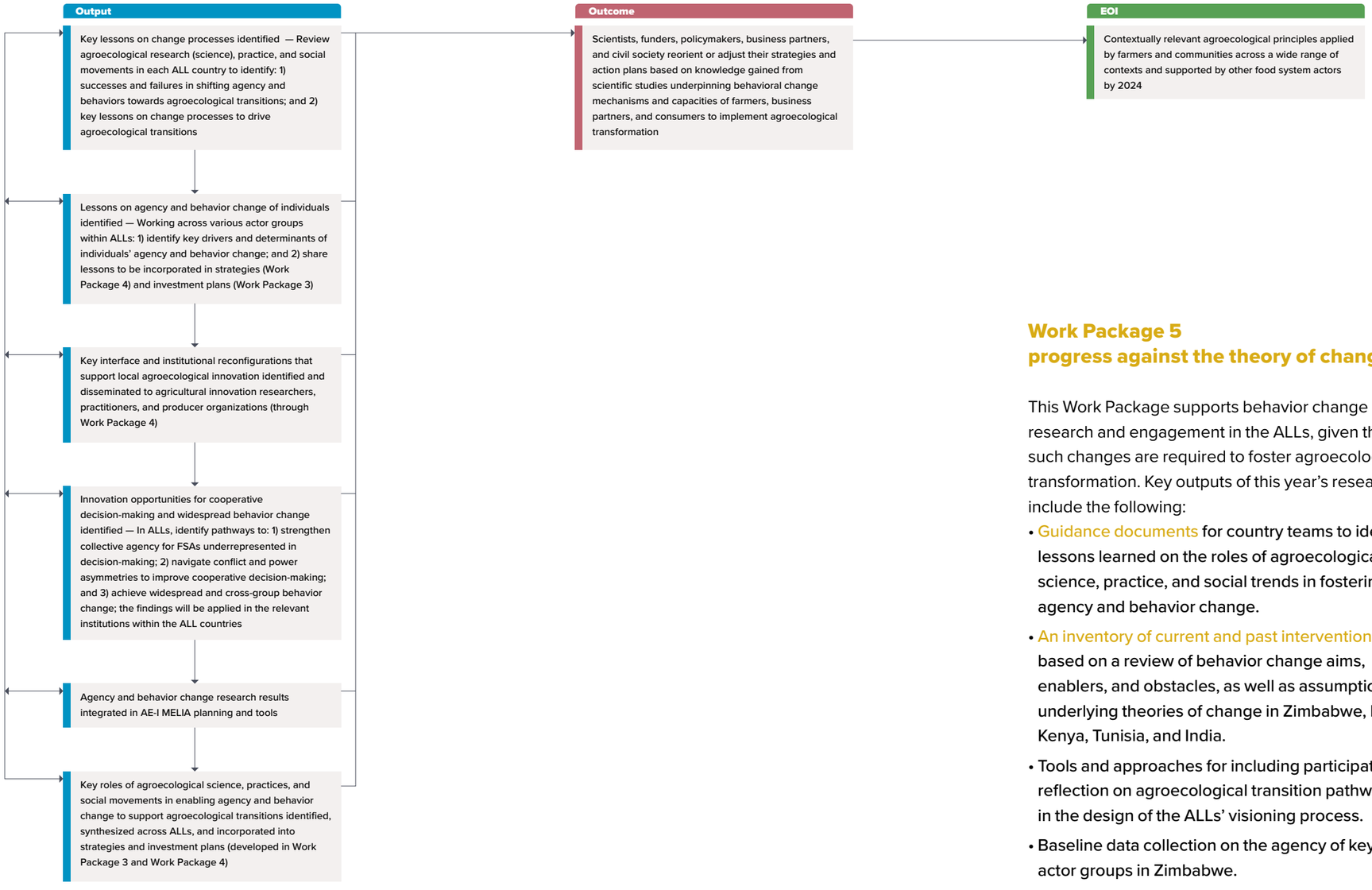


Work Package 4 progress against the theory of change

This Work Package explores mechanisms to facilitate policy integration in support of agroecology. The team focused this year on understanding how policies, local institutions, and governance structures impact agroecological transitions in agroecosystems and food systems under different conditions. It also identified partners and worked with them to identify policy and institutional modifications and research needed to support this work. Following are key results from these activities:

- A policy tracker tool and guidelines were developed for assessing annual progress towards policy and institutional milestones co-generated with national and local stakeholders in each of the target countries and ALLs.
- Tools were also developed for compiling inventories of policies and institutions relevant to agroecology, and for analyzing their relationships to agroecology.
- A resource guide on multistakeholder platforms was produced in collaboration with MITIGATE+ and NEXUS Gains.
- Initial assessments of policies and institutions were completed for India, Peru, Tunisia, and Zimbabwe, including a policy and institutional analysis, policy stakeholder mapping, and stakeholder consultations. These assessments revealed an imbalance in India between investment that favors food security and water management programs, on the one hand, and sustainable agriculture or organic farming, on the other; a lack of coordination in Zimbabwe of the many relevant strategies, policies, laws, and programs; and a lack of policy implementation in relation to few agroecological principles in Tunisia.

Work Package 5:
Understanding and influencing agency and behavior change



Work Package 5 progress against the theory of change

This Work Package supports behavior change research and engagement in the ALLs, given that such changes are required to foster agroecological transformation. Key outputs of this year's research include the following:

- Guidance documents for country teams to identify lessons learned on the roles of agroecological science, practice, and social trends in fostering agency and behavior change.
- An inventory of current and past interventions, based on a review of behavior change aims, enablers, and obstacles, as well as assumptions underlying theories of change in Zimbabwe, Peru, Kenya, Tunisia, and India.
- Tools and approaches for including participatory reflection on agroecological transition pathways in the design of the ALLs' visioning process.
- Baseline data collection on the agency of key actor groups in Zimbabwe.

Preliminary results show that, in past endeavors, training and knowledge dissemination were the main approaches to trigger behavior change. The results also suggest, however, that institutional aspects and innovations, such as a supportive market environment, are needed to sustain behavior change. Work Package 5 will address these in collaboration with other Work Packages. The drivers of behavior varied among actor groups, underscoring the need to address gender, equity, and social inclusion in agroecological transitions. In Kenya, the main focus has been to improve the physical environment; in Tunisia, social movements and non-governmental organizations have focused on sensitization and capacity building; and in Zimbabwe and India (where experience has demonstrated the power of government support and incentive mechanisms to encourage agroecological behaviors), economic factors and a supportive market environment have been key drivers influencing the success of behavior change. Based on this evidence, the Initiative will analyze specific drivers of behavior change that are relevant for the agroecological transitions in each ALL.

Work Package progress rating

WORK PACKAGE	TRAFFIC LIGHT / RATIONALE
1	All countries have established at least one ALL, and most have conducted stakeholder mapping and assessed existing Initiatives. Some countries have also started the visioning exercise, the results of which will determine the agroecology transition pathways that each ALL will follow.
2	Progress aligns with the Plan of Results, even though initial progress was slow. Development of the assessment framework, including the selection of indicators, has taken considerable time. The framework will be ready for piloting by March 2023, and all assessments will be completed by the end of Q3.
3	All outputs were delivered. In addition to the four value chain analyses performed for Kenya, Peru, Tunisia, and Zimbabwe, an initial analysis was carried out in Lao PDR earlier than anticipated. Furthermore, work on inclusive financial mechanisms was carried out for the cacao value chain in Peru's Ucayali region.
4	Although this Work Package plans to generate outputs and contribute to outcomes in all seven target countries, Year 1 saw variable progress across countries, as expected, because of different degrees of progress with national partners and in the formation of country teams. Satisfactory progress was made in four of the seven countries.
5	Initial progress was achieved with five of the six planned outputs. Regarding lessons learned on change processes in agroecology transformation, five countries have made substantial progress. Progress and results so far align with the Plan of Results, Budget and theory of change, with some delays that do not jeopardize the success of this Work Package.

KEY

On track	• Annual progress largely aligns with Plan of Results and Budget and Work Package theory of change • Can include small deviations/issues/ delays/risks that do not jeopardise success of Work Package
Delayed	• Annual progress slightly falls behind Plan of Results and Budget and Work Package theory of change in key areas • Deviations/issues/delays/risks could jeopardise success of Work Package if not managed appropriately
Off track	• Annual progress clearly falls behind Plan of Results and Budget and Work Package theory of change in most/all areas • Deviations/issues/delays/risks do jeopardise success of Work Package

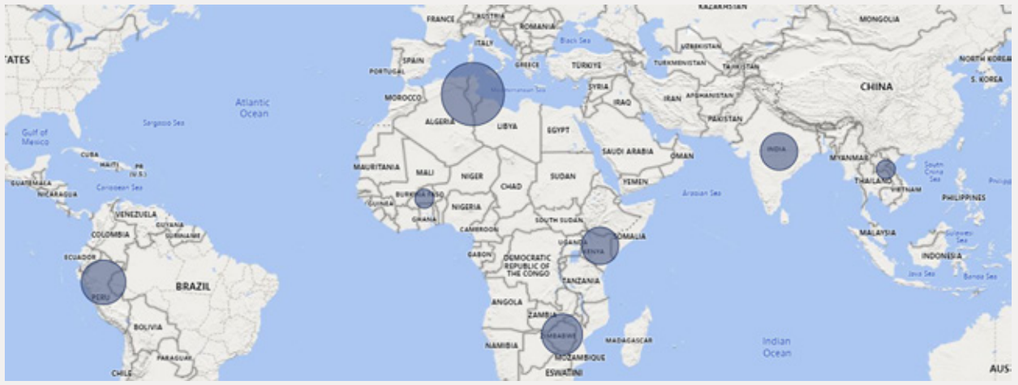
Section 4 Initiative key results

This section provides an overview of 2022 results reported by Agroecology. These results align with the CGIAR Results Framework and Agroecology's theory of change. Further information on these results is available through the CGIAR Results Dashboard.

Overview

Results	Outputs					Outcomes			Centers
61	6 SDGs	8 Capacity sharing for development	7 Innovation development	37 Knowledge products	2 Other outputs	1 Innovation use	4 Policy change	2 Other outcomes	14

Results by country



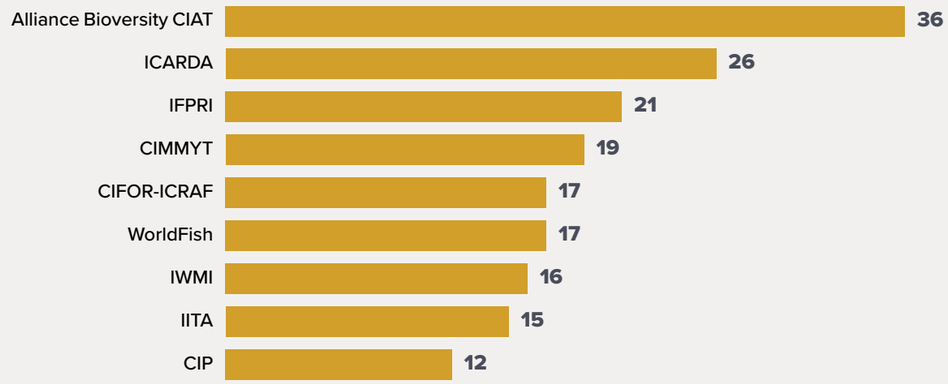
Tunisia has reported the most results (18), with Peru, Zimbabwe, Kenya, and India reporting 11 to 13 results each. Lao and Burkina Faso reported 6 results each, acknowledging that a reported result can be attributed to multiple countries.'

Key outputs and outcomes

LINK	RESULTS TITLE AND TYPE
WP1: Transdisciplinary co-creation of innovations in Agroecological Living Labs (ALLs)	
LINK	Towards the establishment of Agroecological Living Landscapes (ALLs) in seven countries: Considerations for stakeholder engagement in sustainable agroecological transitions (innovation development)
LINK	Engaging with stakeholders to initiate agroecological transitions in Agroecological Living Landscapes: Six guiding principles (output)
LINK	Stakeholder mapping as a key step towards establishing Agroecological Living Landscapes (output)
LINK	Efficiency of crop–livestock production systems under Conservation Agriculture: Scope for sustainable system transformation to achieve food security in rainfed drylands of Tunisia (output)
WP2: Evidence-based agroecology assessments	
LINK	Guidelines for the agroecology-I context document (output)
LINK	The measure of agroecology: Developing an assessment framework to capture economic, environmental, and social impacts of agriculture and food systems (output)
LINK	A case against silver bullets: Context assessments are key for agroecological transitions in diverse food systems (output)
WP3: Inclusive business models and financing strategies	
LINK*	Preparation of a roadmap to consider the carbon market as an alternative financial mechanism for the Cooperativa Agraria de Cacao Aromático “Colpa de Loros” in Peru (outcome)
LINK*	Ucayali – Peru: Development of a Regional Strategic Plan for the Promotion of BioTrade with a focus on agroecology and its action plan for 2028 (outcome)
LINK	Supporting the development of agroecological business models (output)
LINK	Holistic (agroecological) business model assessment: Agricultural Cooperative of Aromatic Cacao Colpa de Loros in Peru (output)
WP4: Strengthening the policy and institutional enabling environment	
LINK*	CIAT collaboration with the regional government of Ucayali in Peru led to implementing an agroecology corridor under a two-year memorandum of understanding (outcome).
LINK	CGIAR contributes to the National Agroecology Strategy in Kenya (outcome).
LINK	Supporting policy and institutional decision-making towards agroecological transformations: Initial activities of the Agroecology Initiative (output)
WP5: Understanding and influencing agency and behavior change	
LINK	Understanding and influencing agency and behavior change – Work Package 5 Activity Guidance, CGIAR Initiative on Agroecology (output)
LINK	Toward a feminist agroecology: Achieving a socially just and sustainable food systems transformation (output)
LINK	Understanding and influencing agency and behavior change in agroecological transformation processes (output)

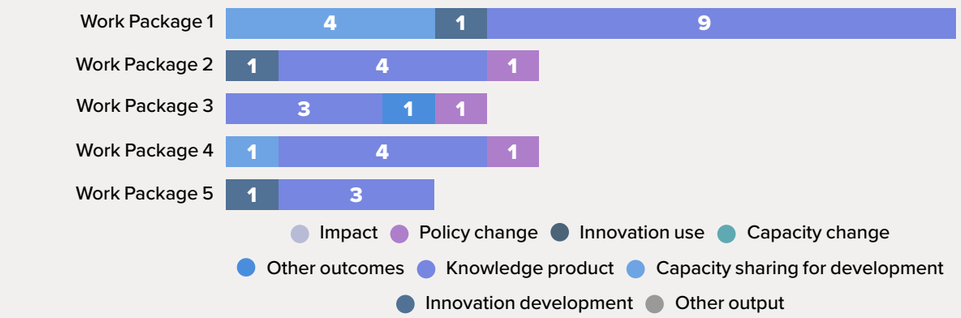
Table: Key outputs and outcomes of the initiative with corresponding links to the result. Results marked with * link to documents archived in an internal but accessible repository.

Contributing CGIAR Centers



The initiative lead center, Alliance Bioversity-CIAT, reported collaboration in the highest number of results (36), followed by ICARDA (26) and IFPRI (21).

Results by Work Package



Most results are reported for work package 1 dealing with transdisciplinary co-creation of innovations in ALLs, an outcome that provides the basis for all other work packages. Work package products are mainly knowledge products (23), followed by training results (6), innovation developments and policy changes (3 each). A reported result can be attributed to multiple work packages. This reflects the trajectory of this new CGIAR initiative, from aligning concepts and methodologies to applying them and thus gradually obtaining research results and outcomes.

Number of FSAs engaged in the co-creation of agroecological innovations

FSAs are considered to be engaged when they have been involved with the initiative, participating in the design or testing of technological or institutional innovations that they consider relevant to their particular social, economic, and political contexts. The table shows the 1,346 food system actors engaged by territorial level, gender, type of actor, and country. *The data in the table comes from a monitoring tool developed by the initiative to monitor direct engagement of FSAs in different stages of the process of co-creating innovations.* The total number of food system actors engaged in 2022 was 1,346. See further analysis of this data.

Territorial level (ALLs)	954
National level	167
Both levels	225
Male	777
Female	569
Farmers	321
Members of a farmer association	301
Staff of NARs	170
Private sector agents	145
Extensionists	85
Staff of (I)NGOs	88
Researchers	60
Policymakers	42
University staff	24
Other	110
Tunisia	532
Kenya	299
Zimbabwe	228
India	123
Peru	66
Burkina Faso	62
Laos	36

Section 5 Impact pathway integration – External partners

Partners typology	# of partners	% of partners
Research organizations and universities (NARS)	5	16.1%
Government (National)	2	6.5%
Private company (other than financial)	2	6.5%
Research O&U (National) (Universities)	2	6.5%
Financial Institution (National)	1	3.2%
All other categories	9	29.0%

Partnerships and Agroecology's impact pathways

This Initiative assumes that FSAs in target territories remain committed to engaging in a co-development process that blends science and local knowledge. The Initiative further assumes that scaling partners will actively support the agroecological transitions identified in each ALL.

In most ALLs, the Initiative relies on existing multi-stakeholder platforms, choosing implementing partners with capacity to strengthen farmers' agency and influence local institutional arrangements, business models, and policies. Country teams have engaged with national and local partners, paying attention to their interests in agroecology, socializing Initiative objectives, and assessing the agroecological context to identify territories that can serve as ALLs.

The Initiative forms partnerships on the basis of inclusiveness and legitimacy as well as demand. ALL partners are farmers or come from grassroots organizations, public technical services, local governments, and government-supported multi-stakeholder mechanisms. National research organizations are involved, usually through a local branch. Collaboration with ALLs in the Initiative's target countries involves 34 partners, including 8 CGIAR Centers, 2 international research centers (CIRAD and CIFOR-ICRAF), and 24 external partners to ensure local leadership. The Initiative has eight innovation and four scaling partners, and the list continues to grow. See a list of the current 24 partners in Section 8.

International learning is a prerequisite for scaling agroecological innovations. This Initiative is closely related to the above-mentioned TPP, which convenes stakeholders from civil society and agricultural research, as well as the rural advisory and development sectors. The Initiative cooperates with other partners for scaling and impact, including GIZ GmbH and Biovision. It also engages with INTPA and the joint France–CGIAR Initiative to map capacities and evidence generated around agroecological principles and their efficacy, and participates in the Agroecology Coalition. Alliance Bioversity–CIAT hosts the coalition's secretariat and participates in the research working group that will inform policymaking.

Section 6 Impact pathway integration – CGIAR portfolio linkages

Portfolio linkages and Agroecology's impact pathways

Portfolio linkages and impact pathway integration for the Agroecology Initiative are being developed around concrete ideas for collaboration with other Initiatives and bilateral projects. Even though this Initiative is a major new research effort for CGIAR (which has not previously undertaken consolidated research on agroecology), there are opportunities to integrate with other CGIAR portfolio efforts. Three Initiatives are strengthening their common understanding, linkages, and collaboration: NATURE+, Sustainable Intensification, and Excellence in Agronomy. A positioning paper is under development that contrasts the different concepts underpinning each Initiative and the entry points to transform systems.

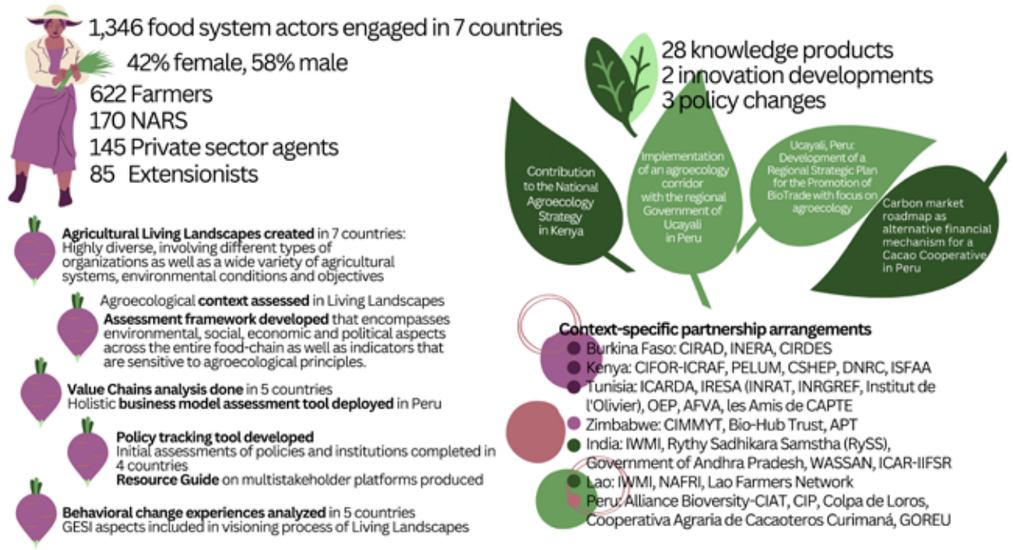
Linkages to the Livestock and Climate Initiative exist with activities in Tunisia and Burkina Faso, where livestock is central to the agroecological transition pathways that actors have identified. In this context, the Initiative is working with various non-pooled projects. ICARDA has linked its activities in Tunisia with the GIZ PROSOL program, which supports farmer communities in designing socio-technical bundles of innovations relevant to their mixed crop-livestock systems (small ruminants and cereals). The Agroecology Initiative supports the enhanced design of these packages with an agroecological lens. It also supports impact assessment and indicators development for PROSOL interventions. Also in Tunisia, the SAPLING Initiative supports enhanced packaging of agroecological innovations in relation to animal health and alternative feeding strategies that are being designed with farmers. Tunisia further expects to work with the F2R-CWANA Initiative on policy analysis to identify key drivers of policy changes.

The Initiative collaborated with NEXUS Gains to develop guidelines for the establishment of multi-stakeholder platforms and is building linkages with national policies in the Lao PDR . The Initiative has started exploring further collaboration with regional Initiatives, for example, in Peru with AGRILAC on innovation hubs and with Resilient Cities on access to local markets. In India, opportunities for collaboration have been detected with Nature Plus (baseline data collection) and NEXUS Gains (alignment of survey modules). There is much potential in Kenya to work at similar sites with other Initiatives.

Section 7 Adaptive management

RECOMMENDATION	SUPPORTING RATIONALE
Revision of Initiative targets.	With the reduction in overall Initiative Budget, it is necessary to revise outcome targets (contained in the full proposal) in terms of the number of FSAs that will co-create agroecological innovations (7,000) and the number of strategies, business models, financial mechanisms, policy Initiatives, and similar interventions (39 across Work Packages). The Initiative revised these targets during its Pause and Reflect meeting and reformulated the targets, as they currently appear in Section 1 for each outcome.
Inclusion of Senegal as a new focus country.	The declining political situation in Burkina Faso has made it difficult to work in both selected territories. While national partners will continue some activities in Burkina Faso, others are expected to start in Senegal. A detailed work plan is under development by CIRAD with selected national partners.
Improvement in internal Work Package and country coordination.	Work package teams have created ideal workflows for their activities, and countries have started to adapt these to create a work plan that optimizes Work Package integration. In addition, all leaders and focal points will share regular updates via a knowledge sharing tool.
Gender, youth, and social inclusion.	To address the research question, "what opportunities exist in the context of the ALLs specifically for young women and men?" the Initiative expects to conduct diagnostic studies in a few ALLs and with its members to inform/support them in identifying potential opportunities to co-design innovations with youth in subsequent years.
Activities in ALLs.	The Initiative team will pay particular attention to ensuring that activities with partners reflect the core values and holistic principles of agroecology, going beyond small demonstration plots.
Simplification of the agroecological assessment tool.	Work Package 2 is developing the Holistic Localized Agroecology Performance Assessment (HOLPA) tool, which will be simplified and piloted in a country before being deployed.
International network of ALLs.	The results of the Pause and Reflect exercise will lead to the implementation of the 2023 work plan, taking into consideration other efforts outside the Initiative.

Section 8 Key result story



Key achievements of the Agroecology Initiative in 2022.
Agroecology Initiative

Strength from diversity in agroecological transitions

The Initiative diversified its approach to ALL establishment, thus widening the scope for sustainable action to create enabling policy environments, find appropriate institutional mechanisms, and develop targeted business models together with alternative financial mechanisms. Initial outcomes include the decision of commercial allies of organic cocoa farmers in Peru to explore carbon markets, an agreement with the government of Peru's Ucayali region to include an agroecological lens in its biotrade strategy, the strong leadership of Kenyan partners in implementing ALLs, and Initiative support for Kenya's Inter-Sectoral Forum on Agroecology and Agrobiodiversity in implementing national policy. In Tunisia, partner organizations are already refocusing their priorities on reducing inputs along the livestock value chain and on social and solidarity-based economy principles for honey production.

Threats to food security and environmental health make the transition to agroecology more urgent than ever. In a novel effort to accelerate this transformation, the Agroecology Initiative has laid the foundation for an international network of selected territories or ALLs.

The Initiative has engaged so far with 1,346 individual food system actors (42% female, 58% male) in seven countries, with the greatest number (532) in Tunisia. These individuals come mainly from farmers or other grassroots organizations, but also a wide range of other public and private organizations. The following comment from consultations in Zimbabwe reflects the outlook of many farmers: "We do not mean to harm the environment, but we need to survive. If we can learn to live in harmony with nature, it will be better."

In collaboration with international research teams, ALL members will design and test innovative practices, enhance the business appeal of preferred options, and bring about further changes needed for rural people to transition to agroecology, with support from other FSAs. At the same time, the ALLs provide diverse settings for the generation of science-based evidence on the effectiveness of agroecological innovations, which is vital for promoting widespread adoption.

The Initiative has deliberately selected ALLs that are highly diverse, involving different organizations as well as diverse agricultural systems and environmental conditions. In Burkina Faso, for example, the ALL centers on an area where a dairy production chain operates, and benefits from the activities of the previously established Milk Innovation Platform. The ALL created in the Lao PDR encompasses 10 villages in an ecological transect from highlands to floodplain areas, with livelihoods based mainly on rice farming and fishing. Two ALLs set up in India build on the efforts of a large government program to promote "natural farming," with 630,000 farmers involved as of 2022. The diversity of the ALLs is a source of strength, making it possible to develop and research multiple options for putting agroecological principles into practice under widely differing circumstances.

To better understand this diversity, Initiative researchers have devised tools for stakeholder mapping, value chain assessment and assessing multi-stakeholder Initiatives already underway. In parallel, Initiative researchers are inventorying current policies and institutions relevant to agroecology, with the aim of tracking innovation in these areas. In several countries, researchers have analyzed key agricultural value chains and their potential to enhance business models aligned with agroecology principles. In addition, country teams have begun characterizing the ecological, economic, social, and political context of their work. Such analysis is critical for enabling the Initiative to generate science-based evidence on the performance of agroecology.

Each ALL will next complete the elaboration of a shared vision for its agroecological transition, drawing on the wealth of data and information assembled so far. Several outcomes have already begun to emerge, including the decision of commercial allies of organic cocoa farmers in Peru to explore carbon markets as an alternative financial mechanism that complements current assistance to cacao producer cooperatives. This mechanism should aid the incorporation of agroecological principles into the cooperatives' business model, while strengthening support for Amazon forest conservation. The private sector partner has already reached out to other companies aiming to inset their carbon equivalent emissions. Meanwhile, the Ucayali regional government has agreed to include an agroecological lens in its biotrade strategy.

In Kenya, the Community Sustainable Agriculture Healthy Environmental Program and Drylands Natural Resources Centre are leading territorial food systems transformation. The country´s Inter-Sectoral Forum on Agroecology and Agrobiodiversity has asked the Initiative to support national policy implementation. In Tunisia, partner organizations are refocusing their priorities on input reduction along the livestock value chain and solidarity-based economy principles for honey production.

> **"We do not mean to harm the environment, but we need to survive. If we can learn to live in harmony with nature, it will be better."**

Farmer from Mbire District in Zimbabwe participating in the ALL

Annex Resources

Related publications

- Zaremba, H.; Elias, M.; Rietveld, A.; Bergamini, N. (2022) Toward a feminist agroecology: achieving a socially just and sustainable food systems transformation. Rome (Italy): Bioversity International. 6 p.
- Jones, S.K., Bergamini, N., Beggi, F. *et al*. Research strategies to catalyze agroecological transitions in low- and middle-income countries. Sustain Sci 17, 2557–2577 (2022).
- Place, F.; Niederle, P.; Sinclair, F.; Carmona, N.E.; Guéneau, S.; Gitz, V.; Alpha, A.; Sabourin, E.; Hainzelin, E. (2022) Agroecologically-conducive policies: A review of recent advances and remaining challenges
- Triomphe, B.; Bergamini, N.; Fuchs, L.E. (2022) Engaging with stakeholders for initiating agroecological transition in Living Landscapes: Six guiding principles 30 p.
- Dossier d'Agropolis #26 (2022) Agroecological transformation for sustainable food systems. Insights on France-CGIAR research

Initiative events/participation in events

- Virtual launch event of the initiative: Agroecology is gaining momentum
- Presentation to the Swiss National FAO Committee (CNS-FAO). 23 March 2022
- Tropentag 2022: Can agroecological farming feed the world?
- Agriculture Innovation Mission for Climate (AIM for Climate) – Innovation Sprint: Agroecological Research Webinar. 11 May 2022. Agroecological research ideation
- Dialogue on "Agroecology as a response to agri-input scarcity" organized by Biovision Foundation, FAO, and the Agroecology Coalition. Thursday, 29 September 2022
- COP 27, Food Pavilion: Building pathways towards more climate friendly food systems
- Global Conference on Sustainable Plant Production. FAO, Rome, Italy, 2-4 November 2022.

Memberships

- Agroecology Coalition
- The Transformative Partnership Platform on Agroecology

In the media

- Agroecología – Transformando los sistemas alimentarios, terrestres y acuáticos (coverage of launch event in Peru by regional government)
- CIRAD is heavily involved in One CGIAR's Agroecology Initiative (CIRAD website)
- Face aux crises, plus de 40 institutions de recherche s'engagent à accélérer les transitions planétaire CIRAD (CIRAD, press release)
- Les légumineuses, graines de star, Fondation FARM (TV program, Tunisia)
- Newsletter of the initiative

LINKS TO IMPACT AREAS

Primary Impact Area: Environmental Health and Biodiversity

Other relevant Impact Area(s): Climate Adaptation and Mitigation; Gender Equality, Youth, and Social Inclusion; Nutrition, Health and Food Security; Poverty Reduction, Livelihoods, and Jobs

GEOGRAPHIC SCOPE

Regions: Northern Africa, East Africa, Western Africa, South Asia, Southeast Asia, South America

Countries: Burkina Faso, India, Kenya, Lao People's Democratic Republic, Peru, Tunisia, Zimbabwe

KEY CONTRIBUTORS

Contributing Initiative: Agroecology
Contributing Centers: Alliance Bioversity–CIAT, CIMMYT, CIP, ICARDA, IFPRI, IITA, IWMI, WorldFish
Contributing external partners:

Burkina Faso
- Institut de l'Environnement et de Recherches Agricoles (NARs)
- Centre International de Recherche-Développement sur l'Élevage en zone Subhumide (Research organizations and universities)

India
- Government of Andhra Pradesh, Watershed Support Services and Activities Network
- Indian Council of Agricultural Research (network)
- Rythu Sadhikara Samstha-Andhra Pradesh Community Managed Natural Farming (NGO)

Kenya
- Community Sustainable Agriculture Healthy Environmental Program (farmer organization)
- Participatory Ecological Land Use Management (civil society)
- Drylands Natural Resources Centre (NGO)
- Intersectoral Forum on Agrobiodiversity and Agroecology (coalition)

Lao PDR
- National Agriculture and Forestry Research Institute (NARs)
- Lao farmers' network

Peru
- Gobierno Regional de Ucayali (regional government)
- Cooperativa Agraria de Cacao Aromatico Colpa de Loros (local farmers' association)
- KAOKA

Tunisia
- Institution de la Recherche et de l'Enseignement Supérieur Agricoles (NARs)
- Institut National de Recherche Agronomique de Tunis (NARs), Institut de L'Olivier (research institute)
- Les amis de CAPTE (NGO)
- Agence de Vulgarisation et de Formation Agricole (NGO)
- Office de l'Elevage et des Pâturages (national government)
- Institut National de la Recherche en Génie Rural, Eaux et Forêts (government)

Zimbabwe
- Bio-Hub Trust (NGO)
- Agricultural partnership Trust (private sector)

International
- CIFOR-ICRAF
- Centre de coopération Internationale en Recherche Agronomique pour le Développement

COVER PHOTO: Farmers participating in the ALL of Anantapur District, Andhra Pradesh, India. Photo credit: APCNF communications team

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