CGIAR

INITIATIVE ON
Nature-Positive Solutions

NATURE+ collaborated directly with hundreds of farmers, including Elizabeth Omusiele, who was photographed at her farm in Lyanaginga Village in Kenya's Vihiga County. To increase her land's agrobiodiversity, Omusiele planted local crop varieties, including amaranth, arrowroot, black nightshade, cowpea, jut mallow, and passion fruit. The artwork is part of a series developed by The Lexicon, which documented NATURE+ activities and developed a website to map the Initiative's environmental and social benefits.

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CGIAR Research Initiative on
Nature-Positive Solutions

Annual Technical Report 2024

Author: CGIAR Research Initiative on Nature-Positive Solutions

Title: Annual Technical Report 2024: CGIAR Research Initiative on Nature-Positive Solutions

Suggested citation: CGIAR Research Initiative on Nature-Positive Solutions. 2025. Annual Technical Report 2024: CGIAR Research Initiative on Nature-Positive Solutions. Montpellier, France: CGIAR System Organization. https://hdl.handle.net/10568/174143

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The Artificial Intelligence (AI) software ChatGPT was used to support the editing of parts of this report, specifically to improve clarity, grammar, and style. ChatGPT was not used to generate the content of the report. All edits made with AI assistance were reviewed and validated by the authors to ensure accuracy, coherence, and alignment with the original intent.

Acknowledgements

This work is part of the CGIAR Research Initiative on Nature-Positive Solutions. We would like to thank all funders who supported this research through their contributions to the CGIAR Trust Fund: https://www.cgiar.org/funders.

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CGIAR Technical Reporting 2024

CGIAR Technical Reporting has been developed in alignment with CGIAR's Technical Reporting Arrangement. This annual report ("Type 1" Report) constitutes part of the broader CGIAR Technical Report. Each CGIAR Research Initiative/Impact Platform/Science Group Project (SGP) submits an annual "Type 1" Report, which provides assurance on progress towards end of Initiative/Impact Platform/SGP outcomes.

As 2024 marks the final year of this CGIAR Portfolio and the 2022-24 business cycle, this Type 1 Report takes a dual approach to its analysis and reporting. Alongside highlighting key achievements for 2024, the report also provides a cumulative overview of the 2022-24 business cycle, where relevant. This perspective captures the evolution of efforts over the three-year period. By presenting both annual and multi-year insights, the report underscores the cumulative impact of CGIAR's work and sets the stage for the transition to the 2025-30 Portfolio.

The 2024 CGIAR Technical Report comprises:

- **Type 1 Initiative, Impact Platform, and SGP Reports:** These annual reports present progress towards end of Initiative/Impact Platform/SGP outcomes and provide quality-assured results accessible via the CGIAR Results Dashboard.
- **Type 3 CGIAR Portfolio Practice Change Report:** This report provides insights into CGIAR's progress in Performance Management and Project Coordination.
- **Portfolio Narrative:** Drawing on the Type 1 and Type 3 reports, as well as data from the CGIAR Results Dashboard, the Portfolio Narrative synthesizes insights to provide an overall view of Portfolio coherence. It highlights synergies, partnerships, country and regional engagement, and collective progress.
- **Type 2 CGIAR Contributions to Impact in Agrifood Systems: evidence and learnings from 2022 to 2024:** This report offers a high-level summary of CGIAR's contributions to its impact targets and Science Group outcomes, aligned with the Sustainable Development Goals (SDGs), for the three-year business cycle.

The Portfolio Narrative informs the 2024 CGIAR Annual Report – a comprehensive summary of the organization's collective achievements, impacts, and strategic outlook.

Elements of the Type 2 report are integrated into the CGIAR Flagship Report, released in April 2025 at CGIAR Science Week. The Flagship Report synthesizes CGIAR research in an accessible format designed specifically to provide policy- and decision-makers at national, regional, and global levels with the evidence they require to formulate, develop, and negotiate evidence-based policies and investments.

The diagram below illustrates these relationships.

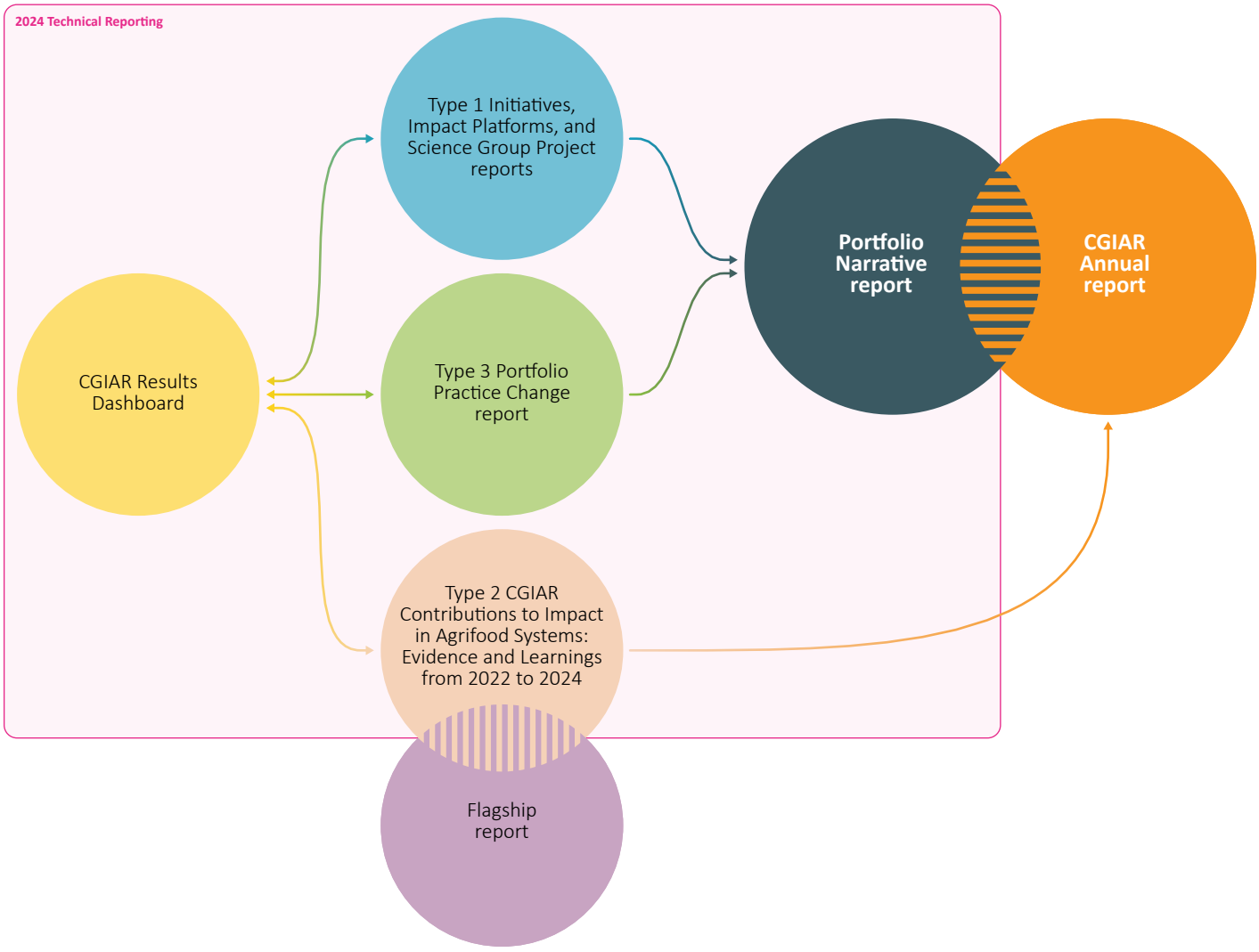

Figure 1. CGIAR's 2024 Technical Reporting components and their integration with other CGIAR reporting products.

Section 1: **Fact sheet, executive summary and budget**

Initiative name	Nature-Positive Solutions for Shifting Agrifood Systems to More Resilient and Sustainable Pathways
Initiative short name	Nature-Positive Solutions
Initiative Lead	Carlo Fadda (c.fadda@cgiar.org)
Initiative Co-lead	Solomie Gebrezgabher (s.Gebrezgabher@cgiar.org)
Science Group	Resilient Agrifood Systems
Start – end date	01 April 2022 – 31 December 2024
Geographic scope	**Countries** Burkina Faso · Colombia · India; Kenya · The Socialist Republic of Viet Nam
OECD DAC Climate marker adaptation score[1]	**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.
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OECD DAC Gender equity marker score[2]	**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/12-nature-positive-solutions-enhancing-productivity-and-resilience-safeguarding-the-environment-and-promoting-inclusive-community-growth/

[1] 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.
[2] 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.

EXECUTIVE SUMMARY

From 2022 to 2024, the CGIAR Research Initiative on Nature-Positive Solutions (Nature+) delivered significant scientific, policy, and community-level outcomes to embed biodiversity conservation and sustainability in agricultural systems. Through a combination of co-created innovations, transdisciplinary research, and multistakeholder partnerships, the Initiative contributed meaningfully to CGIAR's 2022–2024 research portfolio and laid the foundation for broader transformation across food, land, and water systems for CGIAR's Research Portfolio 2025–2030.

At the conclusion of the Initiative's first phase, NATURE+ delivered a strong foundation for continued growth for its portfolio of innovations, a tested model of transdisciplinary collaboration, and a clear direction for scaling nature-positive solutions across regions and systems. The momentum generated by the Initiative is fully expected to be critical to the success of the Multifunctional Landscapes Science Program and the CGIAR Research Portfolio 2025–2030.

Key achievements

Advancing nature-positive science

NATURE+ demonstrated that **nature-positive agricultural transitions are feasible, profitable, and beneficial for people and nature** when grounded in science and driven by partnerships. The Initiative's five Work Packages (WPs) were designed, deployed, and integrated into a holistic vision of nature-positive research and implementation. Centered on the sustainable use and conservation of biodiversity, NATURE+ integrated farming and circular economy systems for enhanced restoration, food and nutrition security, and livelihoods. The Initiative included soil management and research on its microbiome to develop site-specific soil needs for increased productivity. NATURE+ researched true cost accounting (TCA) to calculate and inform stakeholders about the unaccounted-for social and environmental costs of food systems, a key challenge that must include policy action to achieve sustainability. The Initiative collected gender-disaggregated data on nature-positive activity to inform nature-positive implementation and policies.

NATURE+ developed innovations aimed at identifying and using a greater diversity of crops, trees, and forages—with a focus on native species and varieties—in close collaboration with communities. These included **VarScout** and the **Seeds for Needs** approaches to identify crops and varieties, **Diversity for Restoration (D4R)** for identification of suitable native tree species for restoration and integration of agroforestry, and community seed banks and the **My Farm Trees** platform to guide and financially incentivize tree-based landscape restoration.

To improve the circularity of the systems, the Initiative identified financially viable opportunities to manage waste aligned with community needs, waste types, and nature-positive business development and cost reductions for farmer inputs. Waste-based products included biogas and briquettes for bioenergy and black soldier fly farming for biofertilizer and low-cost, high-protein feed for farm animals.

The Initiative worked with farmers to strengthen market-oriented mindsets and embrace economies of scale. Key successes included farm aggregation in Kenya and the creation of—or guidance for growth of—successful circular bioeconomy businesses.

Across its five WPs, NATURE+ successfully developed and enhanced tools, technologies, and knowledge products to support nature-positive outcomes. The use of participatory, farmer-led approaches ensured these tools were relevant and adopted by end users, with measurable improvements in sustainability, equity, and productivity.

Strong progress toward End of Initiative Outcomes

All five End of Initiative Outcomes (EOIOs) met or exceeded their targets, demonstrating meaningful progress. NATURE+ engaged more than 100,000 farmers with nature-positive solutions. Influenced by NATURE+, policymakers in at least five countries supported nature-positive policy reforms and several national agricultural institutions adopted biodiversity-enhancing methodologies. Investment actors integrated nature-positive frameworks into decision-making. These results reflect the Initiative's strong on-ground activity, government collaboration, and the appeal of nature-positive agriculture to public and private sectors.

Country-level impact

Community-led innovation and knowledge systems are central to nature-positive successes, with tools and practices co-developed with community stakeholders. NATURE+ was implemented in Viet Nam, Kenya, India, Colombia, and Burkina Faso. Highlights include:

- **Viet Nam:** Promotion of, and research on, traditional crops in collaboration with rural, Indigenous, and women's networks.
- **Kenya:** Establishment of aggregated farms, permaculture cooperatives, and deployment and of innovative reforestation tools with close community collaboration.
- **India:** Strengthening of traditional seed banks, integration of tribal knowledge, and deployment of several nature-positive agriculture innovation bundles; applicable research on native tree varieties.
- **Colombia:** Transition from extractive farming to nature-positive practices and adoption; sustainable use and conservation of neglected and underutilized species (NUS); nationwide enhancement of circular bioeconomy activity through "boot camps" and government collaboration.
- **Burkina Faso:** Grassroots agroecological frameworks built through partnerships with women's groups and schools; detailed research on 600 small-scale nurseries to improve reforestation initiatives.

These in-country efforts ensured context-specific implementation while reinforcing cross-country learning.

Women in Manyatta, in Kenya's Kisumu County, show off their improved cooking briquettes made from organic waste. In collaboration with NATURE+, the women formed a cooperative to produce better briquettes with equipment and training provided by the International Water Management Institute, which co-led the Initiative. Previously, the women made lower-quality briquettes that sold for less. Their new, independent organization demonstrates how waste can be converted into wealth and create circular bioeconomy opportunities for marginalized people and communities.

Credit: Edwin Okoth for NATURE+

Partnership-driven transformation

Strategic partnerships and evidence-based engagement are critical to catalyzing **policies and investments for nature-positive solutions**. NATURE+ collaborated with more than 100 external (non-CGIAR) partners, including governments, national agricultural research and extension systems (NARES), civil society, private sector actors, and international organizations. Partnerships were central to the collaborative development of innovations and policy recommendations.

The **integration of biodiversity conservation, circular economy, and equity** into agrifood systems delivers **benefits for people and the planet**. The Initiative advanced circular bioeconomy activity through close collaboration with women's cooperatives, entrepreneurs, and government organizations advancing national circular economy goals. NATURE+ circular bioeconomy partnerships in all five of the Initiative's target countries improved waste management, biodiversity, and livelihoods. Initiative activities influenced global dialogues, and, in some cases, program implementation related to nature-positive agriculture. Partner organizations include the FAO, UNDP, UNEP, and the Convention on Biological Diversity.

2024 Highlights

In its final year, NATURE+ deepened policy engagement and local implementation. Several countries aligned agricultural policies and strategies with nature-positive principles. NATURE+ and partners scaled innovations across regions, particularly digital tools for landscape restoration and agrobiodiversity identification and use. The Initiative increased the integration of gender and equity factors into program design and evidence generation.

	2022	2023	**2024**
PROPOSAL BUDGET	$6.62M	$8.57M	**$9.92M**
APPROVED BUDGET [1]	$4.43M	$6.38M [2]	**$6.57M** [2]

[1] The approved budget amounts correspond to the figures available for public access through the Financing Plan dashboard.
[2] These amounts include carry-over and commitments.

The Chinguad family, custodians of agrobiodiversity in Cumbal, Colombia, demonstrate several local landraces they preserve and cultivate, including potatoes, mashua, oca, and other roots and tubers. The family also cultivates several medicinal plants. Families like the Chinguad's collaborated with NATURE+ to take stock of local agrobiodiversity and establish a community seedbank.

Credit: Stef de Haan/International Potato Center

Section 2: **Progress towards End of Initiative outcomes**

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.

CHALLENGE STATEMENT

- By prioritizing cheap and plentiful food production, industrial agriculture has caused severe harm to both the environment and humanity. It drives 80 percent of deforestation, threatens 86 percent of the 28,000 species at risk of extinction, contributes to significant biodiversity loss, accounts for up to 37 percent of global greenhouse gas emissions, degrades land, and uses 70 percent of global water withdrawals. Industrial agriculture also compromises nutrition outcomes, particularly for women and children, and undermines the resilience of smallholder farming through soil degradation, poor waste management, and weakened pest resistance.
- This crisis is exacerbated by policies and incentives that ignore the true costs of cheap food to nature and humans. These dynamics push smallholders toward industrial practices, away from pathways that are sustainable and based on nature-positive solutions (NPS).
- But a paradigm shift is underway: the COVID-19 pandemic and the 2021 UN Food Systems Summit underscored vulnerabilities in industrial agriculture, highlighting nature-positive production (NPP) as key to sustainable food systems. Bolstering this momentum, 92 governments and 95 corporations at COP26 pledged to pursue NPP and sustainable farming practices.
- The business case for NPS is clear—it could create 395 million jobs by 2030—but actionable science for agricultural research and development (AR4D) is lagging. CGIAR is well-positioned to lead the development of NPS by leveraging decades of expertise in addressing research-to-impact gaps.
- Through partnerships with conservation and AR4D stakeholders, CGIAR's NATURE+ Initiative will produce evidence and tools to enable smallholder farmers to adopt nature-positive practices. Goals include eliminating biodiversity loss, deforestation, and land degradation, as well as enhancing outcomes on water, nutrients, and equity—thereby offering a transformative path to sustainable agriculture.

RESEARCH QUESTIONS

- Developing NPS: How can NPS be developed, tested, and scaled to enable smallholder farming systems to achieve sustainable food production while minimizing biodiversity loss, deforestation, land degradation, and greenhouse gas emissions, and enhancing equity, water, and nutrient management?
- Integrating Conservation: Can links between genebank and in-situ conservation be integrated to provide intelligence about gaps, coverage, and changes in biodiversity?
- Measuring Agrobiodiversity, Water, and Soils (AWS): How can the conservation status of AWS be measured systematically to track changes across genes, species, and landscapes?
- Strengthening Social Incentives: What governance systems can drive AWS conservation across generations, and how can they be strengthened?
- Cluster Approach for NPS: How can a cluster approach be tested for NPS?
- Building Markets for Neglected Species: How can markets be developed for neglected species, linking farmers to value chains to enhance income and nutrition?
- Restoring Ecosystem Services: What are the benefits of different NPS for restoration, and how can digital tools lift barriers to adoption?
- Scaling Circular Economy Innovations: Which circular economy–based innovations maximize rural community benefits, especially for women?
- Cost of Food Production Systems: What are the hidden costs of food production, who should pay for sustainable transitions, and what are the implications for marginalized groups?
- Scaling NPS: What capacities, institutions, and policies are most impactful for scaling NPS?

SPHERE OF **CONTROL**

Work Packages

Work Package 1

NPS for more effective conservation of interlinked Agrobiodiversity, Water and Soils (AWS) systems.

Work Package 2

Sustainable, nature-positive management of biodiversity and other natural resources.

Work Package 3

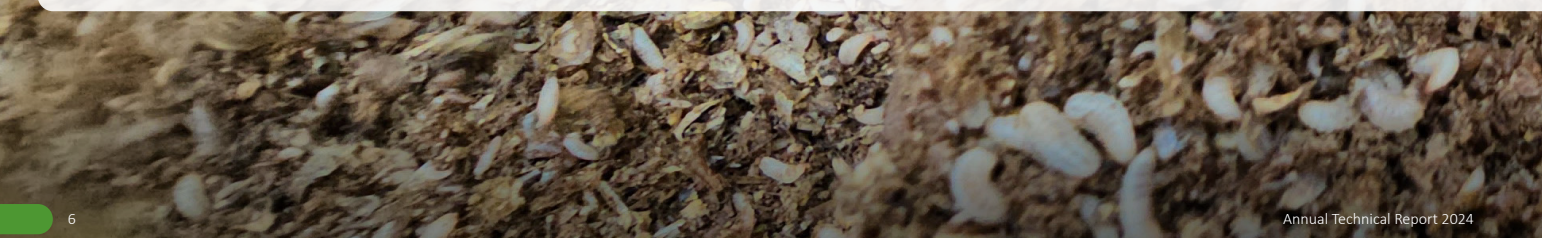
NPS as cost efficiency models for community land restoration.

Work Package 4

NPS for a circular economy approach to rural waste management.

Work Package 5

Engage key actors in creating an enabling environment for NPS.



SPHERE OF **INFLUENCE**

End-of-Initiative Outcomes

End-of-Initiative Outcome 1

Women and men smallholder farmers, local communities, and NARES in five LMICs use nature positive solutions stress-tested and validated by NATURE+ to improve landscape-scale management of biodiversity for food and agriculture (BFA) via the farmscale entry points of water, soil, waste, and land restoration.

End-of-Initiative Outcome 2

Women and men (incl. smallholder farmers) in five LMICs use NATURE+ innovations and pathways to engage more directly in, and benefit more equitably from, value chains based on the outputs of biodiversity conservation, innovative rural waste management technologies, and circular economy principles.

End-of-Initiative Outcome 3

NARES and other development actors in five LMICs systematically adopt participatory, multi-disciplinary approaches that make research more impactful, relevant to local agri-food systems contexts and smallholder needs, and sustainable through local actor take-up, to be followed by NARES entrenching best practices in participatory, multi-disciplinary research as a systemic norm.

End-of-Initiative Outcome 4

National and subnational policymakers in five LMICs acknowledge that true cost accounting should and will be applied to agri-food systems (AFS) related policy formation, followed by realignment of economic incentive schemes and policy by policy actors to account for the true cost of food.

End-of-Initiative Outcome 5

Public and private investment actors use NATURE+ evidence, tools, and methodologies to gain a better understanding of the business case for nature-positive solutions, to be followed by investment actors being assisted to reorient investment streams towards participatory action research (PAR), innovation development, piloting, and scaling of nature-positive solutions.

Action Area Outcomes

Resilient Agrifood Systems

1 · National and local multi-stakeholder platforms are strengthened to become more effective and sustainable, addressing development trade-offs and generating strategies for effective food, land, and water systems transformation.

2 · CGIAR-NARS-SME networks use market segments, target product profiles to orient variety development and deployment towards those that provide larger scale benefits across the 5 Impact Areas.

3 · Implementation partners (e.g. NARES, NGOs, private companies) actively support dissemination, uptake, and implementation of CGIAR innovations.

SPHERE OF **INTEREST**

Impact Areas

Nutrition, Health & Food Security

- End hunger for all and enable affordable health diets for the 3 billion people who do not currently have access to safe and nutritious food.

Poverty Reduction, Livelihoods & Jobs

- Reduce by at least half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.
- Lift at least 500 million people living in rural areas above the extreme poverty line of US $1.90 per day (2011 PPP).

Gender Equality, Youth & Social Inclusion

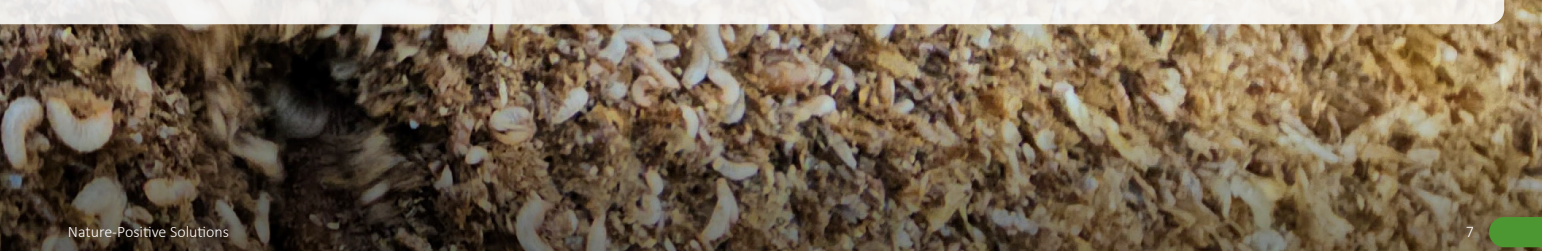
- Close the gender gap in rights to economic resources on, access to ownership of, and control over land and natural resources, for more than 500 million women who work in food, land, and water systems.
- Offer rewardable opportunities to 267 million young people who are not in employment, education, or training.

Climate Adaptation & Mitigation

- Equip 500 million small-scale producers to be more resilient to climate shocks, with climate adaptation solutions available through national innovation systems.
- Turn agriculture and forest systems into a net sink for carbon by 2050, with emissions from agriculture decreasing by 1 Gt per year by 2030 and reaching a floor of 5 Gt per year by 2050.

Environmental Health & Biodiversity

- Stay within planetary and regional environmental boundaries: consumptive water use in food production of less than 2500 km3 per year (with a focus on the most stressed basins), zero net deforestation, nitrogen application of 90 Tg per year (with 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.



In addition to climate-change challenges, farmers in Kenya must weather rising livestock and fertilizer prices. A low-cost, nature-friendly alternative is Black Soldier Fly farming, which produces compost and protein from organic waste. As part of NATURE+'s RECYCLE work package, hundreds of farmers received training on BSF farming. This photo is from a weeklong BSF workshop attended by more than 50 farmers from Kisumu County, in Western Kenya. The session was based on a training manual on BSF farming for feed and biofertilizers developed by the International Water Management Institute and NATURE+.

Credit: Rachel Kibui, NATURE+Credit: credit

Summary of progress against the theory of change

From 2022 to 2024, NATURE+ made significant advances in scientific research and achieved measurable impacts across multiple geographies. By fostering participatory engagement with farmers, policymakers, research institutions, and investors, the Initiative contributed to increased adoption of sustainable agricultural practices and biodiversity conservation.

The Initiative aimed to tackle key challenges related to climate resilience, biodiversity loss, and the integration of sustainability into agricultural policies and investments. By fostering co-creation processes with local stakeholders, NATURE+ aimed to bridge the science-implementation gap and ensure that scientific research translates into actionable, community-driven solutions. The Initiative worked to institutionalize sustainable practice, with the uptake of nature-positive approaches by national research institutions and policymakers suggesting a systemic shift toward more sustainable agricultural governance. NATURE+ also endeavored to scale financial commitments by engaging with investment actors to help secure long-term funding mechanisms that will sustain nature-positive transitions beyond the Initiative's business cycle.

NATURE+ successfully delivered on its theory of change by combining scientific innovation with strategic policy and financial engagements. As the Initiative reaches the end of its current cycle, its legacy is evident in the institutional and financial commitments secured to sustain nature-positive practices at scale. Future efforts in the CGIAR Research Portfolio 2025–2030 should build on these achievements by further integrating digital innovations, expanding farmer-led research networks, deepening policy engagement to ensure long-term impact, and expanding to the landscape scale, both in NATURE+ target countries and others.

Scientific progress

The Initiative successfully developed and disseminated innovative tools, methodologies, and frameworks that enhance the resilience of agricultural landscapes. Key scientific contributions include:

- **Deployment of, and research to enhance, digital innovations** (EOIO 1): NATURE+ researchers added detailed functional trait data on hundreds of native tree species to the D4R platform, information which helps identify native tree species aligned with community restoration priorities. This was bundled with the My Farm Trees app, which guided and financially rewarded thousands of smallholders for successfully planting seedlings and continues to grow in demand. Additionally, NATURE+ collaborated on the expansion of VarScout to Kenya. The tool enables farmers to select crop varieties best suited to climate variability and has been adopted by more than 5,000 Kenyan farmers and extension personnel.
- **Citizen science for agrobiodiversity research** (EOIO 2): NATURE+ researchers worked with farmers to collect data on the growth and yield of several NUS. The field data complemented genetic analysis of crop varieties to build understanding of the drivers of crop traits, including resilience to climate change and benefits to nature-positive agriculture. A digital app (ClimMob) was used for this purpose.
- **Biodiversity monitoring frameworks** (EOIO 3): This transdisciplinary approach to tracking biodiversity improvements in agroecosystems was widely used by NARES.

- **TCA for policymaking** (EOIO 4): NATURE+ researchers collected detailed data on the true economic and social costs of food in Viet Nam and Kenya. Putting a price tag on the externalities, which are generally negative impacts on society and the environment, is expected to lead to policy proposals to guide key actions required to mitigate the harms caused by food production to people and nature.
- **Investment partnerships** (EOIO 5): Works was undertaken to strengthen the engagement of private sector actors in financing nature-positive innovations, leading to increased financial commitments to sustainable agricultural models. The World Bank grant aimed at identifying impact on biodiversity from agriculture; findings will potentially drive investment toward more nature-positive solutions.
- **Soil research**: The Initiative supported soil health improvements through integrated watershed management and landscape restoration approaches, particularly in India and Viet Nam, addressing degradation and enhancing ecosystem resilience.
- **Value chains**: Nature+ worked with local communities to identify opportunities for scaling nature-positive products, particularly NUS, and informed market-based strategies for biodiversity-friendly agriculture.
- **Black soldier fly (BSF) and aggregated farms work**: Nature+ facilitated the uptake of BSF farming in Kenya and Burkina Faso for sustainable animal feed, while aggregated farms in Kenya served as cooperative hubs for implementing nature-positive practices at scale.
- **Policy development**: The Initiative contributed to the development and uptake of policy proposals incorporating TCA and biodiversity incentives, with adoption and piloting seen in countries such as Kenya, Colombia, and Viet Nam.

These landraces of tubers including mashua, oca and potatoes are varieties developed over generations by farming families in Cumbal, Colombia. NATURE+ and the International Potato Center worked with local custodians of neglected and underutilized crops in Colombia's Andean region to catalog, classify and conserve these unique varieties. Efforts led to the establishment of a community seed bank to promote the sustainable use and conservation of rare crop varieties that can thrive under challenging environmental conditions.

Credit: Stef de Haan/CIP

Progress against End of Initiative Outcomes

This infographic provides a concise summary of the Initiative's progress toward achieving its Theory of Change End-of-Initiative outcomes for the 2022-2024 period. By drawing on reported results, it offers a comprehensive synthesis of progress made against the established outcome targets, highlighting the Initiative's overall impact and key achievements at the conclusion of this three-year cycle.

EOIO 1

Women and men smallholder farmers, local communities, and NARES in five low- and middle-income countries (LMICs) use nature-positive solutions stress-tested and validated by NATURE+ to improve landscape-scale management of biodiversity for food and agriculture via the farm-scale entry points of water, soil, waste, and land restoration.

EOIO 2

Women and men (including smallholder farmers) in five LMICs use NATURE+ innovations and pathways to engage more directly in, and benefit more equitably from, value chains based on the outputs of biodiversity conservation, innovative rural waste management technologies, and circular economy principles.

EOIO 3

NARES and other development actors in five LMICs systematically adopt participatory, multidisciplinary approaches that make research more impactful, relevant to local agrifood systems contexts and smallholder needs, and sustainable through local actor take-up, to be followed by NARES entrenching best practices in participatory, multidisciplinary research as a systemic norm.

EOIO 4

National and subnational policymakers in five LMICs acknowledge that TCA should and will be applied to agrifood systems related policy formation, followed by realignment of economic incentive schemes and policy by policy actors to account for the true cost of food.

EOIO 5

Public and private investment actors use NATURE+ evidence, tools, and methodologies to gain a better understanding of the business case for nature-positive solutions, to be followed by investment actors being assisted to reorient investment streams toward participatory action research, innovation development, piloting, and scaling of nature-positive solutions.

Over three years, NATURE+ engaged more than 100,000 smallholder farmers and NARES to accelerate the adoption of nature-positive innovations. The figure includes users of the My Farm Trees app, participants in nature-positive demonstration and aggregated farms, citizen science contributions made by farmers to various research outputs, and engagement and training of entrepreneurs and farmers in circular bioeconomy and value chain activities. By deploying all WPs at shared sites, the Initiative strengthened community participation, co-developed context-specific solutions, and fostered sustainable agricultural practices.

NATURE+ promoted innovations across all pillars of nature-positive systems, tailoring packages to local needs in five target countries. These included technical tools to identify and deploy native trees, local landraces, and NUS for improved nutrition; reduced reliance on industrial inputs; and enhanced food security. The Initiative also advanced soil management research and promoted circular economy models aligned with community and government priorities.

In all countries, farmers used the Seeds for Needs approach or the VarScout tool to identify NUS and climate-resilient crop varieties, accessing planting material through farmer-led systems and seed banks. Forage trials in Colombia, Kenya, and Viet Nam improved livestock nutrition and restored degraded land.

More than 5,000 farmers planted trees using the D4R and My Farm Trees platforms. More than 11,000 engaged with circular bioeconomy innovations. Games-based research generated gender-disaggregated insights, empowered marginalized groups, and fostered cooperation—key to establishing aggregated farms.

More than 11,000 smallholders benefited economically from the adoption of NATURE+ innovations. The Initiative applied a range of strategies to strengthen farmer livelihoods while protecting the natural ecosystems they rely on. It developed 12 value chains across its target countries, reaching 932 direct beneficiaries by 2024, with clear signs of continued growth. Farmers involved in community seed banks also gained from newly established business plans that support long-term sustainability. As coordination around the production and marketing of the 12 commodities improves, these value chains are expected to benefit many more farmers.

In Kenya, farmers began testing the aggregated farm model, which has yet to yield anticipated economic results but continues to evolve. In Burkina Faso and Kenya, farmers accessed tree nurseries developed through NATURE+, which provided both income and restoration benefits. In Burkina Faso alone, the Initiative and its partners studied 600 small-scale tree nurseries to build local capacity and support reforestation more effectively.

Circular economy models also delivered strong economic benefits. NATURE+ helped establish 17 small- and medium-sized enterprises (SMEs) focused on waste-to-resource innovation, creating new livelihood opportunities while promoting environmental sustainability.

NATURE+ forged cross-country partnerships with leading development actors and NARES in its target countries. In all countries, the Initiative worked with the NARS, including Agrosavia in Colombia, KALRO in Kenya, INERA in Burkina Faso, VAAS in Viet Nam, and ICAR in India. As co-implementers of several activities, these centers were involved in participatory activities, including the use of citizen science tools. The Initiative also partnered with other relevant development partners, including UNDP, the National Museums of Kenya, Slow Food, Mani Tese (an Italian NGO), IUCN, GEF, and WWF, among others.

Policymakers utilized TCA data to inform policy reforms, identifying the unpaid costs the food system offloads on society and the environment, and leading to enhanced support and policy work for sustainable land use practices. NATURE+ collected TCA data and discussed results with stakeholders in Kenya and Viet Nam, including the Vietnamese Academy of Agricultural Sciences and several government departments in Viet Nam, several departments from the county governments of Kisumu and Vihiga in Kenya, and the State Department for Gender and Affirmative Action and the Intersectoral Forum on Agrobiodiversity and Agroecology.

In addition, researchers worked closely with the TCA Accelerator, True Price, and Rockefeller Foundation to present a session on TCA at the Sixteenth Meeting of the Conference of the Parties to the Convention on Biological Diversity in Cali, Colombia. NATURE+ was also approached by the World Bank to present a seminar on TCA for the “Biodiversity and Agriculture” webinar series.

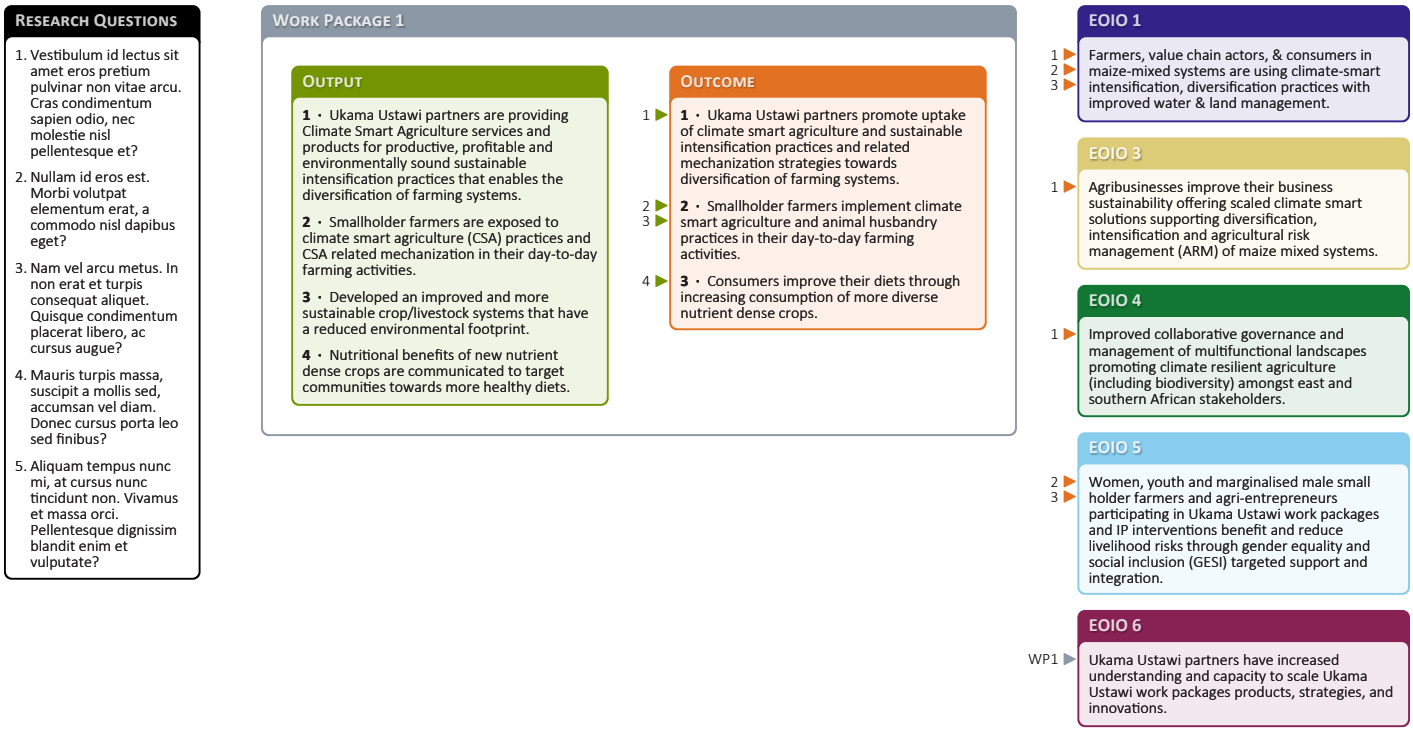
NATURE+ was very active in engaging with policymakers. Notably, the Initiative engaged on seed policy development in Kenya to facilitate the use of agrobiodiversity and contributed to building business cases for community seed banks. The Initiative contributed to the development of an Agroecology Policy in Vihiga County, in Kenya. In Viet Nam, NATURE+ was involved in the government’s food system transformation strategy.

Nature-positive investment frameworks were mainstreamed in regional and global financial initiatives, securing long-term funding for biodiversity-friendly agricultural transitions. NATURE+ innovations and participatory models attracted the attention of new partners and countries, fostering collaborations and funding commitments, namely from UNEP and the World Bank.

These commitments provided funds for assessing the effectiveness of NATURE+ practices, including the positive impacts of agriculture on biodiversity based on NATURE+ approaches. In addition, the Initiative’s designated funds grew each year, demonstrating donors’ interest in supporting nature-positive research and implementation.

The Initiative also promoted greater engagement in nature-positive economic activities, both by engaging private actors and developing rural entrepreneurship and the establishment of SMEs. Community seed banks were developed with business plans to ensure they could develop into sustainable enterprises. Similarly, NATURE+’s circular economy work supported the development of 17 businesses in the five target countries.

WP1: CONSERVE



Work Package 1 progress against the theory of change

Nature+ made significant progress in conserving agrobiodiversity by establishing community seed banks, promoting traditional knowledge, and strengthening nature-positive farming practices. These efforts helped safeguard genetic diversity, improve food security, enhance resilience to environmental changes, and increase the sustainable use of agrobiodiversity across multiple regions.

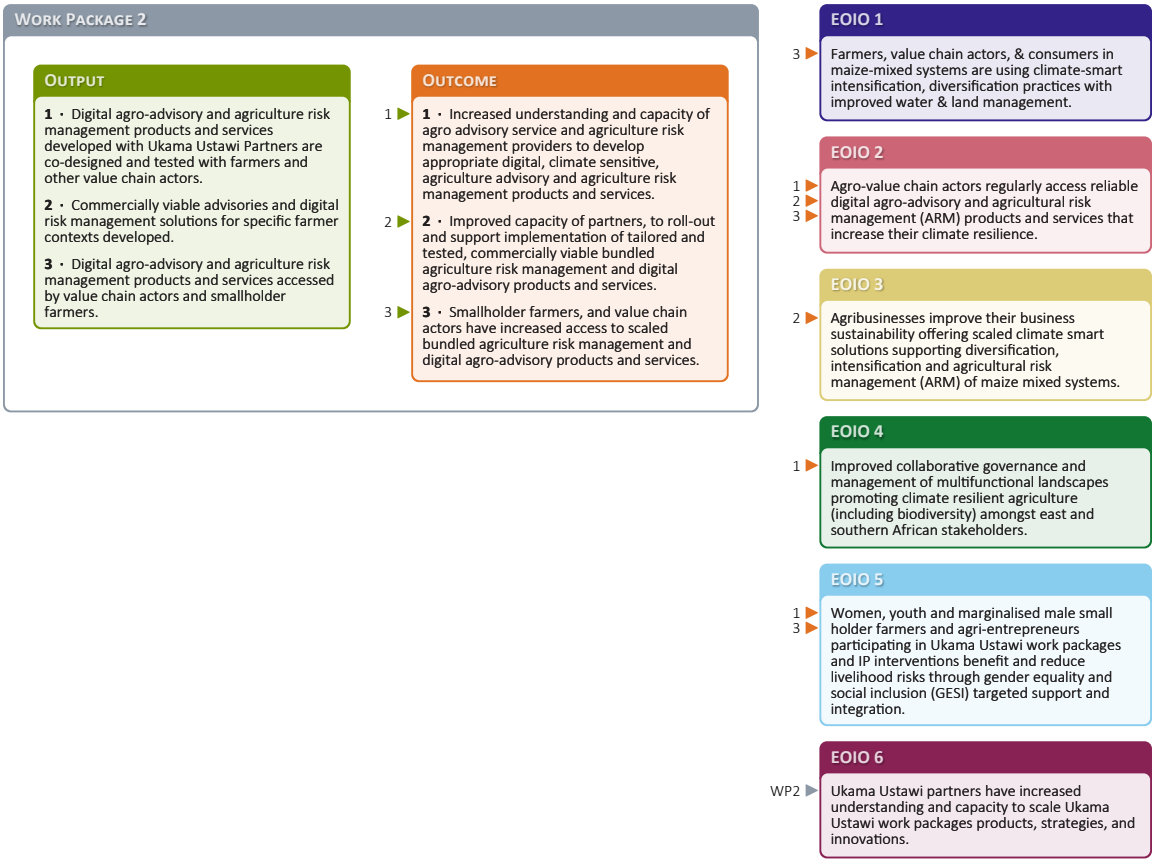
2024 highlights

In 2024, WP1 made notable progress toward its theory of change by strengthening traditional and community seed banks across multiple regions, ensuring the continued conservation and use of agrobiodiversity. The Initiative also advanced the development and enhancement of digital platforms that promote biodiversity in agriculture, including Wikipapa, RIKIYU-Agrobio , EncontrAR, and VarScout. These tools have expanded access to information and facilitated decision-making for farmers and researchers alike. Additionally, WP1 successfully enhanced the integration of NUS into food systems, further diversifying diets and strengthening resilience across implementation sites.

WP2: MANAGE

Research Questions

1. Vestibulum id lectus sit amet eros pretium pulvinar non vitae arcu. Cras condimentum sapien odio, nec molestie nisl pellentesque et?
2. Nullam id eros est. Morbi volutpat elementum erat, a commodo nisl dapibus eget?
3. Nam vel arcu metus. In non erat et turpis consequat aliquet. Quisque condimentum placerat libero, ac cursus augue?
4. Mauris turpis massa, suscipit a mollis sed, accumsan vel diam. Donec cursus porta leo sed finibus?
5. Aliquam tempus nunc mi, at cursus nunc tincidunt non. Vivamus et massa orci. Pellentesque dignissim blandit enim et vulputate?



Work Package 2 progress against the theory of change

WP2 focused on the simultaneous deployment of several technological innovations at research sites. These comprehensive interventions cover biodiversity, and soil and water management. In addition, the WP focused on ensuring that value chains and other livelihood-supporting strategies were improved.

More information about the value chain development approach can be found here.

2024 highlights

WP2 contributed significantly to its theory of change by improving food and nutrition security through sustainable crop diversification and expanded access to diverse planting materials via community seed banks. The Initiative also strengthened market access for biodiversity-friendly products, helping farmers link nature-positive practices with economic opportunities. At the same time, WP2 enhanced farmer-led innovation, supporting locally adapted solutions that promote resilient, nature-positive agriculture across diverse contexts.

WP3: RESTORE

Research Questions

1. Vestibulum id lectus sit amet eros pretium pulvinar non vitae arcu. Cras condimentum sapien odio, nec molestie nisl pellentesque et?
2. Nullam id eros est. Morbi volutpat elementum erat, a commodo nisl dapibus eget?
3. Nam vel arcu metus. In non erat et turpis consequat aliquet. Quisque condimentum placerat libero, ac cursus augue?
4. Mauris turpis massa, suscipit a mollis sed, accumsan vel diam. Donec cursus porta leo sed finibus?
5. Aliquam tempus nunc mi, at cursus nunc tincidunt non. Vivamus et massa orci. Pellentesque dignissim blandit enim et vulputate?

Work Package 3

Output

1 · Agribusiness accelerator programmes are successfully implemented through capacity strengthening of agribusinesses and coordinating private and public partnerships.

2 · Facilitated commercially viable, scalable, innovative solutions for agribusinesses by the support of Ukama Ustawi and partners through acceleration (technical assistance) and access to financing.

3 · Ukama Ustawi partners provide climate smart solutions to agri-businesses that enhances the diversification, intensification and agriculture risk management activities in the ecosystem.

4 · Research and communication product(s) promoting agribusiness value chain development are developed and promoted.

Outcome

1 ▶ **1** · Agribusiness value chain has been widened, deepened, and more sustainable with the support of Ukama Ustawi and partners.

2 ▶ 3 ▶ 4 ▶ **2** · Improved the agribusiness value chain members capacity for climate smart agriculture through the acceleration of their agribusinesses and access to financing.

EOIO 2

1 ▶ 2 ▶ Agro-value chain actors regularly access reliable digital agro-advisory and agricultural risk management (ARM) products and services that increase their climate resilience.

EOIO 3

1 ▶ 2 ▶ Agribusinesses improve their business sustainability offering scaled climate smart solutions supporting diversification, intensification and agricultural risk management (ARM) of maize mixed systems.

EOIO 4

2 ▶ Improved collaborative governance and management of multifunctional landscapes promoting climate resilient agriculture (including biodiversity) amongst east and southern African stakeholders.

EOIO 5

2 ▶ Women, youth and marginalised male small holder farmers and agri-entrepreneurs participating in Ukama Ustawi work packages and IP interventions benefit and reduce livelihood risks through gender equality and social inclusion (GESI) targeted support and integration.

EOIO 6

WP3 ▶ Ukama Ustawi partners have increased understanding and capacity to scale Ukama Ustawi work packages products, strategies, and innovations.

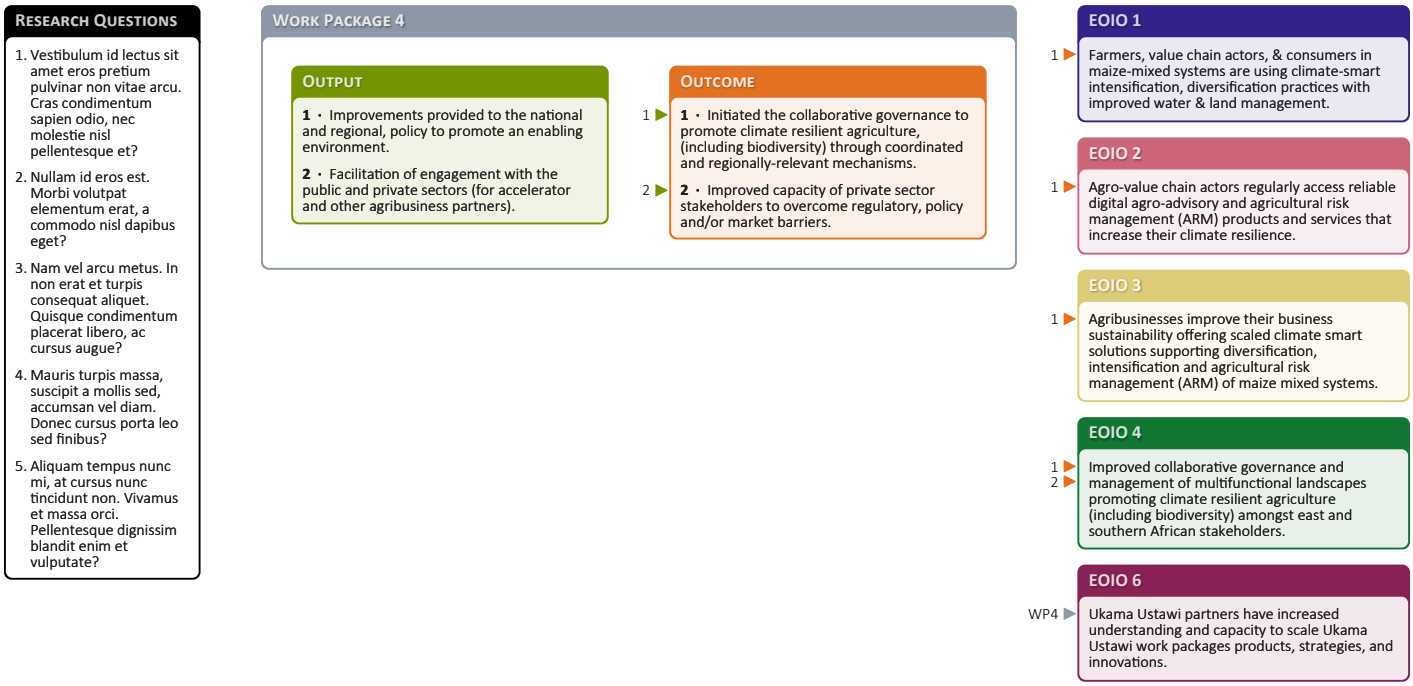
Work Package 3 progress against the theory of change

WP3 played a crucial role in restoring degraded landscapes through innovative restoration tools, participatory approaches, and integrated watershed management. By combining scientific research with community-driven efforts, NATURE+ strengthened ecosystem resilience and contributed to climate adaptation in diverse agricultural landscapes.

2024 highlights

WP3 successfully implemented digital tools for reforestation, enabling more effective planning and monitoring of restoration activities. The Initiative expanded integrated watershed management systems, improving landscape functionality and resilience. Community-led restoration efforts also gained momentum, with strengthened local engagement driving sustainable practices across degraded landscapes.

WP4: RECYCLE



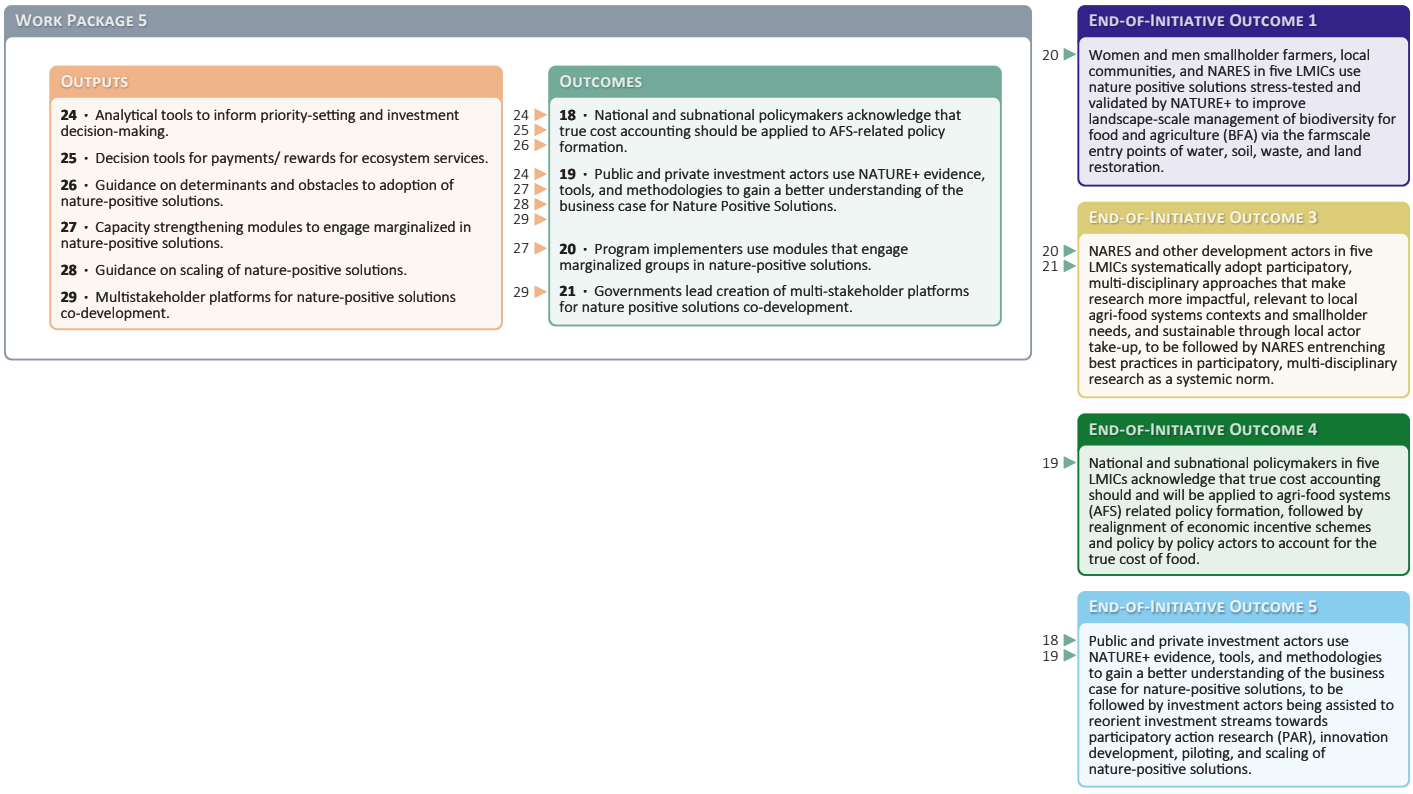
Work Package 4 progress against the theory of change

WP4 drove the adoption of circular bioeconomy solutions by promoting sustainable waste management, innovative bio-based models, and nature-positive income-generating activities. These efforts supported both environmental sustainability and economic resilience in local communities.

2024 highlights

WP4 accelerated progress on circular bioeconomy goals by expanding bioeconomy hubs and startup incubators that support innovation and entrepreneurship. The Initiative worked with stakeholders to integrate circular bioeconomy principles into national sustainability frameworks, reinforcing long-term policy alignment. At the community level, participation in waste-to-resource initiatives grew stronger, demonstrating increased local ownership of nature-positive, circular solutions.

WP5: ENGAGE



Work Package 5 progress against the theory of change

WP5 strengthened engagement with policymakers, communities, and research institutions to promote the adoption of nature-positive solutions. By using participatory approaches, evidence-based advocacy, and innovative learning tools, the Initiative fostered a stronger policy environment for sustainable agriculture.

2024 highlights

WP5 deepened its policy and engagement work by generating TCA data that informed policymakers about the real costs of food, enabling the design of more sustainable, equitable, and health-focused food systems. The Initiative also saw wider adoption of participatory learning tools, which strengthened knowledge-sharing and collective problem-solving among stakeholders. In parallel, it enhanced gender-responsive approaches, ensuring that nature-positive agriculture reflects and supports the needs and contributions of women and other marginalized groups.

Country-specific achievements

Viet Nam:

- Genetic gap analysis for detecting unique landraces of traditional crops was conducted for populations of taro, banana, and potato, both in situ and ex situ; citizen science collaboration was undertaken for agrobiodiversity conservation (WP1).
- Traditional crops were successfully integrated into value chains, improving food and nutrition security. Value chain women's groups as well as health groups were established and active in selling organic vegetables (WP2).
- Soil degradation was addressed through sustainable agricultural practices and landscape restoration efforts (WP3).
- NATURE+ supported circular bioeconomy practices, promoting the sustainable use of agricultural waste, particularly through a training program on circular economy models for the coffee and rice value chains. An MoU with UNDP was signed, nationally integrating Nature+ in circular economy (WP4).
- Research on the true cost of food production provided valuable insights into sustainability trade-offs (WP5).

Kenya:

- An extended evaluation was carried out of NUS and crop genetic diversity for inclusion in production systems, as well as traditional vegetables, and community seed banks were strengthened (WP1).
- Aggregated farms were established that encompass the aims of all NATURE+ WPs; other activities focused on support for growth of community seed banks and resilient seed system (WP2).
- A digital app was introduced to guide farmers in native-tree reforestation, with financial incentives tied to successful tree establishment (WP3).
- The My Farm Trees forest restoration app was expanded to integrate circular bioeconomy principles, encouraging farmers to adopt sustainable practices. In addition, the Initiative accelerated circular innovations by convening country-wide networks of circular bioeconomy entrepreneurs for capacity-building and innovation challenges and increasing collaboration with government entities tasked with increasing sustainable economic activity (WP4).
- Community engagement was enhanced through games-based research, facilitating knowledge exchange and adoption of nature-positive practices, and the true cost of food was assessed in Kenya (WP5).

India:

- Tribal communities in Maharashtra benefited from strengthened traditional seed banks and the integration of indigenous knowledge into sustainable agricultural systems; other activities focused on on-farm conservation centers and community seed bank establishment (WP1).
- Traditional knowledge was harnessed to support indigenous seed banks and integrated watershed management, strengthening sustainable agriculture (WP2).
- Integrated watershed management systems were implemented, linking water conservation with ecosystem restoration (WP3).
- A national hub for circular bioeconomy was launched, combining traditional knowledge with modern sustainability science (WP4).
- Gender-specific studies informed strategies to improve the adoption of sustainable farming practices by women farmers (WP5).

Colombia:

- A community seed bank was established in an Indigenous Andean community for improved access to NUS; extractive dairy production was transitioned to nature-based agriculture; and collaboration was undertaken with Colombia's agriculture research organization, Agrosavia (WP1).
- Farmers transitioned from extractive farming practices to nature-positive models, increasing long-term sustainability; other activities included agro-ecotourism and value chain development and a transition toward nature-positive livestock systems in biodiversity hotspots (WP2).
- A shift to nature-positive farming contributed to restoring degraded landscapes and improving soil health (WP3).
- Nature-positive startup incubators helped scale up sustainable business models in the bioeconomy sector and convened a country-wide innovation challenge (WP4).
- Multistakeholder dialogues influenced policy decisions related to nature-positive agriculture (WP5).

Burkina Faso:

- Seasonal calendars were developed to map NUS (WP1).
- A project to revitalize local women's groups and upgrade processing facilities targeted women's empowerment through NUS and enhanced food security, economic opportunities, and community cohesion. It also developed attractive branding for NUS-based products to boost market (WP2).
- Collaboration was undertaken to implement new frameworks for restoring agricultural landscapes, including a women's group for better market access and schools (WP3).
- Capacity building was carried out on circular bioeconomy practices such as biofertilizer and biochar production; other activities focused on waste-to-energy solutions (WP4).
- Community-based approaches improved local governance frameworks for sustainability efforts (WP5).

In the Loumbila region of Burkina Faso, the Nanglobzanga Producers Union collaborates with NATURE+ and women's groups in an ambitious project to promote neglected and underutilized species (NUS) to promote food security, new income sources and agrobiodiversity. Funded by the Initiative and Alliance Bioversity International and CIAT, and implemented by the NGO MANITESE, the project targets crops such as amaranth, moringa and sweet potato. The work empowers women by equipping them with skills in food processing, quality standards and sustainable practices. By supporting local women's groups and upgrading processing facilities, this initiative enhances food security, economic opportunities, and community cohesion. This photograph is from a training session in Burkina Faso attended by 32 women.

Credit: Eleanora De Falcis/Alliance.

Work Package progress rating summary

WORK PACKAGE	PROGRESS RATING & RATIONALE
1	On track Agrobiodiversity conservation advanced through community seed banks, strengthening genetic diversity preservation and farmer engagement in nature-positive practices. The conservation of agrobiodiversity advanced through the establishment of community seed banks in multiple regions, ensuring genetic diversity preservation. Successes include increased farmer engagement in nature-positive practices and strengthened cooperative models. Ongoing efforts focus on expanding resilient value chains and addressing market access challenges.
2	On track Sustainable agricultural biodiversity use was successfully integrated into food systems, improving nutrition, economic opportunities, and the promotion of NUS. WP2 successfully integrated sustainable agricultural biodiversity use into local food systems, improving nutrition and economic opportunities. Key achievements include the promotion of NUS and the adoption of nature-positive farming techniques.
3	On track Landscape restoration made significant strides with tools such as D4R and My Farm Trees. NATURE+ made significant progress in landscape restoration through tools such as D4R and My Farm Trees, enabling better decision-making for biodiversity recovery and farm- and landscape-scale restoration. Training programs in circular economy models strengthened sustainable agricultural value chains. Securing long-term funding, deepening multistakeholder engagement, and expanding to additional countries are future goals under the CGIAR Research Portfolio 2025–2030.
4	On track Circular bioeconomy solutions, such as women-led cooperatives producing briquettes from agricultural waste and BSF farming, gained strong momentum. The work on circular bioeconomy gained traction, with women-led cooperatives successfully producing briquettes from organic waste, offering economic and environmental benefits. Additionally, BSF farming was widely promoted for sustainable animal feed solutions and for fertilizer production. Scaling up these innovations and embedding them into broader policy frameworks is the goal for continued circular bioeconomy expansion in the CGIAR research portfolio.
5	On track Policy and community engagement were strengthened through research on the true cost of food production and gender-responsive adoption of nature-positive practices. TCA research and gender-responsive adoption of nature-positive practices strengthened policy engagement to create enabling conditions for increased nature-positive activities. Innovative community engagement methods, such as games-based research in Kenya, facilitated knowledge-sharing and behavior change. Scaling policy uptake and deepening gender-inclusive approaches will be prioritized in future work.

Definitions

On track

- 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 jeopardize success of Work Package.

Delayed

- Progress slightly falls behind Plan of Results and Budget and Work Package theory of change in key areas.
- Deviations/issues/delays/risks could jeopardize success of Work Package if not managed appropriately.

Off track

- Progress clearly falls behind Plan of Results and Budget and Work Package theory of change in most/all areas.
- Deviations/issues/delays/risks do jeopardize success of Work Package.

Section 4: **Quantitative overview of key results**

This section provides an overview of results reported and contributed to, by the CGIAR Initiative on Nature-Positive Solutions from 2022 to 2024. These results align with the CGIAR Results Framework and Nature-Positive Solutions's theory of change. Further information on these results is available through the CGIAR Results Dashboard.

The data used to create the graphics in this section were sourced from the CGIAR Results Dashboard on 04 April 2025. These results are accurate as of this date and may differ from information in previous Technical Reports. Such differences may be due to data updates throughout the reporting year, revisions to previously reported results, or updates to the theory of change.

Overview of results by category

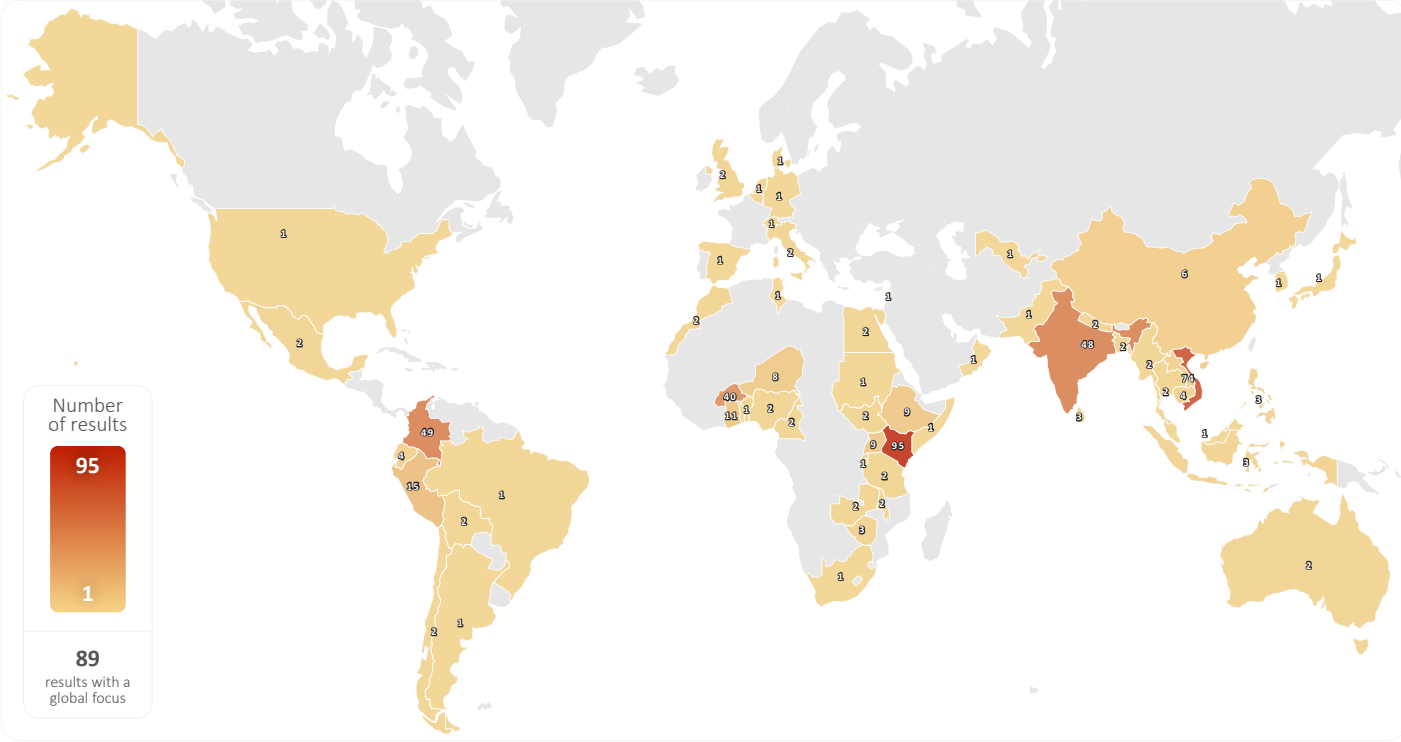
Outputs

- Knowledge products 252
- Other outputs 56
- Capacity sharing for development 33
- Innovation development 28

Outcomes

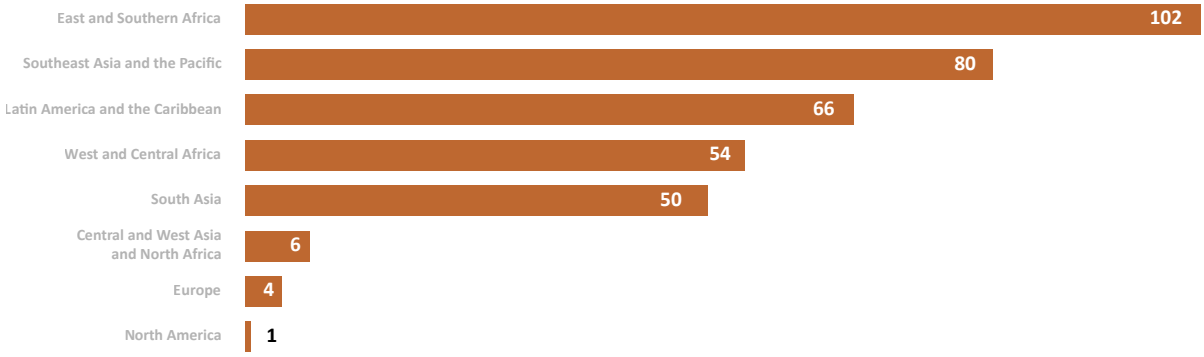
- Innovation use 14
- Other outcomes 13
- Policy change 10

Geographics focus of results

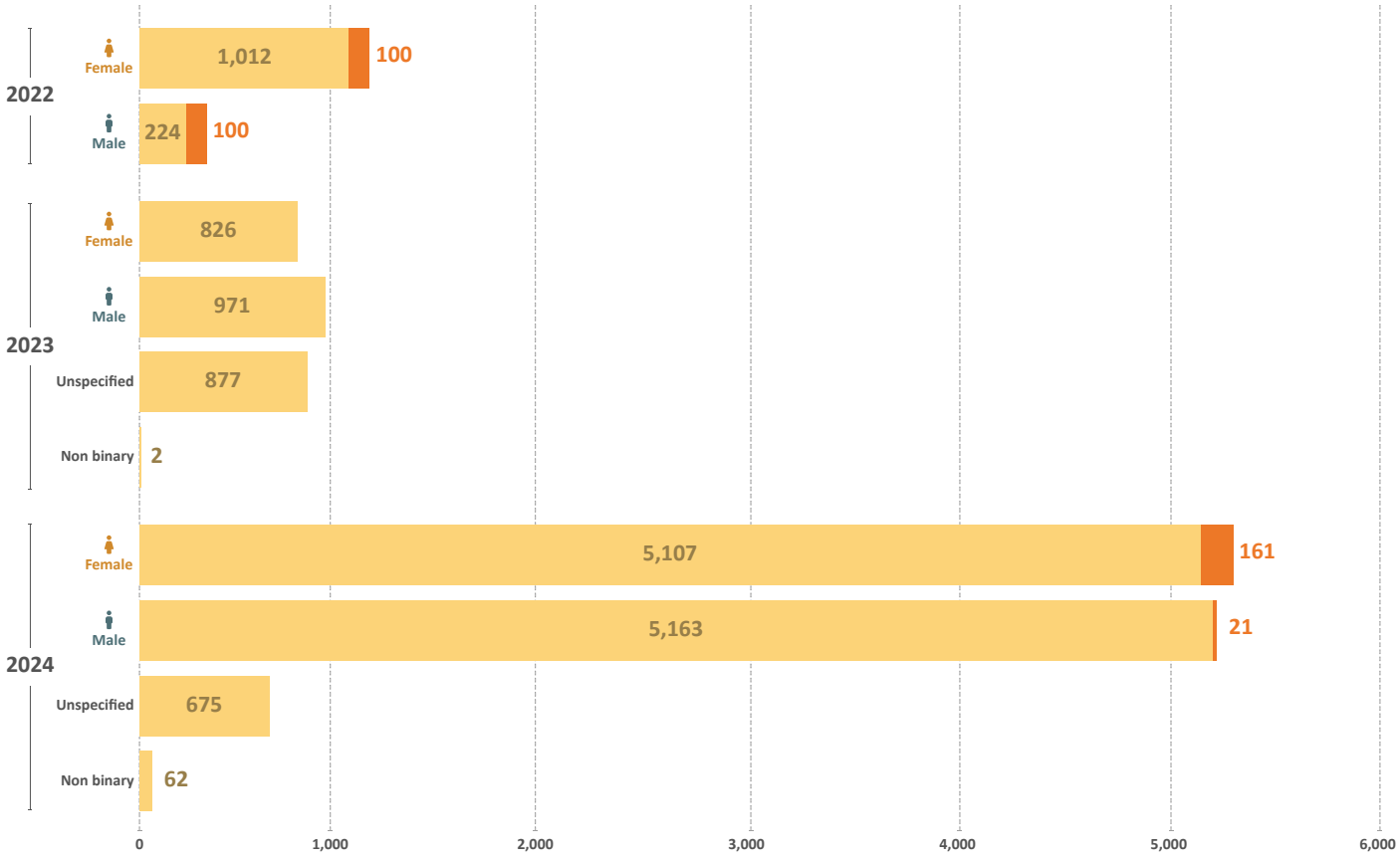


The map provides an overview of the geographical scope of results achieved under Nature+ from 2022 to 2024. It highlights the diverse country contexts—Viet Nam, Kenya, India, Colombia, and Burkina Faso—where the Initiative's science, innovations, and partnerships contributed to tangible outcomes across conservation, restoration, circular bioeconomy, sustainable management, and policy engagement. While implementation was focused in five target countries, several results—particularly knowledge products, tools, and policy contributions—extended beyond these geographies, demonstrating the Initiative's broader global relevance and potential for scaling.

Results by regions



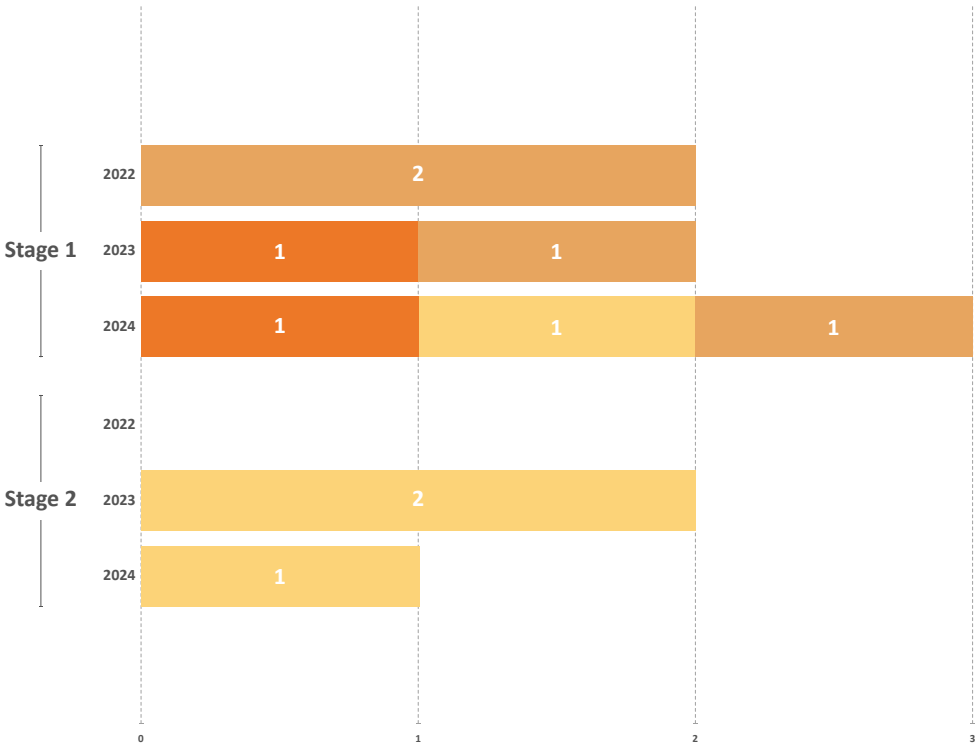
Number of individuals trained by the initiative



Long-term trainees: Long-term training refers to training that goes for three or more months.
Short-term trainees: Short-term training refers to training that goes for less than three months.

This graph highlights the Initiative's contributions to capacity sharing for development between 2022 and 2024, with 33 documented results engaging more than 15,000 individuals across stakeholder groups, a majority of whom were women. These efforts included technical trainings, community-led demonstrations, participatory research, and innovation uptake activities tailored to local needs. Capacity sharing was central to the Initiative's strategy for enabling locally driven, sustainable transitions to nature-positive food systems.

Policies by stage and by type



STAGE 1
Research taken up by next user, policy change not yet enacted.

STAGE 2
Policy enacted.

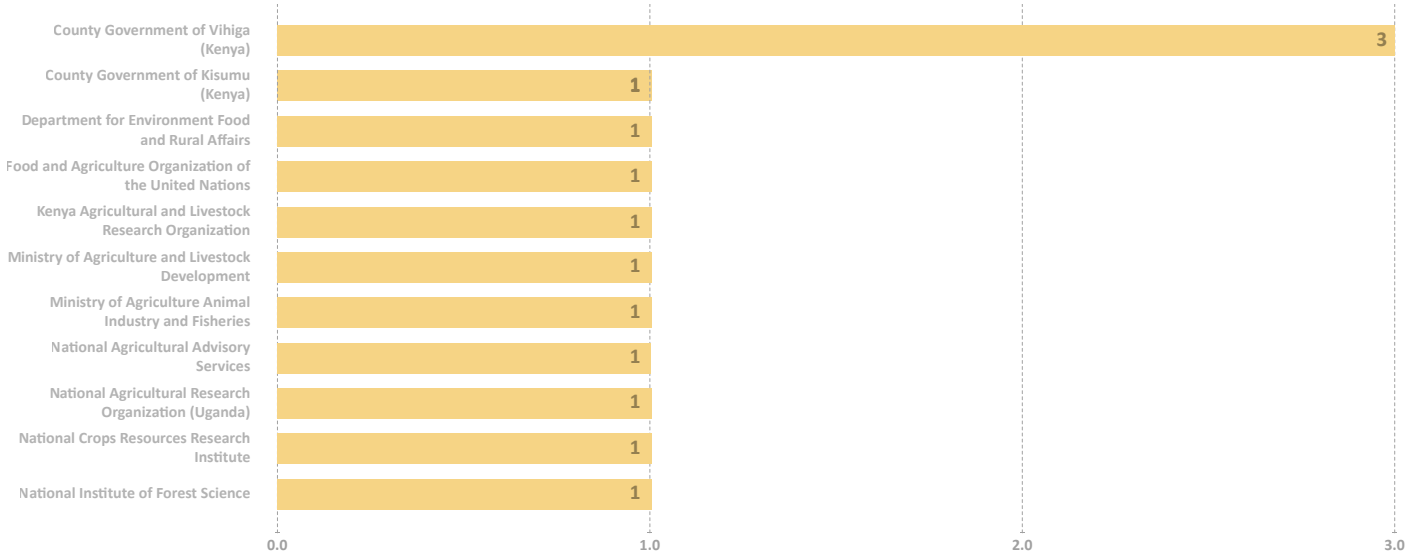
LEGAL INSTRUMENT
Legal instruments include laws, which are defined as Bills passed into law by the highest elected body (a parliament, congress or equivalent); or regulations, which are defined as rules or norms adopted by a government. These laws and regulations dictate very specifically actions and behaviors that are to be followed or prohibited and often include language on implications of non-compliance.

POLICY OR STRATEGY
Policies or strategies include written decisions on, or commitments to, a particular course of action by an institution (policy); or a (government, NGO, private sector) high-level plan outlining how a particular course of action will be carried out (strategy). These documents show the intent of an organization or entity. Examples are country growth strategies, country agricultural policies, organization strategic plans or road maps. This could also be observed as information campaigns (e.g., for improved diets). These documents set the goalposts but then require other instruments for implementation.

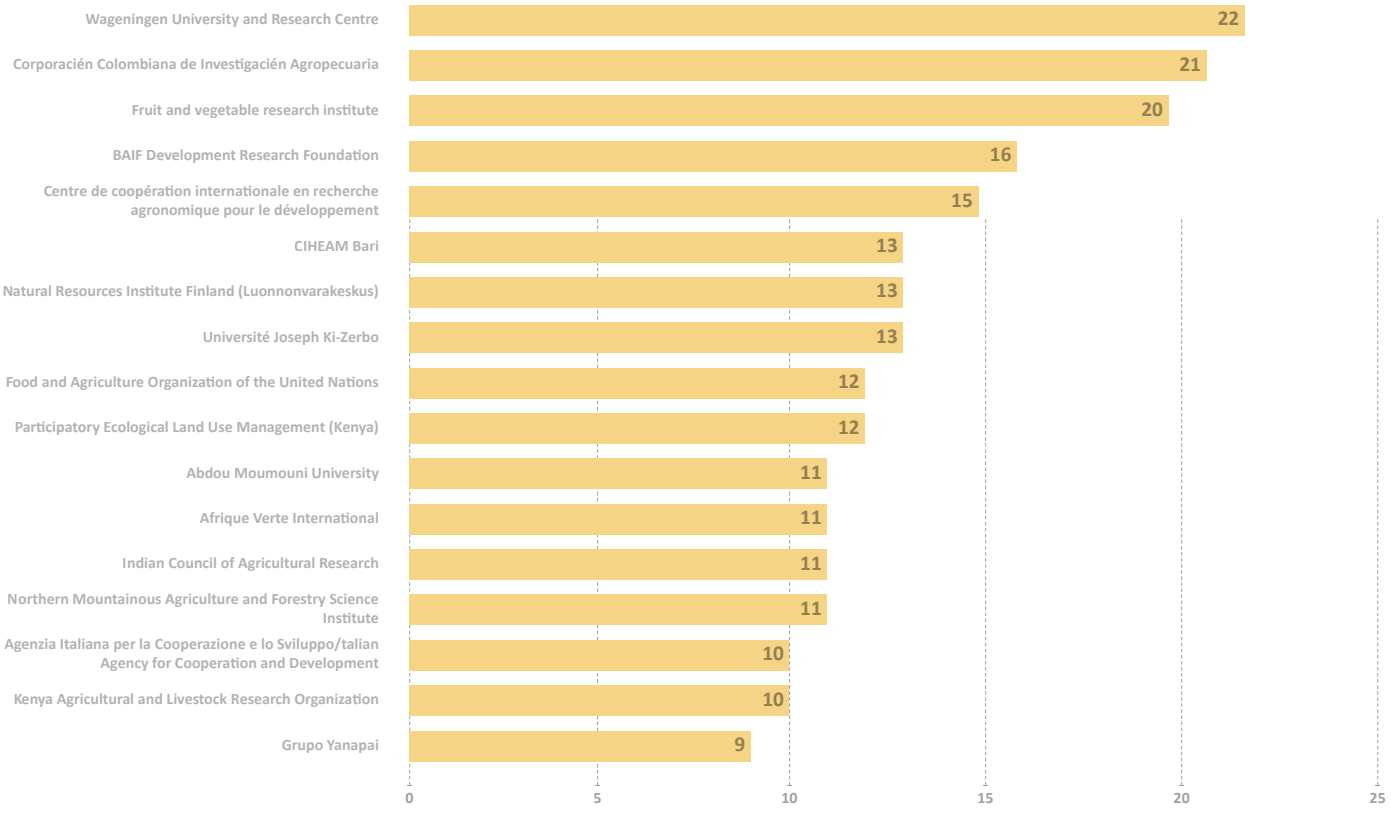
PROGRAM, BUDGET OR INVESTMENT
These are implementing mechanisms that often follow from a strategy, policy or law. There is typically a well-defined set of actions outlined over a specific period of time and with a specific budgetary amount attached. National Agricultural Investment Plans is an example, the budget within a ministry is another, investments from the private sector fit here, as well as programs launched by public, private and NGO sectors.

NATURE+ engaged policymakers at local, national, and global levels to integrate biodiversity and sustainability into agricultural and food system policies. Through tools such as TCA, gender-responsive analysis, and stakeholder dialogues, the Initiative informed evidence-based decision-making in all five target countries. Its contributions shaped policy reforms, supported national strategies, and influenced global conversations on nature-positive agriculture. An agroecology policy informed by NATURE+ was approved by Vihiga County in Kenya.

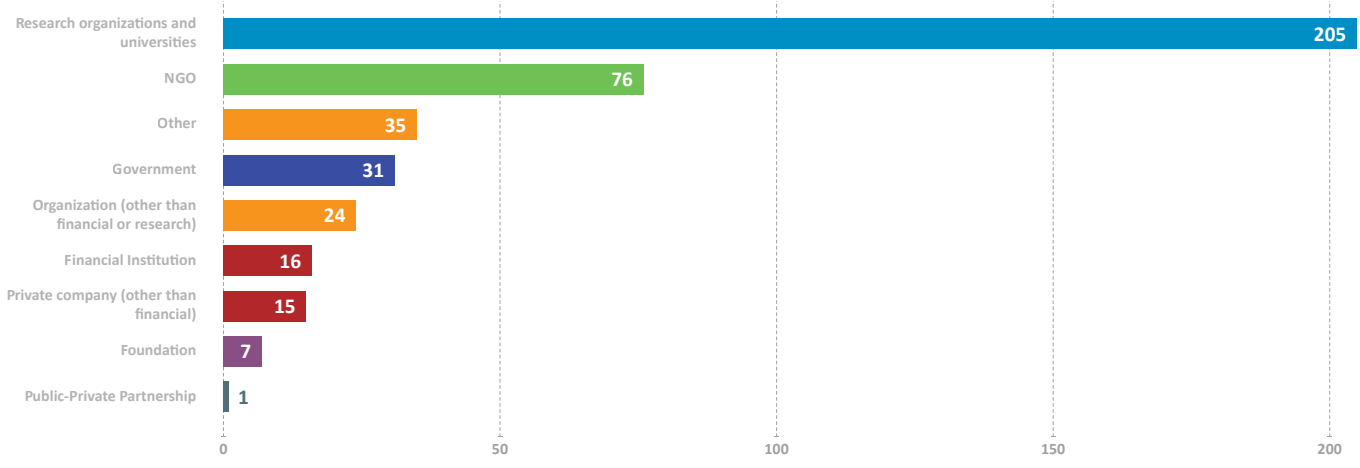
Organizations whose policy has changed



Number of results by contributing partner

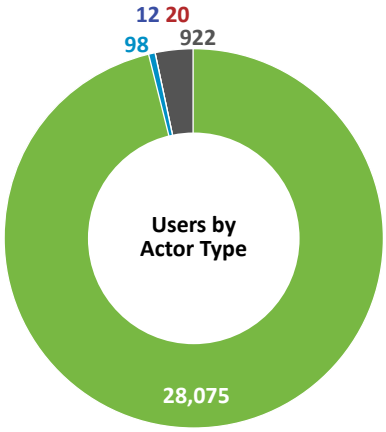


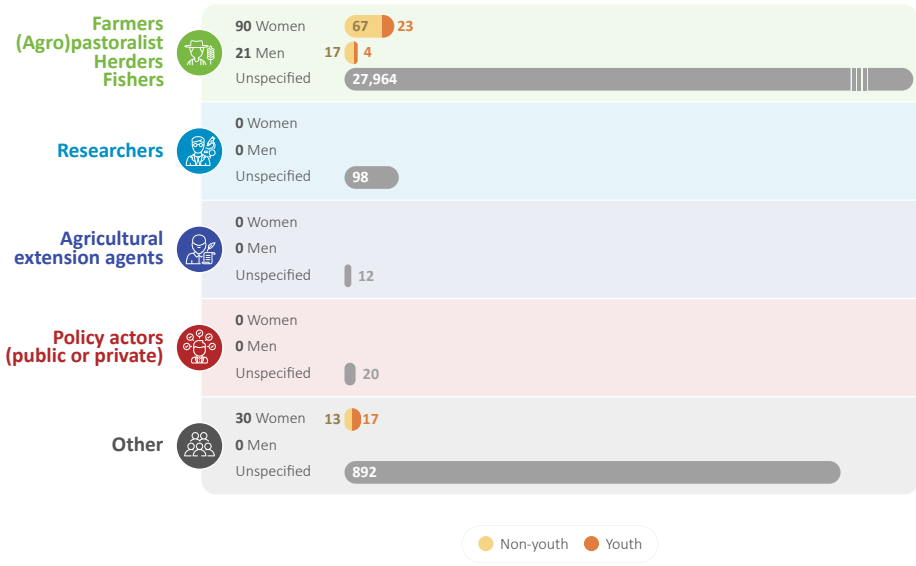
Partner Type



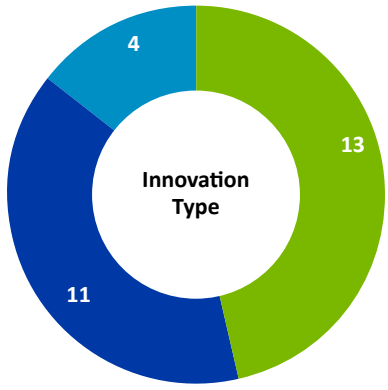
The graphs above present the key external (non-CGIAR) partners that contributed to Nature+ between 2022 and 2024. Partnerships span government agencies, national research systems, civil society organizations, Indigenous groups, the private sector, and international development actors. These collaborations were instrumental in co-designing innovations, scaling adoption, influencing policy, and ensuring that nature-positive solutions are grounded in local realities and institutionalized for long-term impact.

Innovations users by actor type





Innovations by typology



TECHNOLOGICAL INNOVATION
Innovations of technical/material nature, including varieties/breeds, crop and livestock management practices, machines, processing technologies, big data, and information systems.

POLICY/ORGANIZATIONAL/INSTITUTIONAL INNOVATION
Innovations that create enabling conditions, including policy, legal and regulatory frameworks; business models; finance mechanisms; partnership models; public/private delivery strategies.

CAPACITY DEVELOPMENT INNOVATION
Innovations that strengthen capacity, including farmer, extension or investor decision-support services; accelerator/ incubator programs; manuals, training programs and curricula; online courses.

OTHER INNOVATION
Unknown or the type does not work for the innovation.

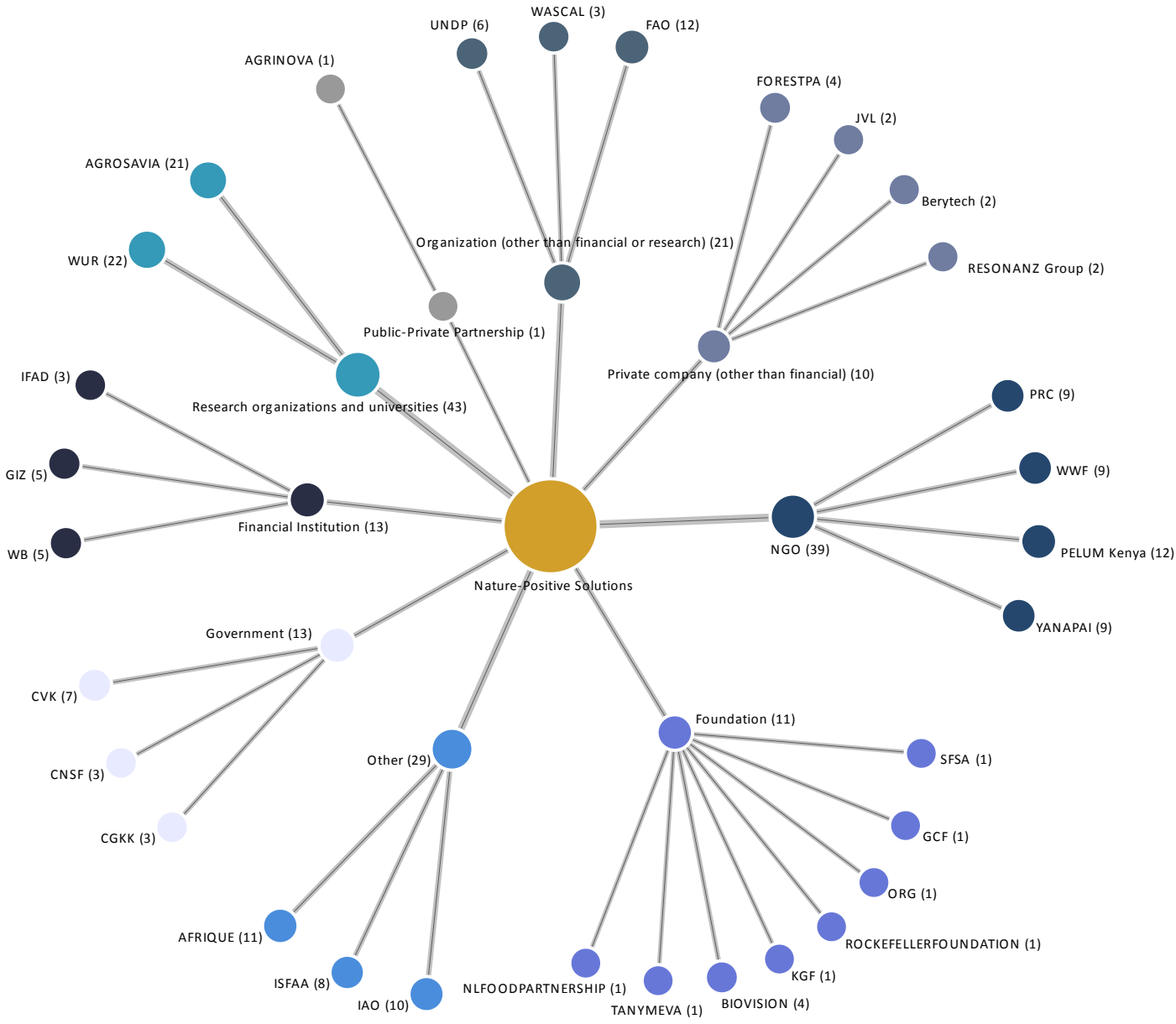
The innovations graphs above capture the range of innovations developed or applied through Nature+ between 2022 and 2024. It includes digital tools, restoration planning frameworks, circular bioeconomy models, and participatory methodologies that have been adopted by farmers, researchers, and policy actors.

Evelyn Okoth (left) discusses her community's seedbank in Kisumu County, Kenya, with Jai Rana (right), the India Country Representative for the Alliance of Bioversity International and CIAT. Okoth leads a women's group in her community that collaborated closely with NATURE+ on the implementation of nature-positive agriculture. Partnerships with local community organizations were key to the Initiative's successes across its five target countries.

Credit: Sean Mattson/NATURE+, Alliance of Bioversity International and CIAT

Section 5: **Partnerships**

Nature-Positive Solutions's external partners



The diagram maps the external partners of Nature+ initiative, organized by partner type. The numbers in brackets represent the number of results each partner has contributed to, reflecting the scale and diversity of collaborations. To allow for a clearer view, a maximum threshold of three partners was applied for each typology. The list of partner acronyms is available here.

Partnerships and Nature-Positive Solutions's impact pathways

Partnerships represented the core of NATURE+. The expertise and site-specific knowledge of partners played a critical role in scaling innovations, implementing nature-positive agricultural practices, and driving policy and investment change. The Initiative collaborated with a diverse network of **research institutions, international organizations, national and local governments, farmer organizations, private sector actors, and civil society groups** to ensure that nature-positive approaches were effectively integrated into food systems and landscapes.

The theory of change guiding the Initiative emphasized cross-sector collaboration to achieve meaningful progress toward the EOIOs. Partnerships supported key areas such as knowledge co-creation, capacity building, policy uptake, and investment mobilization, ensuring that nature-positive solutions were both scientifically grounded and implementable at scale.

These collaborations facilitated the implementation of participatory research approaches, strengthened farmer-led innovation, and provided critical financial and technical resources to sustain long-term adoption of biodiversity-enhancing practices. Many of these partnerships evolved into sustained collaborations, ensuring that the Initiative's impact extends beyond the CGIAR business cycle.

Partnership landscape and key contributions

The Initiative engaged with a broad range of external (non-CGIAR) partners, including:

- **NARES** to drive localized research and adoption of nature-positive solutions.
- **Government agencies** in Kenya, Viet Nam, Colombia, India, and Burkina Faso to influence policy frameworks that integrated biodiversity into national agricultural strategies.
- **Farmer cooperatives and local community organizations** to ensure that smallholder farmers were both beneficiaries and co-creators of innovations.
- **Private sector actors**, including agribusinesses and impact investors, to support market access and financial sustainability for nature-positive products.
- **International NGOs and UN agencies** to help integrate the Initiative's work into global sustainability agendas.

Across all WPs, partnerships were instrumental in translating research into action. Notably, collaborations with investment actors—particularly in Kenya and Colombia—led to the mainstreaming of nature-positive financial frameworks, as demonstrated by efforts to integrate biodiversity incentives into national agricultural policies. Simultaneously, policy-focused partnerships supported evidence-based decision-making, with India, Viet Nam, and Burkina Faso leveraging multistakeholder dialogues to embed nature-positive principles into governance frameworks

2024 highlights

In 2024, partnerships continued to drive momentum for nature-positive transitions. Key highlights include:

- **Kenya and Colombia**: Collaborations with national policymakers and financial institutions resulted in the integration of nature-positive principles into national agricultural policies and incentive structures.
- **India**: The Initiative worked closely with tribal communities and local research organizations, strengthening traditional seed banks and advancing agrobiodiversity conservation.
- **Viet Nam**: Engagement with local and rural farming networks led to the successful promotion of traditional crops within sustainable value chains.
- **Burkina Faso**: A multistakeholder collaboration between women's groups, local schools, and research institutions supported the establishment of new agroecological research frameworks to improve climate resilience.
- **Regional and global level**: The Initiative participated in global policy dialogues with organizations such as FAO, UNDP, and UNEP, ensuring that nature-positive solutions were reflected in international sustainability frameworks.

Strategic partnership example: CGIAR–World Bank synthesis report on advancing nature-positive agriculture

Researchers from four CGIAR Centers (the Alliance of Bioversity International and CIAT, IFPRI, IWMI, and CIP), along with Wageningen University & Research, partnered with the World Bank to produce the CGIAR–World Bank synthesis report on advancing nature-positive agriculture. The report presents a strategic and actionable framework for transitioning to nature-positive agriculture by directly addressing the negative impacts of agricultural production on biodiversity and ecosystem services—thereby contributing to climate change mitigation and building a more resilient and sustainable global food system. Recognizing that agricultural transformation must go beyond isolated interventions, the report emphasizes a system-level approach that integrates bundles of nature-positive practices with a clear assessment of the enabling environment needed to drive agricultural transitions.

The collaboration between CGIAR and the World Bank bridges global environmental goals with local agricultural and social realities, where CGIAR science and innovations play a pivotal role in supporting the World Bank and government investments. Working closely with the World Bank, the team showcased spatially targeted, evidence-based guidance aligned with national biodiversity strategies and Sustainable Development Goals in countries such as Colombia and Ghana. The report offers a blueprint for investment and policy action toward nature-positive agriculture—building urgently needed connections between biodiversity conservation, food system resilience, and rural development.

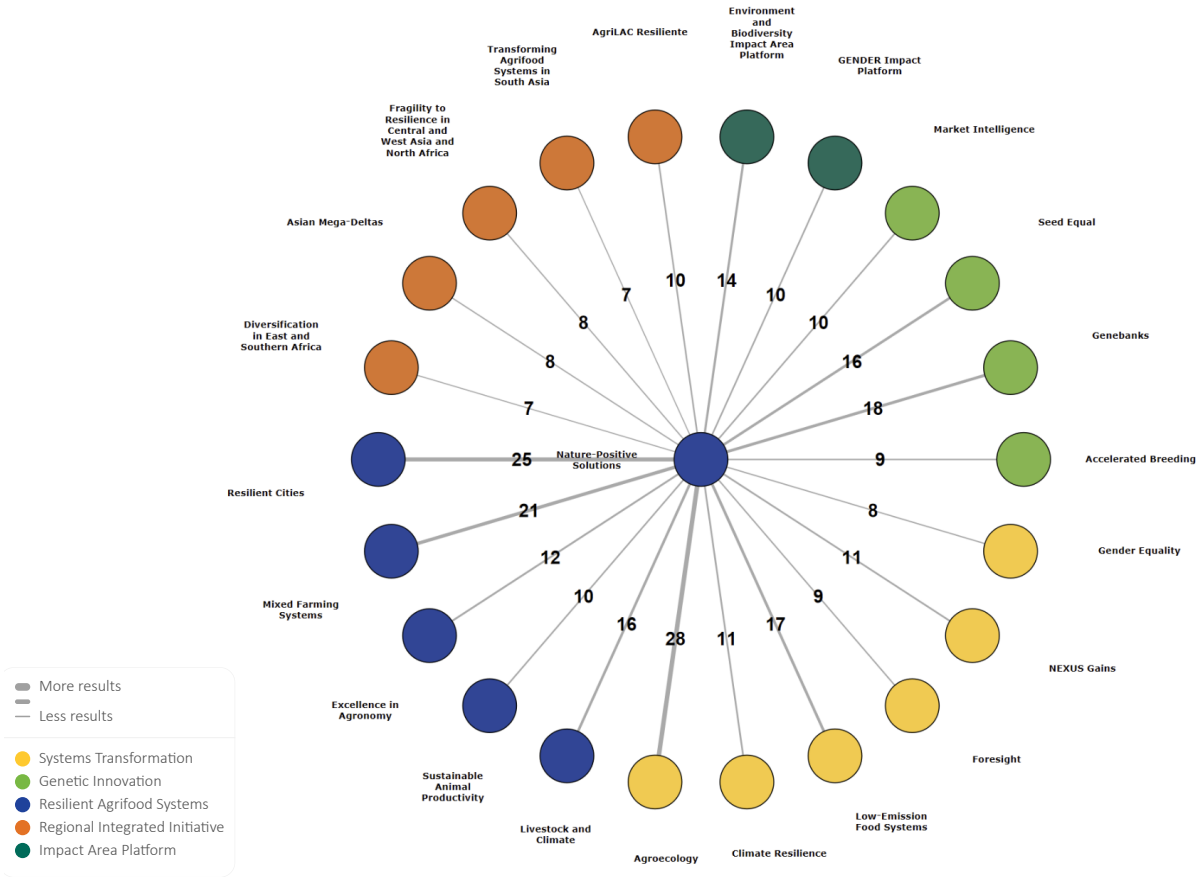
This partnership provided alternative income sources for marginalized groups and contributed to improved waste management, biodiversity conservation, and climate resilience. The success of these models has generated interest from policymakers and impact investors, creating opportunities for further expansion beyond the Initiative's timeline.

NATURE+ demonstrated that strong partnerships—across research, policy, finance, and local implementation—are essential for achieving lasting sustainability impacts. By fostering collaborative networks that bridge science and practice, the Initiative laid the foundation for continued adoption of nature-positive agricultural and economic research and model implementation beyond 2024.

Moving forward, sustaining and expanding partnerships will be critical to ensure that the progress made over the past three years is institutionalized, scaled, and adapted to diverse contexts globally. The partnerships built through this Initiative serve as a blueprint for how multistakeholder collaboration can drive systemic change toward a more resilient and biodiversity-friendly future.

Section 6: **CGIAR Portfolio linkages**

Internal collaboration network of Nature+ Initiative



The diagram presents the internal collaborations of Nature-Positive Solutions with other CGIAR Initiatives, Impact Area Platforms. Connections are sized according to the number of shared reported results, highlighting the depth of collaboration across the CGIAR Portfolio. A results threshold filter is applied (set to a minimum of seven results) to focus the view on the most significant collaborations. Thicker lines represent stronger collaborative links based on a higher number of shared results.

Portfolio linkages and Nature-Positive Solutions's impact pathways

The Initiative was well integrated within the CGIAR Initiative portfolio. NATURE+'s collaboration with the CGIAR Research Initiatives on Agroecology, Nexus Gains, Low-Emission Food Systems, and Gender Equality continued to grow, as sustainable intensification and excellence in agronomy are both critical to define pathways and a framework toward achieving more sustainable agriculture and reducing the negative impacts generated by it. NATURE+ also linked with the CGIAR Research Initiatives on Mixed Farming Systems, Livestock and Climate, and Resilient Cities, as well as the CGIAR Gender Impact Platform, to best develop circular economy strategies, which form a significant part of the Initiative. Finally, NATURE+ engaged in areas of collaboration with the CGIAR Research Initiatives on Seed Equal and Genebanks on the use of genetic resources. With the Genebanks Initiative, NATURE+ explored ways to link in situ and ex situ conservation and improve the use of genetic resources conserved in genebanks.

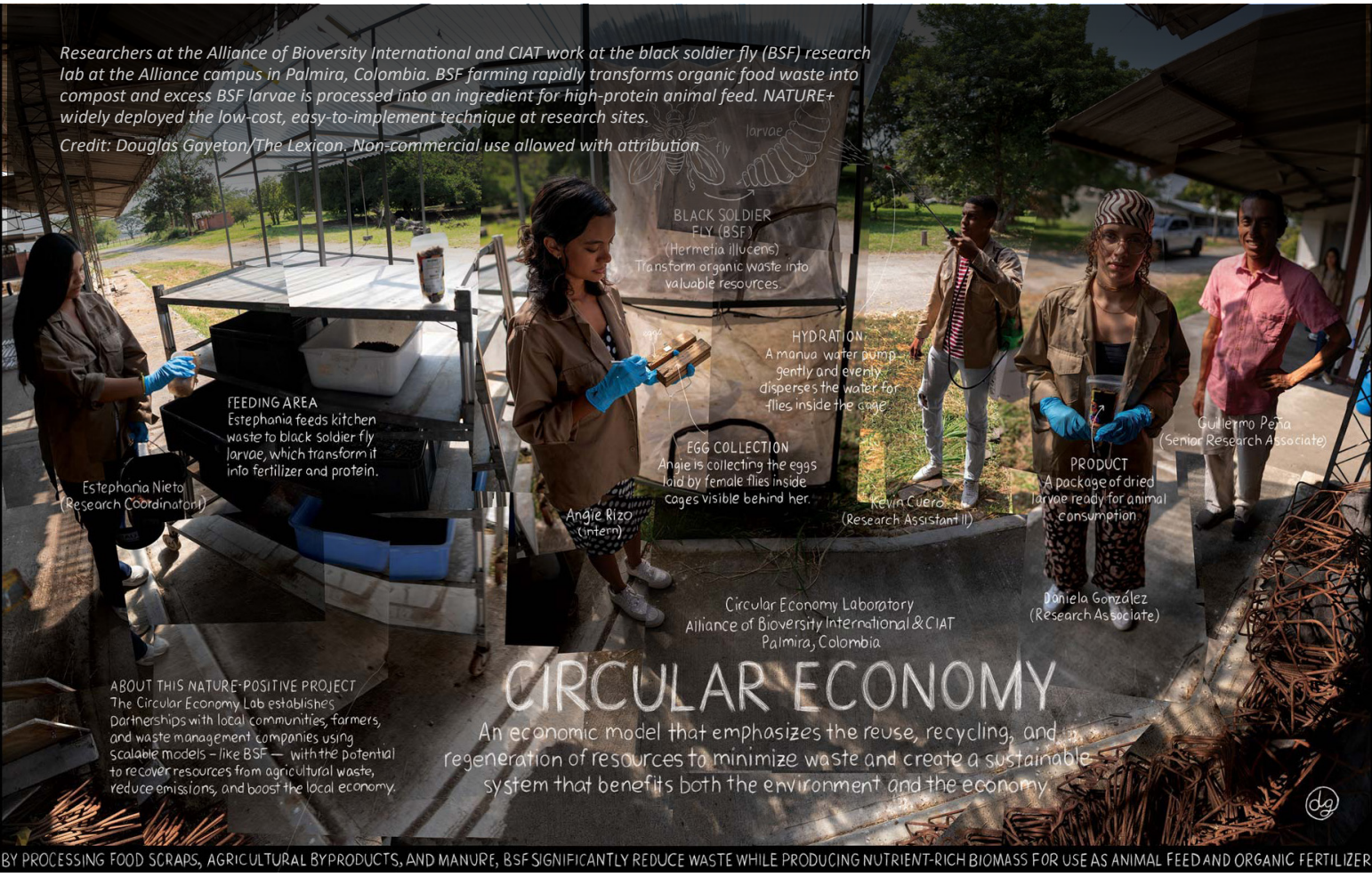
More than 50 farmers participated in a one-week training session on Black Soldier Fly farming in Kisumu County, Kenya as part of NATURE+. The low-cost method produces fertilizer and protein for animal consumption from organic material, including food waste (pictured here at the workshop). These are viable alternatives to industrial livestock feed and fertilizers, which are expensive and often environmentally detrimental

Credit: Rachel Kibui/NATURE+

Section 7: **Key result story**

NATURE+ circular bioeconomy activities reach more than 5,000 people

By 2024, the NATURE+ Initiative's circular bioeconomy activity reached dozens of communities in five countries, creating or enhancing sustainable income sources, and creating wins for both people and nature.



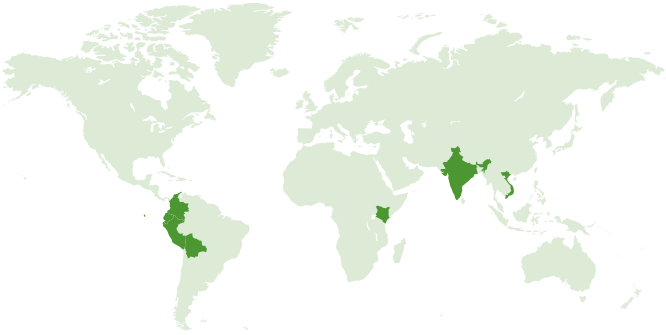
Researchers at the Alliance of Bioversity International and CIAT work at the black soldier fly (BSF) research lab at the Alliance campus in Palmira, Colombia. BSF farming rapidly transforms organic food waste into compost and excess BSF larvae is processed into an ingredient for high-protein animal feed. NATURE+ widely deployed the low-cost, easy-to-implement technique at research sites.

Credit: Douglas Gayeton/The Lexicon. Non-commercial use allowed with attribution

Primary Impact Area

Other relevant Impact Areas targeted

Geographic scope



Countries: The Socialist Republic of Viet Nam · Colombia · Kenya · India · Bolivia · Ecuador · Peru

Contributing Initiative

Nature-Positive Solutions

Contributing Centers

CIP · Alliance of Bioversity and CIAT · ICARDA · IFPRI · IWMI

Contributing external partners

Helvetas (HELVETAS) · County Government of Kisumu (Kenya) (CGKK) · County government of Vihiga (Kenya) (CVK) · Dryland Natural Resource Center (DNRC) · Intersectorial Forum On Agrobiodiversity And Agroecology (ISFAA) · Kenya Agricultural and Livestock Research Organization (KALRO) · National Museums of Kenya (NMK) · Participatory Ecological Land Use Management (Kenya) (PELUM Kenya) · Seed Savers Network Kenya (SSN Kenya) · Intersectorial Forum On Agrobiodiversity And Agroecology (ISFAA) · Plant Resources Center Vietman (PRC) · Vietnamese Academy of Agricultural Sciences (VAAS) · Servicio Nacional de Aprendizaje (SENA) · BAIF Development Research Foundation (BAIF)

NATURE+ scaled circular bioeconomy innovations, empowering communities—especially women—to convert agricultural waste into income, restoration, and resilience as part of a transition toward more nature-positive systems.

By 2024, the CGIAR Research Initiative on Nature-Positive Solutions (NATURE+) scaled circular bioeconomy innovations, empowering communities—especially women—to convert agricultural waste into income, restoration, and resilience as part of a transition toward more nature-positive systems. This transition requires several simultaneous, often paradigm-challenging actions, including innovations for the conservation, management, and restoration of biodiversity, especially agricultural biodiversity. Producers also need policies, accessible research, and evidence-based, professional support to reduce reliance on costly industrial inputs that often underperform on degraded lands and contribute to further land degradation. To complete the nature-positive circle, circular bioeconomic action is crucial.

From coffee bean husks in Colombia to rice stems in Viet Nam, organic agricultural waste is a common challenge in all NATURE+ sites. Though some communities manage waste well, most treat it as a nuisance. When unmanaged, the scale of waste in the Global South is staggering. But properly handled, agricultural waste can become fertilizer, animal feed, or energy—and generate rural income. At scale, circular bioeconomy models benefit both people and ecosystems.

To support the adoption of circular bioeconomy models in the Initiative's target countries, Solomie Gebrezgabher, who led the RECYCLE Work Package, and team began by assessing circular bioeconomy potential in Burkina Faso, Colombia, India, Kenya, and Viet Nam. They shared results with communities to identify locally relevant circular bioeconomy models. Between 2022 and 2024, NATURE+ established circular bioeconomy hubs in Ghana, India, and Viet Nam and hosted innovation challenges in Colombia and Kenya. In Colombia, these hubs were paired with boot camps for entrepreneurs, which built a national network of like-minded businesses. Several were selected for CGIAR's Accelerate for Impact Platform.

NATURE+ also implemented black soldier fly (BSF) farming systems in Colombia, India, and Kenya. BSF farming reduces waste, reducing greenhouse gas emissions; reduces feed and fertilizer costs for farmers, reducing reliance on industrial and often environmentally unfriendly inputs; helps restore degraded landscapes; and creates economic opportunities for BSF farmers. A BSF installation at an aggregated farm in Kenya—another NATURE+ innovation—became a central feature of the farm's production and restoration efforts. In India, NATURE+ launched biochar projects, supporting soil health with organic "coal."

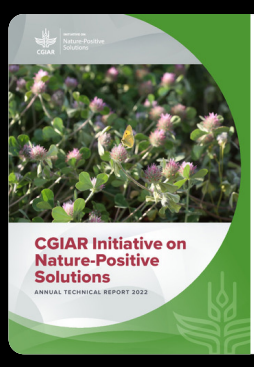
More than 5,000 people participated in these growing circularity efforts. In addition to fieldwork, the Initiative published studies to address knowledge gaps on circularity in the Global South and inform policy proposals to create more enabling environments for circular economies.

The Initiative's activities aimed to close the loop and, at the same time, empower women. In Kenya, NATURE+ helped 30 women form a cooperative to produce briquettes from organic waste, providing training and equipment. The cooperative now operates independently and produces higher-quality products. In India, a women's group producing biochar similarly became a self-sustaining business. In Viet Nam, NATURE+ partnered with UNDP to develop circular bioeconomy models for coffee and rice value chains.

While circularity interventions must be tailored to local contexts—for instance, Viet Nam prioritized rice and coffee waste over BSF—common threads emerged. Women's groups showed strong interest in circular economy practices, and many recycling activities, though widespread, remained informal. Formalizing these practices could improve safety, scalability, and profitability.

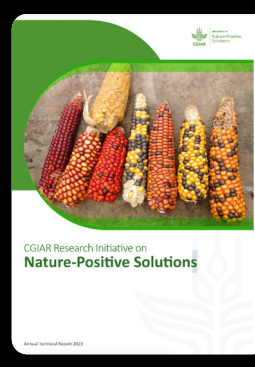
Despite these achievements, many challenges remain: start-ups often struggle to secure financing, a lack of product standards can reduce quality and harm credibility, regulatory support is limited, and co-designing with communities takes time, though it significantly boosts success. However, NATURE+ and its partners anticipate that circular bioeconomy practices will expand from farm to landscape scale. One strategy involves returning value-added waste (such as compost, biochar, feed, or energy) to rural areas from which agricultural products are extracted, effectively closing the loop. By reducing waste, replenishing soils, and lowering dependence on industrial inputs, circular bioeconomy practices help conserve biodiversity, restore degraded land, and build resilient landscapes.

> There is huge potential for circular bioeconomies in the Global South, but unfortunately, it's still mostly untapped," said Solomie Gebrezgabher, who led the RECYCLE WP. "NATURE+ demonstrated that circular bioeconomies successfully contribute to conservation, restoration and livelihoods, and the Initiative laid robust foundations for circularity in the communities across the five countries where we worked.
>
> Solomie Gebrezgabher, RECYCLE WP lead



2022 key result story

CGIAR Initiative on Nature-Positive Solutions: Annual Technical Report 2022



2023 key result story

CGIAR Research Initiative on Nature-Positive Solutions 2023

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Nature-Positive Solutions

Mainstreaming nature-positive solutions will bring major benefits to low-income farmers, particularly those who are trapped in debt cycles to purchase industrial seeds, animal feed, fertilizers and pest controls. In addition to accessing community seed banks to diversify production and restore their landscapes, farmers can make their own fertilizer and high-protein animal feed from Black Soldier Fly farming. As part of NATURE+'s RECYCLE work package, hundreds of farmers received training on BSF farming. This photo is from a weeklong BSF workshop attended by more than 50 farmers from Kisumu County, in Western Kenya. The session was based on a training manual on BSF farming for feed and biofertilizers developed by the International Water Management Institute and NATURE+.

Credit: Rachel Kibui, NATURE+)