

Adapt to Thrive:

Transforming food systems
in Africa. The case for
investing in agroecology

October 2026





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Cover photo: Smallholder farmers in Msanga, Dodoma, Tanzania who have led the establishment of a community seed bank and two seed farms, along with seed demo plots where indigenous crops such as sorghum, millet, cowpeas, and traditional vegetables are preserved and multiplied. © ActionAid Tanzania.

Above: Two smallholder farmers in Ulaya village, Kilosa district, Tanzania, showing the demonstration plot they have cultivated using agroecology in collaboration with local government, supported by MVIWAMORO and ActionAid Tanzania. © ActionAid International

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ACRONYMS

AU	African Union
B-ACT	Business Agroecology Criteria Tool
CAADP	Comprehensive Africa Agriculture Development Programme
CIFOR-ICRAF	Center for International Forestry Research – World Agroforestry
EAC	East African Community
EALA	East African Legislative Assembly
FAO	Food and Agriculture Organization (United Nations)
FiBL	Research Institute of Organic Agriculture
GDP	Gross Domestic Product
NGO	Non-governmental organisation
PGS	Participatory Guarantee Systems
TAPE	Tool for Agroecology Performance Evaluation

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Zawadi Josephat, a young farmer from the Makiingi Youth Hub in Tanzania, used to struggle with the high costs of farming.

Following her transition to agroecological farming, using indigenous seeds, organic manure, and botanical pest control instead of expensive chemical inputs, her costs have dropped from USD 134 to just USD 36 per acre, allowing her to retain more of her earnings and reinvest in her farm.

"This season, I am confident I will make a significant profit because my production costs have been much lower than in previous years. In the past, I spent a lot on chemical inputs, which led to high costs and minimal profits. But this year, things are looking much better for me!"

PHOTO: MEMBERS OF THE MAKIINGI YOUTH HUB IN TANZANIA. ACTIONAID TANZANIA



EXECUTIVE SUMMARY

"The opening words of the African Union's 2025 Kampala CAADP Declaration are clear: **there is an "urgent need to renew our efforts to advance the development of resilient, inclusive and sustainable agrifood systems in Africa."**

Agroecology is the answer to that critical call.

The industrial approach to agriculture in Africa has failed to live up to its promises. It has degraded the ecological base of food production. It is driving climate change. It does not deliver safe, appropriate and nutritious food, and hunger and malnutrition are deepening. For governments, its input-dependent systems create fiscal risk in a context of volatile global input markets and geopolitical tensions. Food production is increasing in Africa but at a significant cost for health, ecosystems and local economies.

- There is an urgent need to transition to sustainable, inclusive and equitable approaches to food and farming systems. Agroecology provides a pathway to support vibrant local economies, food and nutrition security and sovereignty, and robust resilience to climate change.

This paper synthesises the findings of an extensive review of uptake of agroecology in 10 African countries: Ethiopia, the Gambia, Ghana, Kenya, Malawi, Nigeria,

Tanzania, Uganda, Zambia and Zimbabwe. It shows the viability of agroecology to solve multiple, often interlinked social, ecological and economic challenges, and what is needed to support this critical transition. The statistics speak clearly, and the evidence is compelling.

Agroecology increases farm profitability. Farmers benefit from diversified income streams, lower input costs and improved food security. Agroecology shifts farmers from high-cost dependency to lower-cost and higher-margin production.

- Evidence shows that, after a 1-3-year transition period, agroecology can increase farm profitability, with studies in Kenya indicating an average 37.8% rise in profits.
- While synthetic input subsidies deliver limited ecological or nutritional returns, they continue to dominate national agricultural budgets – input subsidies make up 80% of the agricultural budget in Zambia and 50% in Zimbabwe.

Agroecology delivers comparable or greater yields than industrial agriculture – alongside improved nutrition and biodiversity. Yields drop initially in the transition period but bounce back within 3-5 years as ecological systems regenerate. But benefits accrue to farmers from year 1 of the transition period through reduced external input costs, crop diversification (key for nutrition and diversified income streams) and enhanced ecological resilience.

- Studies of agroecology initiatives show a 41% increase in cereal yields in Ghana, tripling of pigeon pea and sorghum yields in Tanzania and 100% increase in maize yields in Zambia, among many other project successes recorded across Africa.

Agroecology builds the climate resilience of food systems. Agroecological systems stabilise yields under dry and drought conditions, improve soil organic matter and restore ecosystem functioning. Agroecology builds system-level resilience, not just production gains.

- Studies show that agroecological production is 2-4 times more energy efficient.
- It is recognised as a pathway for food system transformation in the United Nations Framework Convention on Climate Change and in the Kunming-Montreal Global Biodiversity Framework.

Agroecology is more inclusive. Women are marginalised in decision making in food systems; they also have less access to inputs, land, capital and resources. Africa's youth population is growing, presenting both a risk and an opportunity to drive the agroecological transition at scale, including through entrepreneurial opportunities.

- 66% of women's employment is in agrifood systems, compared with 60% of men's. Closing productivity and wage gaps would reduce global food insecurity by about 45 million people.
- 60% of Africa's population is under the age of 25; 90% of working youth are in informal jobs with about 40% of them living in poverty.

Africa's transition to agroecology is already underway. While African farming systems have long been rooted in agroecology, there is now increasing recognition of its practices in national and regional policy. Agroecology delivers comparable or higher yields over time, reduces

costs, improves profitability, strengthens resilience and lowers public expenditure, making it a viable pathway for transforming Africa's food systems.

- 15 African countries have developed or are developing national agroecology strategies.
- There is increasing consumer demand for pesticide-free food. Agroecology offers consumers access to safe, nutritious and locally produced food.
- The East African Legislative Assembly has called on governments to promote agroecology.
- 20 African governments and regional economic blocs have joined the Agroecology Coalition, embracing the transition toward agroecology.

Scaling agroecology, however, requires coordinated, system-wide action. Current policy, market and financing structures often favour industrial agriculture, creating barriers to adoption. To unlock agroecology's full potential, African governments and funding partners must act across five key areas:

1. Reform policy and regulatory frameworks to align incentives with agroecological outcomes.
2. Build inclusive markets and value chains that connect producers and consumers.
3. Strengthen local input systems, particularly farmer-led seed systems and bio-input production.
4. Invest in knowledge systems, including extension, research and peer learning.
5. Mobilise long-term, accessible finance and shift public and donor investment.

In parallel, targeted communication and awareness efforts are needed to shift dominant narratives, build farmer confidence and stimulate consumer demand. Technologies that reduce labour burdens and post-harvest losses can also support adoption, when aligned with agroecological principles.

Agroecology is not a niche alternative. It is a practical, scalable and cost-effective pathway to deliver food security, climate resilience, ecological restoration and inclusive economic development across Africa.

As countries begin the implementation of the new Comprehensive Africa Agriculture Development Programme (CAADP) framework, it's an opportunity to invest in approaches that will build the sustainable food and farming systems of the future.

INTRODUCTION

Africa's food systems are at a breaking point. Despite decades of increasing agricultural production, hunger, malnutrition and diet-related disease are rising, while the ecological foundations of farming continue to erode. **The dominant industrial agriculture model has delivered only short-term gains at the cost of long-term resilience, locking farmers and governments into costly external input systems and undermining human and planetary health.**

Intensifying geopolitical tensions and conflicts are driving up the prices and availability of the synthetic inputs on which farmers have become dependent. Shifting rainfall patterns and more frequent extreme events (floods, droughts) place rain-fed food production at risk. Rapidly degrading ecosystems are approaching tipping points beyond which they cannot provide the services on which farming depends – pollination, water and climate regulation, soil formation, nutrient recycling and biodiversity maintenance. These pressures are compounded by misaligned subsidies, corporate monopolisation of agricultural markets, and restrictive seed and input laws and regulations.

At the same time, African governments have recommitted themselves to the Comprehensive Africa Agriculture Development Programme (CAADP). The objectives of its guiding document, the 2025 Kampala CAADP Declaration, include sustainable agricultural production; strengthened food and nutrition security; resilience to climate, economic and social shocks; and equitable participation of women, youth and marginalised groups. While the industrial food system in Africa has expanded land under cultivation, fertiliser use and production of staple crops, it has demonstrated that it cannot bring about sustainable food security and the broader development outcomes desired by the Kampala CAADP framework; alternative pathways are needed.¹ Evidence from Africa shows that these pathways are not only possible but already working.

Agroecology offers a practical, scalable framework to rebuild food systems from the ground up — restoring soils, strengthening livelihoods and climate resilience and delivering healthy, culturally appropriate food – in a manner that is fair for both farmers and consumers, and which makes strong economic sense for governments.

Agroecology is recognised as a pathway for food system transformation in the United Nations Framework Convention on Climate Change and in the Kunming-Montreal Global Biodiversity Framework. In Africa, the East African Legislative Assembly adopted a motion in 2025 calling on governments in the East African Community to promote agroecology, and is currently considering a Bill.² And 15 African countries have already adopted or are considering National Agroecology Strategies. Established in 2021, the Agroecology Coalition is also working with 20 African governments and regional economic blocs to share knowledge, attract investments, promote market pathways and advocate for supportive policies for agroecology.³

>> About this paper

This briefing paper draws on an internal scoping of agroecology uptake in 10 African countries (Ethiopia, the Gambia, Ghana, Kenya, Malawi, Nigeria, Tanzania, Uganda, Zambia and Zimbabwe) conducted for ActionAid by Dr Martin Oulu and Dr Wale Olayide in end-2025 and early 2026.⁴ The study used a desktop review of academic and grey literature, government and non-governmental organisation reports, and agricultural and environmental databases. This was supplemented by field data collection in Kenya, Nigeria and Zimbabwe, in-person and online interviews, and surveys conducted with farmer organisations, academia/research institutions, policymakers and technocrats, civil society organisations, private sector and donors. The aim was to assess agroecology's productivity and sustainability, its financial feasibility and profitability, its integration of modern agricultural technologies, consumer perceptions and market dynamics. The study further sought to identify its ability to scale and any transition challenges and opportunities.

This paper explores agroecology's potential to respond to Africa's biggest challenges and provides a synthesis of the existing research. It describes uptake of agroecology in the 10 countries, outlines its benefits and identifies levers for scaling this transformative solution up and out.



1. WHY AGROECOLOGY MATTERS NOW

The industrial conventional approach to agriculture has failed to deliver on its promise of alleviating hunger and rural poverty. Instead, it has significantly degraded farming lands, destroyed biodiversity, polluted soils and water bodies and made farmers and governments dependent on an expensive input system with pricing and availability subject to a volatile global market.

» Growing levels of hunger and malnutrition

Hunger is rising in Africa; more than 50% of the population is moderately or severely food insecure.⁵ This is more than double that of other continents. Undernourishment and malnourishment are prevalent and the number of people unable to afford a healthy diet has risen substantially in the past six years – an increase of 73.4 million people since 2019.⁶ The double burden of malnutrition (undernutrition and overweight/obesity) has been rising for more than 20 years. This is a direct result of the nature of the food environment and the failure of food systems to provide sufficient and appropriate diets. Diet is directly linked to the rise of non-communicable diseases in Africa – diabetes, cardiovascular diseases, cancer and chronic respiratory diseases account for most deaths on the continent. This places extreme strain on already overburdened public health systems.

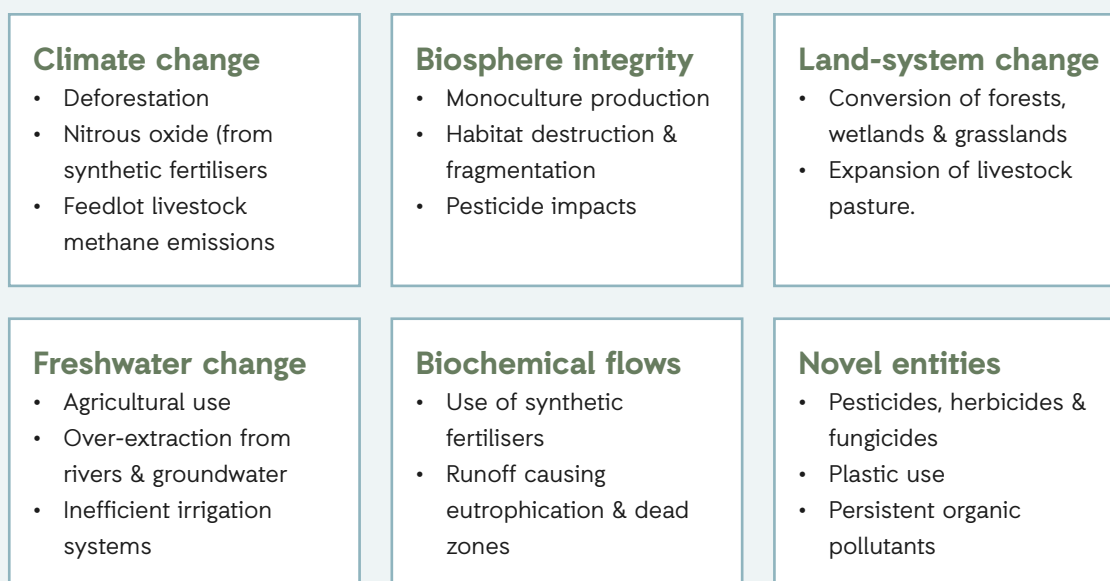
» Rising incidences of pesticide poisoning

Studies show that smallholder farmers in Africa are highly dependent on synthetic fertilisers and pesticides to maintain yields, having adopted conventional methods for improving soil fertility and pest and disease control.⁷ Exposure to toxic pesticides is directly linked to chronic health problems in farmers and the accumulation of pesticide residues on and in fresh produce is harmful to consumers.⁸ These pesticides also accumulate in soil and water and harm animals, including pollinators.⁹ Of the 385 million people suffering from pesticide poisoning each year, 95% of them live in the Global South.¹⁰ Pesticide exposure and consumption is receiving more attention in Africa as its effects become more noticeable.

» Increasing risk of ecological collapse

Industrial agriculture has also significantly contributed to the exceeding of six of the nine planetary boundaries that define a safe operating space for humanity; exceeding these thresholds drives us further towards tipping points and the risk of ecological collapse.¹¹ Figure 1 shows how industrial agriculture contributes to this risk.

Figure 1: Industrial agriculture's contribution to exceeding 6 of 9 planetary boundaries



➤ Escalating costs for African governments

African governments spend a significant percentage of their agricultural budgets on subsidising the costs of synthetic fertilisers and hybrid seeds for smallholder farmers. While there is a lack of consistent and transparent reporting on farm input subsidy programmes across the continent, detailed studies in some countries indicate that they consume a significant percentage of national budgets.

- In 2023-2024, Zambia and Zimbabwe spent 80% and 50% of their national agricultural budgets, respectively, on subsidising agricultural inputs, largely synthetic fertilisers and hybrid seeds, with most imported from outside the region.¹² In 2016-2021, Zimbabwe was spending 6.7% of its national budget on subsidising inputs; Malawi 3.8%, Zambia 3.1% and Senegal 2.5%.¹³

These synthetic inputs are mostly procured from multinational companies that profit from African public funding, with African governments usually locked into expensive and shifting contractual agreements. The

volatile global marketplace, however, means that any disruptions, such as conflicts, disasters or currency fluctuations, affect the pricing. These subsidies directly incentivise smallholder farmers to use synthetic inputs, which studies have shown, further degrade farming land and increase dependencies.¹⁴ Governments end up having to pay the indirect costs of environmental degradation, water pollution and damage to human and ecological health. Agroecology offers governments significant savings over the long term and a practical route to securing food systems and farming livelihoods in an increasingly uncertain world.

Agroecology not only addresses the shortcomings of industrial agriculture; it provides significant benefits to farmers, communities and governments. It supports climate resilience, food security and sovereignty, the inclusion of women and youth, and just, fair food systems.



Previously a subsistence farmer, Denis Tekwo was trained at the Gum Kayo Agroecological Centre in Amuru District, Uganda. His farming now integrates raising goats, chicken and fish, alongside mango trees and dry-season vegetable growing. *"My life has transformed from subsistence farming to farming as a business. The diversification of my enterprises has improved my income and this has contributed to peace and stability in my family since we are able to create wealth and meet my family needs comfortably."*

PHOTO: ACTIONAID UGANDA

2. WHAT IS AGROECOLOGY?

Agroecology is best understood as a scientific discipline (that integrates science, lived experience and traditional knowledge), a set of sustainable farming practices and a social movement that places farmers and their communities as active agents in food systems.¹⁵ A set of commonly agreed principles guide the implementation and monitoring and evaluation of agroecological farming and food systems (see Table 1). Agroecology delivers synergistic (mutually reinforcing) economic, social and ecological benefits. It reduces farmer risk and builds resilience at the ecological level to external shocks, such as climate change and market volatility. It is not a prescriptive model and encompasses a range of sustainable agriculture approaches including organics, biodynamics and permaculture.

»» What agroecology is not

For an approach to be considered agroecological, it must touch on all three aspects: social, ecological and economic and align to the 13 principles of agroecology, as defined by the UN Committee on World Food Security's (CFS) High Level Panel of Experts (HLPE). Any approach that focuses on single agronomic

interventions cannot be considered agroecological nor those that use technologies, inputs or methods that are extractive rather than regenerative. Precision agriculture and climate-smart agriculture, for example, are approaches that focus on singular aspects. They are positioned as sustainable options, picking and choosing from agroecological principles, to justify continued investment in industrial approaches. Agroecology, in contrast, is a whole-system approach.

Precision agriculture depends heavily on technology far out of smallholder farmers' reach and aims to optimise input use at the scale of the field¹⁶ – it intervenes with a singular purpose. Climate-smart agriculture is an especially vague term and is used by both agroecological and industrial agriculture stakeholders, but with very different understandings, causing significant confusion and a lack of coherence in policymaking.¹⁷ In the industrial framework, it is usually solely focused on sequestering carbon in the soil as a mitigation measure and does not consider ecological or human health.¹⁸ These approaches most often seek enhanced efficiency rather than transformation of the underlying structures of the food system. Table 1 illustrates the 13 agroecological principles, their benefits for farmers and society, and how agroecology contrasts with the industrial model.

Figure 2: HLPE 13 agroecology principles

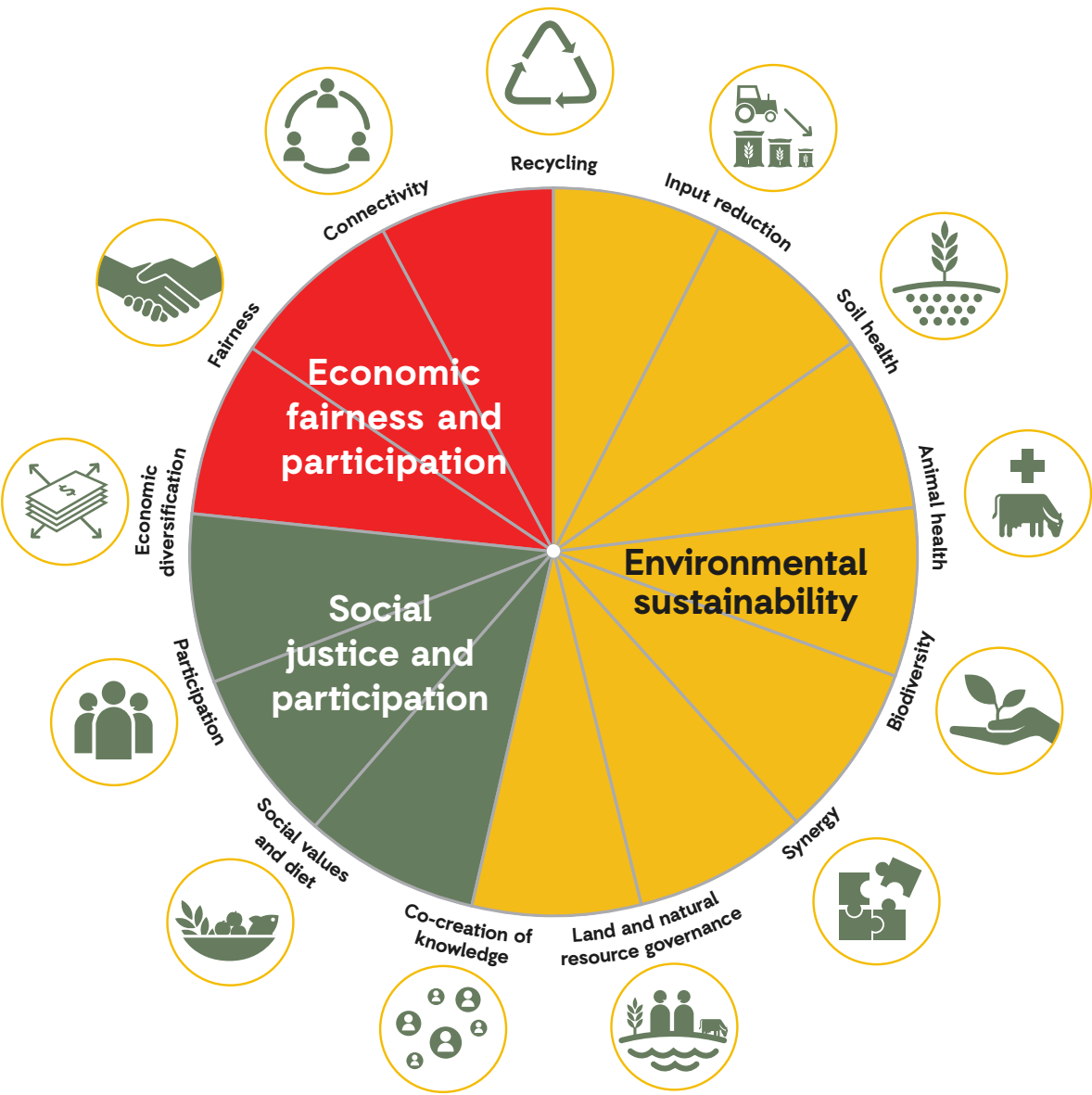


Table 1: Agroecological principles and benefits, contrasted to industrial approach¹⁹

13 Agroecology principles	Benefits to farmers	Benefits to society	Contrast with industrial approach
Recycling: Preferentially use local renewable resources and close, as far as possible, resource cycles of nutrients and biomass.	Lower input costs. On-farm nutrient cycling. Reduced market dependency.	Reduced waste. Lower pollution. More circular local economies.	Linear resource use. Heavy reliance on external inputs. High waste and nutrient leakage.
Input reduction: Reduce or eliminate dependency on purchased inputs and increase self-sufficiency	Greater financial independence. Reduced exposure to price shocks. Lower production risk.	Reduced chemical exposure. Lower environmental contamination.	High dependency on purchased inputs. Vulnerability to price volatility. Chemical-intensive production.
Soil health: Secure and enhance soil health and functioning for improved plant growth.	Improved yields over time. Better water retention. Reduced need for fertilisers.	More nutritious food. Climate resilience. Reduced erosion and land degradation.	Soil degradation. Declining fertility. Reliance on synthetic fertilisers to maintain yields.
Animal health: Ensure animal health and welfare.	Lower veterinary costs. Improved productivity and longevity. Reduced losses.	Safer food. Lower antibiotic resistance risks. Improved animal welfare outcomes.	Intensive confinement systems. High antibiotic use. Animal welfare concerns.
Biodiversity: Maintain and enhance diversity of species, functional diversity and genetic resources; maintaining overall agroecosystem biodiversity in time and space at field, farm and landscape scales.	Reduced pest and disease risk. Greater system stability. Multiple production streams.	Ecosystem restoration. Pollination and natural pest control. Dietary diversity.	Monocultures. Biodiversity loss. Increased vulnerability to shocks.
Synergy: Enhance positive ecological interaction, synergy, integration and complementarity among agroecosystem elements.	More efficient resource use. Multiple outputs from integrated systems. Reduced costs.	Resilient food systems. Reduced external inputs. Stronger ecosystem functioning.	Fragmented systems. Separation of crops and livestock. Lost ecological interactions.
Economic diversification: Diversify on-farm incomes by ensuring that farmers have greater financial independence and value addition opportunities. Enable them to respond to consumer demand.	Multiple income streams. Reduced financial risk. Greater livelihood security. Fair finance.	Stronger rural economies. More local employment. Reduced poverty.	Specialisation in single commodities. Income vulnerability. Market dependence. Exploitive financial products. Indebtedness.
Co-creation of knowledge: Enhance co-creation and horizontal knowledge sharing, including traditional knowledge and local and scientific innovation, especially through farmer-to farmer exchange.	Locally adapted solutions. Less reliance on external advisors. Increased innovation capacity.	Knowledge sovereignty. Inclusive innovation. Context-specific solutions.	Top-down knowledge transfer. Dependence on proprietary technologies. Limited local adaptation.
Social values and diets: Build food systems driven by the culture, identity, and tradition of local communities, providing appropriate diets. Prioritise social and gender equity.	Production aligned with local demand. Cultural relevance. Greater market access.	Healthier diets. Preservation of food cultures. Improved nutrition outcomes.	Standardised diets. Ultra-processed food expansion. Nutritional decline.
Fairness: Support dignified, robust livelihoods for all food system actors, especially small-scale food producers, based on fair trade, fair employment and fair treatment of intellectual property rights.	Fair prices. Improved working conditions. Recognition of farmer rights.	More equitable food systems. Reduced exploitation. Social stability.	Unequal value chains. Exploitation of labour. Concentration of power.
Connectivity: Ensure proximity and confidence between producers and consumers through promotion of fair and short distribution networks and by re-embedding food systems into local economies.	Direct market access. Better prices. Stronger relationships with consumers.	Trust in food systems. Fresher food. Reduced food miles. Rural transformation.	Long supply chains. Disconnection between producers and consumers. Price distortions.
Land and natural resource governance: Strengthen institutional arrangements, including recognition and support of family farmers, smallholders, and peasant food producers – including women and Indigenous People – as sustainable managers of genetic resources.	Secure land tenure. Control over seeds and resources. Long-term planning capacity.	Sustainable resource management. Protection of commons. Food sovereignty.	Land concentration. Loss of farmer rights. Resource extraction.
Participation: Encourage social organisation and greater participation of producers in decision-making to support decentralised governance and local adaptive management of food systems. Recognise and empower women in community decision-making.	Greater agency. Influence over decisions. Stronger collective organisation. Women's economic empowerment.	Democratic food systems. Better policy outcomes. Community resilience.	Centralised decision-making. Marginalisation of smallholders. Limited accountability.

>> How is agroecology measured and evaluated

Measuring agroecology requires moving beyond conventional metrics of productivity, such as yield per hectare, toward a more holistic understanding of performance across ecological, economic and social dimensions (multi-dimensional performance measurement). Agroecological systems are inherently complex and context-specific, making them difficult to assess using standard agricultural indicators alone. In response, a number of frameworks have emerged to capture this multidimensionality, focusing on resilience, biodiversity, soil health, equity, livelihoods and governance alongside production outcomes.

One of the most widely used tools is the **Tool for Agroecology Performance Evaluation (TAPE)**, developed by the United Nations Food and Agriculture Organization. TAPE provides a standardised yet flexible methodology for assessing agroecological transitions at farm and territorial levels. It combines qualitative and quantitative indicators across multiple domains, including environmental integrity, economic resilience, social wellbeing, governance and nutrition. It is designed to be participatory, engaging farmers and local actors in the assessment process, and enabling co-learning while generating comparable data. TAPE aligns with FAO's 10 Elements of Agroecology, offering a structured way to track progress along agroecological pathways rather than measuring binary adoption.

Complementing this, the **Business Agroecology Criteria Tool (B-ACT)** focuses specifically on assessing the alignment of enterprises and value chain actors with agroecological principles. Developed through collaboration between organisations, such as Biovision Foundation and the International Panel of Experts on Sustainable Food Systems, B-ACT evaluates businesses against criteria including ecological sustainability, fairness, governance, circularity and contribution to territorial development. It is particularly useful for investors, policymakers and practitioners seeking to distinguish between genuinely agroecological enterprises and those adopting only partial or superficial sustainability measures.

Together, tools like TAPE and B-ACT reflect a broader shift in how agricultural systems are evaluated. Rather than focusing narrowly on output efficiency, they foreground system health, long-term resilience and

social equity. Agroecology, however, is not assessed through standardised frameworks alone. Evidence is also generated through long-term comparative studies that examine agroecological and conventional systems over time, participatory research projects, demonstration plots, market and consumer perception studies, and the lived experiences of farmers and communities. These approaches help capture dimensions that are often difficult to quantify, such as knowledge exchange, empowerment, food sovereignty, resilience to shocks and changing relationships between people and ecosystems. By combining formal evaluation tools with participatory and practice-based forms of evidence, researchers and practitioners are building a more comprehensive understanding of agroecology's performance and potential.

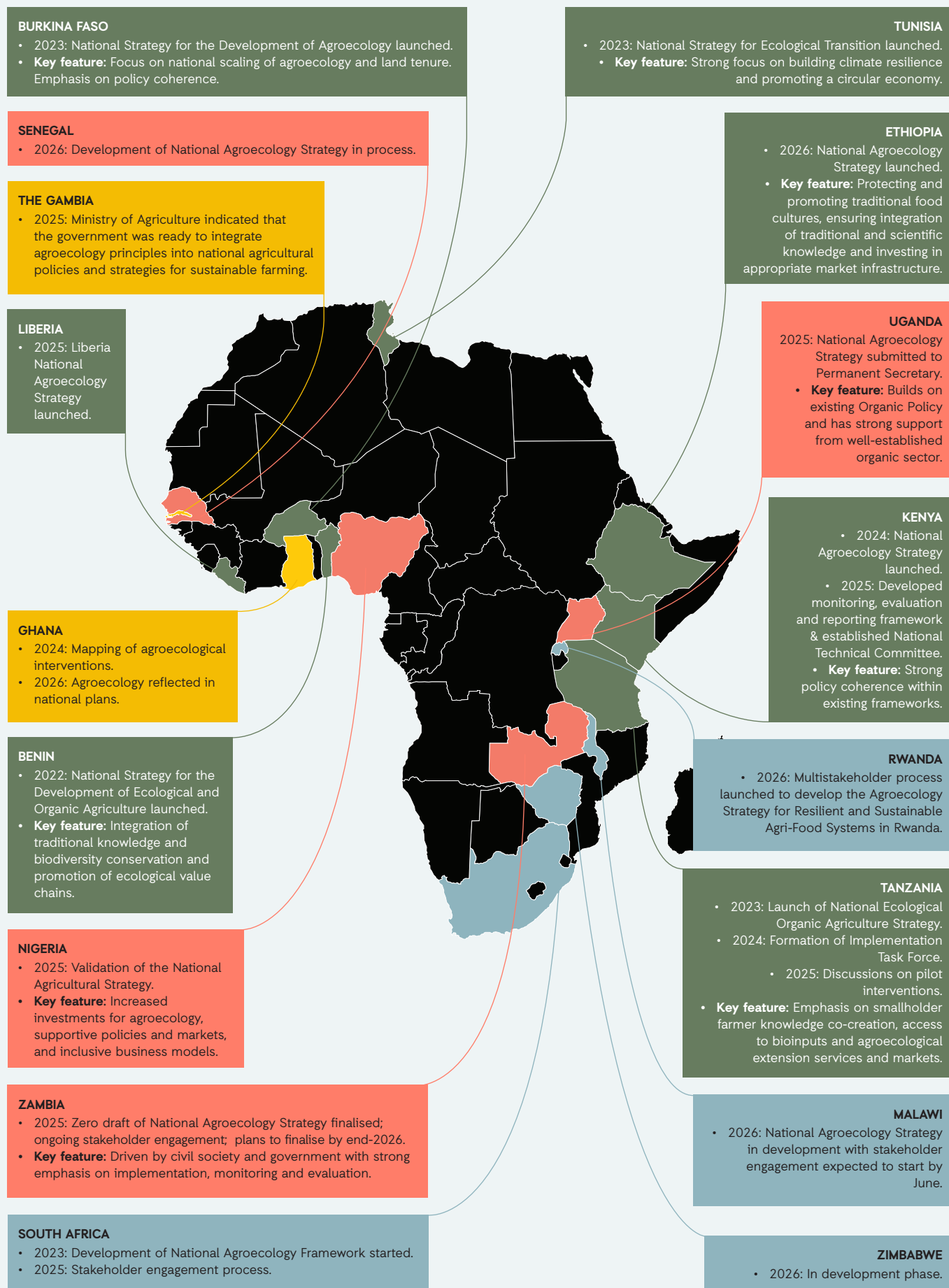
>> The agroecology transition in Africa

There is growing recognition that agroecology provides a practical, sensible and cost-effective way to transform food systems to provide for human and ecological health and livelihoods. This is evident in the growing number of African countries that have developed, or are planning, national agroecology strategies (see Figure 2). These strategies typically frame an agroecological transition as a whole-system shift, rather than a reformist approach in which some elements are tweaked but underlying structures remain the same. While this is a positive move, transforming food systems away from an input-dependent model towards one based on biological processes that delivers nutrition, food security, livelihoods and inclusive and equitable market access is a gradual process, not an immediate fix. Such transformation requires a transition period, at the farm, landscape and sector levels. That transition needs support.

This section digs into the evidence emerging from studies across 10 countries. It provides an overview of experiences in implementing agroecology, details the many benefits it has delivered, while also describing the transition period and critical support required.

Figure 3: Status of National Agroecology Strategies in Africa 2026

● Strategy in place
 ● Near completion
 ● In development
 ● Strong interest



>> The transition process

Most benefits of agroecology are not immediate. It takes time to reboot an agri-food system that has been critically damaged by the industrial model. A popular conceptualisation of the agroecological transition describes progress across five levels: resource efficiency, input systems, production design systems, markets and relationships, and governance and power. While presented as levels, they are also interconnected elements of food system transformation.²⁰

1. Reducing inputs like synthetic fertilisers, pesticides and energy across all scales of farming to improve efficiency of use.
2. Substituting conventional inputs and practices with agroecological alternatives; this requires building agroecological input value chains.
3. Redesigning the agroecosystem on a new set of ecological processes – including active soil regeneration, diversification and crop-livestock integration.
4. Reconnecting producers and consumers in local food systems with strong territorial markets, to shape a 'new' food system that is equitable, inclusive, sovereign and ecologically sustainable.²¹

At the farm level, **the initial transition phase can take one to three years**, depending on the damage done to the soil and surrounding ecosystem from synthetic fertilisers, pesticides and other industrial farming practices, as well as farmers' knowledge and support.

In this period, farmers reduce their use of synthetic inputs and start introducing new practices. The soil and ecological interactions start to improve as the mycorrhizal fungi and associated beneficial bacteria recover and restore nutrient availability, soil structure, water filtration and aeration. Yields may decline or fluctuate in this period.

Processes such as nutrient recycling and pest regulation start to stabilise and work properly between three to five years as soil fertility improves and biodiversity recovers. Yield gaps start to close.

The farming system is more resilient and efficient; cost savings accumulate and yields equal or exceed conventional systems – particularly under climate stress, and in drought conditions. The transition period is to enable ecological systems to recover and to put in place a beneficial system that can deliver nutrition and dietary diversity and support ecological health.

Yield increases can also appear far more quickly than this. The transition period can be sped up where soils are not severely degraded, where farmers have strong knowledge and support, and where there is already diversification of crops or integration of livestock into cropping systems. And where conventional crops are suffering in the face of climate stress, the yield benefits of agroecology can sometimes be immediate.

Figure 3 illustrates the linkages between reduced synthetic input use with integration of agroecological principles.



Figure 4: Compounding benefits from transitioning to agroecology²³

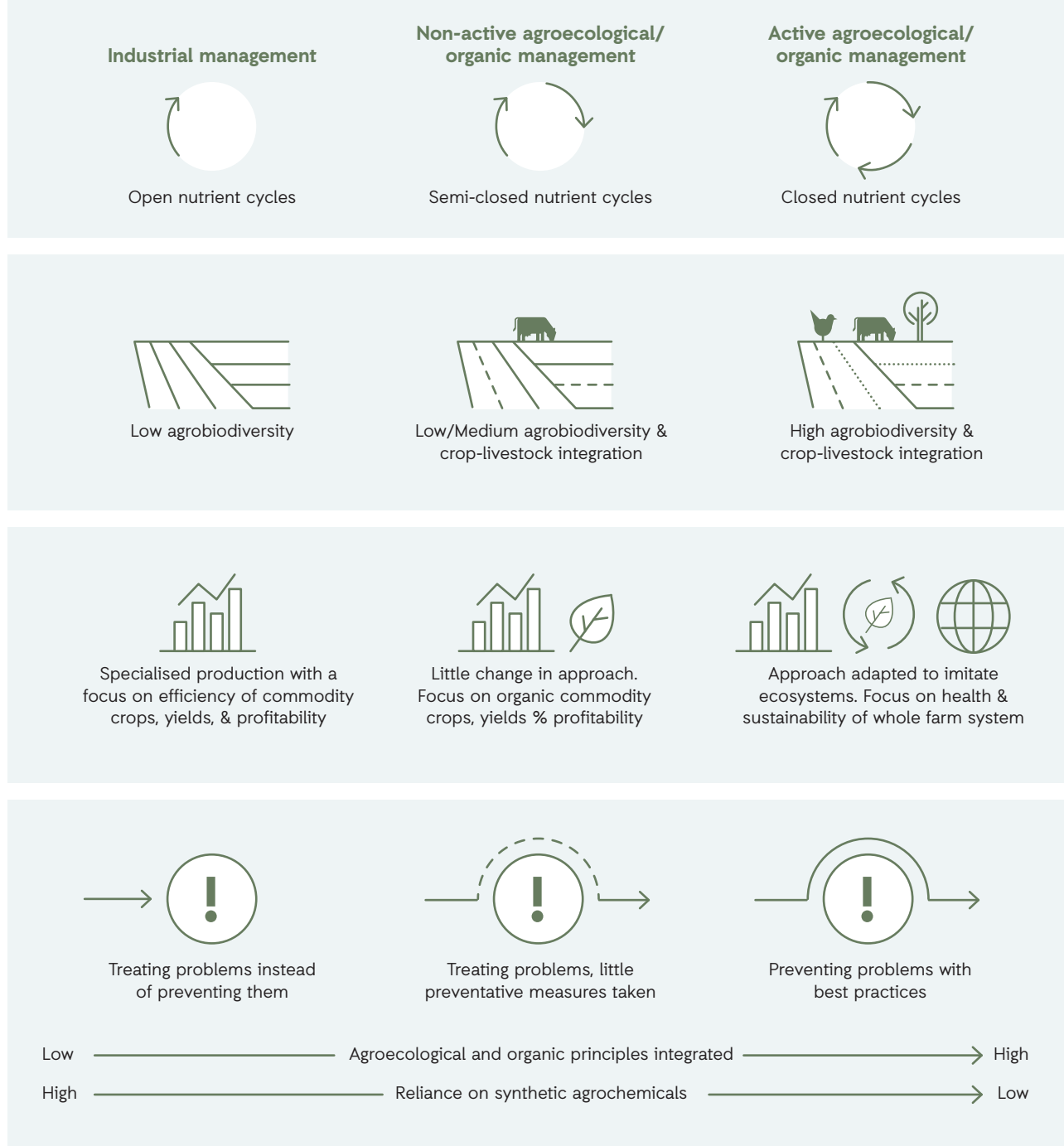
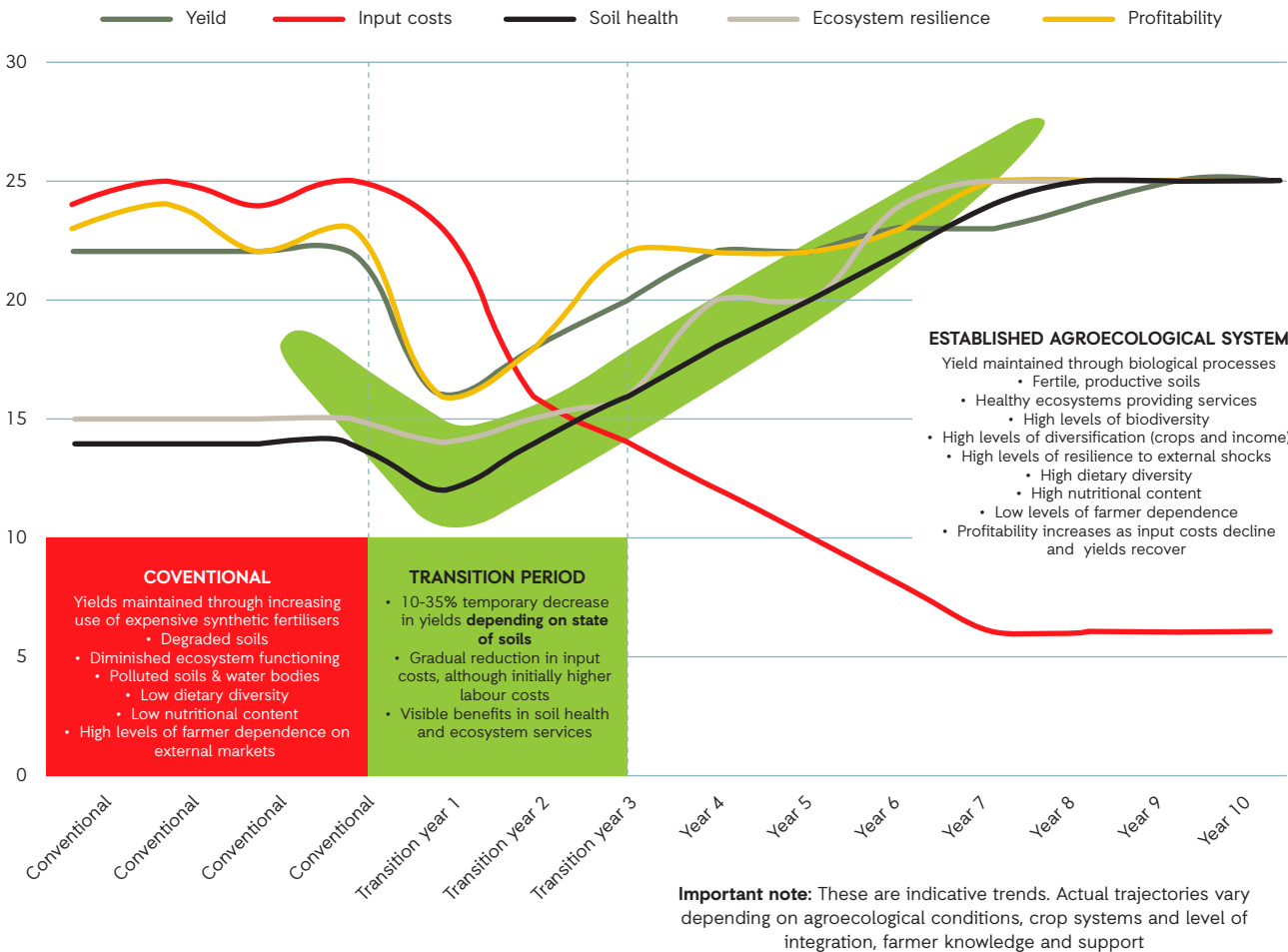


Figure 5: Indicative illustration of agroecological transition and comparisons regarding yield, input costs, soil health, resilience and profitability²²



"When the rains change, we must change with them," said Dz'ra Christiane, a forty-seven-year-old farmer and mother in Ituri province, Eastern DRC. When they resettled after the conflict, her family had to rebuild their lives. Farming was the only way forward, yet rains arrive late or stopped early, and crops that once grew easily no longer thrived. Christiane joined 100 other farmers to learn from an agroecological farmer field school, supported by ActionAid. After 21 months of using the techniques she learned, her 10-acre field flourished: bean harvests increased from 80 kg to about 130 kg; soybean production rose from 90 kg to 150 kg; eggplant yields grew from 250 kg to 400 kg; and potato harvests increased from 300 kg to 550 kg. "Before, everything we harvested had to be eaten" she said. "Now I can save seeds for the future." PHOTO: ACTIONAID DRC



3. AGROECOLOGY WORKS: THE EVIDENCE

» Can agroecology match industrial agriculture's yields? Yes.

The Research Institute of Organic Agriculture's (FiBL's) long-term comparative trials between organic and conventional systems in Kenya, Bolivia and India show that agroecological practices sustainably increase yields per hectare while also generating ecological benefits. In many cases, use of these practices can even surpass conventional yields,²³ by boosting soil fertility, enhancing its structure and ability to retain water and enabling ongoing production.²⁴ This is confirmed by research in northern Ghana that found that agroecological soil and water conservation practices produce maize yields comparable to conventional cultivation.²⁵ In fact, a 2024 meta-study of peer reviewed studies across Africa confirmed that agroecological practices can increase land productivity in maize production.²⁶

- A Center for International Forestry Research (CIFOR-ICRAF) study of agroecological sites in **Kenya** confirms **improved productivity**.²⁷
- Research in **Tanzania** shows an **almost tripling** of pigeon pea and sorghum yields, with significant increases in cassava and maize yields.²⁸
- In **Nigeria**, maize fields under agroecological management show average yield increases from 2.9 to 3.6 tons a hectare.²⁹ And farmers trained in composting, crop rotation and dry-season farming report doubling of cassava, maize and groundnut yields.³⁰
- In **Zambia**, maize demonstration plots consistently **outperform conventional plots by as much as 100%** in some cases.³¹

- In the **Gambia**, yields of millet and groundnuts under agroecological management match or **exceed conventional management**.³² And in the savannah zone, 93% of farmers that adopted agroecological practices noted increased yields.
- FiBL notes that yields can easily double in diversified systems in low-income countries and in the tropics.³³ Across sub-Saharan Africa, grain legume-cereal rotations **increased cereal yields by an average of 41%** compared with continuous cereal cultivation.³⁴

» Kenya – A cost-benefit analysis of conventional and agroecological production

A study focused on traditional African vegetables in Murang'a County, Kenya shows agroecologically produced Amaranth and kale outperforming conventional plots by 45% and 34% respectively. Gross margins were 993% higher for the agroecological Amaranth and 757% higher for the kale.³⁵

FiBL's long-term study in Kenya notes that from year 3 of a transition to agroecology, profitability was similar to conventional farming – but with a 25-50% organic premium gained on sales, profitability was 53% higher.³⁶

A TAPE study conducted in three Kenyan counties notes that higher productivity from those using agroecological practices resulted in a 37.8% increase in profit.³⁷

>> Productivity means more than yields

FiBL's research notes, however, that yield gaps between conventional and agroecology has likely been overestimated and that many estimates show that a growing future population can already be fed with what is produced today.³⁸ This means that the productivity discussion must move beyond yields to address soil health, climate change, hunger and poverty.³⁹ Industrial agricultural approaches have not and cannot solve these critical challenges.

>> Can agroecology build a sustainable base for ongoing agriculture? Yes

Agroecology's benefits accrue and multiply over time. The transition period at the farm level can take up to three years (depending on the starting state of the soil, farmer knowledge and support) to realise comparable yields to conventional farms, although cost savings on external inputs start from year one. The research is clear. Soils regenerated through agroecological practices support heightened and more diverse microbial life, have stronger structures with more organic matter, are able to retain and circulate more water and nutrients, and therefore support long-term ecosystem functioning. This includes maintaining and enhancing critical biodiversity,⁴⁰ including pollinators, beneficial insects for natural pest regulation⁴¹ and wildlife.⁴²

Agroecology as a strategic response to climate change

African smallholder farmers are on the frontline of addressing the climate crisis. Most are practising rain-fed agriculture on soils degraded through continuous cultivation and application of nutrient-leaching synthetic inputs. There is significant risk of reduced or no yields as rainfall patterns shift in timing and intensity with knock-on effects on food security and livelihoods. Agroecology plays a critical role in building farm-level resilience to changing climatic conditions.⁴³ It improves the water retentive capacity of soils and maintains the genetic diversity of food and medicinal plants that we will need in the future to adapt.⁴⁴ Agroecology emphasises use of indigenous and farmer-managed seed that has adapted over time to changing conditions (unlike hybrid or genetically modified seed). Resilience

is built into the ecosystem itself to enable faster recovery in times of extreme weather events – like floods or drought.

- **Zimbabwean** farmers report that **agroecology fields sustain while conventional fields falter under environmental stress**.⁴⁵
- **Across the continent**, studies prove that agroecology **stabilises yields during dry spells** due to healthy soil structure and moisture retention; this provides nutritional and financial resilience for smallholder farmers.⁴⁶

FiBL research shows that farms using agroecological practices are two-to-four times more energy efficient than conventional farms, illustrating mitigation potential.⁴⁷

Agroecology enables a fuller definition of productivity

Industrial food systems define productivity as yield, seeing how efficiently inputs are converted into outputs. There are extreme consequences to this narrow view of farming systems. Increasingly scientific evidence shows the significant damage done to soils, water bodies and biodiversity by industrial agricultural approaches. In addition, these systems often produce food that is lacking in nutrient richness and diversity while exposing consumers to harmful pesticide residues. Ecological and human health costs are externalised in this system with its narrow focus on yield. This is particularly dangerous in a context of changing climatic conditions and increasing soil degradation.

Agroecology embraces a wider view of productivity. This includes yield while also extending consideration to long-term productivity based on healthy soils and farming systems that are able to adapt to climate change and that provide the basis for both food and nutrition security at the community level. By leveraging ecosystem services rather than external inputs, agroecology promotes biodiversity, soil health and climate resilience.⁴⁸

- In **Ethiopia**, a study shows that **transitioning to agroecology has a positive effect on tenure security, agricultural output, gross revenue and diversity of income-generating activities**.⁴⁹
- In **Nigeria**, agroecological farmers achieve **higher technical efficiency** than conventional farmers, with higher levels of resilience against climate shocks.⁵⁰

>> Key takeaways:

- Agroecology yields can match or surpass those of conventional crops
- A transition period of three to five years is sometimes required to reach these levels.
- Agroecology makes farms and food systems more resilient to climate change
- Agroecology enhances productivity gains beyond yield, to also provide benefits over time and in context, and with better quality outputs.

>> Is agroecology financially feasible for governments, farmers and communities? Yes.

Agroecological farming is economically viable, secure and profitable for governments, communities and farmers. Governments benefit from reduced dependencies on volatile global markets to secure vital agricultural inputs, saving them money.

They also accrue significant benefits in conserving vital ecosystems (soils, forests, water systems, pollinators) allowing them to report progress against global targets on climate adaptation, mitigation, biodiversity and land degradation. Over time, expenditure on public health would reduce as people consume more nutritious and diverse foods and instances of pesticide poisoning lessen. They would realise cost savings in responding to climate-induced losses as agroecological landscapes become more resilient to external shocks over time.

- Scaling agroecology could **lower African countries' fertiliser import bills, reduce costs of remediating landscapes and strengthen rural livelihoods** through diversifying income sources. This applies to all countries spending significant levels of agricultural budgets on industrial input support systems, to the detriment of extension services and research and development.

Farmers benefit directly from cost savings, enhanced productivity and diversification of crop income streams. Farmers cut the costs of synthetic fertilisers and pesticides when switching to on-farm composting, recycling of organic waste and natural biopesticides.⁵¹ As soil retains more water, for longer periods, the need for irrigation is reduced, creating even further tangible savings. Over time, these cost savings compound.

- A **Kenyan** study shows a positive correlation between agroecological practices, **reduction in input costs and enhanced income and wealth creation**.⁵²
- This finding is echoed in **Ugandan**⁵³ and **Zambian** research.⁵⁴ A CIFOR-ICRAF 2007 study shows that **agroforestry-based systems are more profitable by up to US\$309 per hectare** than monoculture production.⁵⁵

>> Agroecology builds food sovereignty – of communities, countries, and the continent

Smallholder farmer reliance on synthetic fertilisers – either purchased directly or supplied through state farm input subsidy programmes – places them at significant risk.⁵⁶ These inputs are sourced from a volatile global market increasingly disrupted by conflicts, which escalate the price and availability of fertilisers. Such dependency means that without such synthetic fertilisers, farmers face the possibility of reduced or no yields as their soils are no longer able to support plant growth on their own. In heavily subsidising synthetic fertilisers, governments take on the same costs, dependencies and risks, but at even greater scale. Agroecology provides a solution to this crisis.

>> Pfumvudza-Intwasa: Conservation agriculture in Zimbabwe

Adoption of some agroecological practices in Zimbabwe, under a conservation agriculture approach, known locally as Pfumvudza-Intwasa, has resulted in up to 800% more yields for some farmers compared to their conventional counterparts. Beyond enhanced productivity, this approach has generated significantly higher levels of food security where it has been implemented and has built ecological resilience to climate change and extreme events, like drought.⁵⁷

Those looking to enter formal markets can also embrace certification to access niche markets and the organic premium. While there is no commonly understood certification system for agroecology,

there is an option for organic certification in many African countries – both third party and participatory guarantee systems (PGS). As awareness of the negative health outcomes from the industrial model increases, there is already increased demand for food grown without harmful synthetic chemicals and in ways that regenerate the base of production.

Profitability in these systems is influenced by degree of agroecological practice (knowledge and access to relevant materials), availability of labour and access to markets.⁵⁸

- In **Kenya**, FiBL's study shows that **from year three, profitability of organic agriculture matched conventional, even without a price premium** (due to increased productivity and cost savings). And **with the organic premium, farmers realised up to 53% higher profits** than their conventional counterparts.⁵⁹
- In **Uganda**, price premiums were associated with PGS certification and ability to store the harvest till off-peak seasons;⁶⁰ participants in this study noted that they were, even without certification, **able to sell at slightly higher prices**, likely due to growing health concerns.

➤ Enabling conditions in Kenya for agroecology

Kenya's Murang'a county developed its own strategy prior to national processes, gaining international attention and funding for implementation. Other counties in Kenya followed suit. This devolvement of policy making to district/county level can drive uptake and awareness of agroecology where it matters most – with farmers and consumers. At the national level, Kenya explicitly recognised the links between policies and strategies focused on related aspects – seed, plant varieties, pesticides and climate change.

For households and communities, financial benefits include reduced household spending on food and increased livelihood opportunities through value-addition on farm products and making of bio-inputs. Agroecology reduces household spending on food by encouraging crop diversification, ensuring more types of food are available year-round, resulting in increased

consumption of own production.⁶¹ This cost saving also generates health benefits by building nutritional diversity available at the household and community level.⁶²

By diversifying crops and integrating crops with livestock production, farming households reduce their reliance on a single commodity market:⁶³ mostly maize production that is incentivised through input subsidy and government purchase schemes. A common outcome is that smallholder farmers produce and sell into the market at the same time, driving down prices and thus their own income. Diversification reduces this dependency and opens up additional income streams.

- Research in **Nigeria** highlights **cost savings** and higher levels of **food security** due to crop diversity.⁶⁴

There is significant scope to grow on-farm value addition to lengthen the life of agroecological products and further diversify income streams and enable access to new markets. This requires investment in knowledge generation and sharing and value-addition infrastructure.⁶⁵ Uptake of agroecological farming has also boosted the market demand for bio-inputs (fertilisers and foliar boosters)⁶⁶ creating new livelihood and job creation opportunities. Local and national governments benefit from stabilised and reliable rural economies less exposed to fluctuating commodity prices.

- A study in **Ethiopia** illustrated how transitioning to agroecology **has diversified income-generating activities**, as well as **overall farm revenue**, while also improving dietary diversity.⁶⁷

These economic savings and benefits interact with positive health and ecological outcomes. Agroecology is by its nature synergistic, where different elements support each other and together produce greater overall benefits.

➤ Key takeaways:

- Agroecology reduces costs for farmers and governments
- Agroecology improves profit margins and opens up new income streams
- Agroecology boosts household food security through increased own consumption
- Agroecology reduces systemic risk.

>> Are consumers demanding agroecological food? Yes.

All consumers want food that is healthy and safe.⁶⁸ Across Africa, increasing awareness of negative health outcomes of the industrial food system (pesticide residues, low nutritional value) is slowly driving demand for fresh food produced locally and grown without harmful synthetic chemicals and in a way that does not destroy the ecological base of production.

- In **Tanzania**⁶⁹ and **Zambia**,⁷⁰ growing consumer **concerns around food safety and nutritional content** are driving the **growth of domestic agroecological markets**.
- In **Nigeria**, research shows that **consumers are willing to pay about 20-30% more** for organic vegetables because of health concerns.⁷¹
- This **same trend** applies in **Ghanaian** urban centres where organic vegetables were also associated with better flavour and higher levels of nutrients.⁷² And consumers were willing to pay up to 50% more for certified organic vegetables.⁷³

There are, however, significant issues around access to healthy food – in some countries, this relates to price.^{74, 75} Organic food is often sold with a premium, putting it out of economic reach of most consumers. In other countries, access is restricted by the food system itself, which is incentivised towards industrial methods through subsidies (making conventional products ‘cheaper’ by not reflecting their true cost), institutional orientations and multi-national programmes with their own agendas. This makes it difficult for smallholder farmers to even farm agroecologically and for consumers to access food grown outside of the industrial model. Income and education levels play a role in price perceptions and the willingness to pay more for organic products.⁷⁶

There is far greater awareness of organic products than agroecology in all 10 countries surveyed, as there are few certification and no labelling schemes available for agroecology. In Uganda, consumer research shows that agroecology is understood broadly as linked to sustainable resource use with much less understanding of specific principles and practices, particularly social aspects.⁷⁷ In Kenya, low-income groups tend to not associate organic or agroecological food with labelling or certification but rather their perceptions of where the food originates and how it was produced.⁷⁸ These

perceptions are often based on an assumption that food grown in rural areas is produced in a traditional way without the use of chemicals – this is not always the case. Higher-income groups in Kenya buying from formal outlets (like supermarkets) do not have knowledge of where the food originates and so labelling is more important in being able to discern the system in which it was produced.⁷⁹

There is uneven agroecological market development and demand across the continent. Growing the demand entails engaging in complex market dynamics. Key consumer obstacles include price sensitivity, inconsistent availability or limited availability in convenient retail spaces, a lack of knowledge about agroecological production systems and their benefits, and limited trusted labelling/certification.⁸⁰ Many smallholder agroecological farmers are producing for self-consumption with limited surplus for market.⁸¹ Distribution patterns need to shift to include formal retail outlets, beyond the current direct farmer-to-consumer sales, niche retail, farmers’ markets and NGO-led supply chains.⁸² And this means creating appropriate regulatory and market mechanisms and incentives that are not exclusionary in terms of consistency and volume of production.

There is also a **need for deliberate strategies to stimulate and sustain consumer demand** for agroecologically produced food.⁸³ Many African organisations have taken the initiative to encourage consumption of traditional and agroecologically produced foods. The Alliance for Food Sovereignty in Africa (AFSA) campaign My Food is African aims to raise awareness and stimulate demand for traditional foods, as an example of a multi-country initiative. In many countries, including Malawi, Zambia, Zimbabwe and Kenya, civil society organisations, including ActionAid, support the holding of district and national-level traditional food and seed fairs to encourage consumption and create markets for traditional foods. More needs to be done to shift consumption patterns. Comparative research on the nutritional value of traditional foods (e.g. African Leafy Vegetables) versus modern foods and organisations such as Slow Food have contributed to this shift.

- **Zimbabwean** farmers are increasingly able to position agroecological products as **credible alternatives to conventional** ones, particularly through agroecology food and seed fairs.⁸⁴ These build **consumer trust** and link farmers to urban buyers.⁸⁵

>> Key takeaways:

- Incentivise agroecological production by stressing cost-savings, diversification of income streams, sustained production base and potentially higher yields – rather than the promise of a premium price. This reduces the risk of agroecological products being priced out of reach of most African consumers.
- Support large-scale consumer awareness campaigns that connect food consumption with human and ecological health linked to agroecological practices and principles.

>> Can agroecology support gender equality and youth inclusion? Yes

Women and youth should be at the centre of agroecological transformation. Women are key food producers and lead on household nutritional security. But they face significant challenges – unequal access to land, finance, inputs and decision making.⁸⁶ Women also bear a disproportionate burden of unpaid care and labour work. This limits their ability to participate in training, decision making forums and markets. In sub-Saharan Africa, 66% of women's employment is in agrifood systems, compared with 60% of men's employment.⁸⁷ Closing the 24% productivity gap between women and men farmers, and the wage gap, would increase global GDP by nearly US\$1 trillion and reduce global food insecurity by about 45 million people.⁸⁸ Adoption of agroecology as a framing for food and farming systems can enhance women's control over production (particularly for market production), reduce their labour burdens through dissemination of appropriate technologies, and enable their access to markets through inclusive policies and regulations.

Africa has the youngest population in the world – about 60% of Africans are under the age of 25 years. As of 2025, 57% of African youth (304 million) are working, yet 90% are in informal jobs and around 40% live in poverty,⁸⁹ highlighting the need to transform agriculture into a viable and dignified livelihood pathway. With low average formal employment rates across the continent, this is both a risk and an opportunity. Youth are essential to scaling agroecology as farmers, processors and entrepreneurs. Research shows though that value-chain paths need to be made for youth⁹⁰ and support provided to them to ignite interest in agriculture (and

agroecology) as a profession of the future.

Agroecology is not only an environmental or production approach, but a socially transformative pathway that can advance gender equality, create dignified rural livelihoods and support intergenerational renewal in African food systems.

>> Are there limitations to agroecology? Yes and no.

Agroecology offers a viable pathway for transforming food systems. Its adoption, however, is constrained by a set of structural, economic and practical challenges.

These challenges include:

- **The prevalence of the industrial model with its mono-focus on yield as a determinant of food security, which needs to be replaced with one that considers multi-dimensional aspects such as nutrition, health and livelihoods.** This assumption that yields equate with food security is deeply embedded in policymaking practices, forming the basis for many agricultural programmes, technology and support programmes.
- **The benefits of agroecology are not immediate.** Most systems need up to three years to recover ecological processes and stabilise yields. This creates a period of risk for farmers despite the more significant long-term benefits. They need targeted financial and technical support and incentives to encourage adoption and transition through this period.
- **Agroecology is knowledge intensive.** It requires farmers to reclaim their role as field scientists and researchers, as plant breeders and technicians. As much of this traditional knowledge has been eroded through colonisation and the uptake of capitalist economic models, a highly capacitated extension service and dedicated research and development is needed to support the transition.
- **The input system for agroecological production is under-developed.** Although civil society and private sector is putting significant effort into training, awareness raising, innovation and investments in bio-input production, this needs scaling out and must be accompanied by supportive regulatory frameworks and infrastructure provision.
- **Initially, agroecology is labour intensive.** Labour needs increase during the transition

phase to enable crop diversification, on-farm composting and manual weeding. Provision of appropriate mechanisation and investment in further technology development, aligned with agroecological principles, can address this challenge. Without such support, uptake will be slow or the burden will fall on women, further

deepening inequalities. Or it will fall to youth, further alienating them from wanting to pursue a future in farming.

The primary barriers to agroecology are systemic. To make the necessary transition feasible with less risk for farmers, enabling systems need to be put in place.

In the 2026 farming season, the government of Gambia is distributing 10,000 metric tonnes of locally-produced organic fertiliser for free, alongside reduced amounts of subsidised fertiliser, across the country. The shift towards sustainable input systems is reflected in the country's National Fertiliser Policy (2023 to 2032), which encourages organic fertiliser production and promotes integrated nutrient management.

Gambia's Minister of Agriculture Demba Sabally, at the 2025 National Forum on Agroecology, where he pledged to make organic fertiliser available to farmers.

PHOTO: ACTIONAID GAMBIA



4. SCALING UP AGROECOLOGY IN AFRICA – WHAT IS NEEDED?

An agroecological food and farming framework is not a siloed policy choice. By its nature, agroecology speaks to related aspects of justice (gender, land, seed, water), knowledge and whose counts (indigenous and traditional knowledge on par with scientific knowledge), the economy (inclusivity, equity, markets), environmental affairs (ecological health, biodiversity, and use and access to genetic resources), among others. As such, scaling agroecology relies on a series of interlinked and coordinated interventions to realise its benefits across ecological, economic and social spheres and to overcome historic obstacles and market distortions.

This requires systemic support through proactive policies and regulations, knowledge generation and application and market incentives. These are described below with country evidence drawn from the research aligned with a concise set of recommendations.

» An enabling policy environment

Seven African countries have national agroecology strategies or frameworks in place (Benin, Burkina Faso, Ethiopia, Kenya, Liberia, Tanzania and Tunisia), four more are close to finalising (Nigeria, Senegal, Uganda and Zambia), with four more in the development process (Malawi, South Africa, Rwanda and Zimbabwe).⁹¹ This is significant, but their success will depend on whether

they can leverage existing policies related to agriculture, including climate change, water, rural development and gender. As there are no agroecology policies, the strategies must leverage existing policies or make a compelling call for policy revision.

An enabling policy environment for agroecology is therefore one that considers the interlinkages between sectors and that aims for integrated, not siloed, decision making.

- **Kenya** has, to some degree, done this by recognising the **linkages between policies and strategies focused on climate change, pesticides and seeds** and plant varieties.

In many countries, however, policies and associated regulations, programmes and projects can actively disincentivise uptake of agroecology.

- Farm subsidy input programmes tend to be orientated towards industrial methods reflecting an **institutional bias towards input-intensive systems; this is true for Kenya and Zambia,⁹² along with most African countries.**
- **Inappropriate technical standards** for organic products and bio-inputs are noted as obstacles in **Kenya and Tanzania**, along with delays in gaining products approvals or often **expensive certification.**⁹³

>> Recommendations: Reform policy and regulatory frameworks

- **Align agroecology strategies with national development plans** and existing policies, identifying entry points within agriculture, gender and youth, climate change, biodiversity and rural development policies to embed agroecology across sectors.
- **Review policy misalignment**, by reviewing related policies plus their accompanying strategies, regulations, budgets, monitoring and evaluation frameworks, and programmes to identify barriers to the uptake of agroecology and propose ways to overcome them.
- **Review and align regulatory mechanisms** to incentivise uptake of agroecology and tackle the negative consequences of industrial agriculture.
- **Gradually reorient subsidies and incentives** away from industrial inputs towards supporting a just transition to agroecology. By the end of CAADP's term in 2035, at least a third of subsidies should be aligned with agroecological principles.
- **Develop appropriate standards and regulations for** bio-inputs that enable smallholder farmers to continue with on-farm production and sale/exchange. These inputs range from farmer seed to bio-fertilisers. In some cases, regional model laws or proposed frameworks already exist or are in development, such as AU's policy framework for Farmer Managed Seed Systems released for consultation in 2025, or EALA's 2026 Agroecology Bill.
- **Make a clear case for budgetary support** for agroecology programmes and projects, including for monitoring, evaluation and learning.
- **Strengthen governance and coordination** by establishing and supporting multi-stakeholder platforms to guide, implement and monitor the strategies over time.

Transforming the food system will not be easy, despite the presence of national agroecology strategies. There are entrenched and vested interests in agricultural input markets coupled with an institutional reluctance. Agroecology strategies must also find ways to deal with this significant challenge, and they must speak to district and local level government, as this is where implementation will take place. Funding for existing government programmes across all sectors tends to be limited, and so agroecology strategies must make a compelling case, by positioning agroecology as an appropriate and timely response to climate change, which has funding flows, and quantifying its contribution to other sectors such as health.



Nigeria's National Summit on Agroecology, Climate justice and Public-Private Partnerships in December 2025 validated the country's National Agroecology Strategy and agreed on immediate steps to scale agroecology nationwide.
PHOTO: ACTIONAID NIGERIA

» Dedicated support for market and value-chain development

Agroecological products struggle to compete in markets structured around high-volume conventional production,⁹⁴ particularly as they are not sufficiently differentiated in the marketplace⁹⁵ and there is limited consumer awareness of agroecological production systems and their benefits.

Common challenges for smallholder farmers, including agroecological ones, in accessing markets include supply challenges (producing consistently in required volumes), lack of transport, infrastructure (post-harvest storage and refrigeration), limited or no access to finance, low levels of market literacy (information and pricing) and poor marketing strategies.⁹⁶ Access to premium markets is constrained by logistical and administrative challenges, expensive certification schemes and weak marketing.⁹⁷

» Recommendations: Build inclusive and functional agroecological markets

- **Invest in local and territorial markets** that connect producers to consumers, like food fairs, as well as regional food initiatives that strengthen connections, visibility and pride.
- **Simplify and adapt certification schemes** for agroecological products through appropriate mechanisms such as PGS. These systems enable farmer self-organisation, peer-learning and collaborative production planning that facilitate aggregation of produce to enter larger markets.
- **Strengthen local farmer organisations and cooperatives** to enable easier aggregation and transporting of products to markets, also allowing them to bargain for better prices as a collective.
- **Invest in infrastructure** for aggregation, storage, transport, processing and distribution and in mechanisms that reduce transaction costs for smallholders, including appropriate market information systems.
- **Actively facilitate public procurement** of agroecological produce for schools, hospitals and other public institutions, including by providing direct support to enable consistent supply at scale.

The GAFSP's producer-led organisation grant tract is supporting MVIWATA in Tanzania to train its members in agroecological practices and improved planting practices, resulting in a reported 30% increase in production due to improved disease management and soil fertility practices. Farmers are also benefitting from increased purchasing power through improved market access from the direct purchase of their products by MVIWATA. The organisation offtakes the farmers' products and later sells them at a higher price; the profits are then shared with the farmers. This has reduced farmers' dependency on middlemen who often dictate below market prices. The planned establishment of a farmer-owned processing hub is expected to add further value to raw produce.

Smallholder farmers involved in the Baridi Sokoni project at Njombe Market, Tanzania.
PHOTO: ESAFF



>> Strengthening of local input systems

A transition to agroecology will not be possible without a strong bio-input system, one that is able to deliver appropriate, affordable and contextual solutions to farmers. The industrial model is entrenched through government contracts with multinational corporations to provide seeds, fertilisers and plant protection products with distribution through established agrodealers – that often act as extension officers – and infrastructure (warehousing, retail shops, logistics) and well-funded marketing budgets. Regulations relating to inputs also favour large industrial actors, who can use their size to generate economies of scale. It is an extremely risky model, given that global conflicts (the Russian invasion of Ukraine and the more recent United States' war on Iran) disrupt supply and pricing of

fertilisers, as an example, on which African farmers have become dependent.

Ideally, farmers produce bio-inputs on their own farms, aligning with agroecological principles of recycling and enabling mutually reinforcing interactions. Smallholder producer organisations and civil society organisations, including ActionAid and others, are working to scale up farmer knowledge on how to make bio-inputs. The results are visible – improved soils able to support increased yields and crop diversity. Farmers adapt recipes (for bokashi, liquid manures, plant teas), making use of locally available ingredients, while also creating livelihoods by selling into local markets based on increasing demand. Such initiatives need support to scale up and out.

>> Recommendations: Strengthen local input systems

- **Support** (through investment, incentives and regulation) **on-farm and localised bio-input production** to stimulate local input supply chains while creating livelihoods.
- **Ensure that regulations are not discriminatory or exclusionary** for small-scale input suppliers.
- **Raise awareness of the benefits** of these products, such as cost savings, soil regeneration and biodiversity protection.

In Janeth Nyamayahasi's home village of Msanga, in Dodoma, Tanzania, many farmers were buying seeds alongside fertiliser – often expensive and poorly adapted to the dry conditions of the area – while the indigenous seeds that had sustained communities for generations began to disappear. Since receiving training, farmers have established one community seed bank and two seed farms, along with seed demo plots where indigenous crops such as sorghum, millet, cowpeas, and traditional vegetables are preserved and multiplied. "At our seed bank, farmers can borrow seeds during planting season and return them after harvest," Janeth explains. "This keeps our indigenous seeds alive in the community." The results of seed saving, integrated with other agroecological practices, are already visible. Last season, Janeth harvested 12 bags of maize, far more than the 4 bags the same field provided previously.

PHOTO: ACTIONAID TANZANIA



➤ Investment in knowledge: Extension, peer learning and research

Extension officers and agrodealers need extensive training on agroecology methods to support wider uptake.⁹⁸ This lack of institutional technical and research knowledge compounds lack of knowledge among farmers, particularly on how to manage pests and diseases and produce on-farm bio-inputs, which limits uptake of agroecological practices.⁹⁹ Strong relationships between researchers and farmers are also critical for participatory plant breeding and farmer-managed seed systems. Farmers are also more likely to adopt agroecological practices when they see that their local knowledge has been incorporated.

- A core obstacle noted by stakeholders in **Kenya, Uganda, Ethiopia, Ghana, the Gambia, Tanzania, Malawi and Zambia** is the **inadequacy of current extension services** to support an agroecological transition. The average ratio of extension workers to farmers is about 1:3,000 in Africa; while the FAO suggests a ratio of 1:400 to 2,000, with lower income and population density regions requiring greater extension support. Compounding this, extension officers are typically trained in industrial agricultural practices rather than agroecology.^{100, 101}
- As research from **Tanzania** shows, **research also needs to be localised** to account for the myriad farming contexts and micro-climates across the continent.

➤ Recommendations: Transform extension, research and knowledge systems

- **Reorient extension services towards agroecology** by retraining and taking on more extension officers. This investment is critical to achieving food security at local levels and preserving biodiversity.
- **Invest in and promote farmer-to-farmer learning** through demonstration plots, field schools and knowledge exchanges. There are already many successful projects, particularly led by producer organisations, that could be further supported.
- **Review and align the national research agenda** to support the uptake of agroecology and increase public investment into aligned research and long-term studies on its effects. Ensure that the research agenda follows participatory approaches and recognises traditional and indigenous knowledge on par with scientific approaches.
- **Facilitate the updating of existing school and tertiary level educational curriculums** to centre agroecology as a framing for farming.

Community members of Hufwa Hampande Ward, Monze District, Zambia, pose in front of the newly refurbished extension officer's house, built in response to local advocacy for improved agricultural services.
PHOTO: ACTIONAID ZAMBIA



>> Filled gaps in financing and investment

There is limited public investment in agriculture across the African continent with very few countries having ever met their CAADP commitment to allocate a minimum of 10% of their national budgets to agriculture. Much of the current allocations to agriculture are consumed by harmful subsidy payments that benefit multinational corporations but damage people and ecosystems.

There is significant opportunity, even within current allocations, to redirect this funding into agroecological research, training of extension officers, supporting on-farm bio-input production and subsidising the transition. ActionAid's 2024 review of four countries' (Malawi, Tanzania, Zambia, Zimbabwe) agricultural spending shows that this strategic change is starting to take place. However, despite the policy shift towards agroecology, an average of less than 50% of agricultural budgets, was being spent on activities aligned to agroecological practices.¹⁰² Identifying how governments are already supporting agroecology could be key to opening more public investment in the sector.

Agroecology will not be able to scale without proper investment. Innovative ways will need to be found to fund this necessary transition of food systems across Africa, including positioning it as a response to recognised global challenges – hunger, malnutrition, biodiversity loss and poverty. In particular, it must urgently be recognised as a response to climate change and integrated into Nationally Determined Contributions and National Adaptation Plans. The African Union, the African Group of Negotiators and regional economic blocs must take agroecology forward as both a mitigation and adaptation response. Agroecology provides a significant opportunity for resilience building on the African continent – across social, ecological and economic spheres.

Agroecology does not feature prominently enough in large-scale agricultural research funding, which marginalises its potential contribution.¹⁰³ Even the billions of dollars of broader agricultural financing provided by the African Development Bank (AfDB) to governments remains dominated by industrial, input intensive models. An AFSA study reported that although half of AfDB's agricultural approvals are misleadingly classified as climate finance under the guise of "climate-

smart agriculture", few meaningfully integrate elements of agroecology, with insufficient farmer consultation. AfDB's growing private-sector focused portfolio also lacks transparency on ecological impacts.¹⁰⁴

Donor funding tends to focus on short-term project interventions rather than long-term systemic approaches. Most project cycles are three to four years, but to support an agroecological transition at the landscape level (beyond the farm to encompass broader ecological processes – water catchments as an example), project cycles would need to extend for up to a decade. This would include preparing for a transition – ensuring that the necessary knowledge and technical support is in place, supporting the transition period as yields stabilise and match conventional and to ensure that farmers can access appropriate markets. The Global Agriculture and Food Security Program's (GAFSP) targeted, innovative support for producer organisations, and growing focus on agroecology for climate resilience, provides useful lessons.^{105, 106}

Limited access to finance remains a significant constraint facing farmers, and producer organisations, interested in expanding agroecological initiatives. Financial institutions generally lack awareness of agroecology and its market potential.¹⁰⁷ This limits producers' and their organisations' ability to access finance and capital for expanding their operations. Kenyan, Nigerian and Malawian producers note this as a key constraint as they are unable to purchase storage equipment to reduce post-harvest loss or to process crops or buy transport to access markets.



Ellen Matupi, a smallholder farmer and president of the Coalition of Women Farmers (COWFA) in Malawi, speaking at COP25 in 2019, urging world leaders to invest in agroecology. PHOTO: ACTIONAID INTERNATIONAL

➤ Recommendations: Unlock appropriate and accessible funding

- **Increase national agricultural budget allocations** to support the implementation of national agroecology strategies. At least 30% of national agricultural budgets should be aligned with agroecological principles. This should also extend to other budgetary areas captured in National Agri-Food System Investment Plans (NASIPs) such as water, land, environment, education, research, credit and social protection.
- **Redirect donor funding** towards agroecological, grant-based, and long-term systemic approaches and building elements (such as public research and extension, bio-input supply chains and farmer-managed seed systems) that support the agroecological transition. Such support should be measured against performance indicators that show clear resilience impacts.
- **Source innovative support for agroecological enterprises**, including public co-investment, that extends beyond training or accelerator programmes to ensure they can enter the market. Ensure that such support is provided on an inclusive basis to stop potential market monopolisation.
- **Expand farmers' access to finance and risk management systems.** Such support should be differentiated according to context-specific needs of farmers, rather than a 'one size fits all' model.
 - For smallholders, **producer organisations can be supported to develop collective financial mechanisms**—including cooperative credit systems, guarantee facilities and appropriate crop insurance programmes— to enable their members to invest in infrastructure, production improvements and marketing coordination.
 - For agroecological enterprises growing in size, **work with financial institutions to open appropriate loan offerings** that align to agroecological principles and avoid exposing smallholder farmers to unfair risk and exploitative debt burdens. Financial support should be tailored to their specific context, needs and operational risks. Such tailored and holistic support, integrating both technical and business training and mentoring, should accommodate the transitional period needed as farmers shift from conventional to agroecological approaches.



>> Heightened farmer awareness and consumer buy-in

Limited knowledge, skills and awareness about agroecological practices and their benefits among farmers are most frequently mentioned as obstacles to the implementation of agroecology.¹⁰⁸ A study in Uganda notes that there is scepticism and resistance to change,¹⁰⁹ particularly as the modernist narrative of industrial agriculture is linked to progress while agroecology is perceived as something new and untested.¹¹⁰ Research in the Gambia points to how social norms associate industrial farming as modern and effective.

Uptake is also influenced by education and income levels, gender and land ownership. This requires a differentiated communication strategy for different stakeholders. Such a strategy needs to navigate

producer and consumer expectations, dominant discourses, sociocultural norms and practices.¹¹¹ It needs to explain clearly the transition process and long-term benefits for farmers. For consumers, it needs to highlight the health and social benefits to enable visibility of differentiation between agroecological and conventional products. For government stakeholders, it needs to illustrate how agroecology responds to pressing challenges.

- Research found that **Nigerian consumers** are **willing to pay up to 30% more** for organic food.¹¹²
- **Ghanaian** consumers associate organic food with **better flavour and more nutrients**.¹¹³
- Consumers in **Tanzania**¹¹⁴ and **Zambia**¹¹⁵ are increasingly searching for agroecologically produced food due to **health concerns**.

>> Recommendations: Shift mindsets and raise awareness

- **Invest in large-scale and targeted communication campaigns** using stories and data (productivity, profitability, resilience, health) to provide a compelling narrative of change.
- **Raise awareness of PGS** as a reliable guarantee system for safe and healthy food.
- **Encourage shorter connections between producers and consumers** to build trust in local food systems and to reduce the harms caused by long supply chains (greenhouse gas emissions, as an example).
- **Invest in a counter-narrative to the industrial one** that points to the production of safe, clean and nutritious food in a way that is good for the environment, fair for farmers and consumers, and that sustains all life. A narrative that positions agroecology (using scientific, traditional and indigenous knowledge) as a food system for the future.

In 2025, Zambia's annual Traditional Seed and Food Festival was held under the theme of Seeds of Strength and Sovereignty: Recovering, Rebuilding, Thriving, showcasing agroecological practices that strengthen community resilience.
PHOTO: ACTIONAID ZAMBIA



>> **Appropriate, affordable and accessible technologies**

Agroecology will continue to suffer the ‘traditional’ and ‘small-scale and labour intensive’ image problem if it does not embrace elements of modern technology. Importantly, however, the technology must be appropriate and aligned with agroecological principles. It should not concentrate ownership in a few individuals or corporations. It should not create farmer dependencies. The corporate-led digitalisation of farming, for example, warrants particular caution.¹¹⁶ Industrial agriculture aims to control nature; agroecology aims to enable ecological processes.

Key areas in which technologies could support the uptake of agroecology include labour-saving devices (jab planters, two-wheel walking tractors), water and irrigation technologies (solar, wind or gravity-powered pumps, rainwater harvesting systems, low-pressure drip systems), processing (small-scale mills, threshers and shellers, solar dryers, oil pressers and value-addition tools), reducing food waste and loss at the farm and market level (solar dryers, charcoal coolers, enhanced traditional systems), market systems (mobile advisory services, equipment sharing).

Addressing the labour-intensity of agroecology is key to increasing productivity per person, addressing gender imbalances, attracting youth to farming and implementation on large-scale farms.

>> **Recommendations:** Address labour, technology and transition constraints

- **Support appropriate mechanisation** that aligns with agroecological principles.
- **Reduce labour burdens** through innovation and collective systems.
- **Provide transition support packages** (technical, financial and advisory).
- **Invest in technologies** that enhance, rather than replace, ecological processes.



After Ameya Woreda, a smallholder farmer in Ethiopia, received a walking tractor from ActionAid Ethiopia, she reduced the time she used to spend ploughing her land from three days to one hour. PHOTO: ACTIONAID ETHIOPIA



Members of the Oasis Women's Group in Pombo, Baringo county, Kenya holding produce from their agroecological enterprises.
PHOTO: ACTIONAID KENYA

CONCLUSION

Africa stands at a critical juncture. Continuing along the current industrial agriculture pathway will deepen ecological degradation, increase public costs and fail to meet the continent's food and nutrition needs. Agroecology provides a credible alternative grounded in evidence, which is already being practised by farmers and increasingly recognised in policy.

The transition is not automatic. It requires deliberate political will, sustained investment and coordinated action across policy, markets, knowledge systems and

finance. It also requires a shift in how productivity, value and progress are defined – from short-term yield gains to long-term agrifood system health, resilience and equity.

With the right support, agroecology can move beyond fragmented initiatives toward guiding a coherent, continent-wide transition, enabling African countries to confidently realise the vision of the Kampala CAADP Declaration.

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ActionAid is a global movement of people working together to achieve greater human rights for all and defeat poverty. We believe people in poverty have the power within them to create change for themselves, their families and communities. ActionAid is a catalyst for that change.

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