

# Exploring actor roles, behaviors, and agency through participatory timelines in Zimbabwe



INITIATIVE ON  
Agroecology

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## Executive Summary

This report highlights learnings from participatory timelines for agroecological transition conducted in Murehwa and Mbire Districts of Zimbabwe in 2022, and key informant interviews conducted from 2023-2024. A total of 142 local farmers and 20 non-actor farmers participated in the discussions in the two districts. Mbire's timeline starting point was defined to be the tsetsefly aerial spray programs in the late 1980s, followed by rural resettlement and cotton promotion programs that contributed to a major expansion of agricultural and agropastoral activities. The region then saw a series of forest and wildlife conservation initiatives that promoted non-agricultural livelihoods alongside government programs supporting agricultural intensification. In the 2000s, government and NGO projects in the region focused on integrating conservation and agricultural production goals.

In Murehwa, the starting point of the timeline was defined by Zimbabwe's Fast Track Land Reform Program of the early 2000s, which redistributed land largely from white commercial farmers to black smallholders and medium-scale farmers, many of whom had previously farmed communal lands. This process pushed former farm workers to begin clearing and farming previously conserved land. While it expanded new landowners' agency, many lacked adequate resources and knowledge to productively farm their new land. In the following decades, government and NGO projects emphasized low-cost, resource-efficient practices such as conservation farming.

The timelines highlighted the varied experiences of actor groups, including different types of farmers (smallholders, commercial farmers, landless workers, women). The land reform process affected these groups of farmers differently. Men were often more capable of benefitting from agricultural programs and projects than women due to their ownership of land and access to finance. However, women and youth have seen increased agency through empowerment programs. The timelines demonstrated incremental improvements in farmers' knowledge about and uptake of sustainable practices and their agency to change their on-farm production systems. However, their involvement in governance and decision-making was modest throughout the timeline and remains low.

Government actors, especially environmental agencies, local government bodies, and extension services, saw significant gains in agency and involvement in decision-making over the timeline, while traditional leaders lost power. International NGOs also gained *de facto* power over the agricultural development agenda as they provided crucial resources. Private sector actors played a relatively minor role in the timelines thus far, and barriers to their more active support of agroecological transition included unsupportive policies and a lack of consumer demand.

These findings added breadth and depth to insights generated through previous WP5 activities and highlighted potential areas for change in AE-I implementation. These include supporting more transformational change through collective action, which could boost farmers' involvement in broader decision-making and governance processes; monitoring farmers' voice and agency, especially women and youths', as important outcome indicators; and pursuing and formalizing partnerships with powerful government actors, influential civil sector actors, and private sector actors whose engagement has been modest but who have substantial potential for impact on behavioral outcomes.

## Introduction

Agri-food systems around the world face challenges related to climate change, natural resource degradation, poverty, persistent hunger, malnutrition, and more (Mockshell et al., 2023; FAO et al., 2016). In response to these challenges, the CGIAR Transformational Agroecology across Food, Land, and Water Systems Initiative (AE-I) aims to support agroecological transformation through the development and scaling of contextually relevant agroecological innovations for small-scale farmers and other agri-food system actors in seven low- and middle-income countries. In Zimbabwe, AE-I's transdisciplinary, participatory, and change-oriented research and actions are focused on in Murehwa and Mbire Districts and anchored within agroecological living landscapes (ALLs), which are multi-stakeholder spaces that support the co-creation of knowledge and testing of agroecological innovations.

This report presents AE-I Zimbabwe Work Package 5 research, which focuses on understanding factors influencing agency and behavior among producers and other agri-food system actors. The findings shared here are derived from participatory timelines of agroecological transition developed with ALL members and other stakeholders (Table 1). By examining actors' past experiences related to agroecology, we explore how different events enabled or impeded progress toward agroecological transition. Specifically, we consider how past events impacted actors' behavior, agency, and involvement in governance systems, and what factors contributed to these changes, thereby identifying entry points for achieving desired changes in agency and behavior.

We broadly define agroecological transition as a gradual shift toward sustainable agroecosystems and agrifood systems that support environmental, social, and economic objectives in alignment with the thirteen HLPE principles of agroecology (HLPE, 2019). This process is not necessarily a continuous or straight line, and steps along the transition process may not be explicitly described as "agroecological" among local stakeholders for whom the term "agroecology" is relatively new. However, in using this umbrella term of agroecological transition, we sought to position AE-I Zimbabwe's ongoing work about the history of agri-food system reform efforts and other relevant events in the ALLs. The findings will feed into AE-I Zimbabwe's efforts to support transformation processes through ALL activities and help in the identification of indicators that can be used to monitor change for the initiative.

## Methods

To learn how past events and initiatives have impacted actors and contributed to or impeded agroecological transition, we worked with members of the ALLs in Mbire and Murehwa Districts to co-develop timelines of key events in each district's agroecological transition. In October and November 2022, we identified possible timeline starting points through consultations with staff of key local organizations (primarily Zimbabwe's Environmental Management Agency and National Extension Service, AGRITEX). These starting points did not seek to conclusively define the beginning of the agroecological transition process—which arguably has a very long history—but identified significant turning points in modern history. We then organized two workshops per district—one per ALL—and subdivided workshop participants into several smaller focus group discussions (FGDs) comprising 6-22 participants each. Within each ALL workshop, two FGDs were held with farmers, disaggregated by gender, and an additional FGD was convened with non-farmer stakeholders at the district level who have knowledge of the agroecological trajectory of change in the district. The parallel farmer discussions allowed for freer expression of ideas and experiences and were later consolidated into a single timeline through report-back sessions. A total of 142 local farmers participated in the timeline mapping exercise and ladder of power and freedom exercises with 61% being men in the 4 ALLs. In addition, each group was coordinated by two (2) CIMMYT researchers with the support of the two (2) extension staff in the ward.

A follow-up discussion in each ALL was organized in October 2023 to revisit and validate the timelines and discuss the impacts of each key event on actors' agency, behavior, and involvement in governance and decision-making. Between October 2023 and July 2024, key informant interviews (KIIs) were conducted with additional stakeholders in which pre-developed timelines were presented and discussed. These conversations helped to fill gaps, resolve inconsistencies, and understand other actors' engagement in the timeline events. Therefore, we interviewed 20 non-farmer actors [16 male and 4 female] at the district and ward levels.

**Table 1. Participants in participatory timeline workshops and KIIs.**

Actor Group	Representation	Direct participant or broader constituent	Data collection methods	Number of participants
<b>Men farmers</b>	Men, socioeconomic and age diversity	ALL participant	FGDs (2 per district; 4 total)	Mbire Ward 2: 22 participants Ward 3: 22 participants  Murehwa Ward 27: 21 participants Ward 4: 22 participants
<b>Women farmers</b>	Women, socioeconomic and age diversity	ALL participant	FGDs (2 per district; 4 total)	Mbire Ward 2: 9 Ward 3: 6  Murehwa Ward 4: 21 Ward 27: 19
<b>Local leaders</b>	Men	Constituent	KIIs	2
<b>Environmental agency representatives</b>	Men	ALL participant	KIIs	4
<b>Local government representatives</b>	Men, women	ALL participant	KIIs	4
<b>NGO representatives</b>	Men	Constituent	KIIs	2
<b>Grain Marketing Board representatives</b>	Men	Constituent	KIIs	2
<b>Extension agents</b>	Women	ALL participant	KIIs	2
<b>Processors</b>	Men	Constituent	KIIs	1
<b>Private Businesses</b>	Men	AEI Partners	KIIs	2
<b>Commercial Farmer</b>	Men	Constituent	KIIs	1

Source: To come

## Results

### Mbire District Timeline (Q1-2)

Mbire District is a semi-arid region along the Zambezi Valley. Before the starting point, it was characterized by a fragile ecosystem and limited agricultural potential. The region was sparsely populated, in part due to tsetse fly infestation and African trypanosomiasis disease, and the land was mainly used for national parks and safari areas. Before the 1990s, the government developed road maps for the area's sustainable rural development, including tsetse fly control and the expansion of agro-pastoral peasant farming along the northern fly-belt of Zimbabwe. Several tsetse fly control efforts were conducted after that, as part of the new land use plan, which contributed to drastic changes in Mbire District's social, health, and environmental, and

economic systems (discussed below). As such, ALLs discussions identified 1987-1988 as a key point that set the course for increased agricultural activity and agroecological transition, when the Government of Zimbabwe and the European Union (EU) embarked on the aerial spray of tsetse fly. Tsetse fly control expanded farming potential in the region, the farming population increased, and new environmental pressures emerged.

### Starting point conditions and behaviors

At this starting point of agricultural and agroecological transition, farmer behavior in Mbire largely reflected an “organic by default” approach, and agroecosystems were reportedly rich in biodiversity. Most farmers were smallholders who cultivated communal lands and shared resources but had limited individual resources and capital. The communities had fairly homogeneous agro-pastoral farming systems where crop choices, livestock types, and management techniques were shared among communities through social interactions. Farmers mainly used landrace cultivars of maize and finger millet and often practiced monocropping. FGD participants reported that they did not use inorganic agrochemicals (fertilizers, herbicides, and pesticides) to enhance agriculture productivity, but did recycle some farm products such as cattle and goat manure. Cattle ownership per household was very low. In some areas, veterinary services prohibited cattle ownership for reasons related to animal disease control, for instance, where trypanosomiasis infection rates were very high. Due to limited cattle for draught power, farming was done using manual tools such as the hand hoe. Several ethnoveterinary plants and practices were used for ectoparasite control; for example, katunguru’ leaves were used for post-harvest grain storage. Because the area was remote, channels linking farmers to input and output markets were limited. Most of the available natural resources at this time were treated as commons and access was not regulated by formal rules or fees for use, except for sacred species associated with traditional beliefs, rituals, and practices, such as pangolins.

The agency of local actors and their involvement in decision-making and governance varied. Patriarchal social structures led women and youths to be marginalized in terms of formal education, decision-making, land possession, and leadership roles within communities. Although male household heads were the primary decision-makers in agricultural activities, most labor-intensive activities like planting, weeding, and threshing were done by women and children. The village leadership, chiefs, and spirit mediums allocated land and governed other common resources, and were responsible for enforcing conservation laws. The spirit mediums had some power to influence decisions about agriculture at the local level, and some promoted resource-conserving methods like no-tillage, the use of animal or dry matter manure, or the use of agrochemicals. Although most of the farming activities practiced were organic by default, several practices degraded ecological integrity, including streambank cultivation, poaching, wildfires, and monocropping without rotations. Since the region experiences long dry spells, streambank cultivation to this day remains common as a way of maintaining production, especially for garden crops.

“ *The spray of tsetsefly-infested areas caused a lot of change in this district pertaining to agroecology. The presence of tsetsefly in this area posed significant risks to human and livestock populations, but after the aerial spray, people started to keep cattle and other livestock. Migration to Mbire increased from all over the country, leading to increased settlements and land clearing for agricultural activities.....*

*Male farmer, Mbire Ward 2.*

### Years following the starting point

Following tsetse fly eradication efforts, the government initiated rural resettlement and development programs in the Zambezi Valley’s tsetse belt, to expand the frontiers of communal farming and increase the number of settlers. The program was organized and overseen by national ministries governing agriculture, health, and wildlife, with some support from international organizations like the Food and Agriculture Organization (FAO), World Health Organization (WHO), and bilateral aid agencies. Local governments and communities were typically consulted to some extent, especially in terms of logistics and community mobilization, but they had limited influence over major decisions such as the choice of chemicals, timing, and specific areas for spraying. The local government’s role was often limited to facilitating implementation, educating the public, and ensuring compliance with the national directives rather than participating in the decision-making process.

As a result of the aerial spray program and resettlement efforts, small-scale farmers migrated to under-exploited regions in the Zambezi Valley, which increased agricultural and agro-pastoral activities within the region. These activities were further expanded

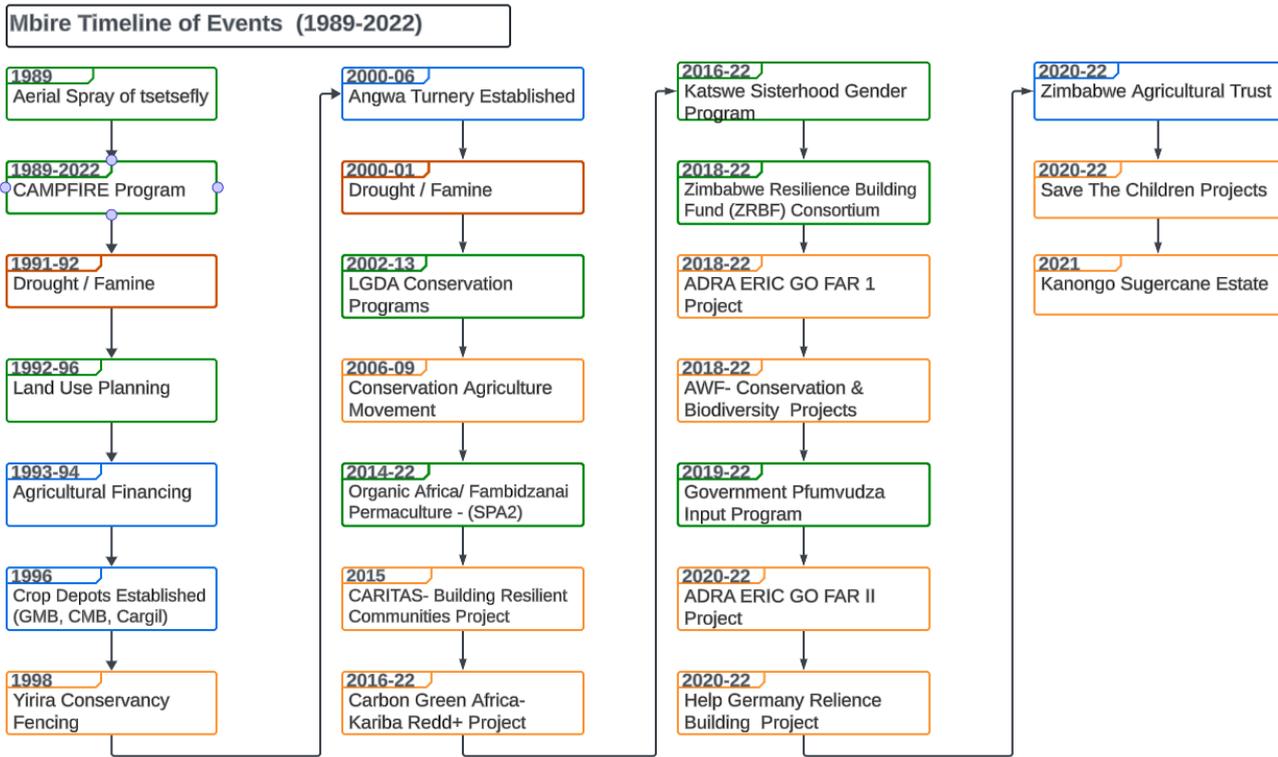
through the influx of cotton companies contracting resettled farmers to produce cotton in Mbire. Due to this migration, livestock numbers increased, which expanded the use of animal draft power in agricultural production and transport. Increased population and agro-pastoral activities led to increased encroachment to wildlife corridors, leading to an increase in human-wildlife conflict (HWC) in this highly biodiverse zone.

In the decades after tsetse fly control, some key projects led by Zimbabwe's government, research institutions, and international development partners promoted natural resource conservation. The USAID-funded CAMPFIRE project, which launched in the 1990s, focused on conservation of wildlife and forest habitat, reduced HWC, and community-based resource management. CAMPFIRE and other projects involved close partnership between international donors and government agencies, and promoted farmers' and communities' involvement in forest preservation, forest-based livelihoods like apiculture, and non-violent responses to HWC. CAMPFIRE also increased communities' power to manage their resources and make decisions by decentralizing resource ownership and benefits. It sought to expand community members' involvement in decision-making via deliberate involvement of ward-level and village-level committees in dialogue with government departments about the selection of safari operators, development of hunting protocols, and decisions around how to use proceeds from kills. This expanded communities' interests in the sustainability and profitability of local wildlife. Community engagement in whistleblowing and training of game scouts also contributed to the power and agency of community actors. However, the participation of women in these committees was limited until the gender equality movement in the 2000s.

Over the same period during the 1990s, a series of government-led programs were implemented to support expanded farming operations in Mbire, largely without a focus on sustainability. An agricultural financing initiative was implemented to support cotton production in particular and improve access to agrochemical inputs. Land redistribution expanded and secured farmers' landholdings. Crop depot collection points increased farmers' access to markets and thereby improved farmers' income generation opportunities. Together, these efforts encouraged agricultural intensification and extensification, and therefore contributed to deforestation, soil and land degradation, and increased HWC as people cleared more space for farming. Mbire also experienced two periods of famine linked to drought from the 1990s to the early 2000s, both of which undermined ecological integrity as farmers' reliance on streambank cultivation and poaching increased, as well as increased HWC and veld fires.

Beginning in the 2000s, Mbire's agricultural sector was shaped by development projects linking agricultural livelihoods and conservation efforts. Funded and implemented largely by international and local NGOs as well as some government agencies, these efforts included a series of projects focused on conservation agriculture (CA), agroforestry, and wildlife conservation. Agroforestry, for instance, was promoted by Carbon Green Africa and the Forestry Commission, which advocated for communal farmers' uptake of beekeeping among other forest-based livelihoods. These alternative livelihoods were promoted as a means toward economic diversification that would encourage communities' embrace of forest conservation and HWC prevention (as bees also provide protection from elephants), potentially replacing or reducing reliance on conventional farming practices that required clearing of forests. In addition, a few projects touched specifically on agrobiodiversity through seed saving and multiplication, such as the Zambezi Valley Biodiversity Project, Zimbabwe Resilience Building Fund, and ERIC GOFAR II. The AWF's Transboundary Conservation Program sought to pair wildlife (megafauna) conservation, reduced HWC, and sustainable livelihood development, and promoted eco-tourism in the buffer zones of Mbire District. In recent years, the government played a key role in supporting uptake of sustainable farming practices, including through its Pfumvudza initiative - one of the projects attributed with the most impact on behavior change through the distribution of free inputs to encourage uptake of CA basin planting practices.

Taken together, the events recorded from 1990 to the present did not drastically change decision-making and governance structures but had incremental impacts on farmers' knowledge, behaviour, and agency. Training and educational programs, as well as expanded participation in farmer groups, increased farmers' knowledge about new practices. Their agency expanded slightly over the timeline as their ability to make decisions at the farm level and their access to new opportunities (such as new practices and market opportunities) increased. This change was supported by increased farmer participation in collective agricultural activities (e.g., gardening projects) and village income schemes, especially targeting women. The timeline events shifted producer behaviour not only through increased knowledge but also when farmers received tangible benefits from projects, such as free inputs provided through the Pfumvudza project in response to uptake of basin planting. Over the timeline, environmental agencies and extension services also gained agency and involvement in decision-making as projects and regulatory changes expanded their reach, power, and enforcement capacity.



**Figure 1. Consolidated timeline visual for Mbire District. Orange events are NGO-led projects, green are government- and other locally led programs, blue are private sector or public-private initiatives, and red are natural disasters**

### Murehwa District Timeline (Q1-2)

Murehwa District is located in the Agroecological Region II of Zimbabwe, which has high productivity in crops and livestock farming due to high rainfall patterns. Although several possible starting points for the timeline were proposed, a key moment in the agroecological transition process was determined to be 2000, when the Government of Zimbabwe’s Fast Track Land Reform Program (FTLRP) started. FTLRP was a radical attempt to redress historical land inequalities and had far-reaching consequences for the country's agricultural sector.

### Starting point conditions and behaviors

Before land reform, Murehwa hosted commercial farmers (mostly white farmers who occupied large areas of fertile land for crop and livestock farming) and communal farming systems in which mostly black farmers cultivated small portions of land for subsistence farming and marketing of any surplus. Under communal systems, resources were treated as commons and regulated by informal community rules under the custodianship of chiefs and headmen. Communal farmers used many indigenous farming practices and relied on guidance from spirit mediums who dedicated crops to God for protection against pests and diseases (a practice still common today). Some practices that undermined ecological integrity were reported, including conventional monocropping without rotation, streambank cultivation, wildfires, and deforestation. Other practices aligned with agroecological principles, including crop rotations and agroforestry. Traditional methods of pest management were common, for example, planting of "mufandichimuka" shrubs that are effective against insects like weevils, moths, and other storage pests. The farming season was reportedly long, with good rainfall from mid-October through April. There was rich biodiversity in wildlife and forests interspersed with agricultural lands, including sacred trees and animals, and little degradation of land or water resources. Intra-community decisions were dominated by men whilst women and youths were excluded, despite their role supporting household agricultural production. Overall, small-scale farmers reported low agency during this period, and their decision-making power was mainly through the Zimbabwe Farmers' Union, which represented them in policy-making processes, whilst the Agricultural Marketing Authority (AMA) regulated the production and marketing of all agricultural products. The Farmers Union aims to represent and safeguard farmers' rights and interests while working to enhance productivity and farmers' livelihoods.

The use of improved farming technologies was increasingly common for both communal and commercial farmers, but especially the latter, since the 1980s. Research organizations promoted increased productivity through the use of fertilizers and high-yielding varieties of maize and wheat. Commercial farmers practiced intensive production methods like the use of tractors, herbicides, pesticides, and cloud seeding. There were financial and commodity markets in place including the Grain Marketing Board (GMB) and farmer banks, which gave loans to support commercial farmers' input purchases. These commercial farmers were a core source of employment for many landless and land-poor workers who were farming on small, infertile land portions.

After the government embarked on the land reform program, five farm types emerged: communal farmers, resettlement farms (A1 and A2 farmers), and large- and small-scale commercial farms. The land reform process effectively sub-divided most of the prior commercial farming sector and replaced it with medium (A2 farms, with 5-20ha land) and small-scale (A1 farms, with less than 5ha) resettlement farms which were shared among landless war liberation fighters who had previously had none or limited land. For many A1 and A2 farmers, land reform represented a significant increase in agency whilst for commercial farmers a massive decrease in agency; many left Zimbabwe, some pulled out of agriculture, and others were killed. By gaining access to land, A1 and A2 farmers were empowered to make decisions about land use, crop choices, and farming practices. Previously landless or land-poor individuals and families suddenly had control over productive resources.

For former workers on commercial farms who were not granted land of their own, the reform triggered job loss and their marginalization within communities. Many former farmworkers migrated to formerly conserved areas and land previously reserved for commercial use (cropping, ranching, game reserves, etc.). A new group of marginalized communal farmers therefore emerged who shared labor and other resources to maintain some degree of agency. This migration to formerly conserved areas contributed to increased pressure on natural resources, with more land being cleared for farming, diminishing vegetative covers and wetlands, biodiversity loss, soil erosion, and significant deforestation. The new class of communal farmers also embraced tobacco farming, which they had experience practicing on former commercial farms, but which triggered additional deforestation due to the need for firewood for curing.

“ *In my view, the land reform has caused a lot of changes which we see now in this area. First many people who were working in commercial farms migrated back to the rural areas looking for places to stay. This led to massive deforestation clearing out land for farming and pegging homesteads. Due to increased population pressure, people ended up reducing grazing lands and wetlands as people converted them to farming plots.....*

*Male farmer, Murehwa Ward 27*

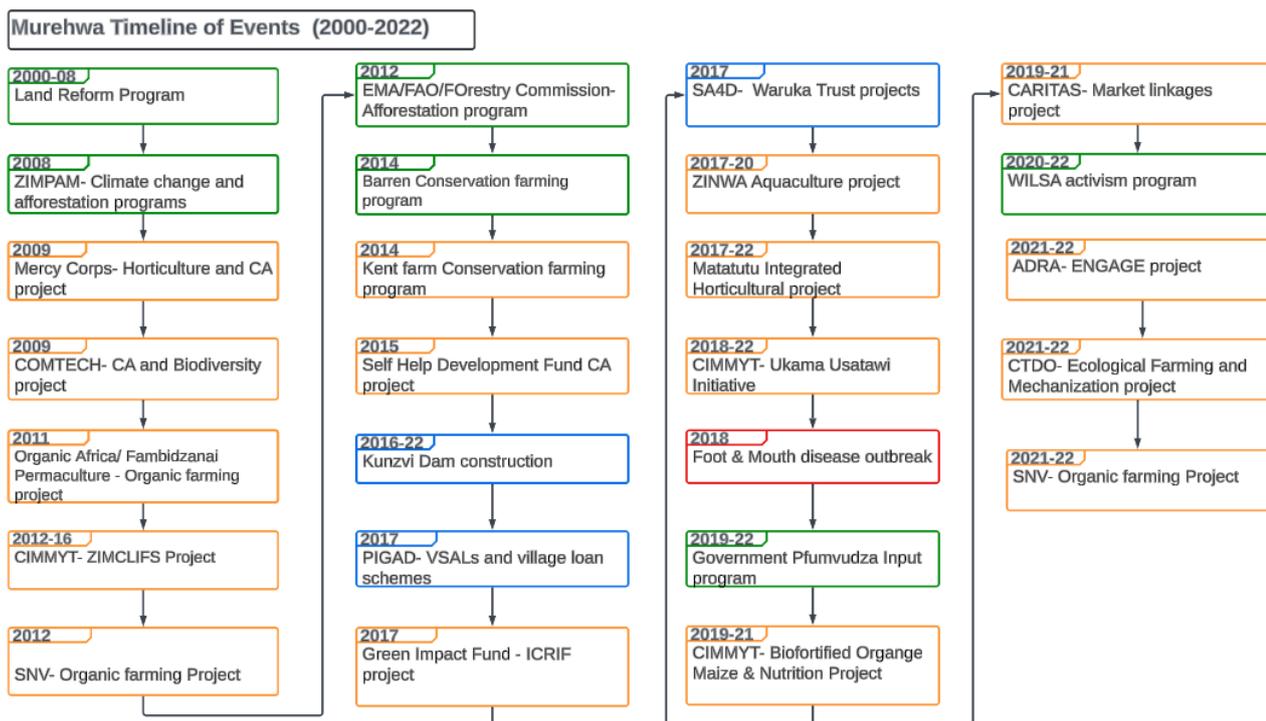
Redistributing land to small-scale farmers in some ways enhanced social well-being and equity, with emphasis on sustainable livelihoods and fair resource distribution. However, FTLRP brought with it some challenges. The abrupt redistribution process left many new landowners without the resources, technical knowledge, and access to inputs and markets necessary to sustain conventional, high-input farming systems previously used by commercial farmers. The lack of sufficient support meant that new landholders struggled with productivity, which in turn affected food security. In some cases, the lack of secure land tenure and limited government support made it challenging for farmers to invest in long-standing infrastructure or sustainable practices that yield delayed benefits to soil health and productivity. Additionally, local conflicts and competition for resources triggered by the land redistribution process sometimes hindered community-based initiatives and collective action.

Nonetheless, the downturn in productivity following land reform pushed the government and NGOs to explore and support alternative agricultural models that could promote food security and resilience in the face of climate change and economic constraints. This has slowly led to increased interest in sustainable practices that restore degraded lands and empower smallholder farmers as a way to rebuild Zimbabwe's agricultural sector. Many smallholder farmers independently turned to low-cost, resource-efficient, and sustainable farming methods out of necessity. Practices such as intercropping, crop rotation, and organic pest management were practical options for farmers who were less reliant on expensive synthetic inputs, and for whom sustainable practices could yield better results in degraded or resource-limited environments. Furthermore, the movement toward smaller farms increased the opportunity for traditional knowledge to play a role in farming practices. Many new landowners brought indigenous knowledge and community-based approaches to land stewardship. This shift aligned with agroecological principles, which emphasize diversity, resilience, and local adaptation.

## **Years following the starting point**

Murehwa’s later timeline is largely defined by agricultural development projects that launched in the years following the land reform process, involving NGOs, government agencies, and occasionally private sector actors. Most projects had a focus on reduced environmental impacts through more sustainable cultivation practices among smallholder communal farmers. Several programs embraced agroecological production principles and promoted forms of CA, such as Berren and Kent Farms’ CA programs, ZIMCLIFS project, and projects focused on horticultural development, such as ENGAGE. These projects targeted specifically smallholder farmers (communal and A1 farmers). As in Mbire District, the government’s Pfumvudza program was identified as a major contributor to farmer behavior change (especially among smallholders), as it built on several decades of incremental improvements in farming practices through external programs. In recent years, an outbreak of African trypanosomiasis and the construction of the Kunzvi dam had significant impacts on farming communities and production systems—the former causing loss of livestock and thus reduced access to animal traction, and the latter causing displacement of some communities, deforestation, and expanded access to irrigation—but neither had a drastic, direct impact on behaviors or agency related to agroecological transition.

The largest positive contributors to changes in agency, especially for smallholder farmers, were projects that expanded income generation opportunities, such as the contract-farming-focused Increasing Climate Resilience in Farming (ICRIF) Project, the Chipore Village Garden Scheme, and Self-Help Development Foundation’s programs. Other events that expanded agency included NGO-funded empowerment programs focused primarily on women and girls, for instance, to reduce gender-based violence and child marriage or expand their income generation opportunities. For example, Partners for Integrated Growth and Development (PIGAD) supported smallholder farmers, youth-led micro-enterprises, and community-based organizations to enhance resilience, food, and income security through climate change adaptation programs. These efforts expanded youths and women’s voices and participation in public settings while providing them routes to increased financial independence. The establishment of Zimbabwe’s Environmental Management Agency drastically expanded the government’s authority in monitoring and enforcing conservation policies while reducing local control over and enforcement related to resource use. This contributed to reduced streambank cultivation, firewood collection in protected areas, and poaching, as well as increased afforestation, use of fire guards, and promotion of CA practices through extension.



**Figure 2. Consolidated timeline visual for Murehwa District. Orange events are NGO-led projects, green are government- and other locally-led programs, blue are private sector or public-private initiatives and red are natural disasters.**

## Actor group experiences

### Farmers

In both districts, over the course of the timelines, smallholder farmer behavior shifted to better align with some key agroecological principles, notably those related to environmental outcomes and improved on-farm practices: soil and water conservation, input substitution, and biodiversity conservation. Social equity and economic connectivity principles of agroecology were much less commonly addressed, aside from economic diversification and efforts to improve fairness and participation through women and girls' empowerment.

In Mbire, farmer behavior shifted from "organic by default" production to more deliberate CA practices, HWC avoidance, and agroforestry-based livelihoods, primarily through externally-funded projects and government programs. In Murehwa, farmer behavior shifted from conventional agriculture toward CA in response to similar events, following major restructuring of the agricultural sector through the FTLRP. In both districts, smallholder behavior change was motivated by increased knowledge, expanded opportunities, and direct benefits farmers received in exchange for their participation in the project (for example, input provision). A few recent events (notably droughts) undermined farmer behaviors that aligned with agroecological principles, as these events narrowed farmers' range of options and led to increased streambank cultivation, poaching, and HWC. In both districts, farmers were calling for reliable alternative water sources which can drive people away from streambank farming.

Both women and men farmers reported being primarily *represented* in decision-making, both at the timeline starting point and currently, but played little direct role. Very few changes to farmers' involvement in decision-making and governance emerged from the timelines. Semi-commercial farmers were usually best represented in decision-making and governance and gained more agency and power when they accessed land through the land reform program of 2000. All groups of farmers except commercial farmers are represented through the Zimbabwe Farmers' Union, which speaks for them in the policy-making process and higher-level decision-making. The commercial farmers are represented by the Zimbabwe Commercial Farmers Union, which advocates for favorable conditions for commercial farmers. This includes advocating for access to agricultural inputs, financing, fair pricing, and land tenure security.

Over the timelines, development projects and government programs have incrementally expanded smallholder farmers' agency, in terms of their ability to make and act on decisions related to their production and livelihoods. Major gains in agency emerged from the FTLRP, which granted land access to smallholders. Later, more gradual expansions occurred through increased access to knowledge, new income-generation opportunities, strengthening social networks, and empowerment programs for women and girls. However, no events in either district's timeline reflected substantial gains in smallholder farmers' control over higher-level decision-making about resources or the food system. Formation of farmer cooperatives and other attempts to build collective agency were not reported in timelines in either ALL, aside from minor focus in some externally funded projects, but existing collective decision-making structures and social networks reportedly provided farmers some degree of collective agency. Still, farmer agency is constrained by laws, regulations, and customs enforced by government and traditional leaders, such as their access to and ability to freely use resources, and other social issues such as inheritance laws for women.

Farmers' experiences were, in both districts, differentiated by gender and other characteristics. On one hand, women saw fewer gains in agency than men from land redistribution and agricultural financing initiatives due to their limited access to land and collateral. On the other, recent initiatives that supported women's empowerment and the establishment of community farming groups and village savings and loans associations (for example, PIGAD) have helped expand women's income generation opportunities and agency through increased financial independence, often at the exclusion of men. Youth engagements in the timelines were not a large focus, although a few projects deliberately aimed to increase youth freedoms and economic opportunities through expanded livelihood opportunities and protections from abuse and child marriage. The ZIMCLIFS project in Murehwa district is one example of a project which specifically targeted youths as a way of leveraging technology and digital tools. Events impeding agroecological transition processes such as droughts were reported to exacerbate existing gender inequalities, as women often have less access to resources and decision-making power and face greater challenges in coping with stressors. The increased burden of securing water, food, and fuel during droughts often falls on women, limiting their time and capacity to engage in farming activities or pursue alternative livelihoods.

## Government/parastatal actors

Government and parastatal actors played a key role in both districts' timelines, sometimes leading and consistently participating in events. The process of government devolution increased the agency and involvement in governance of local District Development Coordinators (DDCs) and Rural Development Councils (RDCs) over the timeline, as they have received devolution funds and gained greater power over local development. Local development efforts are now guided by District Development Plans and Provincial Plans, which have thematic areas focused on food security and nutrition. Local government bodies (DDCs and RDCs in particular) have the power to issue directives, enforce regulations and alignment of programs and initiatives, advise and approve new activities, and supervise progress. Their authority includes approving engagements and providing guidance/directives for international non-governmental organizations (INGOs). Still, DDCs interviewed reported that they rely on NGO projects, community initiatives, and private sector efforts to deliver on government goals. These initiatives and the resources they provide can thus be a source of agency for local government. Sometimes local government can influence projects' directions, but they report having limited power to sway NGOs' agendas.

Environmental agencies such as the Environmental Management Agency (EMA) and Forestry Commission (FC) had a consistent participatory role in the timeline and in many events played a lead role. These federal agencies' objectives are tied closely to environmental sustainability and resource conservation, in contrast with the sometimes-competing interests of other agencies (e.g., the Ministry of Agriculture's focus on expanding productivity and local government bodies' priorities for economic development). These groups are involved in agricultural projects in the district for regulatory purposes (e.g., ensuring compliance with research standards), information service provision (e.g., training in natural resource management), and to conduct appropriate related research. In Mbire, local representatives of environmental agencies reported that their agency and involvement in governance had increased over the timeline due to government restructuring that granted them increased enforcement power, as well as their involvement in some high-impact projects such as CAMPFIRE, Zambezi Valley Biodiversity Project (ZVBP), ZRBF, and Pfumvudza. These changes contributed to environmental agencies' increased ability to make decisions and implement their agendas. Their engagement in development projects in the timelines also expanded their agency, as these were a means to connect with communities and expand their reach. They are also increasingly invited to contribute to decision-making related to agriculture, due to attention to climate change, drought issues, and sustainable development within Zimbabwe and in the global community.

The parastatal Grain Marketing Board (GMB) played a more minor role in many timeline events (either included or participating) but did not have a significant role in governance and decision-making. They were often consulted in projects and had a limited role via input distribution, product purchasing, or M&E efforts, although many of these activities were directed from higher levels in the Ministry of Agriculture. Although environmental agencies promoted phasing out of some chemicals and reduced fertilizer use, GMB representatives did not perceive this to run counter to their goals or operations, which were to buy and supply inputs for diverse cropping systems. They reported working with extension service to decide on seed and agrochemical inputs to offer for sale in each area, so had a minor role in deciding which grain and which varieties were offered (although NGO-based projects sometimes made decisions independently). Ultimately, the Ministry of Agriculture, extension services (AGRITEX), and the Office of the President were reported to be bigger drivers of decisions about crops and varieties promoted in development projects and programs—for example, AGRITEX advises on the varieties or crops promoted for each agroecological region.

Extension services (AGRITEX) had a central role throughout the timeline, including during land reform. Their role was often participatory or included, with some but limited involvement in decision-making - they were typically key partners assisting with project implementation on the ground and provided technical knowledge and advice in planning processes. They also had some engagement in ward planning efforts. In this regard, although they rarely played a lead role, they could help shift initiatives in specific directions and drive the adoption of innovations. Extension agents reported increased agency due to their participation in training programs and development projects. These efforts expanded their knowledge, making them more capable of engaging in decision-making processes around, for instance, crops, practices, varieties, or geographic areas to prioritize; strengthened their partnerships with local communities, government, environmental agencies, and other players; and enabled them to better connect to their constituents to provide advice and training.

## Traditional leaders

In both districts, traditional local leaders (e.g., chiefs and headmen) reported an erosion of their power as local government actors (DDCs and RDCs) saw their agency and involvement in governance grow. Traditional leaders played a participatory role, or were at least included, in most timeline events, for instance, facilitating the land reform process, mediating between external actors and communities, and offering recommendations or guidance to projects. However, local leaders have lost the ability to fine individuals as enforcement of formal regulations has shifted to local government and specialized agencies (notably EMA and

FC). This has negatively influenced local leaders' agency as lack local decision-making authority and no longer collect enforcement-related fines. In addition, as their constituents gained more legally enshrined rights, traditional leaders' power to govern freely has been curtailed. They also play a reduced role in setting the agenda related to agriculture and resource conservation, in which NGOs and government entities now play a bigger role.

## NGOs

Conversations with numerous actors suggested that local and international NGOs play a significant role in the agroecological transition timelines. Local NGOs largely played a support role and rarely led in timeline events. They were implementing partners on many INGO projects and saw benefits from this, such as increased membership and thereby increased recognition and power within communities, including agency to contribute to decisions about local development processes. INGOs, in contrast, had more power in dictating the direction of agricultural initiatives, even over local government actors. One key informant (an extension agent active since the 1990s) reported that the Ministry of Agriculture and Ministry of Research had primary responsibility for directing agri-food system development in the 1990s, but much of this power had shifted to external development partners since then. Farmers participated actively in many externally-funded projects for tangible benefits which were not provided by the government. INGO efforts were intended to complement government projects and assist with resources—in theory, these actors are accountable to local government offices that have the authority to set the local development agenda and insist that INGOs comply. However, INGOs appeared to have maintained a high level of decision-making power and played a lead role in many events on the timeline. Their agency and involvement in governance and decision-making increased over time.

## Private sector

Private sector players played a relatively minor role in the ALLs' transition processes overall. While some commercial farms (two in Murehwa) led programs focused on CA promotion, other public-private collaborations—including the setup of a tannery and a plantation in Mbire—had mixed results, sometimes expanding livelihood opportunities but contributing to environmental harms such as deforestation. In Mbire, private safari operators were engaged in an initiative to reduce HWC, poaching, and veld fires.

Although they have limited power in decision-making and governance about the agri-food system, private sector actors have actively engaged with local communities and have some economic power in setting prices. In Murehwa, private businesses supported communities through training on conservation farming, agroforestry, and VSALs. Hamara has a seat in the Poultry Association of Zimbabwe and therefore participates in policymaking processes relevant to the industry. However, since these actors' main motives relate to maximizing output and profits, the drive to support uptake of sustainable production practices is still low due to the low demand for agroecological products on the market. Increased awareness and hence demand for agroecological products in the market could help drive private sector actors' behavior.

In both districts, contract farming initiatives provided farmers with income-generation opportunities and markets. Contracting firms stipulated specific production methods, inputs, and quality standards that farmers must adhere to and influenced farming practices by demanding certain farming practices or reduced input use (e.g., organic inputs, reduced chemical usage). They also offered technical support and market access and lobbied for better policies for farmers, thereby exerting some power over both farmer practices and wider decision-making processes.

Processors play a critical role in food and feed production in Zimbabwe. They are usually represented by the Grain Millers Association (GMA) in policy discussions, and by the Brewing Companies' Management Boards in strategic decisions on production, marketing, and distribution. They work together with GMB and AMA to decide the pricing of products. Processors reported limited engagements with the producers of their products and little technical expertise to guide a transition toward more sustainable practices, suggesting their power and agency over other actors' behavior was limited. Their involvement in governance structures was also limited within the agroecological space although they could influence product quality/standards through contractors or suppliers. Consumer demand is a key driver of their behavior, so limited demand for agroecologically produced goods has failed to encourage adoption of new practices. Processors point to a lack of supportive policies and incentives from governments to promote agroecological practices, including high costs and risks of organic certification, inadequate infrastructure to support alternative production methods, as well as limited market demand for agroecologically produced feed. Infrastructure is optimized for conventional production methods. Farmers therefore have few incentives to switch, and agroecologically produced raw materials are not available consistently or at scale.

## Lessons and recommendations

### Synthesizing findings across WP5 activities

Many of the findings from these timeline activities align with or complement previous AE-I Work Package 5 activities exploring agency and behavior change. We therefore aim to compare and synthesize the results of the participatory timelines with Activity 5.1, which reviewed past initiatives related to agroecology, and the Ladder of Power and Freedom exercises conducted to understand the determinants of farmer agency.

First, the timeline and inventory of past initiatives in Activity 5.1 both point to a long history of NGO and government interventions promoting behavior change in the direction of conservation agriculture, agroforestry-based livelihoods, improved resource conservation, and reduced HWC within Zimbabwe's ALLs. The timeline activity provided deeper insights into how effective (and why) these efforts have been in changing behaviors and increasing farmers' and other actors' agency and involvement in decision-making. The results show that past initiatives have contributed to gradual improvements in farmer knowledge, slightly expanded economic opportunities, and created tangible incentives to adopt new practices, which together have led to gradual changes in behavior toward more sustainable production practices and increased farmer agency over their on-farm productive decisions. However, farmers' involvement in governance and broader decision-making in the agri-food system was not reported to have changed over the timeline. Government actors (particularly local government and environmental agencies) *have* gained power through past initiatives, government restructuring, regulatory reform, and mainstreaming of conservation ideas. Meanwhile, INGOs have gained significant power over agricultural development and conservation agendas due to government reliance on the resources they provide. This suggests a degree of de-localization of decision-making around resource management and the agroecological transition process, with local traditional leaders reporting the greatest loss in agency and governance among actor groups included in this exercise.

Overall, we can interpret findings from these timelines of agroecological transition to reflect incremental rather than transformational change through past projects and programs. Environmental factors such as periodic droughts, infrastructural challenges, and lack of consumer demand for more sustainably-produced goods have constrained the change process. Agri-food systems in the ALLs (especially decision-making and governance systems) do not appear to have been fundamentally restructured by past events, nor social equity or economic connectivity principles widely embraced, although on-farm practices and resource conservation practices have shifted to align with agroecological principles.

Few of the timeline events were reported to have created lasting changes in behavior, particularly in production-related behaviors. Farmer comments both during timeline development and Activity 5.1 indicated that behavior changes in response to projects have often been temporary and driven by immediate, tangible incentives for participation that disappear when projects end. Evidence that progress towards agroecological transition is periodically undermined by stressors such as droughts also suggests many behaviors supporting ecological integrity are not necessarily permanent. This indicates that past initiatives, which largely provided information to farmers over a limited period, have had some impact but have not been adequate to transform agri-food systems. AE-I can apply these learnings from Activity 5.1 and the timelines in the design of incentive structures that are not based solely on farmers' *short-term* gains.

Considering this, it is worrying that private sector actors have been very minimally engaged in past agroecological transition timelines, which NGO and government activities dominated in both districts. A few private sector players did appear, but usually concerning training programs or contract growing operations of limited duration. Activity 5.1's case studies and the Ladder of Power and Freedom exercises both emphasized that expanded economic opportunities have great potential to change behaviors and sustainably increase agency. However, lasting market opportunities created by private sector partners did not play a major role in the timelines. Instead, key informant interviews with private sector players underscored some barriers they face in supporting agroecological transition, including policy and infrastructure challenges and lack of markets for sustainably produced products.

Finally, we see alignment between timeline insights into agency determinants and findings from the Ladder of Power and Freedom exercises. Foremost among agency determinants were social norms, economic opportunities, and knowledge. Social norms granting men preferential access to land, resources, and decision-making authority were discussed in the Ladder exercises, and similarly mediated how women and men experienced certain past events in the timelines. Men achieved greater gains in agency than women through past events related to land reform and agricultural financing due to their control over resources, for example. In recent years, as reported in Ladder exercises, women have achieved gains in agency through projects focused on empowerment and gender equality. These empowerment programs were mentioned by women in both districts'

timelines, indicating their relevance to the agroecological transition process; this aligns with the recommendation offered following Activity 5.1 to ensure a focus on social equity principles alongside agronomic and environmental outcomes.

## Insights for AE-I Engagements

Since the launch of AE-I in Zimbabwe, WP5 has built an understanding of the drivers and determinants of behavior change and agency across actor groups. Activity 1 highlighted the power of tangible incentives (such as free inputs), market opportunities, and deep engagement by partners in the agroecological transition process in order to foster active collaboration and local ownership. The findings emphasized the importance of co-design processes that ensure alignment between initiative activities and local needs. It also encouraged multi-faceted interventions that address more than farmer knowledge gaps, by emphasizing, for instance, market linkages, solutions to labor shortages, and livelihood opportunities. Finally, the results supported consideration of social equity principles as important but previously under-emphasized elements of the agroecological transition process.

Adding to these findings, the Ladder of Power and Freedom exercises explored determinants of farmer agency, specifically. The most important determinants were found to be social and relational dynamics, particularly gender norms that grant older, married men authority over their households and, at the community level, over women and youth generally. Income generation opportunities, access to resources, education, knowledge, physical ability, property rights, and empowerment programs were also reported to be important contributors to farmers' agency. While not all of these determinants fall within the scope of AE-I, the results supported efforts to expand resource access, income generation opportunities, and knowledge and training opportunities, while prioritizing transformation of gender relations to increase the agency of women and youth.

Activity 2 has built on these learnings, especially by providing evidence as to how and why behavior change and agency expansion in support of agroecological transition has been gradual rather than transformational. The transition timelines included projects promoting sustainable agricultural practices and resource conservation, primarily through knowledge transfer, alongside government programs that have incentivized agricultural extensification and intensification. Environmental challenges, notably droughts, have presented disincentives for farmers to adhere to sustainable practices, while limited consumer demand for sustainably-produced products and unsupportive policies and infrastructure have constrained private sector interest in agroecological behavior change. With a few notable exceptions, such as women's empowerment projects and land reform efforts, marginalized groups have not seen drastic expansions in their agency. Instead, most events that could be considered to have enabled agroecological transition have gradually expanded farmers' knowledge and agency to make production-related decisions on their farm, without attention to broader governance and decision-making processes or to the wider social equity-oriented principles of agroecology.

In light of these findings, we offer several recommendations for future interventions under AE-I Zimbabwe. These are intended to address identified determinants of behavior change and agency and fill some of the gaps in previous efforts.

## Supporting collective action and transformative agency

Farmers' role as drivers of agroecological transition is important, but the timeline findings from Zimbabwe's ALLs suggest they have limited control over "big decisions" around agriculture. Their opportunities are dictated by (I)NGOs and government agencies that set the agenda and choose pathways for food security and resource conservation. There is no evidence from the two timelines that past events have meaningfully expanded farmers' involvement in governance and decision-making processes. Achieving transformational agroecology may therefore require rethinking farmers' roles and creating space for their active participation in agenda-setting and decision-making, at least at the local government level.

In light of this, AE-I should go beyond interventions focused on building farmer knowledge to consider the relevance of increased farmer involvement and agency in reference to governance systems, improved infrastructure, expanded market opportunities, and collective action (such as cooperative formation). All of these can be leveraged to increase agency and change behaviors over the long term. This aligns with some aspects of the V2A, such as Murehwa Ward 4's and Mbire Ward 2's interest in consolidating production, processing, and marketing operations to improve access to global markets, as well as Mbire's V2A focus on more active participation of community members in decision-making processes. Strengthening farmers' voices and potential for collective engagement in local decision-making also has potential to improve environmental and resource management outcomes, as described in each V2A plan.

Work Package 3's engagement on holistic business model development contributes to economic opportunities in pursuit of these goals, but other efforts by AE-I toward increased farmer agency and collective action are limited at present. Deliberate efforts to support farmer organizations' growth and capacity would be recommended. Capacity building efforts might include

technical skills related to production and processing, entrepreneurial skills building, and skills related to lobbying and advocacy. AE-I could, in this process, deliberately help organize farmers and build their capacity to engage in public fora, decision-making around the food system and broader resource system, and new livelihood engagements.

### **Monitoring farmers' voice and agency**

Monitoring the impacts of the initiative, including the activities described above, on farmers' agency—and especially the agency of women and younger farmers who have limited power and freedom to implement new agricultural approaches—is critical to understanding the success of AE-I. Agency measures of interest include not only farmers' power to make decisions about their own farm and consumption habits, which have been the primary outcome of past events reported on the district timelines. AE-I should also assess changes in actors' transformative agency—their power to shape the direction of agri-food system development and conservation efforts in the district and nation. AE-I can therefore monitor farmers' (especially women and younger farmers') engagement in local leadership, district-level planning, and local policy-making processes, and any evidence of policy or programmatic changes based on these engagements.

Specifically evaluating gender and age disparities in agency is crucial for creating equitable agroecological transitions that benefit all members of the community and ensure sustainable development. Implementing Gender Transformative Approaches (FAO, IFAD & WFP, 2020) in ALL operations may be one way to build agency within these groups and expand women's engagement in leadership (Mbire V2A) and reduce gender-based violence (Murehwa Ward 4 V2A), both of which can be monitored as agency indicators. As Murehwa Ward 4's V2A also aims to expand women's participation in income-generating activities, AE-I might develop income generation opportunities specifically geared toward women and youth. These objectives raise the importance of tracking women and youth's economic engagements as a marker of agency, i.e., farmers' engagement in agriculture-based and non-agricultural livelihoods and income generation through them.

### **Pursuing public, private, and civil sector partnerships**

Implementing multi-faceted approaches to behavior change and agency means building collaborations across sectors. Government partners, particularly local government bodies and environmental agencies, are critical to the agroecological transition process given their power over many other actors. Many of the most notable changes in agency and involvement in governance that were reported over the timelines affected government partners positively. These actors have already been engaged in AE-I activities from ALL inceptions. However, ensuring their commitment to the agroecological transition process, and seeing that agroecological principles are explicitly incorporated into their wider district and province development plans, could help leverage their influence beyond the immediate term of the initiative. AE-I's Work Package 4 could facilitate this process and help advocate for formal (local) government commitments to agroecology.

The other highly influential actors in the timelines, INGOs, are arguably "easy allies" due to their existing focus on topics such as CA, women's empowerment, and sustainable resource management. However, their engagement with ALLs thus far has been somewhat light. INGOs could be more deeply engaged either through direct partnerships or MoUs with AE-I or through explicit engagements in local government bodies' agroecological transition plans. This could position INGO allies to support the continuation of the agroecological transition process after AE-I's conclusion. This would ideally include not only farmer training around agroecological practices, but efforts to build out promising value chains and new income generation opportunities, contribute to transformation of gender relations, and build farmers' capacity to advocate for change in the agri-food system.

Private sector actors have not had a very big role in the past timelines, but the evidence presented here and in other WP5 outputs suggests that the long-term economic opportunities they can create are critical to expanding farmers' agency and encouraging behavior change. They reported many constraints to engaging in the agroecological transition process that could be addressed by AE-I Zimbabwe. This includes advocating for more supportive government policies, developing infrastructure suited for changes in production toward agroecology, and creating new markets to sustain private sector engagements. Contracting firms have direct power over farmer behaviors, but their interests need to align with agroecology. We recommend active engagement of the private sector actors in the agroecological transition process by building incentives for private investment in sustainable agriculture, fostering public-private partnerships, and promoting agroecology through corporate social responsibility (CSR) initiatives.

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