SYNTHESIS NOTE

Strengthening Regional Scaling Ecosystems: Insights on Scaling Champions Across East and Southern Africa

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Front cover photo: Group photo of participants at the Regional Workshop on Scaling Champions in Kampala, Uganda. (*photo*: Moureen Awori/IITA).

Back cover photo: Participants engaged in the opening session of the Regional Workshop on Scaling Champions in Kampala, Uganda. (*photo*: Moureen Awori/ IITA)

Contents

Key Messages

In this report, scaling refers to the process through which proven Food, Land and Water Systems (FLWSs) innovations move beyond pilot projects into widespread adoption, uptake, and sustained use, leading to sustainable impact at scale (Sartas et al., 2020; Kohl, 2024). Scaling is important because it enables research investments to translate into tangible development outcomes and reach a significant share of intended beneficiaries. In East and Southern Africa (ESA), scaling efforts have supported the uptake and use of improved technologies, practices, and services, contributing to productivity, resilience, and equitable and sustainable development.

The key messages below summarise the main lessons from this work and highlight the conditions that shape effective and inclusive scaling in practice.

- **Scaling succeeds through people and institutions, not technologies alone:** Across ESA, innovations gain traction where individuals and institutions act as connectors, conveners, and brokers within fragmented systems. Scaling outcomes are shaped more by relationships, trust, and institutional readiness than by the technical performance of innovations.
- **Scaling champions operate as key intermediaries within scaling ecosystems:** Champions emerge across extension systems, universities, community structures, research organisations, private sector, and government agencies. In this context, scaling champions are individuals or institutions who bridge the gap between innovation and sustained use by building trust, mobilising others, and working across institutional boundaries over time. Their effectiveness depends less on formal authority and more on credibility, persistence, and the ability to navigate constraints and relationships.
- **Gender, youth, and inclusion (GESI) fundamentally shape scaling pathways:** Women and youth are central actors in sustaining and adapting innovations, yet face persistent constraints related to decision-making power, access to resources, and institutional recognition. Scaling approaches that engage directly with household dynamics and social relations are more likely to hold and adapt over time.
- **Enabling environments determine whether champion-led efforts endure:** Champion-led scaling is highly sensitive to policy coherence, institutional alignment, political buy-in, and financing arrangements. Where mandates are fragmented and funding cycles are short, scaling momentum weakens despite strong local leadership and commitment.
- **Learning and adaptation are core functions of responsible scaling:** South-South peer learning enables actors to surface trade-offs, reflect on failure, and adapt approaches in response to changing conditions. Treating learning as ongoing infrastructure rather than a project activity strengthens scaling judgement and reduces reliance on linear replication models.
- **Institutionalising scaling knowledge is critical for long-term impact:** Embedding scaling principles within universities, Technical and Vocational Education and Training (TVET) institutions, extension systems, and professional training is important to move scaling beyond project cycles. Curriculum- and training-based approaches provide a pathway for sustaining scaling capacity and normalising responsible, inclusive scaling practice across the region.
- **Scaling at scale requires pathways that connect innovations to markets and delivery systems:** Evidence from the Kenya case shows that moving beyond pilots depends on intermediation functions, structured partnerships, and enabling arrangements that make innovations relevant, investable, and deliverable through private-sector and institutional systems.

- **Implications for donors, CGIAR, and regional actors:** Strengthening regional scaling ecosystems requires longer-term, flexible investment that supports champions, institutional learning, and education pathways. For CGIAR and its partners, this calls for closer alignment between research, delivery, learning, and capacity development functions to support durable, context-aware scaling at scale.

1. Introduction

Agricultural research in East and Southern Africa (ESA) has generated a rich portfolio of innovations over the past several decades. These include improved crop varieties, biological control technologies, conservation agriculture packages, climate-smart soil and water practices, and emerging digital advisory tools (Doss, 2003; Baudron et al., 2019; Ramirez-Villegas et al., 2020; Onyango et al., 2021; Dirwai et al., 2024; Gbegbelegbe et al., 2024; Mnukwa et al., 2025). Many of these innovations have demonstrated strong performance in pilots and project sites (Nandwa, 2001; Ngoma et al., 2021; Mnukwa et al., 2025). However, widespread and sustained uptake remains limited. Evidence across the region consistently shows that even promising innovations often reach only a fraction of farmers, are adopted unevenly, or fade once project support ends (Mwase et al., 2015; Mnukwa et al., 2025). This pattern reflects systemic weaknesses in how scaling is organised and supported rather than shortcomings in the innovations themselves. Studies point to persistent barriers related to limited access to markets and social capital, policy weaknesses, insufficient and overstretched extension services, fragmented institutional support, weak coordination across actors, lack of market incentives for technology adopters and credit market inefficiencies, all of which undermine sustained uptake and scaling (Abdallah, 2016; Wigboldus et al., 2016; Marenya et al., 2017; Makate, 2020; Olabanji and Chitakira, 2025).

These uptake gaps have significant implications for Food, Land, and Water Systems (FLWSs) in ESA. The region confronts overlapping pressures such as climate stress, soil degradation, water scarcity, demographic growth, emerging pests and diseases and heightened demand for resilient livelihoods (Nandwa, 2001; Dimnwobi et al., 2022). In response, innovation at scale is increasingly recognised as central to addressing these challenges, not as a single technical event but as a system transition requiring collaboration, trust, and institutional readiness (Wigboldus et al., 2016). Within agricultural research and development, this shift has translated into a growing emphasis on scaling as a pathway for achieving climate-resilient and equitable transformation. The CGIAR Scaling for Impact Program (S4I) emphasises that achieving systemic change requires more than technologies; it demands strengthening enabling environments and understanding the actors who carry innovations into everyday practice, particularly those operating at the interface between policy, research, markets, and communities, and who play critical bridging and coordinating roles across institutional boundaries over time (Totin et al., 2020). Despite this emphasis, there remains limited empirical understanding of how these actors' function within real institutional settings, how they navigate constraints, and how their efforts shape scaling outcomes across different contexts (Totin et al., 2020; Makate, 2020).

Extension systems are central to this interface. Across the region, frontline extension officers remain the first point of contact for farmers, often valued more for their relationships, indigenous and local knowledge systems, and lived experience with farming systems than for formal technical training (Asare-Nuamah et al., 2019). Many have accumulated decades of experience through proximity to farming systems rather than formal certification pathways. Their work is driven by commitment, reputation, and community trust. At the same time, they are frequently under-resourced, overstretched, and expected to support transformation without the institutional support or incentives needed to act effectively as facilitators, knowledge brokers, or innovation intermediaries (Davis et al., 2020; Somanje et al., 2021). It is in this human reality that scaling either gains traction or weakens. Increasing evidence shows that innovations move when people move them; these actors are often invisible within programme logic, yet they profoundly shape uptake and longer-term outcomes (Davis et al., 2020). What remains insufficiently documented is how they translate trust, experience, and informal influence into sustained scaling processes, particularly within siloed institutional and policy environments.

Beyond formal extension systems, a wider set of actors across ESA step into these roles, convening partners, negotiating bottlenecks, championing ideas within bureaucratic spaces, and sustaining momentum through periods

of change and uncertainty. Together, these actors play a central role in linking innovations with institutional, policy, and market systems. Understanding how to recognise, support, and strengthen these actors is now key to building functional scaling systems (Davis et al., 2020; Somanje et al., 2021). While their presence is widely acknowledged, comparative evidence remains limited on how scaling champions operate across different country contexts, what constrains or enables their effectiveness, and how their contributions can be intentionally supported within regional scaling strategies.

This synthesis note responds to that gap by examining the roles, practices, and institutional positioning of scaling champions across various countries in ESA. It draws practical lessons from work conducted in Uganda, Malawi, Zimbabwe, and Kenya, where government actors, CGIAR centres, national agricultural research systems, universities, and farmer organisations have reflected on how scaling unfolds in diverse contexts. These country experiences do not present models for direct replication. Rather, they offer grounded insights into institutional arrangements, scaling pathways, and the lived realities of actors who push innovations forward on the ground. Collectively, they illuminate what enables scaling, where it stalls, how champions emerge, and the conditions under which their work contributes to wider system change.

The evidence builds on a foundational scoping study conducted under Ukama Ustawi's Learning Alliance, which highlighted the importance of peer learning, knowledge exchange, and regionally anchored approaches for strengthening innovation uptake systems. These insights were further developed through ESA and South-South exchanges held between 2023 and 2025, convened with sub-regional and continental organizations. These included the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), the Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA), and the Forum for Agricultural Research in Africa (FARA), alongside national agricultural research systems, universities, CGIAR centres, and regional partners. Together, these engagements formed a collective learning process focused on champion-led scaling, enabling environments, and institutional readiness.

This report sits within S4I under Area of Work Five (AoW5), contributing to an applied scaling science and innovation systems research agenda that strengthens South-South learning and capacities for responsible, context-aware scaling. At the same time, it offers a distinct contribution to practice and academia by foregrounding the relational and institutional work through which champions influence scaling outcomes, an area that remains underrepresented in existing scaling literature. By presenting lessons across four countries, the note aims to support universities developing curricula, governments shaping extension reform, CGIAR teams designing innovation delivery strategies, and regional platforms positioning themselves as conveners of learning and coordination.

Scaling is not only a technical transition but also a relational and institutional one. It succeeds when innovations encounter systems prepared to absorb them, when actors have space to adapt and learn together, and when those holding systems together are supported rather than stretched. The following section defines what constitutes a scaling champion, drawing on insights from a Regional Workshop held in Uganda.

2. Defining a Scaling Champion

This synthesis adopts an understanding of scaling champions, grounded in practice, that emerged through a Regional Workshop convened under S4I in Uganda, rather than being derived from a predefined conceptual framework. During this workshop, participating organisations collectively reflected on their lived experience of scaling across ESA through facilitated breakout group discussions. These discussions were deliberately designed to move beyond abstract definitions and to articulate, from practice, who functions as a scaling champion and under what conditions their efforts are sustained. In this synthesis, scaling champions are understood as actors who actively bridge the gap between innovation and sustained use by navigating relationships, institutions, and constraints over time.

As illustrated in Figure 1, the workshop discussions enabled participants to collectively unpack the roles, characteristics, and enabling conditions associated with scaling champions through dialogue and reflection.

Figure 1. Participants engaged in breakout group discussions during the Regional Workshop in Uganda to collectively unpack the roles, characteristics, and enabling conditions of scaling champions. (*photo*: Moureen Awori/IITA)

Across the workshop discussions, scaling champions were characterised less by formal titles or institutional mandates and more by what they do. Participants consistently described champions as actors who convene diverse
stakeholders, translate innovations into locally meaningful action, navigate institutional and social constraints, and
maintain momentum through periods of uncertainty. Their influence was understood to rest on credibility, trust, persistence, and the ability to work across institutional, sectoral, and social boundaries, rather than on positional
authority.

The workshop further clarified that scaling champions are found across a wide range of actor groups and points within scaling systems. These include:

- farmers and lead or model farmers shaping peer learning,
- frontline extension agents within government and non-government systems,
- women and youth leaders acting as connectors and innovators within communities,
- universities and training institutions anchoring learning and coordination, and embedding scaling concepts and practices through teaching, training, and curriculum development,
- national agricultural research and extension systems linking research and delivery,
- private sector actors along value chains,
- civil society organisations supporting mobilisation and inclusion,
- traditional and community leadership structures shaping local norms and governance,
- and government ministries, departments, and agencies influencing policy coherence and institutional alignment.

This diversity reflected a shared recognition among participants that scaling is inherently multi-actor and that progress depends on interaction across roles rather than leadership by any single group.

When reflecting on what makes champions effective, workshop participants emphasised qualities related to credibility, communication, persistence, and adaptability instead of formal authority. Direct engagement with the innovations being promoted, combined with an ability to translate between technical, institutional, and social worlds, was seen as particularly important for sustaining uptake beyond project cycles.

Importantly, the workshop discussions stressed that champions do not operate in isolation. Their effectiveness was consistently shaped by enabling conditions beyond individual capability, such as policy coherence, institutional alignment, access to finance and incentives, opportunities for skills development, and networks that support peer learning and mutual reinforcement. Where policies were misaligned, financing short-term, or institutional responsibilities fragmented, participants noted that even highly committed champions struggled to move beyond localised success.

By grounding the concept of scaling champions in collective reflection on experience, the synthesis ensures coherence between the learning approach, the evidence presented, and the practical implications drawn across the report. The next section presents four country snapshots from Uganda, Malawi, Zimbabwe, and Kenya, illustrating how scaling champions operate within different institutional contexts. These cases form the evidence base from which the synthesis distils cross-cutting lessons and identifies emerging priorities for strengthening regional scaling ecosystems.

3. Country Snapshots: Practical Lessons

Rather than presenting models for replication, the country snapshots highlight how scaling champions operate, how innovations are bundled and adapted, and how institutional arrangements enable or constrain progress. The cases focus on practical lessons, trade-offs, and enabling conditions identified across different institutional and socio-economic contexts.

3.1 Zimbabwe

Zimbabwe's experience illustrates how institutionally embedded, youth and women focused approaches can support the scaling of bundled agribusiness innovations in highly constrained contexts. The country's agricultural sector is shaped by diverse agro-ecological zones, high reliance on smallholder farming, recurrent climate shocks, and economic instability, conditions that complicate sustained innovation uptake and disproportionately affect young people and women (Mano and Nhemachena, 2007; Nyikahadzoi et al., 2012; Manatsa et al., 2020; Madamombe et al., 2024).

The Sustainable AgriVentures for Empowered Women and Youth (SAVE-WY) intervention, designed to support youth and women led agribusiness development through a revolving fund and sustained mentoring, was implemented under the Ukama Ustawi Initiative in 2024-2025 by the Marondera University of Agricultural Sciences and Technology (MUAST) in partnership with the Bindura University of Science Education (BUSE), with financial and technical support from the International Water Management Institute (IWMI). The intervention operated with a total budget of approximately USD 45,000 and targeted 150 youth and women led agribusiness households (Rukasha et al., 2024).

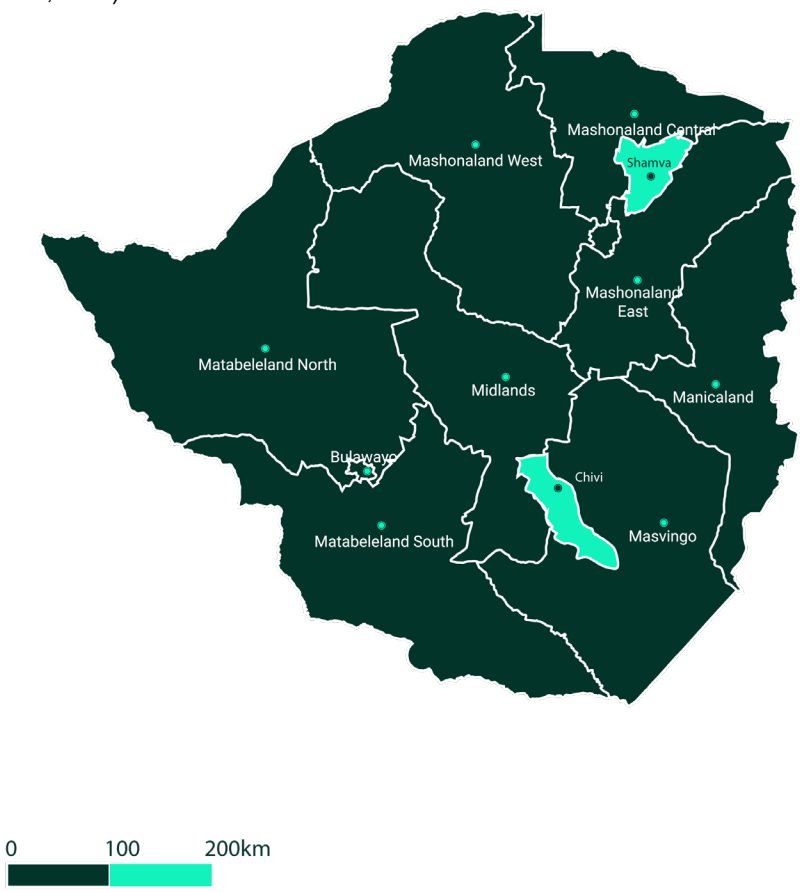

Figure 2. SAVE-WY implementation districts in Zimbabwe

Implementation focused on two districts: Chivi District in Masvingo Province and Shamva District in Mashonaland Central Province (Figure 2). In Shamva District, the revolving fund was implemented across two funding cycles, Cycle 1 (November-December 2024) and Cycle 2 (February-March 2025). Across these two cycles, 95 recipients were supported in Shamva District, comprising 32 women, 6 youth, and 5 men in Cycle 1, and 43 women and 9 men in Cycle 2. In Chivi District, women and youth agripreneurs were supported through the same revolving fund and mentoring mechanism, reaching 39 women and 16 youth in Cycle 1, and 35 women in Cycle 2 (Rukasha et al., 2024).

Insights from SAVE-WY were presented by MUAST during the Regional Workshop (see Figure 3), highlighting how universities can function as institutional scaling champions by providing coordination, legitimacy, and continuity for innovation delivery across districts.

Figure 3. Dr Tanyaradzwa Rukasha (MUAST) presenting insights from the SAVE-WY intervention during the Regional Workshop in Uganda. (*photo*: Moureen Awori/IITA)

Scaling champions emerged at multiple and complementary levels. Universities played an anchoring role, coordinating implementation, managing the revolving fund, and sustaining engagement beyond individual activities. At the local level, youth agri-preneurs and women leaders acted as community-based champions, influencing peer learning, experimentation, and adoption within their networks.

SAVE-WY adopted a bundled support approach that combined a revolving fund mechanism with capacity development workshops and personalised mentoring prior to seed disbursement. Supported agribusiness activities included poultry production, mushroom cultivation, bread baking, fruit and vegetable vending, and agro retailing. Beneficiaries were selected through a vetting process before receiving seed funding, and training focused on business planning, marketing, financial management, and record keeping (Rukasha et al., 2024).

Evidence from the intervention indicates that this combination supported early adoption and enterprise development. Participants reported improvements in enterprise management practices, reductions in poultry mortality following improved housing and ventilation, and stronger repayment performance in enterprises with shorter value chains such as vending and baking (Rukasha et al., 2024, pp. 15-16). At the same time, difficulties in marketing perishable products, particularly mushrooms, highlighted the limits of production focused support where market linkages were weak.

Peer learning and mentoring supported continued engagement. Group discussions, mentoring sessions, and collective reflection enabled participants to share experiences, adapt practices, and build confidence over time. Youth to youth learning contributed to positioning agribusiness as a viable livelihood pathway, particularly in contexts of limited formal employment. However, access to land, competing time demands, and limited capital beyond the revolving fund continued to constrain the expansion of some enterprises, especially among youth, reflecting broader institutional and policy conditions that limit youth access to land and formal finance.

Scaling outcomes were shaped by clear trade-offs and contextual constraints. Climate induced droughts and heat stress increased production risks, limited access to quality inputs constrained the application of recommended practices, and economic volatility influenced both input costs and market demand (Rukasha et al., 2024, p. 16). Policy and institutional arrangements governing land tenure and access to credit further constrained youth led enterprise growth, while weakly aligned agricultural policies and short funding cycles limited the integration of successful approaches into broader programmes.

Zimbabwe provides an example of how scaling youth and women led agribusiness innovations requires more than entrepreneurship training or finance alone. Progress depends on institutional champions that provide continuity, coordination, and legitimacy, alongside local champions who mobilise trust and peer influence. For scaling to move beyond localised success, these efforts must be complemented by stronger market integration, more inclusive land and finance arrangements, policy alignment, and climate responsive support systems.

3.2 Malawi

Scaling dynamics in Malawi were shaped less by the availability of new practices and more by how farming and livelihood decisions were negotiated within households. Conservation agriculture and water-related practices were already familiar in many communities, yet uptake remained uneven because decisions about land use, labour allocation, crop choices, inputs, and income were often divided along gender and generational lines (Enokenwa Baa et al., 2024). Women carried a substantial share of responsibility for farming and water management but frequently lacked influence over these decisions, limiting sustained adoption even where extension services were present (Enokenwa Baa, 2025).

The Gender Action Learning System (GALS) work was led by IWMI and implemented in partnership with Machinga Agricultural Development Division (MADD) and Total LandCare Malawi (TLC) under the Ukama Ustawi Initiative. The intervention was implemented between 2023 and 2024 across six districts: Balaka, Nkhotakota, Salima, Dowa, Machinga, and Zomba (see Figure 4), with more intensive facilitation concentrated in Balaka and Nkhotakota zones, where implementing partners and trained facilitators were primarily based during the implementation period.

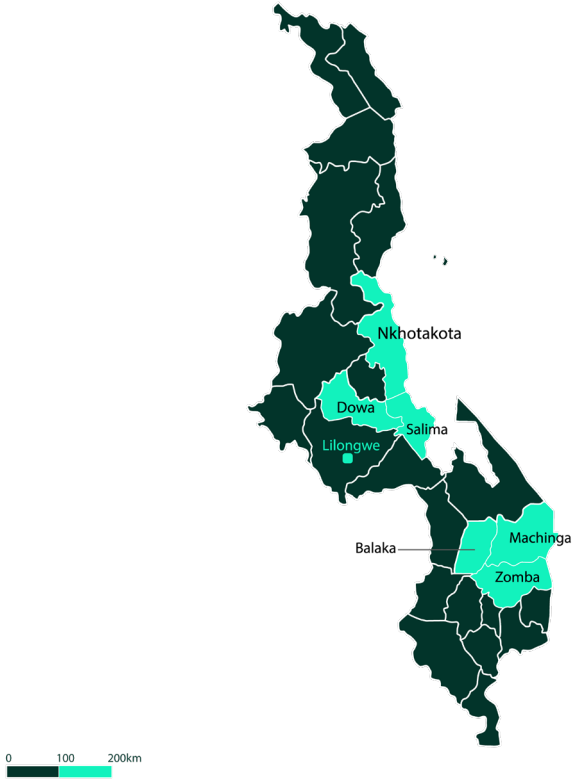

Figure 4. Geographic distribution of GALS implementation districts in Malawi

GALS is a participatory household and community planning methodology that uses simple visual tools to support joint decision making, reflection, and action among women and men (Enokenwa Baa, 2025). Rather than introducing technologies or prescribing practices, the approach focused on how households analyse their situations, surface constraints, and negotiate practical changes related to livelihoods, land, labour, and water use. Experiences from this work were shared by the implementing partner, Total LandCare Malawi in Figure 5.

Figure 5. Tasha Msango (Total LandCare, Malawi) presenting community-led scaling experiences using GALS at the Regional Workshop. (*photo:* Moureen Awori/IITA)

Scaling champions in this context functioned primarily as facilitators of process rather than promoters of specific innovations. A total of 40 trained GALS champions, drawn from traditional leadership structures, government extension services, market cooperative leads, and lead farmers, played a central role in sustaining engagement and cascading learning. These champions worked alongside 404 household trainers, collectively supporting engagement and reach to over 4,095 households, made up of 2,928 women and 1,167 men, across participating communities. Their sustained presence and proximity to communities supported continuity and trust, particularly in settings where formal extension services faced staffing and resource constraints.

Through facilitated use of visual tools, households mapped how resources were distributed, how labour demands were shared, and where bottlenecks constrained progress. More importantly, households and communities were able to envision sustainable practices as well as relevant partnerships and networks they needed to consider in achieving their goals and agricultural decisions. This enabled incremental testing of changes rather than wholesale adoption of predefined packages. Conservation agriculture and water-related practices were adjusted to household labour availability, seasonal variability, and competing livelihood demands. Participation was not constrained by literacy, and decisions were shaped through household-level dialogue rather than assumed by external actors (Enokenwa Baa, 2025).

Changes observed through the process were gradual but concrete. Households reported clearer communication around farming and livelihood priorities, increased involvement of women in decisions over crops, land use, and income, and greater willingness to experiment when risks were discussed openly. Repeated facilitation and peer exchange supported continuity of practice during periods of shock, such as erratic rainfall, pest pressure, and labour shortages (Enokenwa Baa et al., 2024). The process surfaced trade-offs, such as increased workloads and short-term yield pressures.

The work was implemented within Malawi's decentralised agricultural extension and community development landscape, where government services, non-governmental organisations, and traditional leadership structures jointly shape household-level engagement. While community-level champions played a central role in maintaining momentum, their effectiveness depended on coordination with implementing organisations and alignment with government extension services. The design of champions' role with clear criteria for selection also acted as an accountability booster, with the champions able to coordinate and scale learning within and across the districts.

Structural constraints remained. Most households operated on very small plots of land, limiting opportunities to expand production, while rainfall variability and weak infrastructure continued to shape outcomes. At an institutional level, poorly coordinated programming and short funding cycles constrained the ability to sustain facilitation-intensive approaches over longer periods (Enokenwa Baa, 2025).

The Malawi case highlights how sustained facilitation and relational engagement can enable continued use of innovations in contexts where household dynamics, labour constraints, and social relations strongly shape outcomes, and where progress depends on the ability of champions to remain present, support reflection, and enable adaptation over time.

3.3 Uganda

Uganda's experience shows how peer to peer information exchange accelerates uptake and scaling of bundled agricultural innovations to tackle an emerging disease problem, the Banana Bunchy Top Virus (BBTV). The emergence of banana bunchy top virus, a devastating disease, results in 90-100% productivity loss in the first season, and bananas cannot be produced in subsequent seasons (Ocimati et al., 2024). The disease poses a significant threat to farmer livelihoods, causing severe yield losses, economic hardship, and endangering the diversity of banana varieties grown, which could eventually result in food insecurity.

Working with the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), and the National Agricultural Research Organisation (NARO), together with farmer groups and with technical support from IITA, these organisations formed the core facilitation team. They used Ukama Ustawi's Learning Alliance model to facilitate a stakeholder learning visit. This visit aimed to empower farmers from high-risk districts of Bushenyi, Rubirizi, and Bunyangabu, where the disease was not yet present, to learn from peers in Kasese District and acquire the knowledge and skills necessary to prevent and manage the disease.

Figure 6. Blaise Amony (ASARECA) presenting lessons during the Regional Workshop in Uganda. (*photo*: Moureen Awori/IITA)

A total of 30 participants took part in the study tour, with 10 participants drawn from each of the three districts. The team worked with local government authorities to identify lead individuals and organisations to participate in the study tour. Participants were selected based on their standing within their communities and included influential community members, lead farmers, and leaders of banana farmer cooperatives and trader groups. The aim was to enable participants to learn directly about the disease, its preventative measures, and available control options in order to reduce the risk of further spread. Lessons from the study tour and peer exchange were subsequently shared and reflected upon during the Regional Workshop, with ASARECA facilitating discussion and synthesis of key insights (Figure 6). Following the learning visit, participants were expected to act as local champions,

disseminating information within their communities on measures to prevent disease introduction and spread, as well as on eradication and recovery strategies in areas where the disease had already been reported. The work conducted revealed that:

(i) study tours and peer to peer information dissemination are crucial for enhancing preparedness of farmers in disease free districts to prevent the introduction and spread of the disease.

(ii) use of different media platforms to facilitate information and knowledge dissemination, through radio talk shows, videos, jingles, and short text messaging, was effective in enhancing uptake of bundled innovations for integrated disease management and control.

(iii) availability of solutions acts as an incentive and pull factor to drive uptake of innovations. For BBTV, availability and access to affordable, clean, disease-free planting material, technical support, and willingness to eradicate infected plants are crucial for effective disease management.

Key lessons from managing an invasive disease problem:

1. Awareness among farmers of the problem and control measures is crucial for the uptake of information and disease management innovations.

2. Involvement and buy in of government is critical; government actors are key champions in the uptake and dissemination of disease management innovations and should be involved at every stage.

3. Farmers learn effectively from other farmers. Study tours are crucial for understanding the problem, observing impacts in real time, and learning from peers how to manage the disease.

4. Understanding critical information about the disease is essential. In this context, BBTV is a transboundary disease spread over long distances through the movement of infected planting material. Cross border cooperation is therefore vital to mitigate risks and control outbreaks that do not respect national boundaries.

This case demonstrates that proper identification of scaling champions, networking, and collaboration are key to the uptake of BBTV management innovations. BBTV has been confined to a few sub counties in Kasese District, reflecting cooperation among institutions that assumed scaling champion roles. These included district agricultural officers, local government authorities, and individuals working at community level to eradicate the disease. Scaling champions emerged at multiple levels, including local government authorities and extension workers, lead farmers, respected village influencers, and religious leaders, with support from district agricultural officers. The media also emerged as a key champion, disseminating information by visiting affected areas and ensuring that messages reached a wide audience.

3.4 Kenya

IITA has been working with partners to scale aflatoxin prevention and control innovations, centred on the use of Aflasafe, a nature based biological control for aflatoxin contamination in maize and groundnuts. Aflatoxins are secondary metabolites produced primarily by the fungus *Aspergillus flavus* in several crops and commodities. They are carcinogenic, teratogenic, and immunosuppressive, and are implicated in growth retardation in children, immune suppression, interference in micronutrient metabolism, liver cirrhosis, liver cancer, and decreased human and animal productivity (Groopman and Kensler, 2005; Williams et al., 2004). Acute, severe exposure to aflatoxin can result in death (Azziz-Baumgartner et al., 2005; Lewis et al., 2005; Kamala et al., 2018).

Aflatoxin contamination presents a critical, multifaceted threat to public health, trade, and food security across Africa. The toxins cannot be seen or smelled; farmers and consumers typically do not know what aflatoxins are, the burdens they cause, or ways to mitigate them; detection requires laboratory tests that are not easily accessible; and markets typically do not discriminate contaminated crops (Udomkun et al., 2017). Exposure to aflatoxin occurs primarily through the consumption of products derived from contaminated grains. Aflasafe is a field-based intervention that effectively reduces aflatoxin contamination from farm to consumption, as presented in Figure 7.

Figure 7. Jane W. Kamau (IITA) presenting AFLAS-supported learning alliance work on the management of banana bunchy top virus. (*photo*: Moureen Awori/IITA)

Fields treated with Aflasafe have consistently reduced aflatoxin contamination by more than 90%, and in some cases up to 100% control has been achieved. IITA and its partners have developed Aflasafe products that have been successfully scaled in 23 countries through partnerships with private sector manufacturers and distributors. The process of commercialising Aflasafe has revealed that partnering with the private sector is key to achieving scale. This has required the systematic integration of tools, establishment of licensing and legal frameworks, and the development of sustained partnerships, making both the research and private sectors relevant to industry and market needs.

IITA's strategies to build private sector partnerships

To overcome challenges associated with scaling innovations, IITA employs a strategic intermediation approach designed to bridge the gap between innovation and market uptake through structured collaboration with the private sector.

- **Upstream co creation of solutions:** IITA and its partners engage stakeholders at the outset of projects to co create innovations, leveraging market intelligence, product profiling, demand insights, and regulatory requirements to ensure solutions respond to real market needs.
- **Formalising transactions and engagement:** Investment and technology transfer are facilitated through mechanisms such as investor forums and **formal Technology Transfer and Licensing Agreements**. Although establishing these legal and licensing frameworks has been challenging, they are now in place and are critical for sustained collaboration.
- **Dedicated platforms for engagement:** IITA provides platforms for ideation, co creation, incubation, and acceleration to foster active private sector participation.
- **Rigorous scalability assessment:** The viability of innovations is evaluated after extensive field testing under real farming conditions, using tools such as Scaling Readiness assessments, e catalogues, and clearinghouses to assess market readiness and scalability.
- **Market focused commercialisation:** Clear market assessments and commercialisation strategies guide the uptake and diffusion of innovations into agricultural value chains, including planning for mass production.

These systematic approaches underpin a substantial financial commitment. Since 2015, IITA and its partners have invested approximately USD 15 million toward commercialising innovations through these structured intermediation efforts

Building enabling policy environments

Recognising that innovation scaling is impossible without a supportive ecosystem, IITA invests effort in cultivating enabling policy environments. In Kenya, aflatoxin management is shaped by a mix of food safety regulations, agricultural standards, and public health policies that together create both opportunities and constraints for scaling biological control innovations such as Aflasafe.

- Policy landscape and regulatory frameworks: Kenya has established food safety and quality standards for aflatoxin through agencies such as the Kenya Bureau of Standards (KEBS), alongside public health regulations and regional commitments under the East African Community that set maximum allowable aflatoxin limits in staple crops. These standards provide an important foundation for aflatoxin control by signalling public health risk and market requirements. However, enforcement capacity remains uneven, testing infrastructure is limited, and incentives for compliance at farm and market level are weak, particularly for smallholder producers.

- Policy analysis and advocacy: IITA's approach includes ongoing policy analysis and advocacy to create favourable conditions for innovation adoption by addressing regulatory bottlenecks, gaps in enforcement, limited awareness of aflatoxin risks, and misalignment between food safety standards and market incentives.

- Engagement with governments and partners: The strategy encourages multi stakeholder cooperation among farmer organisations, research institutions, private enterprises, development partners, regulators,

and government agencies, including ministries responsible for agriculture, health, and trade, thereby strengthening collective action to accelerate adoption of aflatoxin management innovations.

- Alignment with national priorities: IITA engages with policy priorities such as food safety, public health protection, youth employment, and market access, recognising that political will and cross sector coordination strongly influence whether aflatoxin control innovations move beyond pilots into routine practice.

4. Cross-Cutting Insights from Peer Learning

The insights presented in this section draw on peer learning from the Regional Workshop in Uganda, South-South University Network exchange at the S4I Scaling Huddle convened in Kenya (Figure 8), and a session during the 21st Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) Annual General Meeting in Botswana. Across these events, practitioners, researchers, universities, regional organisations, and government-linked actors compared experiences and reflected collectively on how scaling efforts unfolded within different institutional, political, and social contexts.

Figure 8. South-South University Network at the S4I Scaling Huddle in Kenya. (*photo*: International Livestock Research Institute)

A consistent pattern across these exchanges was that scaling outcomes were shaped less by the technical performance of innovations and more by the conditions under which actors were able to work together over time. Where relationships, incentives, and institutional roles aligned, scaling efforts gained traction; where they did not, progress was often partial or short-lived. This pattern cut across countries, sectors, and types of innovation, pointing to common constraints and enablers within scaling ecosystems

Leadership emerged as a defining factor in whether scaling efforts advanced. Across contexts, scaling champions were not isolated individuals operating independently, but actors embedded within communities, organisations, and networks who sustained momentum by convening others, building trust, and translating innovations into forms that could be taken up in practice. Champions included farmers, extension agents, youth leaders, university staff, private sector actors, and government officials. Their effectiveness was shaped less by formal authority than by credibility, persistence, and the ability to operate across institutional and social boundaries. Leadership in scaling was therefore expressed through continuity, coordination, and relational work, rather than positional power.

Peer learning also highlighted the role of universities, colleges, and TVET institutions in strengthening scaling capacity over time. Across different learning events, participants noted that many extension workers and facilitators

already possess substantial practical experience in supporting innovation uptake, often acquired through years of field engagement rather than formal certification. Discussions during the S4I Scaling Huddle pointed to experiences from Ethiopia, where some universities and colleges have integrated scaling concepts into curricula and, in collaboration with government agencies, offer certified short courses for extension workers. These programmes build on experiential knowledge by providing formal recognition, structured learning pathways, and professional incentives within public extension systems. In contrast, participants noted that where scaling knowledge remains largely project-bound or informally acquired, opportunities to consolidate learning and sustain capacity are limited. These exchanges underscored that universities and TVET institutions can function not only as conveners or knowledge partners, but as anchors for institutionalising scaling capacity when aligned with government training and accreditation frameworks.

Gender, equity, and social inclusion (GESI) cut across all discussions as central determinants of scaling trajectories. Experiences shared during peer learning highlighted how household decision-making, access to resources, and social norms influenced who adopted innovations and who absorbed risk. Recurring challenges included tokenistic inclusion, elite capture, increased labour burdens for women, and social backlash where inclusion was insufficiently supported. Where scaling approaches engaged directly with these dynamics, innovations were more likely to be adapted and sustained; where they were overlooked, outcomes were often uneven and fragile.

These insights frame scaling as an interconnected process shaped by champions, institutional arrangements, learning systems, and social relations operating over time. They provide a grounded basis for identifying priorities for strengthening scaling ecosystems across levels, which are taken up in the following section.

5. Emerging Regional Priorities for ESA

Insights from the country cases and collective learning point to a set of priorities that are critical for strengthening scaling ecosystems in ESA These priorities reflect how scaling unfolds in practice and where current approaches struggle to move beyond localised success. They emphasise that effective scaling is fundamentally bottom-up, requiring strong local and national policy ecosystems, with regional action playing a supportive and complementary role rather than serving as the primary driver.

- **Strengthening local and national enabling policy environments for scaling**

Champion-led scaling was highly sensitive to the quality of local and national policy ecosystems, including institutional alignment, clarity of roles, and coherence of mandates across actors operating at district and national levels. Where responsibilities were disjointed, mandates unclear, or enforcement weak, scaling momentum weakened even in the presence of strong local commitment and capable champions. Strengthening scaling ecosystems therefore requires deliberate investment in local and national policy environments where scaling is enacted in practice, including extension systems, land and finance arrangements, regulatory enforcement, and institutional incentives that support sustained uptake and adaptation.

Evidence from the country cases shows that regional frameworks alone are insufficient to compensate for weak local policy ecosystems. Durable scaling depends on policies and institutions that enable champions to operate consistently within their communities and districts, rather than relying on short-term project alignment or external coordination.

- **Strengthening locally embedded scaling champions and selectively connecting them across contexts**

Across contexts, scaling advanced where champions were able to convene actors, sustain relationships, and translate innovation into practice over time. These champions operated within universities, extension systems, community structures, and youth and farmer networks, often bridging formal and informal spaces. Their effectiveness depended primarily on local resourcing, mobility, institutional recognition, and the ability to work consistently within their immediate policy and governance environments.

While champions were often isolated, under-recognised, and dependent on short-term project arrangements, the priority for strengthening their effectiveness lies in supporting their local roles rather than relocating responsibility to regional initiatives. Selective regional connection can play a complementary role by enabling peer learning, visibility, mentoring, and exchange across contexts, but cannot substitute for sustained local and national support mechanisms.

- **Embedding gender, youth, and social inclusion as foundational to scaling**

Experiences across contexts showed that scaling pathways that did not engage with household decision-making, access to resources, and power relations often produced uneven or fragile outcomes. Approaches that worked directly with these dynamics were better able to sustain adoption and reduce unintended exclusion. Responsible scaling therefore requires embedding gender, youth, and social inclusion considerations within local and national systems from the outset, rather than treating inclusion as a corrective measure applied after implementation challenges emerge.

- **Mobilising and aligning financing for locally grounded scaling**

Champions consistently highlighted the constraints imposed by short funding cycles and project-based financing, which undermine continuity, learning, and adaptation. Scaling requires time for trust-building, experimentation, and course correction, yet prevailing financing modalities often prioritise rapid outputs. Addressing this gap requires financing approaches that support longer-term, locally grounded engagement, enabling champions to maintain presence, outreach, and coordination within their communities and districts.

- **Institutionalising sustained peer learning across level**

Ongoing opportunities for exchange, reflection, and collective problem solving enable actors to adapt approaches, avoid repeating mistakes, and respond to changing conditions. Peer learning is most effective when embedded within local and national institutions, such as extension systems, universities, and farmer organisations, and supported rather than driven by regional platforms. Treating learning as part of core scaling infrastructure, rather than as a series of ad hoc activities, strengthens the capacity of scaling ecosystems to learn, coordinate, and evolve over time.

Together, these priorities frame scaling as a systems challenge rooted in local and national policy environments, where progress depends on sustained investment in people, institutions, and learning mechanisms. Regional initiatives can add value by supporting coordination, reflection, and shared learning, but durable scaling ultimately depends on strengthening the policy and institutional ecosystems where champions operate and innovations are used in practice.

6. Implications, Way Forward and Conclusion

This synthesis shows that scaling in ESA is shaped far more by how processes are organised and sustained than by the availability of technologies themselves. Across the country cases and peer learning engagements, progress was evident where people were able to play championing roles over time, where institutions provided continuity and coordination, and where learning was built into implementation. Where these elements were weak or absent, scaling efforts struggled to hold, even when innovations were technically sound.

These patterns point to a need to rethink how scaling is supported and financed. Rather than concentrating effort primarily on delivery within short project cycles, greater attention is needed on the human and institutional foundations that allow scaling to continue beyond individual initiatives. Champions require space, recognition, and practical support to operate effectively. This implies sustained investment in relationships, peer learning processes, and institutional roles that enable coordination, adaptation, and continuity across contexts.

The findings also clarify the contribution that CGIAR can make in advancing this agenda. CGIAR's strength lies not only in innovation development, but in generating comparative insight, convening learning across countries, and supporting adaptive approaches that respond to changing conditions. Its value is strongest where it helps surface patterns across contexts, supports reflection on how scaling unfolds in practice, and strengthens connections between research, delivery, and learning functions.

Longer term durability, however, depends on leadership and ownership extending beyond individual projects and securing political buy in at national and sub national levels. National and local actors, including extension and research networks, training institutions, national research systems, and relevant ministries, play a central role in embedding scaling principles within policy, education, and implementation structures. Where political commitment is present, scaling priorities can be reflected in mandates, budgets, and accountability mechanisms, creating space for continuity beyond project cycles. Reinforcing scaling knowledge through training systems, professional practice, and institutional routines increases the likelihood that scaling efforts persist and evolve over time. These actors are also well placed to institutionalise peer learning as an ongoing function within scaling systems.

The analysis further shows that peer learning and South-South exchange are central to how scaling capacity is built and sustained. Learning spaces enabled actors to move beyond project boundaries, make sense of shared constraints, and adapt approaches in response to changing conditions. Rather than producing models for replication, these exchanges strengthened judgement, relationships, and collective problem solving, improving how actors navigate complexity over time.

Overall, strengthening scaling in ESA is less about introducing new instruments and more about reshaping how support is organised over time. Scaling is not a one-off achievement, but an ongoing process shaped by leadership, institutional readiness, and sustained learning. By bringing scaling champions into focus as central actors within these systems, this synthesis clarifies what is required to move beyond fragmented and inconsistent interventions toward scaling approaches that are more coherent, resilient, and inclusive across the region.

7. Recommendations

The recommendations below identify where current scaling approaches consistently fall short and outline practical shifts in practice, investment, and institutional support required for scaling efforts to hold, adapt, and remain effective over time.

Strengthen and support scaling champions

- Recognise scaling champions as a deliberate and essential component of scaling systems, rather than as informal or incidental actors.
- Invest in the continuity of champion roles through long-term engagement, mentoring, and mechanisms that enable champions to remain active across institutional and geographic boundaries.
- Enable selective regional and cross-country connections that allow champions to exchange experience, sustain momentum, and navigate institutional and political constraints collectively.

Institutionalise peer learning as part of scaling practice

- Embed peer learning and South-South exchange as core infrastructure for scaling, rather than as ad hoc or project-specific activities.
- Integrate deliberate reflection, exchange, and adaptation processes into regional programmes and scaling initiatives.
- Use peer learning spaces to interrogate why adoption weakens as innovations move across institutions and to strengthen shared understanding among actors involved in scaling.

Embed scaling into education, training, and professional development

- Institutionalise scaling capacity through universities and TVET systems by developing accredited short courses that recognise and strengthen the experience of extension workers, alongside the integration of scaling concepts into pre-service education and degree curricula.

- Strengthen curricula to equip graduates and practitioners with applied scaling capabilities, enabling them to adapt innovations to context, support uptake, and work across institutional and sectoral boundaries.

- Rebalance training beyond a narrow focus on technologies by prioritising skills in facilitation, systems thinking, value chain coordination, and inclusive innovation delivery.

- Support partnerships between universities, extension systems, and research organisations to ensure that scaling education is grounded in real implementation experience.

Strengthen enabling environments for scaling

- Improve alignment across policies, institutional mandates, and implementation structures that shape how scaling is supported.
- Clarify roles and coordination mechanisms among research organisations, extension services, universities, and implementation partners to reduce fragmentation.
- Support institutional arrangements that allow flexibility, learning, and adaptation, as opposed to rigid delivery against short-term targets.

Embed GESI in scaling pathways

- Integrate GESI from the outset of scaling design, rather than treating them as corrective or downstream considerations.
- Support approaches that engage household decision making, power relations, and differentiated access to resources as integral elements of scaling processes.
- Use disaggregated and qualitative evidence to understand who carries risk, who benefits, and how scaling pathways may reinforce or reduce exclusion

Align financing with the realities of scaling

- Shift away from short funding cycles that undermine continuity, learning, and institutional memory.
- Support financing approaches that enable experimentation, adaptation, and sustained engagement over time.
- Invest in the institutional capacities required to hold scaling processes together beyond pilot and demonstration phases.

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