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## Emerging pathways for scaling: Insights from AICCRA country clusters

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AICCRA is being implemented in six countries, as well as at the regional level, to help deliver a climate-smart African future driven by science and innovation in agriculture. Ambitions of scaling are built into the project design, with high-level objectives around reaching people, institutions, and countries to impact Africa's future in a systemic way.

Deep, equitable, long-term partnerships are often the key that opens the door to climate-smart agriculture implementation at large scale. AICCRA

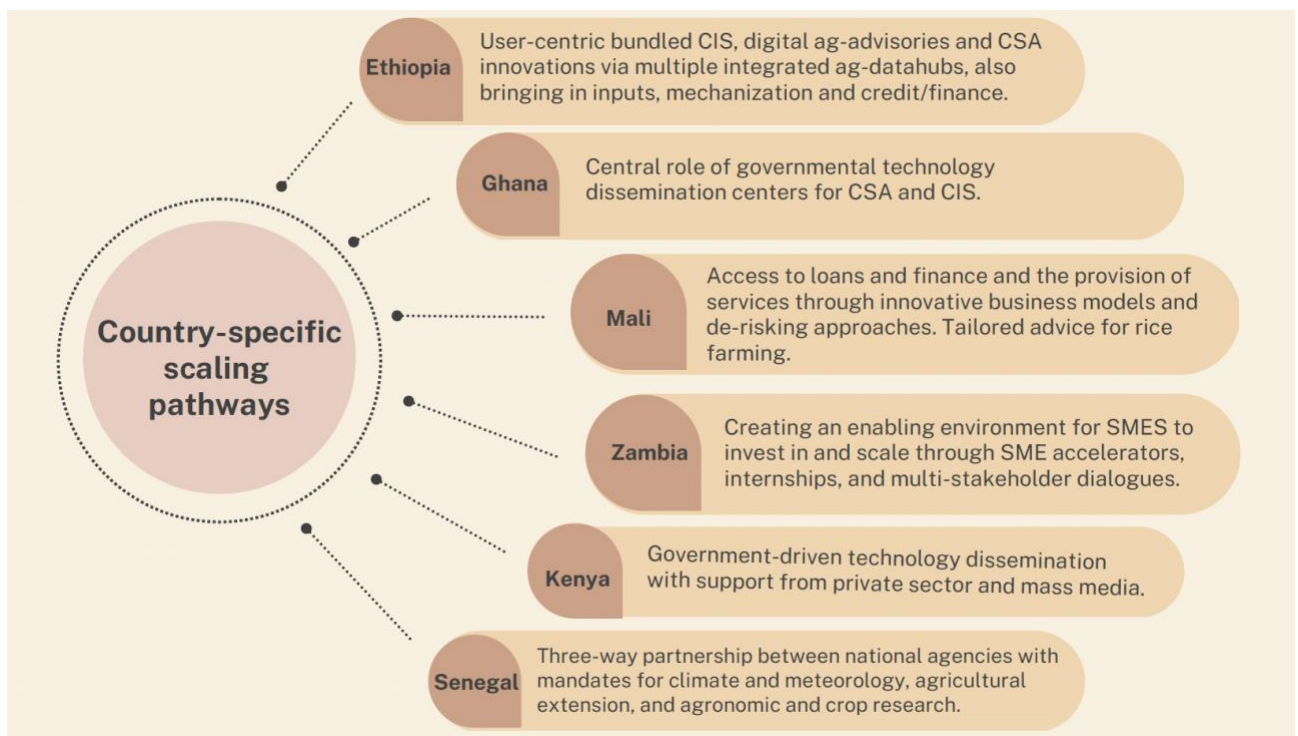
pursues co-innovation within adaptive, trust-based partnership networks that include local, national, regional, and continental institutions. This is consistent with what is known as adaptive scaling, which is a systemic approach that places multi-actor engagement and partnership at the center of its drive to achieve transformative impact. Notably, according to this concept, scaling is driven by actors in their own institutions (International Water Management Institute. 2021. [Adaptive scaling to achieve system transformation in One CGIAR](#)).

While AICCRA as a whole embraces a strategy of partnership-based scaling, the project also relies on a flexible adaptive style that allows a heterogeneity of approaches at the country level. In each country, scaling approaches are also determined by specific characteristics, obstacles, and opportunities. In Mali, for example, AICCRA's approach ensures access to loans and finance and the provision of services through innovative business models and de-risking approaches. In Ghana, on the other hand, a central role is played by governmental technology dissemination centers for climate-smart agriculture (CSA) and climate information services (CIS). Zambia is creating an enabling environment for small and medium enterprises (SMEs) to invest in and scale CSA practices or CIS through SME accelerators, internships, and multistakeholder dialogues. Figures 1 and 2 provide more details on country-specific pathways and convergence and divergence among select strategies in AICCRA countries.

### Key messages

- There are heterogeneous approaches to scaling CSA and CIS in AICCRA countries.
- Partnerships are key to AICCRA scaling frameworks, with the public sector, private sector, and non-governmental organizations having different roles in different processes in each country.
- Understanding the capacity of partners and stakeholders is crucial in designing the appropriate training support and in bringing together people and entities with complementary knowledge, skills, and capacity that will contribute to driving the scaling efforts.
- Use of agro-advisory platforms, mass media, and social learning approaches play a key role in scaling CIS and CSA. Revitalizing existing partnerships and improving coordination is the first step for establishing efficient and effective collaborations among institutions.





**Figure 1: Select country scaling pathways in AICCRA**

## Scaling Pathways through Partnerships

The following puts forth information on the scaling strategy in each country, with a focus on institutional roles and partnerships.

### **Ethiopia**

Scaling in Ethiopia is dominated by a set of bundled CSA activities and enhanced CIS and agriculture advisories developed via multiple integrated agriculture datahubs using user-centric digital bundling by integrating inputs, mechanization and credit/finance. These include: (1) integrated national ag-data hubs including for CIS and ag-advisories, improved and resilient seed systems, generation of small ruminant innovations, agroecosystem-based fertilizer recommendations; (2) enhanced NextGen short, medium, sub-seasonal and seasonal CIS for agriculture, health, and disaster risk management sectors for crop and livestock value chains accessible through Ethiopia’s National Meteorological Institute platform, (3) bundled gender-responsive enhanced CIS, agro-advisories, and CSA technologies generated from Ethiopia’s Digital Agro-climate Advisory Platform (EDACaP) for wheat value chain using API linkages with Green Agro-solution PLC’s Lersha Digital

Platform; (4) farmer-centric bundled CSA practices for rehabilitation of degraded landscapes and ecosystems accessible through NGO (Inter Aide) platforms; (5) CSA bundled technologies and practices for small ruminant value chains (Smart Packs) accessible through Regional Agricultural Institutes Centers (RARIs) Platforms; and (6) bundled gender-responsive bundled CSA technologies and practices for forage and feed value chains through Ethiopia’s Regional State Government Bureau of Agriculture Platforms.

The scaling framework in Ethiopia is determined by the strong centralized system in the country, where the scaling of agricultural innovations is predominately conducted through the public sector national agricultural and health extension system. CGIAR and partner innovations are promoted as technical support using large-scale sector development national and international partners (for example, the World Bank) projects managed by the Ministry of Agriculture, Ministry of Education, Ministry of Water and Irrigation, Ministry of Health, and the National Disaster Risk Management Commission to achieve impact at scale. Although the AICCRA approach also engages significant numbers of NGOs, the private sector, and other civil society actors’ platforms to make CIS and CSA innovations accessible to end users and for scaling, the public sector has a crucial role in implementation of activities and scaling efforts.

**Table 1: Some key characteristics of country-specific scaling approaches in AICCRA**

Country	Institutional arrangements	Different approach vis a vis activity	Role of private sector
Ethiopia	Mixed institutional arrangements (public and private sector, NGOs platforms), and technical support to big-ticket national and international partners initiatives serving impact pathways for scaling and achieving impact at scale on the ground	<p>Government institutions predominate enhanced CIS scaling, with central agriculture and health extension system along with mass media (radio) driving dissemination/scaling out of enhanced CIS.</p> <p>Active private sector start-ups involved in private-public partnerships for scaling CIS using user centric digital bundling strategy involving credit, inputs and mechanization.</p> <p>Government, NGOs, universities, and private sector all help drive scaling of CSA bundled activities for crop and livestock systems.</p>	Present in all CSA and CIS scaling efforts
Zambia	The agribusiness ecosystem is at the center of scaling efforts with various activities and partners, including government, development partners, research-for-development organizations, and civil society all collaborating to strengthen the enabling environment.	<p>End-to-end methodology developed for science-based agribusiness acceleration to scale innovations and catalyze private investments.</p> <p>Strengthening the agribusiness capacity pipeline of skills needed for scaling through SME internships and university partnerships.</p> <p>Integrated AgDataHub, co-designed and hosted by government.</p> <p>Longstanding technical support to targeted government agencies at the forefront of CIS provision.</p>	<p>Participants in Accelerator Program</p> <p>Partners, co-funders and internships hosts</p> <p>Providers of CIS for AgDataHub</p> <p>Present in all scaling efforts</p>
Mali	Mixed institutional arrangements, with NARES, private sector, development organizations	<p>CSA scaling driven by partnership between government research institutions and private sector/NGOs</p> <p>Irrigation management authority and farmers organizations key to scaling CSA</p>	Irrigation suppliers, service providers, for-profit farmers organizations providing agricultural services through innovative business models
Kenya	Government-driven technology dissemination with support from private sector and the media	<p>Strengthened national agricultural observatory platform delivers CIS and agro-advisories through mass media and farmer-facing organizations</p> <p>Counties lead CSA scaling through demonstration plots and governmental extension agents</p> <p>Use of mass media (television) to support scaling out to communities</p>	Agro-businesses and farmer facing organizations disseminating bundled and tailored agro-advisories
Senegal	Mixed institutional arrangements, with NARES, private sector, agricultural extension	<p>Participatory CIS-CSA innovations driven by national agencies (CERAAS and ANCAR)</p> <p>Development of AgDataHub driven by the national agency together with international research consortium comprised of national institutions and university partner</p> <p>Improved dissemination of agro-advisories through multiple channels accelerated by private sector and extension (Jokalante, ANCAR, SAIDA platform)</p>	<p>Present in Gender Accelerator program for women-led climate-smart SMEs</p> <p>Present in dissemination of CIS, specifically regarding communication through phone messages in local languages.</p>
Ghana	Government-driven technology dissemination with complementary support from private sector and the media	<p>CIS dissemination through private sector led digital platform (ESOKO)</p> <p>Technology dissemination centers managed by the government (RELCS)</p>	Present in dissemination of CIS and companies for seed distribution

Across all activities and scaling frameworks, there is a mix of institutional partners and public-private partnerships. As suggested above, government institutions have a role in all of them, including at multiple levels, such as the national level or regional level. Civil society actors, including universities, unions, and NGOs, and the private sector contribute to many scaling activities, with Interaide leading scaling efforts in the activities around the farmer-centric CSA bundles and universities having a critical role in scaling the SmartPack interventions. Scaling strategies for enhanced CIS are exclusively characterized by the presence of government institutions.

### **Ghana**

In Ghana, AICCRA is bringing farmers to the forefront of its scaling strategy by designing and implementing interventions that are responsive and meet user demands. The selected CSA innovations for maize, cowpea, yam, potato, and vegetable value chains are based on the prioritization and validation processes with stakeholders.

Six key activities are contributing to this scaling vision including: (1) CIS dissemination through the ESOKO platform, an online digital tool for agricultural marketing and messaging services with a focus on reaching rural communities; 2) establishment of pilot demonstration plots in collaboration with Research-Extension Linkage Committees (RELCs); 3) organizing farmer field days to showcase how yields are improved using CIS, CSA, and OneHealth innovations with an emphasis on “women’s crops”; 4) awareness raising around CIS-CSA bundles through the use of community radio and farmer field schools; 5) developing strategic stakeholder partnerships through capacity strengthening on the use of CIS-CSA bundles including government agencies and CORAF Regional Center of Excellence on Roots and Tubers; and 6) organizing media training to enhance understanding of CIS-CSA bundles for better dissemination and reporting to target audiences.

The highlight of AICCRA Ghana’s scaling mechanism is how it optimizes the role of demonstration plots as a learning hub to harness accumulated knowledge and experience on CSA technology and practices. This emphasizes the central role of technology dissemination centers as a venue to foster partnerships that can influence improved adoption of CIS-CSA innovations with support from private sector digital platforms and the media. Monitoring, evaluation, and learning are integral elements of the scaling process. In parallel, AICCRA also takes the opportunity to engage in science and policy dialogues and to mainstream the science and products generated into the Ministry of Food and Agriculture curricula development and to collaborate with the existing OneCGIAR regional initiatives and relevant World Bank projects such as Food System Resilience Program.

### **Kenya**

The scaling approach of AICCRA in Kenya entails several complementary mechanisms: 1) dissemination of CIS and agro-advisories through the public sector, the national agricultural observatory platform, and radio; 2) training and capacity building regarding using bundled CIS and CSA with county extension agents, producers organizations, and private service-providing companies; 3) demonstration plots led by counties to disseminate drought-tolerant pearl millet, sorghum and pigeon pea; 4) dissemination of CSA practices in collaboration with an agricultural make-over television show; 5) development of climate risk profiles to guide climate-smart investments; and 6) development of university curricula.

Kenya’s strategy is characterized by the central role of the public sector in scaling CIS, through the national agricultural observatory, and CSA, through county-led demonstration plots. AICCRA is strengthening the capacity of government agencies with mandates in agriculture and climate and is conducting CSA dissemination activities in close collaboration with three county governments. Scaling efforts are led by the public sector, but media is playing a crucial role disseminating CIS

and CSA practices through local radios and television shows. Agri-businesses and farmer-facing organizations, which have gained the trust of local farmer communities, are strategic for scaling bundled and targeted agro-advisories.

AICCRA is targeting existing public-led platforms. Revitalizing the collaboration between the Kenya Meteorological Department and the Kenya Agricultural and Livestock Research Organization, AICCRA has strengthened the national agricultural observatory platform with accurate and timely information that provide ward-specific weather forecasts, agro-advisories, and market information for farmer facing organizations and farmers. CSA practices are disseminated through demonstrations plots and farmer field days that rely on social learning approaches whereby lead farmers act as trainers of trainers and disseminate innovations in the wider farming community.

### **Mali**

AICCRA is scaling agro-advisories, CSA practices, and innovative business models through several mechanisms: 1) Dissemination of CIS and agro-advisories through public platforms, radio, and farmer-facing organizations; 2) Dissemination of CSA practices through on-farm demonstrations, field schools, and multi-stakeholder platform in partnership with government institutions, specifically the national agricultural research center and the Niger Office (a semi-autonomous government agency); 3) capacity building of government extension agents and service providers on using the RiceAdvice agro-advisory tool to implement CSA; 4) support to farmers and farmers organization in accessing finance through community saving groups and de-risked bank loans, 5) workshops to scale solar-powered irrigation through pay-as-you-go business models.

The scaling strategy is characterized by a focus on rice-related innovations and by a well-rounded and integrated scaling approach that focuses on supporting farmers' access to finance alongside CIS strengthening and CSA dissemination. This is achieved through a range of complementary partners, including government institutions, such

as the national agricultural research center (Institut d'Economie Rurale), and the Syngenta Foundation for Sustainable Agriculture, a foundation with links to the private sector.

Access to finance limits the adoption and scaling of CSA, including the implementation of RiceAdvice recommendations. This is being addressed by AICCRA by working alongside Syngenta Foundation, banks, local NGOs, irrigation suppliers, and service providers to develop innovative business models. The close collaboration with the Niger Office, managing the largest irrigation scheme in Mali, is leading to the institutional uptake of the innovations introduced by AICCRA. In particular, AICCRA is scaling drought tolerant and early maturing rice varieties, alternate wetting and drying, and GEM parboiling technique.

### **Senegal**

In Senegal, AICCRA implements activities with a key focus on scaling by applying the following approaches: 1) participatory CIS-CSA innovations through the installation of demonstration sites, farmer field schools and technology parks across initially three regions which are extended to four, allowing farmers, lead farmers, and extension agents to have direct access to technical advice and skills on best production practices in crop production (millet, groundnut, and cowpea) as well as across livestock production to boost the milk and meat value chains; 2) strengthening partnerships through technology (iSAT, rain gauges, analytic tools, and models) transfer and exchange between an international research consortium with the National Agricultural Research and Extension Systems and the private sector to enhance capacities and upgrade existing CIS platforms; 3) developing an AgDataHub for public and private extension and farmer organizations and other actors engaged in the co-production of tailored agro-advisory for farmers, and linking it to the SAIDA platform for broader dissemination; and 4) increased access to markets and finance by bringing in funding opportunities for women through the Gender Accelerator Program to develop capacities of implementing partners in upscaling process of CSA technologies and practices.

	Senegal	Ghana	Mali	Kenya	Ethiopia	Zambia
Farm demonstration plots	✓	✓	✓	✓	✓	✓
Local CIS dissemination	✓	✓	✓	✓	✓	✓
Radio and mass media	✓	✓	✓	✓	✓	✓
Multi-stakeholder dialogues	✓	✓	✓	✓	✓	✓
Digital agro advisories	✓	✓	✓	✓	✓	✓
University curricula	✓	✓		✓	✓	✓
Guiding investments in CSA	✓			✓		✓
Access to finance	✓		✓		✓	✓
Innovative business model development			✓		✓	✓

Figure 2: Convergence and divergence among dissemination strategies and innovation in AICCRA

Senegal’s scaling strategy is anchored in the three way partnership between the national agencies which have the mandates for climate and meteorology (ANACIM), agricultural extension (ANCAR), and agronomic and crop research (CERAAS). These three agencies are working collaboratively for the first time to integrate CIS and CSA innovations. This is accelerated further by the broad outreach of the private sector (Jokalante, an agri-tech partner) compounded with the national digital platform (SAIDA app with a potential reach of 84,000 producers) managed by ANCAR and FAO and mass media (radio broadcast) to utilize diverse dissemination pathways to reach a greater scale.

By improving the institutional performance of national agencies through capacity strengthening via training and anchoring climate risk management topics to university curricula: Senegal’s scaling framework supports the creation

of communities of experts that can facilitate the flow of CIS and CSA across scales with the

recognition of the strong role of private sector and agricultural extension partners in bringing these innovations to the last-mile users.

### Zambia

The scaling approach consists of five main pieces: 1) Partnership with national incubators and the private sector to co-design and implement accelerator grants for startups/SMEs; 2) Development of the Agdata hub to strengthen the generation and dissemination of contextualised agro-services; 3) Creation of multi-stakeholder platforms for private sector partners to support collaboration across multiple sectors to generate innovative solutions to advance CSA-CIS innovation and accelerate the scaling of the selected CSA bundles; 4) internship and innovation grant (I2G) to strengthen the pipeline for agribusiness scaling of CIS and CSA to generate capabilities of individuals

and institutions to deliver on the ‘translational research’ into business and commercialization, and 5) scaling out via a combination of communication channels including multi-stakeholder dialogues, television, radio, and social media.

AICCRA’s approach in Zambia relies on the concept of adaptive scaling, which sees scaling as a systemic process that places partner engagement at its center. According to this concept, innovation is accelerated via a supportive technical, financial, and institutional environment to reach scale in a sustainable and inclusive manner. This framework stimulates multiple scaling pathways for innovation bundles depending on the enabling environment, human and financial resources, multi-stakeholder partnerships and capacity.

Adaptive scaling for system transformation requires strengthening the entire ecosystem: policy, finance, markets, technology, and capacity of actors. AICCRA Zambia’s scaling strategy includes public and private sector scaling partnerships, individual and collective investments, financing mechanisms for SMEs, institutional capacity building and multistakeholder dialogues. As shown in Table 1, the private sector is key to this process, as the main vehicle for scaling in the various scaling platforms is the Accelerator Program, I2G, and multi-stakeholder dialogues..

## Looking Forward

This brief intends to describe the main scaling strategies across the AICCRA project, demonstrating both the heterogenous approaches but also commonalities. Future analysis could examine in more detail these approaches, contributing to a research agenda on scaling in an African context. This could include:

- Systematically use Monitoring, Evaluation, and Learning to generate learnings and evidence around the effectiveness of

scaling mechanisms and pathways applied in each AICCRA country.

- Further analysis comparing scaling strategies of different types of climate-smart agriculture technologies and climate information system approaches.
- Comparison of the different institutional approaches to scaling, such as different types of institutions (public, private, NGO) and their role in scaling efforts, including vis-a-vis different technologies and interventions.
- Analysis of the impacts of scaling activities within the institutions involved such as looking at how their roles have changed, and what new skills and capacities have developed in advancing the scaling process.

## Further Reading

[AICCRA Scaling Vision, Ethiopia](#)

[AICCRA Scaling Vision, Kenya](#)

[AICCRA Scaling Vision, Ghana](#)

[AICCRA Scaling Vision, Mali](#)

[AICCRA Scaling Vision, Senegal](#)

[AICCRA Scaling Vision, Zambia](#)

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