



Photo credit: Elie Ntirengaya

Synthesis Learning from a Decade of CGIAR Research Programs –

Action Area 1: Systems Transformation



Advisory
Services

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Brief 1

Background and Context

In 2020, in an ambitious One CGIAR reform, CGIAR commenced to streamline the governance, operational structures and processes guided by the [2030 Research and Innovation Strategy](#). In the Strategy, Action Area on Systems Transformation recognizes that doubling agricultural productivity and incomes of poor small-scale farmers, pastoralists, and fishers to tackle poverty, hunger, and malnutrition will require both (1) eliminating the constraints they face in accessing productive resources, knowledge, finance and markets; and (2) multisectoral analysis, innovations and sound policies to address the complex and interconnected agricultural, environmental, energy, and social challenges and risks that threaten food security and livelihoods, including mismanagement of landscapes and water systems, global warming, extreme droughts and floods, deforestation, environmental degradation, soil degradation, and loss of biodiversity.

To achieve this, CGIAR will work with national programs and partners to co-generate an evidence base and options for systems change using foresight and tradeoff analysis, and codesign innovations to foster more viable, efficient, and inclusive markets and institutions. In collaboration with the Action Area on Resilient Agrifood Systems, interdisciplinary research on terrestrial, freshwater, and marine ecosystems will integrate biophysical, technological, social, and institutional dimensions of innovations and policy, using remote sensing, big data tools, and strengthened participatory approaches for resource planning and management. In addition, CGIAR will address risk factors in informal and formal channels to improve the sustainability and affordability of healthy, safe diets.

Evaluation Synthesis Methodology

In 2021, the Evaluation Function of the CGIAR Advisory Services (CAS) conducted an evaluative exercise to provide recommendations for and support the future One CGIAR. The [2021 Synthesis](#), serves the dual purpose of accountability to CGIAR funders and learning from 10 years of implementing CGIAR Research Programs (CRPs)—see Figure 1.

The approach of the 2021 synthesis was summative and formative. The predominately qualitative method used a narrative approach to synthesize findings. The synthesis of evaluative evidence relied on information from 43 purposefully selected CRP and thematic evaluations and reviews. Validation of results and quality assurance relied mainly on data triangulation, including related synthesis of evaluative evidence. The quantitative method used basic descriptive statistics, where quantitative data on the quality of scientific publications were available. The overarching analytical framework was based on five themes: quality of science; inputs and progress towards outputs; performance; management and governance; and future orientation/relevance. Key limitations included the reliance on secondary source data due to the synthesis nature and desk-based nature of 2020 CRP reviews without first-hand, face-to-face contact with key stakeholders, evidence gaps and limited comparability across themes and subthemes; and limitations related to discontinuation of several of the systems CRPs after one phase.

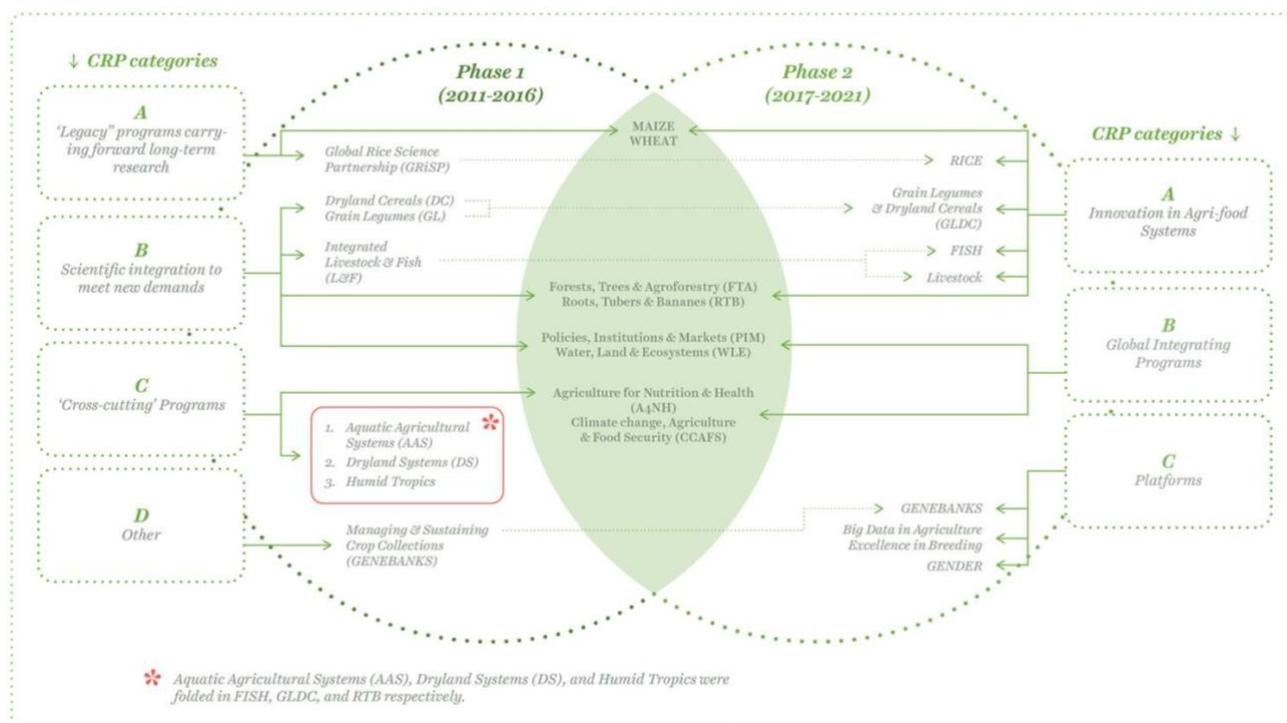


Figure 1. Evolution of the CRPs over two phases of implementation

Key Findings

Several of the CRP global integrating and systems programs focused on policy analysis and innovations, and/or strengthening participatory approaches at field and policy levels, sometimes using multiple-disciplinary approaches.¹ The evaluative evidence provided a number of key findings of relevance to the Systems Transformation action area. They include:

- The CRPs opened new research areas for CGIAR, including nutrition and health, market chains, climate change, advanced and systems-based approaches, aided by new, innovative partnerships with Advanced Research Institutions (ARIs).
- Several CRPs, e.g., Climate Change, Agriculture and Food Security (CCAFS), Policies, Institutions, and Markets (PIM), Agriculture for Nutrition and Health (A4NH), Forests, Trees, and Agroforestry (FTA), and Water, Land and Ecosystems (WLE), contributed significantly to policy discussions and outcomes related to climate change, nutrition and health, response to economic shocks, and the sustainable management of land, water, and ecosystems. Their work provides an important foundation for future efforts at the interface of livelihoods, landscape resilience, nutrition/health, and food and water security.
- There was inadequate focus on the needs of the poorest and most vulnerable sectors, with little attention to potentially valuable off-farm income and employment opportunities for rural women and youth. This gap reflects limited CRP social science capabilities, and the predominant focus on biophysical dimensions.
- CGIAR metrics for resilience, poverty alleviation and sustainability are poorly used or insufficient. Progress indicators and impact assessment methodologies are particularly challenging for natural resource management (NRM) and systems research where achieving impacts requires significant time, often exceeding the duration of a typical CRP.
- Window 1 and 2 (W1/W2) funding was insufficient to provide a central integrative driver for the CGIAR Research Programs, negatively affecting their ability to deliver the overall purpose and intended outcomes. Funding for systems programs, especially those focusing on participatory approaches, and programs related to environmental health, were most severely affected by low and uncertain funding. While CCAFS was generously funded, WLE was the least funded CRP, and systems CRPs Humidtropics, Drylands, and Aquatic Agricultural Systems (AAS) were not extended to a second phase.

¹ Refer to the Synthesis Annexes for more information.

Selected Evidence Gaps

The evidence on work across CRPs on natural resource management, biodiversity, and ecosystem services, and their relation with poverty, livelihoods and equity was limited and inconsistent. This information would provide a baseline for Action Area 1 and indicate where additional work is needed.

Key Lessons Learned

- Through CCFAS, WLE, A4NH, PIM and FTA, CGIAR has developed relevant skills and experience to expand its work at the interface of environment, climate change, nutrition/health, and livelihoods. However, these CRP efforts operated in relatively siloed fashion, with little cross-CRP interaction or cross-flagship work within CRPs. The future challenge will be bringing these strengths together to inform food systems transformation in the context of multiple sectors and objectives.
- CCAFS and A4NH demonstrated CGIAR capacity to effectively address new and emerging topics, and the important role of external research institution partners in filling CGIAR disciplinary and management gaps, and opening new opportunities for collaboration.
- CRP experiences with systems and participatory approaches are highly relevant to Action Areas 1 and 2, including long-term, place-based multidisciplinary research, such as the Sentinel Research Program of FTA and the systems approaches of Humidtropics, Dryland Systems, and AAS. However, there was limited acceptance and funding for these approaches by CGIAR and donors. If multiple disciplinary research, including natural resource topics, is going to receive more focus under One CGIAR, it will be important to understand and address the underlying reasons for the lack of support in a more comprehensive way than was possible in the synthesis review.
- Achieving transformative systems change will require impact at scale, engagement and commitment from many partners beyond CGIAR, including the private sector. CGIAR will need to invest in developing a partnership strategy, and in individuals with skills to develop and sustain partnerships, which are different from the training and background of traditional CGIAR scientists. CGIAR will also need more social scientists, strategies and resources to improve the institutional capacity of country partners, and investments to improve communications. Achieving development outcomes at scale will require the CGIAR to define its comparative advantage in development, measure its contributions appropriately, and sustain its engagement and resources over a longer period of time.
- Adaptive management, and incentives to incorporate evidence and learning into ongoing revisions of program approaches, will be required to address complex system challenges and ensure country partner ownership and effective participation.

Conclusions and Recommendations

The achievements of the global integrating programs and systems CRPs provide an important foundation for Action Area 1 research initiatives, but the significant challenges they faced also provide warning signals about what must be addressed in order to ensure the success of new initiatives. These include:

- Rather than tackling climate change, NRM, and agriculture for nutrition and health separately, CGIAR should consider them together, holistically, exploring science-policy synergies and tradeoffs across the areas as food systems transform.
- To achieve a stronger focus on poverty reduction across all programs, target the rural resource-poor, women, and those most disadvantaged. Increase attention to understanding and addressing the equity impacts of policies, shocks, and risks faced by poor people in taking up technologies and research solutions.
- Address the linkages between environmental sustainability and resilient agri-food systems. Relationships between the dynamics of environment, ecosystems, biodiversity, and livelihoods in agro-ecosystems will require significant attention.
- Identify a handful of place-based programs in high-priority agroecologies, where the triple challenge of achieving sustainable food production, enhancing human well-being, and conserving ecosystem services can be addressed and where national commitments bring opportunity for impact at scale through integrated innovation systems.

Read the report and download the annexes: cas.cgiar.org/evaluation/publications/2021-synthesis