RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

CGIAR CCAFS

Info Note

Ten principles for effective AR4D programs

Strengthening individual and program behaviours to achieve outcomes in climate change adaptation and mitigation

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Key messages

- Effective agricultural research for development (AR4D) faces many challenges that are exacerbated under climate change.
- Particular behaviours by AR4D individuals and programs may drive the likelihood and quality of positive outcomes when working with partners.
- Explicit principles about effective behaviours can improve AR4D theories of change and enhance achievement of outcomes.
- Internal learning over four years of CCAFS implementation suggests ten principles to guide AR4D (Figure 1).

The numerous challenges in agricultural research for development (AR4D) include paralysis in the face of complexity and weak mechanisms for engagement and negotiation among relevant stakeholders (Sayer and Campbell 2004, Hall et al. 2014; Harrington and Fisher, 2014). Climate change-related research comes with additional challenges. Agriculture and food systems are at the nexus of three of the grand challenges of the 21st Century: food insecurity, adapting to climate change (both longer-term trends and greater frequency and intensity of extremes), and reducing greenhouse gas emissions. Uncertainty around future pathways and complex causal relationships create difficulties for clear-cut decisions (Vermeulen et al. 2013) and exacerbate scepticism and inaction. Solutions to the grand challenges require working from farmers' fields to global processes, forging linkages across the environment-agriculture divide, building bridges between the global change community and the agricultural community, and giving equal attention to technology, institutions, power and process.

Fundamental to the operation of the CGIAR Research Program (CRP) on Climate Change, Agriculture and Food Security (CCAFS) is a series of nested "impact pathways" that link research activities and outputs to desired outcomes and impacts on people's wellbeing, up to the global level of the Sustainable Development Goals (SDGs). The impact pathways depend in turn on a comprehensive "theory of change" (ToC) at program level (Figure 2), which proposes a set of hypotheses about how change is bought about by a wide set of partners to achieve the program's impact pathway. The program-wide ToC is linked to theories of change for the nested flagships (four thematic research areas), regions (Latin America, West Africa, East Africa, South Asia and Southeast Asia), projects, and the cross-cutting area of work on gender and social inclusion.

The central hypotheses and assumptions in the ToC concern policy and practice by the wide range of stakeholders across sectors (public, private, civil society) and at different levels from local to global. But our four years of internal learning in CCAFS suggest that day-to-day behaviours by an AR4D program also drive success.

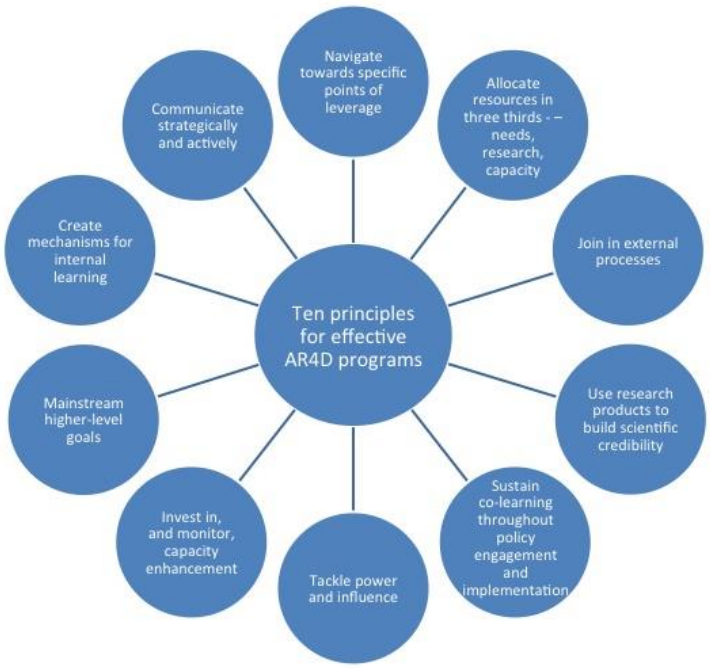

Figure 1 Ten principles for effective AR4D programs

Here we present ten principles on how our behaviour as an AR4D team (including researchers, communicators, administrators, data managers, event managers, monitoring and evaluation specialists, partnership specialists and research leaders) can enhance the likelihood and quality of positive outcomes.

Learning from CCAFS experience

CCAFS initiated a process of internal learning when it was established. One component of that was the identification in 2011 of "success factors" and then the annual tracking of how CCAFS was performing as a team in relation to those success factors, often with the help of external facilitators. Another component was a risk catalogue, where the major risks to CCAFS were tracked and mitigation measures put in place. A third tool was a set of management performance indicators to track performance on what was regarded as key variables, and to report these to the CCAFS governance body for their discussion, advice and direction. We have also undertaken a series of external evaluations on specific program activities, e.g. on the degree to which specific outcomes were valid, on managing the matrix of themes and regions, and on communications strategies. We have also drawn on our previous experience with AR4D (Sayer and Campbell 2004, Carlile et al. 2013, Vermeulen et al. 2013, Campbell et al. 2014, Alvarez et al. 2014) as well as the published literature.

Ten principles of effective behaviour by AR4D programs and researchers

1. **Navigate towards specific points of leverage**: We propose that an effective AR4D program inquires into complexity and confronts wicked problems, but – rather than get lured into either reductionist approaches or vast attempts to model complexity – uses "best-bet" prioritisation to navigate towards a limited number of leverage points most likely to drive change (Sayer and Campbell 2004, Vermeulen et al. 2013).
2. **Allocate resources in three thirds – needs, research, capacity**: We propose that an effective AR4D program invests a third of resources in working with next users to build relationships and to define their needs from research, a third on research per se (often with partners), and a third on enhancing next users' capacity so as to improve the uptake of the research (Fullana i Palmer et al. 2011). A crucial component of this assumption is the importance of quality partnerships. CCAFS strives for clear partnerships and collaborative arrangements built on trust, ownership and joint commitment to vision and impacts (Campbell et al. 2006).
3. **Join in external processes**: We propose that an effective AR4D program tries as far as possible to participate in the processes of next users (governments, organizations, businesses, inter-governmental and multi-stakeholder processes) rather than creating new stakeholder processes and events. This approach will require researchers to make compromises on timing of products and events

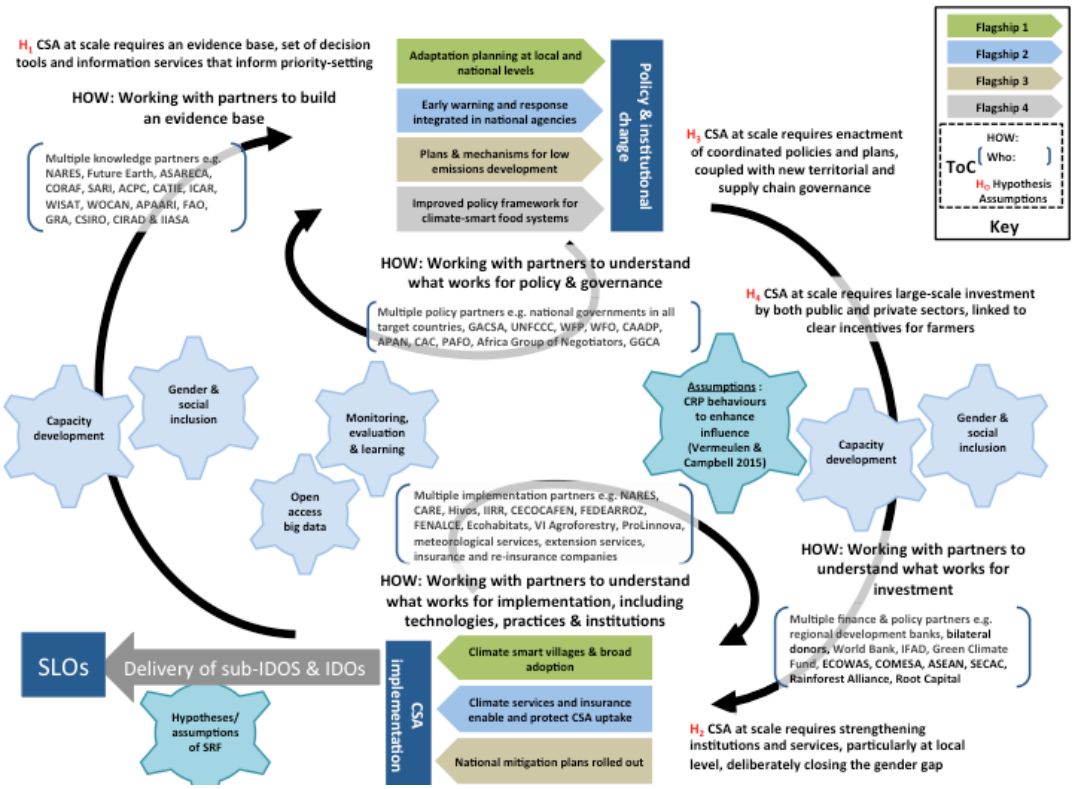

Figure 2 CCAFS Theory of Change

during the research cycle, approaches to analysis and engagement, choice of stakeholders involved in the process, priorities for action, and modes of shared communication.

4. **Use research products to build scientific credibility**: We propose that an effective AR4D program maintains scientific credibility through high-impact publications, basic science research and open access policies – recognizing that these are seldom direct pathways to impact but are critical to provide the foundation for legitimacy. Legitimacy then gives the research agency a seat at the table in driving processes and decisions through expert input.
5. **Sustain co-learning throughout policy engagement and implementation**: We propose that an effective AR4D program tailors and translates diverse public goods outputs (scientific results, databases, metrics, analytic methods, models and decision tools) in co-learning processes at all stages of the policy and practice cycle, working with private and civil society policy-makers as well as public policy (Carlile et al. 2013). Relevant stages of the policy and practice cycle include: identification of new issues and options, consultation, prioritization, design, resourcing, formalization, institution-building, implementation, monitoring, review and revision.
6. **Tackle power and influence**: We propose that an effective AR4D program actively addresses gender and other power differences within deliberative approaches in which the CRP participates (Carlile et al. 2013). One important aspect of this approach is recognition of the power and influence of the AR4D program itself. In most cases science is only one among many influences on policy and action, and scientific inputs are not given privilege on account of being more "objective" or "factual".
7. **Invest in, and monitor, capacity enhancement**: We propose that an effective AR4D program supports next users, as well as research partners, to enhance their capacities to ask better questions of science, achieve associated development outcomes, and adapt to new knowledge. Indicators of individual organizational capacity (e.g. Baser and Morgan 2008) can provide a strong framework for measuring progress and steering strategy.
8. **Mainstream higher-level goals**: We propose that an effective AR4D program ensures that higher-level goals of poverty reduction, gender equity, social inclusion, environmental sustainability and improved nutrition are considered at all stages of the research and engagement process. It can be all too easy for a researcher to lose sight of the higher goals of the work when closely involved in the delivery of a specific project. Thus simple but formalised mechanisms, such as peer reviews and annual reflection exercises, can help to ensure that all work is strategic and cognisant of the full range of higher-level goals.
9. **Create mechanisms for internal learning**: We propose that an effective AR4D program includes processes to review the theory of change, re-align the strategy for impact, and seize emerging opportunities in the dynamic policy spaces of climate and agriculture. Much useful internal learning can be informal and ad hoc. But more formal components provide a strong framework for institutional learning and change. These can include formal online planning and reporting systems, results-based management (RBM), frequent external evaluation of potentially problematic areas, and longer-term learning utilizing baselines and ex-post Impact Assessment (ep-IA). Capacity development among the whole team is likely to be crucial to achieving and demonstrating effective outcomes (Alvarez et al. 2014).
10. **Communicate strategically and actively**: We propose that an effective AR4D program links the communications strategy tightly with the impact pathway (CCAFS Communications Team 2014). This can involve imaginative use of the full range of tools and approaches, from peer-reviewed publications through to social media and reality TV, to reach a wide range of next users and end users of the science; but the key need is for communicators to be embedded in impact pathway processes.

What next?

We do not intend that these principles merely remain on paper. They will be discussed and refined with implementing partners and form the basis of developing the capacity of research partners, including ourselves. After a number of years of implementation, we will examine research outcomes and explore which of the behaviours have been most important in facilitating outcomes.

Further Reading

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About this brief

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CCAFS and Info Notes

The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) is a strategic partnership of CGIAR and Future Earth, led by the International Center for Tropical Agriculture (CIAT). CCAFS brings together the world's best researchers in agricultural science, development research, climate science and Earth System science, to identify and address the most important interactions, synergies and tradeoffs between climate change, agriculture and food security.

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