

Lessons in theory of change: experiences from CCAFS

Key messages

- Impact pathways are living documents that require a flexible design process that includes learning and harmonisation between different parts of a collaborative research program.
- Capacity to develop, monitor and communicate theories of change, impact pathways and monitoring and evaluation needs to be mainstreamed throughout a collaborative research program and centres implementing its research.
- A well-articulated collaborative research program impact pathway helps centre teams understand what is expected of them, and to design their own impact pathways showing contribution toward the collaborative research program outcomes they will be responsible for monitoring and reporting.
- The common denominator within a collaborative research program must be a harmonised monitoring and evaluation system so that we are producing evidence that aggregates at higher levels and across geographies, and provides a clear picture for all our partners of what results are occurring, what results are expected, and how they will be produced.

Authors ••

Christine C. Jost^{1,2}

Patti Kristjanson^{1,2}

Sophie Alvarez^{1,4}

Tonya Schuetz^{1,5}

Wiebke Foerch^{1,3}

Laura Cramer^{1,3}

Philip Thornton^{1,3}

¹ Climate Change, Agriculture and Food Security research program (CCAFS) of CGIAR

² World Agroforestry Centre (ICRAF), Nairobi, Kenya

³ International Livestock Research Institute (ILRI), Nairobi, Kenya

⁴ International Centre for Tropical Agriculture (CIAT)

⁵ Formerly with the Challenge Program on Water and Food (CPWF) of CGIAR

About Us ••

The CGIAR Research Program on Climate Change, Agriculture and Food Security (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. CCAFS is a strategic partnership of CGIAR and Future Earth, led by the International Center for Tropical Agriculture (CIAT). www.ccafs.cgiar.org

The 2008 reform of the CGIAR consortium for a food secure future included creation of collaborative research programs (CRPs) that draw on expertise across member institutes to address some of the most pressing challenges to poverty reduction, food security, health and nutrition and sustainable natural resource management. The Climate Change, Agriculture and Food Security (CCAFS) program was the first of two CRPs to begin work, in 2010. CCAFS is a strategic collaboration between Future Earth, the global change community, and the 15 research centres that are members of CGIAR.

Phase 1 of CCAFS relied on a log frame-based program design and management system of four overarching research

topics: adaptation to progressive climate change, adaptation through managing climate risk, pro-poor climate change mitigation and integration for decision making. The program has delivered significant research results, and is now grappling with the challenge of documenting the impacts of its research.

The 2nd phase of CCAFS will start in 2017. However, all research elements are being phased in earlier, including the flagship on policies and institutions for climate-resilient food systems starting in 2014, and climate-smart agricultural practices, low-emissions agricultural development, and climate information services and climate-informed safety nets in 2015.



Theory of Change in the CGIAR

CGIAR is moving to a different model of doing science, and this needs to be well thought out and understood by centres, CRP researchers and partners. The focus can no longer be on research deliverables such as reports, trainings, crop varieties and decision support tools. We have learnt that the production of these deliverables doesn't automatically lead to impact in terms of the wellbeing of smallholder farmers, the end users of our research.

Instead, we need to focus on taking responsibility for the outcomes emanating from the uptake and use of our deliverables. An outcome is a change in the way actors and organisations do things so as to bridge the gap between us and the ultimate beneficiaries of our research, and the corresponding changes in knowledge, attitude and skills that underpin these key behavioural changes. We call these "bridging actors" next users, and our deliverables are often targeted at helping them improve the way they do business.

A CRP needs a vision of how results from its research will improve the

livelihoods of smallholder farmers, and a solid plan for the intervening steps between a deliverable and achieving impact. We call that plan our impact pathway, and it is supported by a theory of change (TOC) that recognises the assumptions made, the strategies needed and the actors that must be involved to move from one step in the pathway (e.g. an activity) to another (e.g. an outcome). A good CRP impact pathway shows how all the areas within a CRP relate to one another (are nested together) so as to jointly contribute to achieving the program's vision, while providing enough details about each of the progressive steps in the pathway that users can understand every step in terms of location, timing, how it will be achieved, who will carry it out and how it contributes to the next step in the pathway. We focus on outcomes rather than impacts because they are closer to our sphere of action and lead to an enabling environment that allows impact to happen.

The common denominator within a CRP must be a harmonised monitoring and evaluation (M+E) system so that we are producing evidence that aggregates

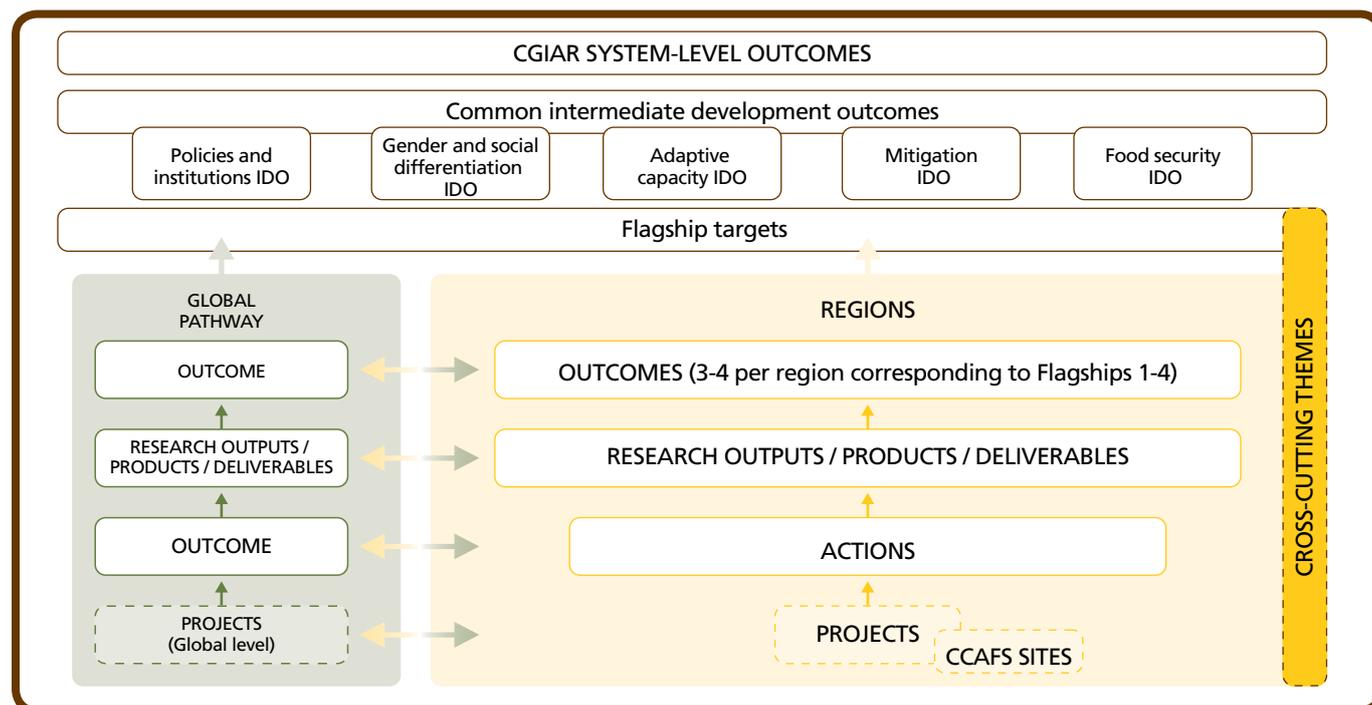
at higher levels in space and time, and can provide a clear picture for all our partners of what results are expected and how they will be produced. That highest level is a set of common impacts shared by all the CRPs called intermediate development outcomes (IDOs).¹ In CCAFS we have found that good nested impact pathways are essential to achieving a harmonised M+E system.

This series of Climate Change and Social Learning (CCSL) briefs will focus on lessons learnt from the ongoing CCAFS experience with TOC. The objective is to share experiences in real time, and generate discussion that will help CCAFS and others improve their TOC, impact pathways and M+E.

TOC in the CCAFS Regions

CCAFS is an early adopter of the CGIAR mandate that the second phase of CRPs be designed according to an explicit TOC, including a detailed impact pathway for M+E of outcomes and impacts. The approach has proven valuable for planning in accordance with CCAFS's goal of a science-driven agenda meeting regional priorities.

Figure 1. Schematic diagram of the CCAFS Phase 2 impact pathway



¹ Increased and stable access to food commodities by rural and urban poor ("Food security"); Increased control by women and other marginalized groups of assets, inputs, decision-making and benefits ("Gender and social differentiation"); Increased capacity in low-income communities to adapt to climate variability, shocks and longer-term changes ("Adaptive capacity"); Additional policies and institutions supporting sustainable, resilient and equitable agricultural and natural resources management developed and adopted by agricultural, conservation and development organizations, national governments and international bodies ("Policies and institutions") and increased carbon sequestration and reduction of greenhouse gases through improved agriculture and natural resources management ("Mitigation").



The bulk of CCAFS research takes place in five regions: Latin America, West and East Africa, and South and Southeast Asia. We have a complex program of large clusters of research referred to as Flagship Programs (or Flagships for short), which are mostly but not entirely implemented in these five regions (Figure 1). Much of the impact from our work is being measured on the ground in the regions where we work. Therefore, the research that occurs at sites within those regions must be based on clear and detailed impact pathways for each site, these in turn contributing to overall impact pathways for each region. This means that our research must meet the climate change, agriculture and food security priorities of our site and regional stakeholders, and those impact pathways need to be fully owned by the stakeholders involved.

The CCAFS regional program leaders have been working on developing their impact pathways since November 2013.

They have taken various approaches to identifying priorities — for example, expert consultations, workshops and prior experience. One key lesson is that regional program leaders need to have a good prior understanding of the situation in the region, the actors, and the barriers that decision makers face.

Also, because of the complex nature of the CCAFS program, it has been more effective for regional program leaders to draft the upper levels of their impact pathways in-house (vision, outcomes, research outputs), and then convene a larger group or workshop to revise and validate that work before going on to map actions and specific projects to the research outputs.

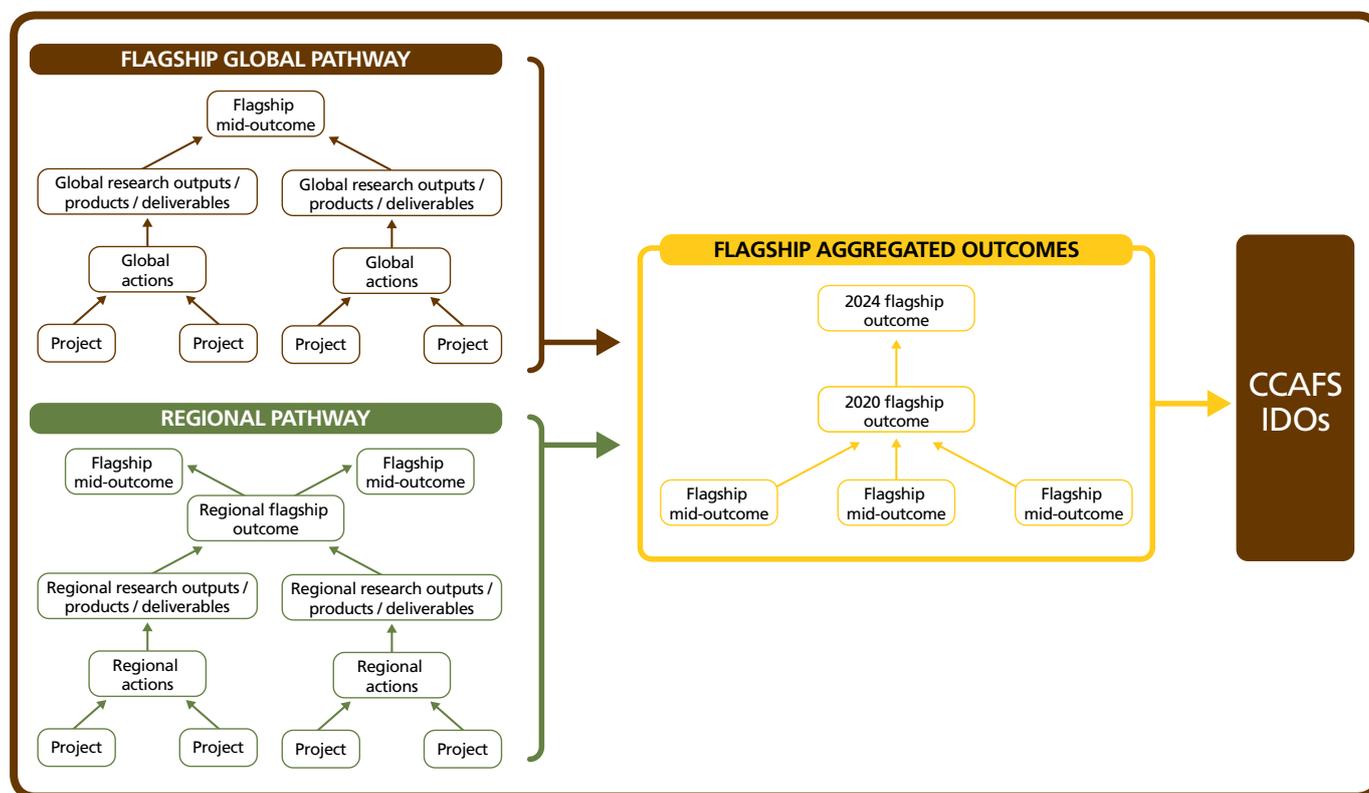
Theory of change in the CCAFS Flagship Programs

We have realised that regional outcomes and actions need to be well defined prior to development of flagship impact pathways. Building a

flagship impact pathway is a process of harmonising a research mandate with regional priorities. The majority of the four flagship pathways will actually be captured in the regional impact pathways.

The process we have developed is for flagship leaders to first develop the upper or aggregate levels of their impact pathways, meaning the higher-level outcomes to which all of the regions contribute. This consists of a small number of mid-level outcomes leading to a 2019 outcome target and a 2025 outcome target. The next step is to identify which of the regional outcomes contribute to the mid-level outcomes, and determine if the combination of research outputs and actions across the five regions adequately ‘cover’ the work that needs to occur to meet the mid-level outcomes, or if there are gaps. If gaps exist, the regional impact pathways will be revised to cover those gaps. Also, the flagship leader needs to determine

Figure 2: Schematic diagram of a Flagship impact pathway, showing how regional (red) and global components (purple) contribute to the overall Flagship (black), allowing for outcome aggregation at the higher levels and contribution to the CCAFS IDOs.





if there are more global level research outputs and actions that are needed to complete their impact pathways. Those supra-regional activities are documented as a global component of each flagship impact pathway.

Each regional and flagship impact pathway is accompanied by a TOC, where the assumptions made in developing the impact pathway are documented, particularly how one step leads to another, and the strategies for managing those assumptions. In some cases, those strategies will call for additional activities that need to be implemented to ensure there is progress made along the impact pathway in a timely fashion.

Progress in CCAFS

To date we have completed the TOC and impact pathway for our Flagship on policies and institutions for climate-resilient food systems. This has been an experiential learning process, during which we gained knowledge and insights as we worked with regional program leaders and research partners to develop the flagship. When we called for concept notes from CGIAR partners last year, we did not have impact pathways for the flagship or region. One reason is that we had little existing capacity in TOC and impact pathways, and were building our knowledge and skills as we went along. As a result, some required elements in our call for concept notes, and later, full proposals were unclear or unnecessary. One lesson is that a well-articulated flagship impact pathway helped the project teams considerably to better understand what was expected of them and to design their own impact pathways, with indicators of progress toward outcomes that they will

be responsible for monitoring and reporting on.

A major point of learning for us has been that there needs to be capacity to develop, monitor and communicate TOCs, impact pathways and M+E in each region and flagship of CCAFS, as well as in those centres that are implementing research. This is a weakness for us right now, because there is little capacity for this in the CGIAR system. Our work on TOC is coordinated through the CCAFS crosscutting research theme on linking knowledge to action (K2A), which has strategically sought support and advice from outside CCAFS.

Next steps for CCAFS

Development of impact pathways takes time and resources that need to be mainstreamed into all our flagships and regions. Capacity also needs to be created or mobilised within the centres.

In February 2014 we convened a CCAFS Working Group on Impact Pathways and M&E for Results-Based Management, which currently has a one-year mandate to facilitate our TOC process. The working group is composed of members from each flagship and region, as well as interested centres. The members will be trained in April 2014 in TOC, impact pathway and M+E design. Over the following three months, members will be supported by K2A in facilitating the completion of the impact pathways and M+E plans in their units. The working group will gather later in the year for a follow-on training focusing on M+E harmonisation and implementation.

We have learnt that impact pathways are living documents. In a large, complex program like a CRP, flexibility

is necessary in the design process so that each unit builds its pathway through iteration that includes learning and harmonisation with the other units — in our case the flagships and regions that make up the CCAFS matrix structure. And we have learnt that there should be emphasis on having a communication strategy. Partners may not have the capacity to do impact pathways, outcome oriented work, and so on. Therefore what we want to achieve needs to be clearly communicated so that they can prioritise building appropriate capacity.

This process has also taught us how important it is to develop an M+E system in parallel with our impact pathway, so that they feed into each other. We will report on development of the CCAFS M+E system in our next CCSL TOC learning note. In the near future, we will also issue a CCSL TOC learning note exploring how the CCAFS flagship on policies and institutions for climate-resilient food systems, the first Flagship to fully adopt a TOC and impact pathway approach to program design and M+E, is using its impact pathway to trial a results-based management system for a preliminary set of outcome-focused projects.



Acknowledgements

We aim to practice what we preach. This briefing series is the product of an on-going social learning process — the Climate Change and Social Learning initiative (CCSL) — between the CCAFS team and its partners, in which knowledge has been co-constructed through many different channels, including workshops, the CCSL 'Sandbox', and social media. Many thanks to everyone who has participated in this process so far and to those who continue to do so.

CCSL Partners:

