



RESEARCH PROGRAM ON
**Climate Change,
Agriculture and
Food Security**



Revised CCAFS Theory of Change Facilitation Guide



Revised CCAFS Theory Of Change Facilitation Guide

CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)

Written by:

Tonya Schuetz

Wiebke Förch

Philip Thornton

With contributions from:

Deissy Martinez Baron, Osana Bonila-Findji, Kevin Coffey, Arun Khatri-Chhetri, AS

Moussa, Maren Radeny, Meryl Richards, Christine Jost, Ioannis Vasileiou

Cover photos: S. Kilungu (CCAFS) & T. Muchaba (CCAFS)

*This is an updated version of the “CCAFS Theory of Change facilitation guide”. Revised
Version: 15 December 2014*

ABOUT THE AUTHORS

Tonya Schuetz has 15 years of experience in change management, monitoring and evaluation, personnel and capacity development: five years in the private sector focusing on process analysis and resource optimisation, and ten years in research for development projects and programs in over 20 countries in Sub-Sahara Africa and Asia with substantial field experience on the project and policy influencing level. She has worked across a range of sectors, including agriculture, water, health and education for organizations like IFAD, CGIAR Centres and Research Programs. Her cross-cutting experience includes institutional analysis and assessment of their capacity, quality management, knowledge and innovation management with hands-on skills in project/ program design, monitoring and evaluation of research projects for outcomes and impact, institutional and organisational learning, conceptualisation of adult learning. Contact: t.schuetz@cgiar.org

Wiebke Foerch is the Science Officer for the CCAFS Flagship Program on Policies and Institutions for Climate Resilient Food Systems, based at the International Livestock Research Institute (ILRI) in Nairobi. In 2014, the flagship program has started trialling results-based management for CGIAR – with a strong emphasis on applying theory of change and impact pathway thinking as well as on adaptive management and learning. She is also contributing towards the Monitoring and Evaluation unit of CCAFS. Contact: w.foerch@cgiar.org

Philip Thornton joined the CGIAR Research Program on Climate Change, Agriculture and Food Security (CAAFS) in 2010, first as Leader for Theme "Integration for Decision-making"; and, from January 2015, leading the Flagship "Institutions and Policies for Climate-Resilient Food Systems". Philip Thornton has been working for the International Livestock Research Institute (ILRI) since 1996. He is an Honorary Research Fellow in the Institute of Atmospheric and Environmental Sciences at the University of Edinburgh. He has published widely on systems modelling and impact assessment. Contact: p.thornton@cgiar.org

ACKNOWLEDGEMENTS

We would like to thank the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) for its leadership in developing theories of change for research in development, and its support of the introductory training for the CCAFS Working Group on impact pathways and monitoring and evaluation (M&E) for results-based management, and its continued support of the working group. We would also like to thank the CCAFS science officers for their continuous support of the process and for their hard work in leading the development of the impact pathways of their respective units. Additionally, this document builds strongly on the first version of CCAFS Theory of Change Facilitation Guide. Authored by Jost C, Alvarez S. and T Schuetz. (2014), it is a revision and further evolution of the process and associated guiding questions.

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INTRODUCTION

CGIAR is in the midst of a transition process in order to improve its research for development programming (for more details see [CGIAR Strategic Results Framework](#)), its contribution towards development outcomes and to foster collaboration across CGIAR centres as well as key stakeholders. Within this context, the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) has started planning the extension phase (2015-16) of its Phase 1 using an impact pathway (IP) approach and requesting all its flagship programs, regional programs and projects to develop IPs to demonstrate the contribution of their research to development outcomes.

This facilitation guide is an up-date of an earlier version that was produced to support a training of scientists who are members of the CCAFS Working Group on Impact Pathways and M&E for results-based management conducted from 1-5th April 2014 in Segovia, Spain ([previous version of the guide](#), [lessons from the training](#)). This improved, simplified facilitation guide documents the ways CCAFS is currently using an IP approach in its program planning.

The objectives to revise the guide were to

- share an update of the streamlined and simplified CCAFS IPs and theory of change (TOC) building process as it currently is being implemented by the program,
- show a practical way for CGIAR centres and the CGIAR Research Programs (CRPs) to develop an M&E planning framework, and
- develop the facilitation guide in an adaptable form with CCAFS as an example.

Similar to the previous version this guide should

- provide its readers with a stepwise description of building and documenting their TOC and their IPs in detail and draft their M&E plan,
- design and facilitate consistent TOC/IP reflection and revision for their unit,
- explain and promote the TOC/IP/M&E planning to other CRPs and beyond,
- address three different components of the programmatic IP building, i.e. from thematic/flagship, regional and project perspectives.

As the guide covers the three programme dimensions – flagship, region and project, guiding questions are put into separate sections specifically tailored to each of these three perspectives. The guide is written in the way that depending on whether you need to build a thematic, regional or project impact pathway, you will select the respective part. It is not meant to be read from cover to cover, in which case you will find redundancies in the areas where the three dimensions feed into each other, are linked and harmonized. In the case of CCAFS from a reporting perspective, the dominant IP that brings all three dimensions together is the flagship. That being said, it is key that these three sets of IPs are developed from their respective perspectives and insights and are systematically harmonized – so, for example, projects need to be contributing towards achieving the flagship and regional outcomes. The exercises are designed to guide you through this.

After the training in Segovia, the CCAFS management team felt that the initially planned process was too resource intense in its development as well as its later application. Therefore, it was decided to simplify as much as possible the existing draft framework for its usage from 2015 onwards. This was done in three phases around a series of regional planning workshops, including their preparation, implementation and follow-up (see [full workshop series report](#) and [learning brief](#)). In parallel, the simplified version was also tested with one other CRP.

A lot of head way has been made in terms of developing a practical results-based management M&E system for a research for development program with its focus on outcomes, IPs and TOC.

CCAFS has completed its TOC/IP development process through a series of regional planning meetings that were held in each region between September and November 2014. The [CCAFS M&E Strategy](#) has been approved and a [M&E Support Pack](#) is being developed to support strategy implementation.

Along with these changes CCAFS developed an online planning and reporting system (P&R) to support the projects and programme and build a dataware house that can produce reporting requests for the programme and project teams. In late 2014, the 2015 planning cycle was completed with the whole CCAFS portfolio and the reporting component will be developed and tested with six trail projects¹ in early 2015 and fully rolled-out in 2016 reporting for the whole portfolio.

For internal communications within the CCAFS program team a document on [Guiding principles or propositions on Monitoring and Evaluation in CCAFS](#) was put together. It explains how the ongoing initiatives of revamping the CCAFS planning and reporting online platform, the development of impact pathways across the program and the up-dated CCAFS M&E strategy and operationalization are linked and integrated with each other as a mechanism in support of CCAFS result-based management approach.

These facilitation notes are to be seen as guidance where considered useful and enabling. In their implementation they will need some adaptation and contextualisation. Where teams feel that they are not progressing they should take a step back, take note of concerns and contentious issues, park them and try to move on and revisit the concerns at a later stage. We believe this guide can be valuable input for users outside of the CCAFS programme who face similar challenges of mapping, with the participation of key stakeholders, the pathways to development impact of research projects. Even more so if many different pathways must be harmonised to aggregate at a programmatic level.

As for anticipated audience for this facilitation guide, we anticipate other research for development programs, first and foremost under the CG umbrella, but possibly also beyond. Any organization that is challenged to do state of the art research with the purpose to make a positive development contribution and that gets evaluated by outcomes, i.e. behavioural changes that it manages to contribute to. While we realize that the section for the flagships and regions are more of a documentary value for CCAFS itself, we anticipate that the section for projects will be useful for further CCAFS calls and project contracting.

We encourage our partners and stakeholders from CGIAR centres, CRPs, non-governmental organisations, national agricultural research systems and others to adapt these notes to their own needs, and let us know how you do! As you use this guide, please send us feedback on what is working for you and what is not, with suggestions for revisions to schuetztonya@gmail.com or w.foerch@cgiar.org. You can follow the progress of TOC/IP implementation on the [CCAFS website](#).

¹ CCAFS was selected to trial results-based management for the Consortium Office. Six trial projects under Flagship 4 on Policies and Institutions for Climate Resilient Food Systems were selected in early 2014 and planned their projects using the IP/TOC approach ([2014 Report](#) to the Consortium Office on achievements and lessons from the trail).

FACILITATION GUIDELINES FOR FLAGSHIP PROGRAMMES

Introduction

CCAFS being one of 16 CGIAR Research Programs (CRPs) is structured into four thematic research areas, called flagship programmes (FPs):

- Climate smart agricultural practices
- Climate information services and climate-informed safety nets
- Low-emissions agricultural development
- Policies and institutions for climate-resilient food systems

These four flagships have been defined to be the main reporting lens to CGIAR Consortium Office (CO) while gender and social differentiation, capacity strengthening, data management, communication and engagement, monitoring and evaluation (M&E) are cutting across and mainstreamed throughout CCAFS's portfolio.

Below is a series of questions that will help you work through developing a Theory of Change (TOC), impact pathway (IP) and M&E plan for your **flagship**. These notes are designed to facilitate the development of an IP. You can use them for your own work, or you can use them to facilitate others in the IP development process. Figure 1 illustrates the process flow through the eleven sessions. Each session is conceptualized to spend about 1 - 1,5 hours on, in order to have a rough draft which can be revisited and honed should resources allow. There are some terms used in these notes that may be new to some users. Please see the [glossary](#) annexed at the end of the document or online at <https://activities.ccafs.cgiar.org/ip/glossary.do>.

Important to note, feel free to be selective and use what you find useful and applicable to your own context while this guide offers a whole framework, it will most likely require some adjusting to your own operational requirements and setup.

These sessions are designed with the assumption that you are starting from the beginning. They are designed for a rather quick and rapid approach in order to be most efficient even if this means leaving some gaps of depth. It will be good to take note of them and if you should find the time and resources to address them in more detail you can revisit them. In the case of CCAFS the FPs have already made significant progress towards designing their IP in more depth and this guide is rather a product of process simplification as explained in the introduction. If you have already spent some time on developing IPs or some TOC you will find that going through the sessions will help you review and revise your work.

These facilitation notes provide you with examples. *All examples are in italics*. Tables are provided in each session to compile your notes and results. Please add more rows to capture all of the information you are developing or use a form of documentation you feel most comfortable with. You can also create a graphic IP that captures the most important elements as shown above e.g. in PowerPoint, DoView or any other flowchart design programme.

TIPS

You will find tips boxes throughout these facilitation notes. They remind you of key points, and provide you with facilitation recommendations. The methods you choose to facilitate different steps in a session will depend on what you are comfortable with, and social-cultural norms. But always encourage everyone to speak up, and always try to use active exercises. Be creative!

TIPS

Work through the questions in order and to the end of a question. Do not let uncertainty “bog you down”. Where there is confusion or disagreement, note down the ideas that come up, move on, and then return to that question later.

The flagships have many partners, so you may want to do this work with them in a workshop setting. Ideally, should you have the chance to bring people together face-to-face this would be best. In 1.5 days you can progress considerably by facilitating a small to medium sized group of people (1-12) through this section.

If you have to develop this virtually, we recommend to break your meetings up into short sessions of 1.5 hours so that people stay fresh and have time for reflection. The questions in the sessions below are divided into suggested sessions.

Remember:

- Developing a TOC and IP is an iterative process that will lead to improvements in the product **over time**;
- Your IP is a piece linked with other IPs in your programme (e.g. CRP), and
- Your IP brings together all of the regions through the flagship 2025 outcome to contribute to the CGIAR intermediate development outcomes (IDOs).

Review, discussion and negotiation will be necessary to ensure that harmonization with the regional and project IPs occurs.

You can use several methods to facilitate a session:

- **Large group:** Sometimes it helps to have everyone in the session working all together. This works well if you have up to 10 people. It can cut down on time because you don't need to harmonize small group work after the session. But if the group is too large it will increase time because you need to capture everyone's ideas one-by-one.
- **Small group:** If you have more than 10 people, consider breaking them into groups. The different groups can address the same task and you can harmonize the work in plenary afterwards. Or if there are multiple tasks, each group can do a separate piece of the work. For example, developing the IPs for different 2019 outcomes in the FP.
- **Note cards:** Each participant can write their idea on a note card. Then each person can present the idea. This is a helpful technique when there is a divisive issue under discussion, because everyone listens to the presenter without criticizing. You can also collect the cards and present them yourself. This makes the ideas anonymous, which can also be helpful when there are competing ideas in your session.
- Materials you might find useful: Flipchart paper, 3-4 coloured markers, different coloured cards, computer with graphic software, and these facilitation notes.

Keep track of all of your notes, as most will be incorporated into your TOC. This guide offers some templates of tables to complete. Focusing only on tables in a computer can be exhausting. Consider creative ways to engage the discussion and develop the information, and then capture it in the tables afterwards:

- **Drawing:** Small groups can draw a map or a picture, for instance of the outcome they would like to see.
- **Reporter:** You can have a small group elect a 'reporter' that interviews the other group members to draw out the ideas and then present them to the larger group.
- **Note cards and sticky notes:** When dealing with complex topics, like many different projects leading to different major output groups, people can write the different components of the IP on note cards, sticky notes, etc. and move them around on a board to see different relationships.

Symbols: To capture nuanced information, symbols like colours, shapes, the thickness of lines, etc. can be used to capture them.

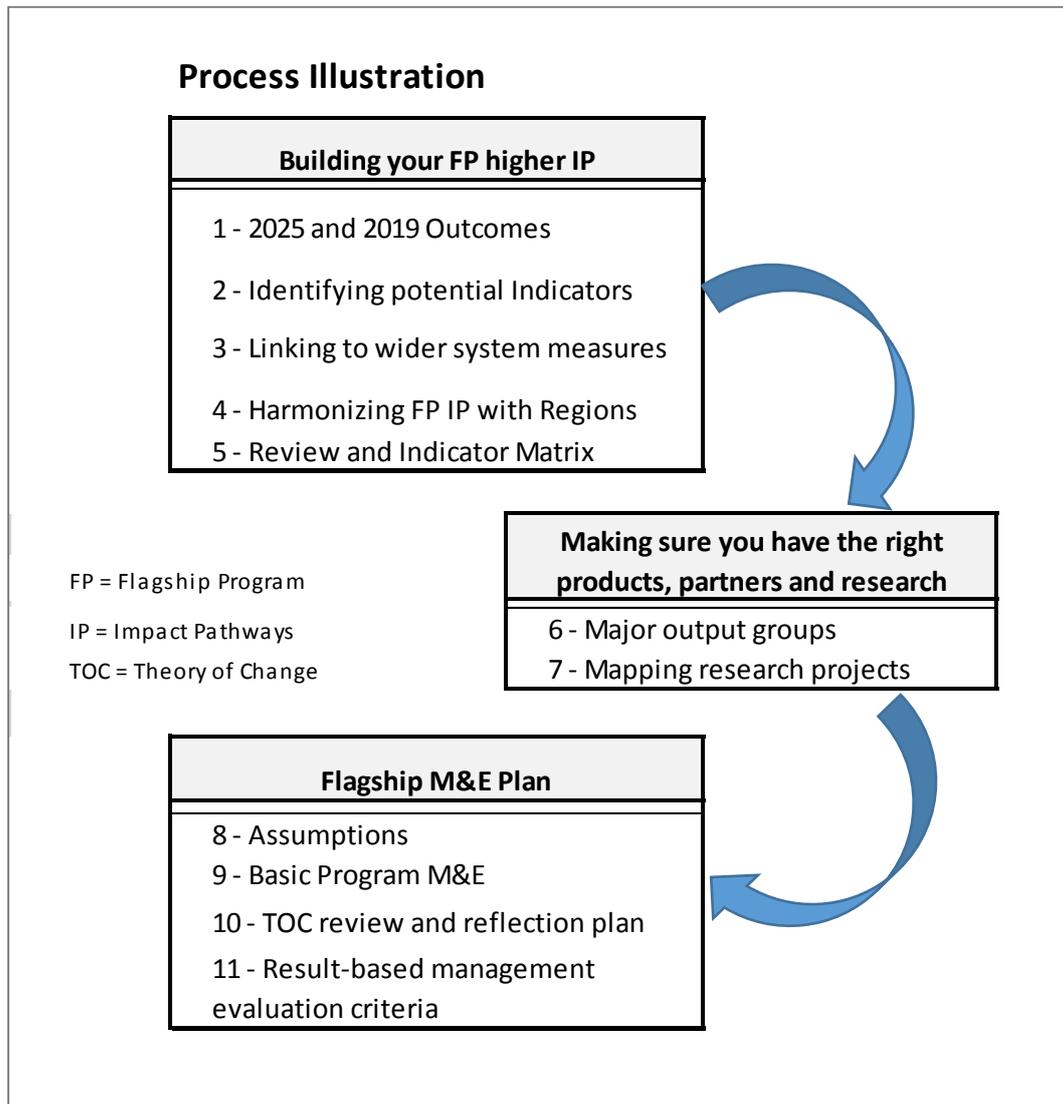


Figure 1 Process flow - Designing your flagship impact pathways

Building your Flagship higher impact pathway

These guiding questions are a suggestion to help you develop the following elements of a flagship impact pathway see schematic figure 2 below.

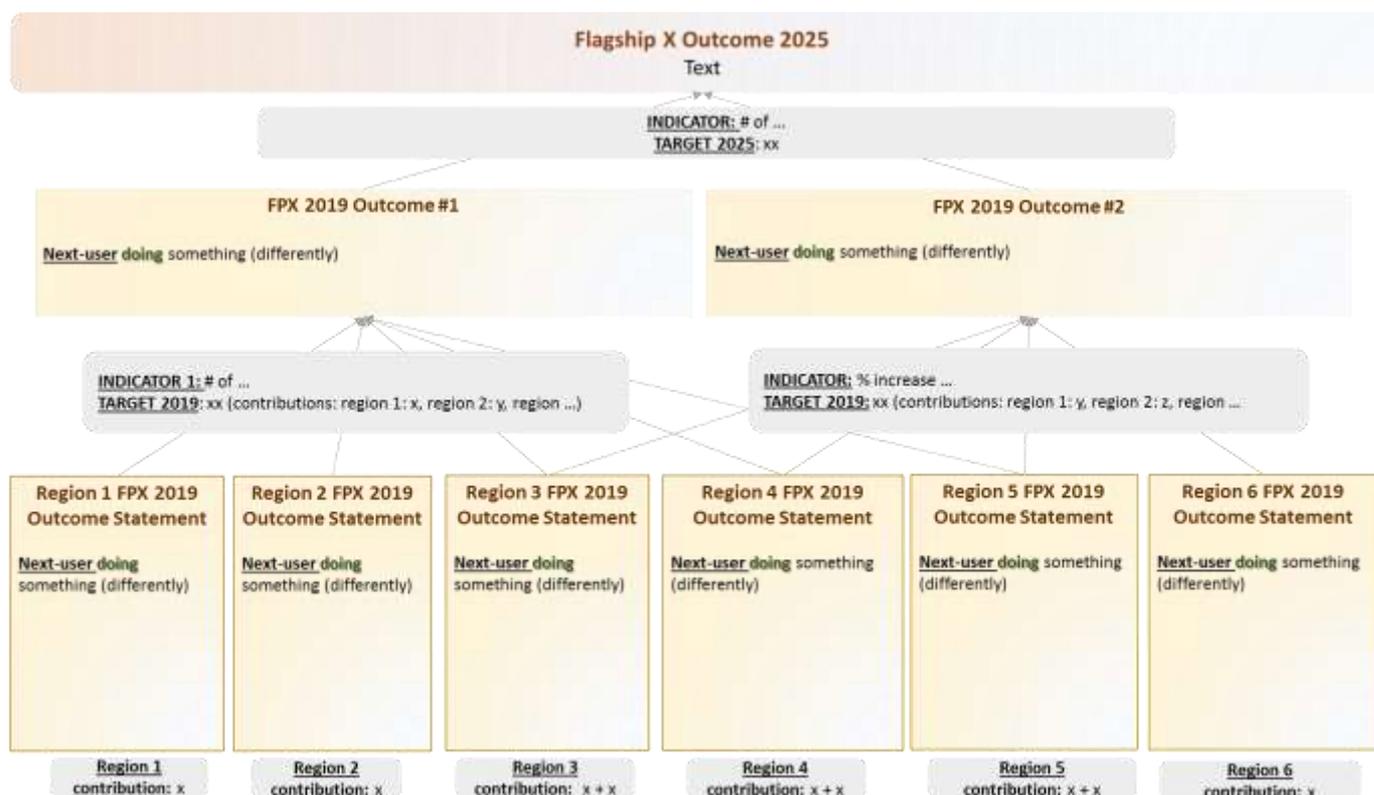
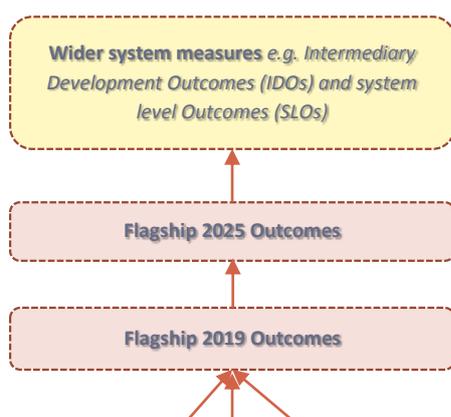


Figure 2: Simplified schematic overview of a flagship impact pathway

Summary

The first three sessions will help you build the upper (aggregate) level of your flagship impact pathway. You will produce a visual looking something like Figure 3. Keep track of all of your notes as background to the diagram of your impact pathway! Much of this background information will form your theory of change (TOC). The first three sessions lead into each other and involve the same participants. Therefore, consider conducting these three sessions as a short workshop of 1-1.5 days, depending on the level of experience your participants have with outcomes thinking.



working.

Background Documents:

1. Any programmatic strategic document, e.g. CCFS Phase 2 extension proposal
2. Any regional strategic documents, e.g. Expression of Interests or any calls for concept notes

Participants: At a minimum flagship programme staff, and key advisors (from CGIAR centres and countries). Try to also include the Regional Program Leaders and other stakeholders from the regions where you are

Figure 3. Schematic of the upper levels of a CCAFS flagship IP. Each flagship will have 1-3 2019 outcomes.

Session 1: 2025 and 2019 Outcomes

Objective: To develop outcomes for your flagship for the years 2019 and 2025, linked to the regional 2019 outcomes where you are working.

Output: The outcomes for the flagship impact pathway.

Steps:

1. Identify your flagship's 2025 outcomes (goal) and consult any strategic programmatic documents, e.g. like the Extension Phase 2 proposal.
2. Who are the next-users relevant to your flagship that must take decisions that will lead to achievement of the 2025 target? Be as detailed as possible, making a long list of specific people and organisations. Make sure you are identifying next-users, not end-users (see box 1: definitions).
3. Group your next-users. Group them by how they will use your programme's products/ outputs to generate outcomes, and try to achieve a short list of no more than 5-6 groups. Now think: how do you expect each next-user group to use your programme's products to change their practices in order to contribute to achieving the vision for the region?
4. Now return to your 2025 target. You need to rephrase it as an outcome statement that specifically incorporates these next-user groups. Use active terms, like – are using, are implementing, are accessing, are writing... An outcome is written as:
'Exactly who is doing what...differently?'

2025 Outcome statement:

'Exactly who (your next-users) is doing what...differently?'

5. Consult any strategic programme documents and identify your flagship's 2019 target. Now return to the list of next-users. Why aren't those next-users already making decisions leading to the 2019 target? What barriers do they face in terms of incentives, agency, norms and external factors (see box 2)? Capture these barriers by completing columns 1 and 2 in the following table:

Next-user group	Barriers	Practice change
International organisations relevant to climate change,	<ul style="list-style-type: none"> Do not know what the climate change (CC) priorities of the constituent countries are 	<ul style="list-style-type: none"> International organisations working in SEA need to seek to overcome negative

Box 1: Definitions

Next-users: national and international research and education institutions, private sector, extension services, governments both at local and national scales, regional organisations such as river basin organisations and NGOs. Next users access and use CGIAR products directly. They can create an environment that enables the target impact for end-users; also decision makers that we want to influence to achieve outcomes. They help to bring ideas and tools to scale and into new arenas.

[End-users: The beneficiary population; usually quite massive, making it unfeasible for a project or programme to work with them directly. They are not a focus of direct work with partners]

Outcomes are changes in next-user behaviour, i.e. knowledge, attitudes, skills and practices. An example outcome statement: *International organisations like IFAD, WB, FAO, UNFCCC, etc. are engaging member countries to learn what their climate smart food system priorities are, and appropriately direct their investments.*

[An **impact statement** would be: 6 million climate resilient smallholder farmers in Kenya. This is not what we want as it deals with end-users.]

<i>agriculture and food security: IFAD, WB, FAO, UNFCCC, WTO, WFP</i>	<i>because successful engagement is blocked by bureaucratic structures and culture</i> <ul style="list-style-type: none"> • <i>Don't direct their investments towards the true CC priorities of constituent countries</i> 	<i>bureaucratic structure and work with member countries.</i> <ul style="list-style-type: none"> • <i>- These organisations invest in member country CC priorities.</i>
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Box 2: Incentives, capacities, competencies, norms and external factors

Incentives – relates to more ‘rational choice’ concepts of behaviour analysis that state that decisions to adopt specific behaviours are based on perceived costs and benefits. This applies to both individuals and institutions, and is related to the development of attitudes and values regarding the importance of, or potential returns from a particular action.

Capacities and competencies (real or perceived) of an individual or institution to achieve an outcome by the adoption of certain behaviours, access to information, knowledge, skills and other financial and infrastructural resources.

Norms – relates to social norms, traditions and habits that shape the actions of individuals and institutions. Many individuals and institutions experience a certain amount of inertia, or mimicking that can shape actions even in the presence of other influencing factors.

External factors – relates to factors outside the individual or the institution that affect behaviours. In the case of CCAFS this more frequently involves the behavioural changes in other institutions within the system that affect the behaviours of another. This would traditionally be called the enabling environment, yet in the CCAFS program many of these systems and institutions are also stakeholders in the program itself, and thus are less ‘external’.

6. Discuss how each group needs to change its behaviour and practices in order to create an environment where it can contribute what is necessary for achieving the 2019 target. These we will call “practice changes”. Capture them in the third column of the above table.
7. Now review the list of practice changes for overlap and synergies. Combine these into the 2-3 main practice changes that address the most important or even all of your flagship’s next-users and allow these next-users to make decisions and take actions leading to the 2025 outcome. Capture these 2-3 practice changes in the first column of the table below:

Practice changes	2019 Outcomes
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8. Now rephrase the practice changes so that they are outcome statements. Use active terms, like – are using, are implementing, are accessing, are writing... An outcome is written as: ‘Exactly who is doing what...differently?’ Capture these 2019 outcomes in the second column of the table above.

Session 2: Identifying potential indicators

Objective: To identify potential indicators

Output: Flagship outcome indicators [and optional: IDOs linked to the flagship]

Steps:

1. Consider your flagship's 2025 outcome and possible ways to measure achievement of that outcome by asking yourselves: 'How will we be able to know that this outcome has been achieved?' Or: 'What are some indicators of achieving this outcome?' Identify and define supporting evidence, a potential indicator you can measure. One indicator per outcome if possible, since you will need to follow-up and put the M&E mechanisms in place for provision of evidence. Choose your metric system carefully. For CCAFS, it was also important to keep in mind that indicators need to be generic enough to capture regional differences and allow for aggregation across regions in a meaningful way, without counting apples with oranges.
2. Consider your flagship's 2019 outcome and possible ways to measure achievement of such. Will they also contribute, in some part, to the 2025 outcome indicators? If not, your outcomes are not logical steps from one to another, and need to be better thought out.
3. Capture your indicator ideas in the table below. You can use them in later sessions. Keep in mind that the indicator needs to be formulated so that a quantitative measure and aggregation across the programme is possible.

Flagship 2019 Outcomes	Potential indicators for 2019 outcome	Flagship 2025 outcome	Potential 2025 outcome indicators
<i>Flagship 1: National and sub-national governments develop CSA policies and programmes and strengthen related institutions based on evidence from case studies, data, tools, and models</i>	<i>Flagship 1: # of National and sub-national governments that develop CSA policies and programmes and strengthen related institutions based on evidence from case studies, data, tools, and models</i>		

TIPS

Remember, a SMART indicator is:

- *Specific* – target a specific area for improvement.
- *Measurable* – quantify or at least suggest an indicator of progress.
- *Assignable* – specify who will do it.
- *Realistic* – state what results can realistically be achieved, given available resources.
- *Time-related* – specify when the result(s) can be achieved.

And yet these indicators also need to allow for the flexibility that is required within an adaptive management approach under the result-based management monitoring and evaluation system.

Session 3: Linking to wider system measures

The following session is based on the assumption that your program is embedded within a wider/ bigger system, which might require some measures from your program. In the case of CCAFS there is the CGIAR the bigger system, like an umbrella under which CCAFS is operating and contributing to. The CGIAR put some Intermediate Development Outcomes (IDOs) and System Level Outcomes (SLOs) in place a selection of which all its operating centers and research programs need to contribute to. This session is an example how to link to such wider system level measures, like IDOs. If your program is not part of a bigger system, this session can be skipped.

Objective: To identify the wider system measures (e.g. IDOs) that the flagship will contribute to.

Output: IDOs linked to the flagship.

Steps:

1. To which of the selected Programme Intermediate Development Outcomes (IDOs) does your 2025 outcome contribute meaningfully?
2. What is the supporting evidence, i.e. a potential indicators you can measure?

TIP

Remember, do not do this as a theoretical exercise about your flagship! Find the IDOs that you can contribute to based on your 2025 outcome and its supporting evidence (potential indicators you can measure). No single flagship will contribute to all the IDOs. Usually a flagship will contribute to 2-3 IDOs. The more IDOs you claim to support, the more evidence your team will have to collect, analyse and report!

Some possible IDOs

Food security Increased and stable access to food commodities by rural and urban poor

Gender and social differentiation Increased control by women and other marginalised groups of assets, inputs, decision-making and benefits

Adaptive capacity Increased capacity in low-income communities to adapt to climate variability, shocks and longer-term changes

Policies and institutions 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

Mitigation Increased carbon sequestration and reduction of greenhouse gases through improved agriculture and natural resources management.

Session 4: Harmonising flagship impact pathways with regional ones

Objective: To ensure that the upper levels of the flagship impact pathway are harmonised with the regional impact pathways.

Output: A complete upper-level impact pathway for the flagship.

The following steps are designed for when you need to harmonise flagship outcomes with regional ones. It requires that the regional teams have already drafted their IPs. Using ICT may be a good way to tackle these steps. At a minimum, the regional programme leaders and the flagship leader should be ‘virtually’ present. Consider using Skype and/or Google Docs so that everyone can participate in a real-time discussion that doesn’t require extensive back and forth (for instance via email), every participant can see the outcomes that are being considered, and everyone can see the changes as they are being made. The participation of the key decision makers is key in this step so that decisions about changes can be taken swiftly (alternatively, the participants need to be fully empowered in their respective units to take critical decisions).

We are aiming at building towards what is shown in the figure below:

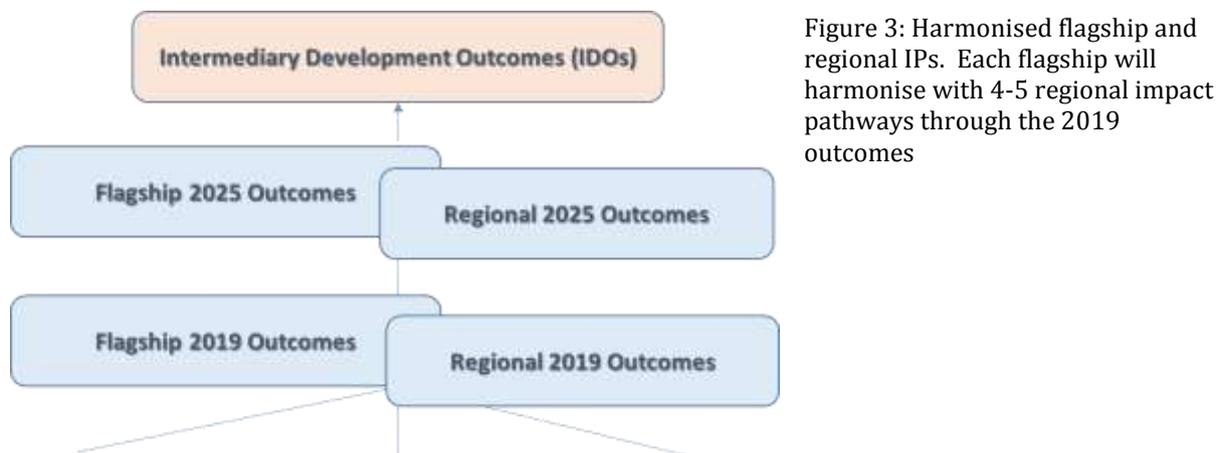


Figure 3: Harmonised flagship and regional IPs. Each flagship will harmonise with 4-5 regional impact pathways through the 2019 outcomes

TIPS

You will have seen that developing your flagship outcomes required close collaboration with the regions to harmonise outcomes. This will be true throughout the process. Likewise, close collaboration with regions is critical when developing your IP indicators. This is because the regional IP will be providing the most important contributions and evidence in terms of your flagship outcomes and eventually the impact. Therefore, the data from the different regional IPs must be harmonised across the regions to provide convincing evidence of progress towards the flagship outcomes, and harmonised across the flagships to provide convincing evidence of progress towards your CRP impact.

This level of harmonisation requires good coordination, negotiation and compromise from all flagships and regions to create a system that provides your CRP with the best possible evidence regarding progress towards impact. **The process is iterative.** You will find that as the coordination occurs changes will be necessary. The same is true for the regions. Completing the CRP regional and flagship IPs will involve the art of compromise. The end result will be a harmonised system of IPs that represents the complexity of the CRP.

Steps:

1. Review the IPs from the regions where your flagship is working. Identify the regional 2019 outcomes relevant to your flagship, and capture them into the first two columns table below:

Region	Regional 2019 Outcome	Flagship 2019 outcome(s) relevant to the regional 2019 outcome
<i>Example: South Asia</i>	<i>National and sub-national governments develop CSA policies and programmes and strengthen related institutions based on evidence from case studies, data, tools, and models.</i>	

2. Consider the first regional 2019 outcome and your flagship's 2019 outcomes. Which of the flagship outcome(s) does this regional outcome contribute to? Capture the relevant outcome(s) in column 3 of the table above. Continue through the table and complete all the regions. Try to keep the number of flagship outcomes that the regional outcome contributes to at a minimum (ideally these are 1-1 relationships).
3. Now take a step back and consider the regional 2019 outcomes for your flagship and your 2019 outcomes. The regional outcomes are essential for making progress towards your 2019 outcomes. The regional outcomes are the most important element in achieving your goals for your flagship. Work with the regional team to ensure that the regional outcomes for your flagship are captured in your flagship 2019 outcomes. If all of the regional outcomes for your flagship are achieved, will your 2019 outcomes also be achieved? Collaboratively revise the regional outcomes for your flagship and your 2019 outcomes until they are well harmonised.

Session 5: Review and Indicator Metrix

Objective: To ensure that the upper levels of the flagship impact pathway are harmonised with the regional impact pathways.

Output: M&E plan for the flagship.

Steps:

1. Review your upper level flagship IP one more time to make sure it flows, is harmonised, and is meaningfully contributing to the Programme's overall vision.
2. Review the individual outcome statements 2025 and 2019. Make sure they are truly outcomes (not impacts or outputs): 'Exactly **who** is doing (action terms) **what... differently?**'
3. Now break down each outcome statement into its individual components, asking yourself for each component: Is this really what we want? Can we measure it? How?

Example:

National/sub-national governments, in collaboration with the private sector and civil society,

- These are the specific next-users (public, private and civil society) that must come together. If one next-user is missing, the behaviour change won't happen. In each CCAFS country we can survey ministries involved

in CSA policy, and agribusinesses and civil society groups (e.g. national farmer associations), best placed to provide CSA information, technologies and support.

enact

- We want to measure evidence of actual policies, plans and strategies, either revised or new, and their implementation.

equitable food system policies that take into consideration climate smart practices and strategies

- The issue of equity must be front and centre in any plan, so as to guide implementation towards poor and vulnerable members of society, particularly women. The policies we consider must be broad enough to reflect that it is the interactions of policies in the food system (agriculture, food security, infrastructure, trade, etc.) that must work together to support the adoption of CSA. The basic issue is CSA.

4. Next, we need to add target figures to each of the defined outcomes indicators. To come up with these figures it requires some background research, your experience and an iterative process with the regions. The numbers for each flagship will be the sum of contributions from each region that the flagship is working in, and, in some cases, 'global' contributions that are generated by the flagship and don't link to specific regions. The regions in turn get their figures from adding up the contributions from their projects in their regional portfolios. To define the target figures it requires some balancing between being ambitious on the one hand, and being realistic on the other (see table below). Note that these figures are based on your best assumptions at the given point in time with the information available.

Flag-ship	Year	Indicator	Total # from regions	Region 1	Region 1 narrative explanation	Region 2	Region 2 narrative explanation	...
1	2025	# (mio.) of farmers, incl. at least 40% women, with strengthened adaptive capacity and food security as a result of programmatic CSA investment	30	7	Laos, Cambodia, Vietnam, Philippines	8	Peru, Columbia, Nicaragua, Honduras,	...
1	2019	# of national and subnational development initiatives and public institutions prioritise and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools	15	4	Vietnam, Cambodia, Laos	3	Peru, Columbia, Honduras	...
1	2019	# of public-private actors at national and sub-national levels are using new incentive mechanisms or	10	2	Worldbank, USAID	3	Agriculture CC initiative in Colombia MAP Program Central America	

		<i>business models/ markets explicitly promoting climate smart approaches along the value chain, using CCAFS science</i>					<i>(CATIE) Action Plan of CC Law in Honduras</i>	
--	--	--	--	--	--	--	--	--

5. It is now necessary to break these 2019 outcome targets into annual steps and progress towards the bigger trajectories of change. You need to agree on how to add the numbers up over the years (i.e. additional ones or cumulated). In the case of CCAFS, the target numbers are cumulative. Note that it might be that there is no progress shown in the figures in one particular year, (e.g. in the example below, it is not anticipated that any of the initiatives prioritise and make use of CCAFS science for their decision making in the first year). It is therefore important to have progress towards targets described qualitatively in narratives provided at planning and reporting stages.

Flagship	Year	Indicator	Total # from regions	Region 1	Region 1 narrative explanation	Region 2	Region 2 narrative explanation	...
1	2019	<i># of national and subnational development initiatives and public institutions prioritise and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools</i>	15	4	<i>Vietnam, Cambodia, Laos, Philippines</i>	3	<i>Peru, Columbia, Honduras</i>	...
1		2018	12	3	<i>Vietnam</i>			
1		2017	9	2	<i>Philippines</i>			
1		2016	4	1	<i>Laos</i>			
1		2015	1	-				

6. Although the indicators you have identified will be collated and analysed across the flagships for CCAFS reporting, the majority of the evidence will be collected by the regions! Discuss the indicators you have identified for each outcome with the regional teams participating in your flagship. Ask them to share with you indicators they have identified for the 2019 outcome in their region that corresponds to your flagship. Adjust your indicator(s) or the regional indicator(s) to ensure that the regional indicator(s) also provide(s) evidence, or a sub-set of data, for the flagship 2019 outcome.

Conclusion

You have now completed the upper level of your flagship impact pathway! In doing this work you will have noted how important it is to harmonise the flagship IP with the pathways of the regions where you are working. The upper levels of your flagship IP will link directly with the regions at the 2019 outcome level, while the flagship 2025 outcome will be a step in the progress to the regional outcome statements (figure 3). This close harmonisation will continue into the lower levels of the IP.

When possible join together with the regional teams when you are doing this work so as to co-design these elements, and you will find that the process is easier and more creative because all priorities are explicit and managed at the same time by all parties. CCAFS has been at the forefront of innovative programming in the design of its second phase, and elements such as the Phase 2 proposal, and components of regional and flagship pathways were already in place before we formally began working on an overall IP that embraces all of our themes and regions. The process that we are using allows us to draw upon and include this previous work while completing an overall IP towards impact for CCAFS that is owned by all team members and stakeholders.

Making sure you have the Right Products and Partners

Summary

The next session will help you identify the products, i.e. research outputs you need to successfully achieve the goals of your flagship: meaningful contribution to the CCAFS Intermediary Development Outcomes (IDOs) through research in your thematic/ flagship area that addresses the priorities of the CCAFS regions. In this session you will add major output groups (MOGs) to your impact pathway (figure 4).

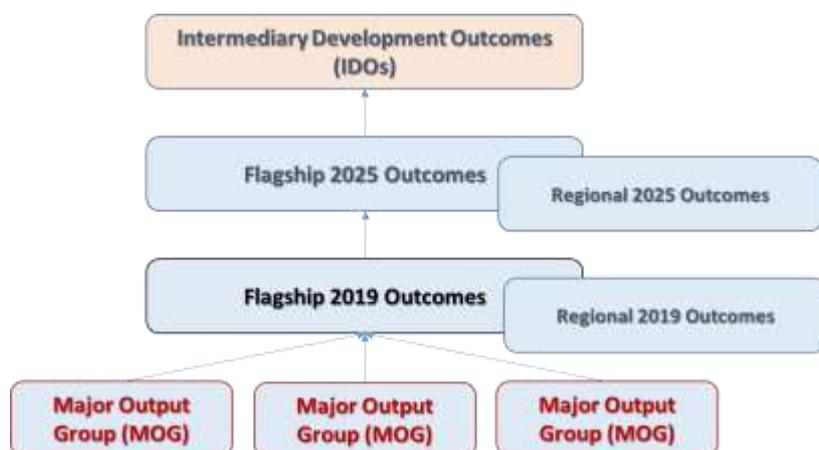


Figure 4. Schematic representation including the middle levels of a CCAFS flagship IP. Each flagship 2019 outcome (black) will be supported by a small set (1-3) of major output groups (MOGs) (red) that will occur mostly in the regions.

Session 6: Major Output Groups (MOGs)

Objective: To identify the major output groups (MOGs) that are necessary for achieving the flagship 2019 outcomes, and harmonise them with the relevant regional IPs.

Output: Flagship MOGs that the regional or global components of the flagship produce.

Background Documents:

- Regional Impact Pathways

Steps:

1. Ask participants to review the flagship's 2019 outcomes. What products/deliverables does your flagship need to produce to achieve this outcome? These products need to be useful to the key next users that you identified in session 1 to make the anticipated changes. Some example could be *new knowledge from research together with new capacity in a specific group of stakeholders to use that knowledge and enact CSA policy*. Grouped into some bigger clusters of type of products is what we refer to as Major Output Groups (MOGs) so that you end up with roughly 1-3 MOGs for each 2019 flagship outcome. Capture these in the table below.

Note on Major Output Groups (MOGs)
MOGs are theoretical and not too relevant to the projects. But they are key for the reporting to the higher programmatic framework in CCAFS case the CGIAR Consortium Office, which is done through the thematic areas, the flagships.

2019 outcome	Corresponding approx. 1-3 major output groups (MOGs)
<i>Flagship 1: National and sub-national governments develop CSA policies and programmes and strengthen related institutions based on evidence from case studies, data, tools, and models.</i>	Example: 1. Decision support systems developed, evaluated and usefulness demonstrated, introduced to decision-makers and being used by them to create national strategies and policies in support of CSA.
	2.
	3.
<i>Flagship 1: Public-private actors at national and sub-national levels are using new incentive mechanisms or business models/markets explicitly promoting climate smart approaches along the value chain, using CCAFS science</i>	1.
	2.
	3.
...	1.

TIPS

- If you have more than 2-3 MOGs per 2019 flagship outcome, identify their relationships and bring them together into a shorter list. Remember, these are **Major Output Groups!** It might take several research projects and partners to contribute to any one group.
- Avoid going into details, tasks, etc. That will be done on the project level for their workplans. **Think big picture.**
- Remember the projected timeframe for achieving the outcomes in the upper level of your flagship IP. This means you want to have completion of some MOG components in 3 years so that you can begin to measure progress towards your 2019 outcomes in a timely fashion.

2. Return to the regional IPs and review the MOGs in the regions where your flagship is being implemented. These should be corresponding and reflect the work that is planned in the region. It will require discussions between the flagship(s) and regional teams. Remember to use programmes like Skype and GoogleDocs that allow participants in different locations to hear, speak and see the work as it is evolving.
3. Through this process of negotiation with the regions, most of the MOGs you identified as necessary for your flagship will be taken care of in the regional IPs. But you may find gaps in terms of some products needed. Note these in a separate 'global' pathway for your flagship using the following table:

2019 outcome	MOG not 'covered' in the regional impact pathways

4. Now review the harmonised MOGs that you have created for your flagship with the regions you work in and check if you have the right partners in place through the project consortia to achieve the delivery of these MOGs.

TIP

- The checking of partners and partnerships is an important step. It is necessary to do this again together with the whole regional project portfolio to ensure synergies are identified and opportunities for collaboration are taken on board into project plans.

- It is important to do this from a personnel, staffing point of view. We need to ask ourselves questions like: ‘What skills and competencies have project team members?’, ‘Do we have the expertise that we need to support the changes that we want to make?’, ‘Who will make the changes happening?’, ‘What competencies, capacity, skills are we missing to achieve the anticipated changes?’; And from an organisational/ institutional point of view. We need to ask ourselves questions like: ‘What is the mandate of the organisation that is a partner in the projects?’, ‘Are these the mandates that we need?’, ‘Are we missing anything?’, ‘What other organisations are key to help with our trajectories?’
- This can be done best in a network analysis, for example, a now and end-of-the-programme network map to show also which new partnerships we need to build. It is also advisable to do an institutional analysis. In both cases did we use simplified and adapted versions e.g. of used (mostly simplified version of it), like <http://netmap.wordpress.com/about/> and the World Bank Sourcebook.

Conclusion

Congratulations, you have now completed your flagship IP except for mapping projects to the pathway! Again you will have noticed the close harmonisation between your flagship IP and the pathways of the regions where you are working. In this session we hope you have found that the majority of your MOGs are actually presented in the regional components of your flagship pathway. You may find, however, that there are some MOGs critical to your flagship that are not placed in any of the CCAFS regions. If you do, you will complete your pathway by creating a ‘global’ pathway component independent of the regions.

Making Sure you have the Right Research

Summary

In the next session you will identify the research *needed* in each region to ensure that all of your MOGs are being produced (Figure 5). Ideally this part of IP design is done *before* any projects are agreed upon with partners, so that research design in your flagship is driven by the outcomes rather than the 'old' system in which of research outputs were often just products, e.g. developing a model or a new crop variety.

In CCAFS' case, great strides had already been made in the design of its Phase 2 before the design of IPs. These facilitation notes bring together existing and newly contracted projects while identifying *synergies, redundancies and gaps* in the flagship portfolio. This was one of the main objectives of a series of regional planning workshops that were conducted by CCAFS to finish the development of harmonised IPs from flagships, regions and projects (see [full workshop series report](#) and [learning brief](#)).

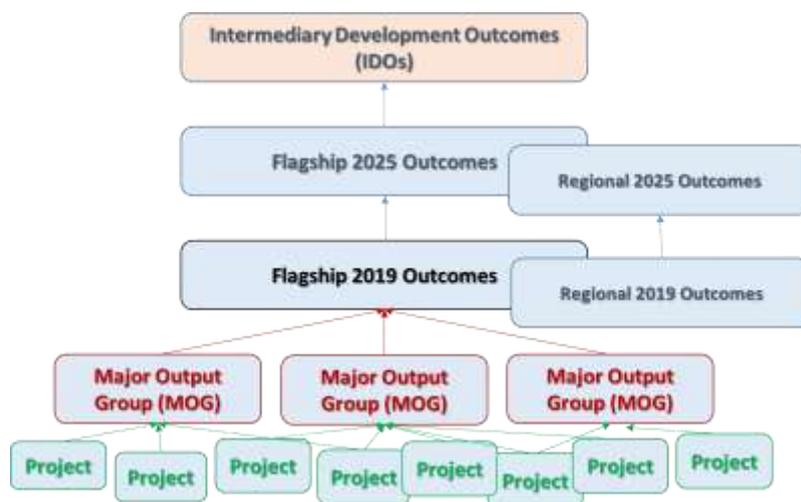


Figure 5. Schematic representation of a complete flagship IP. Sets of projects that will mostly occur in the regions (green) are contributing with their deliverables to MOGs.

TIPS

- Because of the detailed nature of the work in this session, it is best to hold it in a workshop, after the upper levels of the flagship IP from sessions 1-4 have been harmonised with the regions.
- It can be done in a workshop that includes all relevant flagship and regional actors, incl. leaders of pre-existing projects. Also consider including additional research and development stakeholders who can provide a bigger picture regarding flagship research that needs to take place in each region. Aim for 5-10 participants per regional group.
- Alternatively, consider working with the regional teams to organise regional workshops where all flagship actors are present to map projects' contribution to your programme's outcomes.
- **Be careful**, the sheer number of scientists present from pre-existing projects risks biasing the mapping exercise towards pre-existing work rather than objectively reflecting on what work is needed to fulfil the regional IP. If this happens, the critical steps of identifying synergies, redundancies and gaps will be lost. Aim for 5-10 participants per flagship group.
- Ideally, plan 1,5-3 days for such a workshop. First part is to help new stakeholders become familiar with CCAFS, reviewing the upper parts of the IP. Second on identifying existing research projects. When you do this, include all the research related to the flagship(s) that participants can identify, including that being done by national agricultural research

services, international organisations, universities, CGIAR and other research or development organisations. Third is identifying synergies, redundancies and gaps in the portfolio.

Session 7: Mapping Research Projects

Objective: To identify the relevant current research and map it to the flagship impact pathway, and identify gaps and synergies.

Output: A complete flagship impact pathway.

Participants: This session must be done with actors from the flagship and the regions where the flagship works. Include leaders of projects that have already been funded by CCAFS, as well as development and research actors that can provide a *holistic perspective* on all the work that needs to be done to complete the flagship impact pathway.

Background Documents:

- Impact Pathways for the regions

TIPS

- These notes are written from the standpoint of a *flagship workshop* in which all regional projects are mapped to the flagship. If you are running a regional workshop in which all flagship projects are mapped to the regional IP you will want to adjust your facilitation notes accordingly. See regional session 6 for help with this.
- This session involves a lot of ideas and relationships. It is difficult to capture all this information using a linear table. We suggest providing participants with different colour cards and sticky notes to write on and move around, representing MOGs and projects.

Steps:

1. Compile a list of all the research projects that currently fall under your flagship in the different regions. Include projects funded by your programme, while acknowledging that other initiatives, programmes, projects will help to achieve your flagship outcomes. Note that no individual research project will be able to fully create the set of desired outcomes. Each will need several projects.

TIPS

- If a detailed regional IP has already been completed, the listing of projects will have already been done for you by the region (existing projects and gaps). But the participants should review the regional IP to make sure nothing has been missed.
- If you are working with a small group that cannot compile a list of projects, you can produce the list beforehand. For example, you can email and call key stakeholders (flagship leaders, RPLs, NARS leaders, etc.) to compile the list. Review the list with the participants before starting to map.
- We recommend to focus on your programme's work and put other ongoing work (funded by others, e.g. CGIAR centers, NARS, NGOs, universities) into a separate list.

2. Starting with one region, identify exactly what components each project is contributing to. Remember, each outcome is a large target, and no individual research project will be able to fully create it. Each will need several pieces of research.

TIP

- For example, the project name can be written on a note card with a red marker. Red arrows can be drawn from the note card to the MOG(s) it contributes to. The exact component(s) that the project contributes to can be underlined in red, as can be the exact component(s) of the corresponding MOG. Then go on to the next project and use a blue marker.

- If representatives from all regions are participating in the session, you can break the participants up into regional groups, and each group can do the work for its region. You can also have a group that works on the global portion of the flagship IP.

3. Identify those MOGs in the regional portfolio that are not addressed by any project, or are not fully met by the projects that contribute to them. These are critical gaps! You can write new projects to fill the gaps on note cards. What are your suggestions to fill these gaps? Note them in the box below.

Suggestions for filling gaps:

4. You should also identify repetition, overlaps and synergies. What projects are together contributing to a certain outcome? Where is this creating too much repetition that needs to be eliminated so that resources are efficiently used? Where is this creating synergistic opportunities for co-development of knowledge, joining resources, etc.? What are your suggestions for minimising repetition and maximising synergies? Note them in the box below:

Suggestions for minimising the repetition and maximising the synergies:

5. Complete steps 2-5 for each region for your flagship IP.
6. If this session was done without a full complement of research and development stakeholders from each region, you now need to take your IP to those regions and harmonise the project mapping with the regions.

TIP

In the design of your IP, i.e., the pathway that connects what you do to achieve outcomes and eventually impact, you have made several assumptions of how things will work, and of the effects your work will have. It is important to make these assumptions explicit, discuss with stakeholders the factors that influence how changes happen on the ground, and what can be done to both overcome obstacles and use leverage points. We regularly make many assumptions around how things like “reach”, “use”, “contribute” happen!

Conclusion

Congratulations, you have completed your impact pathway (Figure 6). Your pathway may also include a global component of research that is not regionally based.

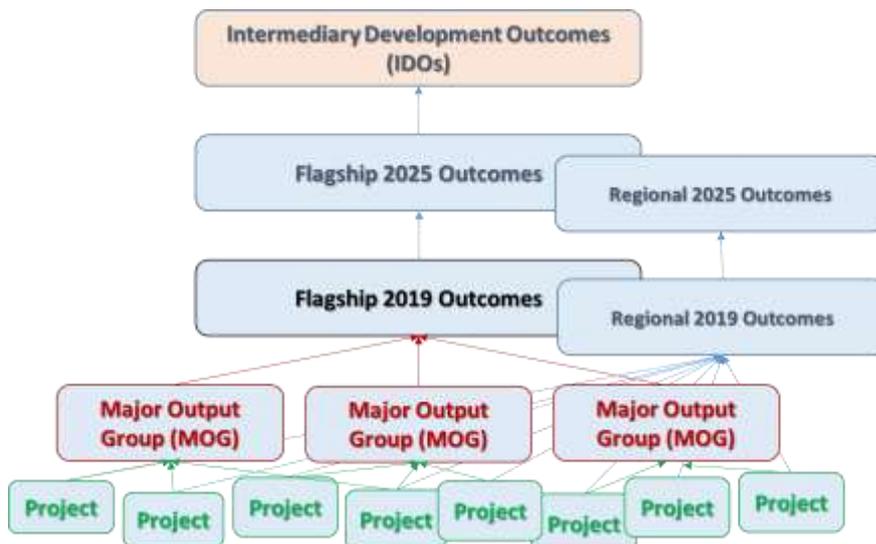


Figure 6. Schematic representation of a harmonised CCAFS IP, including projects. The diagram shows projects taking place in the different CCAFS regions that contribute to a CCAFS flagship and support CCAFS in meeting its IDO targets.

Your Monitoring and Evaluation (M&E) Plan

Summary

These last sessions will help you to draft a basic programme M&E plan that uses the flagship perspective as the lens of reporting. With the information provided by all the flagships, the programme will have the evidence necessary to report on progress towards achieving development outcomes (IDOs)! It is embedded within the wider scope of a results-based management system as well as a utilisation-focused M&E plan to ensure that we are focusing the monitoring on the things that will be used by specifically identified people, including your flagship stakeholders, about the specific impact your flagship is having.

TIPS

- You will have seen that developing your IP required close collaboration with the regional program leaders where you are working in order to harmonise outcomes and identify research synergies, gaps and opportunities. Likewise, close collaboration with the regional teams is critical when developing your IP indicators. This is because the regional IPs will be providing the most important evidence in terms of the CCAFS flagship outcomes and eventually the development outcomes (IDOs). Therefore, data from different IPs must:
 - Harmonise across the regions to provide convincing evidence of progress towards the 2019 and 2025 outcomes.
 - Harmonise across the flagships to provide convincing evidence of progress towards the CCAFS IDOs.
- This level of harmonisation requires good coordination, negotiation and compromise from all flagships and regions to create a system that provides CCAFS with the best possible evidence regarding annual progress towards the set outcomes.
- The process is iterative. You will find that as the coordination occurs changes will be necessary to your flagship indicators, and perhaps even to elements of your IP. The same is true for the regions.
- Completing the CCAFS regional and flagship impact pathways will involve the art of compromise.
- The end result will be a harmonised system of impact pathways that represents the complexity of the CCAFS programme of a science driven agenda to meet regional climate change, agriculture and food security priorities!

Participants: The following sessions require the broader buy-in of programme management including the programme director.

Session 8: Assumptions

1. Look at your MOGs (session 6), Strategies and Partnerships (session 7, your selected projects and partners to implement the projects): what assumptions have you made regarding these, especially in how they will contribute to the flagship 2019 outcomes? What needs to happen in terms of activities to produce these MOGs? Discuss how you expect these MOGs to reach next-users, and contextual factors that influence the process. What are you assuming about how the partners will help your outputs reach and influence next-users' practices? Document these assumptions in the following box:

MOGs, Strategies and Partnerships Assumptions:

2. Look at your flagship outcome statements for 2019 and 2025: what assumptions have you made regarding these outcomes, especially in how they will contribute to the programme's development outcomes (e.g. CCAFS IDOs)? What has to happen for these chains of events to happen? What factors influence these practice change processes? When you look at the total picture, do you believe that the theory makes sense? Is this theory of change (TOC) FEASIBLE? Do we have the capacities and resources to implement the strategies that would be required to produce the outcomes in the pathway of change? Document these assumptions in the following box:

Outcomes assumptions:

Session 9: Basic Flagship M+E plan

Objective: To compile a basic overview of an utilisation-focused M&E plan with indicators for the flagship IP that (i) harmonise with evidence being produced by the regions where the flagship is working, (ii) harmonise with other flagships, and (iii) ensure that your programme has a complete and compelling body of evidence regarding its impacts.

Output: Basic programmatic M+E plan.

Participants: This session is best done by Flagship Leaders together with Regional Programme Leader and the programme M&E team.

Background Documents:

- Impact Pathway for the regions
- Impact Pathway for the flagships

Steps:

1. What is it that you as a flagship leader from the programmatic perspective will need to monitor? List these elements in the first column to the left in the table below.
2. Discuss the indicators you have identified for your 2025 outcome with the other flagship leaders. Ask them to share with you the indicators they have identified for their 2025 outcomes. Adjust your 2025 outcome indicator(s) to ensure that the full package of evidence being provided across the flagships is objective, representative and compelling.
3. Go through your 2019 outcome indicators. Make sure that there is a logical progression from 2019 to 2025 (to IDO), providing a compelling and complete body of evidence in terms of your flagship's contribution (to its IDOs). Capture in the table below what you want to monitor, which is defined through your indicators in the table below.
4. Go through the columns of the table below and fill the other columns for the identified items that are necessary to be monitored, i.e. who will use the information? What is the purpose of the information collected? When is the information required? Who will collect the information? How will it be collected and how often? And any specific monitoring tools.

5. Now give your flagship IP indicators a holistic review. When considered as a set, do the indicators:
 - Provide evidence of annual progress along the impact pathway?
 - Provide quantitative evidence at reasonable time intervals (not necessarily annual) of next-user practice change?
 - Provide quantitative evidence at reasonable time intervals (not necessarily annual) of progress towards the IDOs?
 - Provide a rich qualitative narrative that provides a compelling context for the quantitative changes?

TIP

For those indicators under the management of the regions (project, MOG, regional 2019 outcomes), you should capture them in the above M+E plan so that you have a complete record of the body of evidence expected by your flagship from all the components of its IP (regional and independent). By capturing the information in the above table, you will have a plan that quickly informs you of what evidence to expect from whom, and you will avoid unpleasant surprises during the crunch time of reporting periods.

6. The above table is the basic information for your flagship IP M+E plan. Through bringing the projects together in the region, discussions will come up about necessary baselines to be able to provide meaningful evidence for any contributions of your flagship towards the anticipated changes. It will require some discussion of what is needed, what is already available and accessible and if not available who will carry out these baselines in a timely fashion. Likely your flagship will want to develop a document that provides an overview of what basic information is required and how it is being covered. See the table below for capturing this. Similar approaches to baselines across regions also make sense (e.g. CCAFS baselines that have been already implemented at CCAFS sites).

Required basic information (baseline work)	Is it available?	
	if yes, where/ who to contact	if not, who will carry it out and when

Table x: Basic Monitoring plan

WHAT TO MONITOR? MONITORING PRIORITY (e.g. 2025 outcome, 2019 outcome, MOG, projects)	WHO WILL USE THE INFO?	PURPOSE OF THE INFO?	WHEN IS THE INFO NEEDED?	WHO WILL COLLECT THE INFO?	HOW OFTEN WILL IT BE COLLECTED?	HOW WILL IT BE COLLECTED	PROPOSED MONITORING TOOL
<i>CCAFS Global Programme (through a flagship lens):</i>							
<i>A set of one 2025 and two 2019 outcome indicator targets per flagship (quantitative measures)</i>	<i>CCAFS global programme level, Director, CCAFS Management team</i>	<i>To demonstrate achievements and delivery to promised outcomes for the ISP</i>	<i>By Mar. when reports to the CO are due</i>	<i>FPLs will have to do some aggregation and consolidation across the programme to ensure consistency and accuracy.</i>	<i>Annually</i>	<i>Annual reporting period Traffic light</i>	<i>P&R with an iterative process to ensure learning and understanding of progress towards outcomes</i>
<i>Explanatory narrative for the target outcome numbers, specifying and providing background and smaller progress steps (qualitative description)</i>	<i>CCAFS management liaisons (FPLs and RPLs)</i>	<i>To ensure that we are aggregating without double counting and see progress towards outcomes</i>	<i>By Feb.</i>	<i>Projects will be prompted through the P&R system</i>	<i>Annually</i>	<i>Annual reporting period Traffic light</i>	<i>P&R with an iterative process to ensure learning and understanding of progress towards outcomes</i>

Session 10: Theory of Change review and reflection plan

Objective: To discuss innovative ways to review progress along the IP and basic assumptions and strategies in the TOC, and create a plan for an annual review.

Output: An annual plan of reflection and review for the flagship TOC.

Steps:

1. Collect and agree on some ways of how the programme as a whole or the flagship(s) team(s) in particular would like to reflect on their TOCs so that they are confident that their initial hypothesis of what the group thinks might happen will be reflected on and up-dated according to the insights and lessons from implementation. This should happen periodically and ideally be part of and form some preparatory step for annual reporting for the previous year and planning of the coming year. Collect the notes from this discussion in the box below:

Notes on methods for IP and TOC annual reflection:

TIP

Remember that at TOC is a hypothesis of what the group thinks is happening in the flagship, and will happen because of the work that CCAFS is doing. Think of this as a '**working hypothesis**' that should be reviewed regularly and revised based on that reflection process. The TOC annual review is an opportunity for the group to ask, "what is working", "what is not", and most importantly "**what do we need to change in our TOC and/or IP to make sure we achieve our outcomes in a timely fashion?**"

2. Collect all of the notes you have made about assumptions, project portfolio (and strategies, partnerships), monitoring, reflection and review plan. Create a single document from these notes that is your flagship's Theory of Change and annual plan for documentation and reflection. Your plan should have the following components.

IDOs	
<ul style="list-style-type: none"> - One or more indicator per IDO that the flagship contributes to (quantitative) - Developed at the consortium level and provided to the CRPs for compliance 	
Outcomes	
<ul style="list-style-type: none"> - One or more indicators per flagship 2025 and 2019 outcome (quantitative, qualitative) - Developed and agreed on through consultation between flagship and regions - Be open to documenting 'surprises'. Things that you hadn't planned but that are creating momentum towards your outcomes. This may lead to major changes in the IP! 	
MOGs	Projects
<ul style="list-style-type: none"> - Documents progress in achieving MOGs (quantitative/qualitative) - Developed and agreed on between flagship and regions 	<ul style="list-style-type: none"> - Document project contributions to flagship MOGs - Often based on verification of deliverables, narrative annual reports should provide interesting anecdotal information about implementation, particularly in terms of partnerships and stakeholder interactions - Developed and agreed on through consultation between PIs and RPLs and flagship leaders

<p>Backstory</p> <ul style="list-style-type: none"> - Provides a rich narrative, about the four sets of indicators - Be creative in choosing your methods: video, photo narrative, infographic, etc. - Allows projects, regions, flagships to tell their story of progress and contribution to the overall CCAFS impact pathway
<p>TOC Reflection</p> <ul style="list-style-type: none"> - Review of the TOC in terms of progress, decisions and changes based on M&E and reflection. Pay special attention to the flagship's assumptions and strategies. Are the assumptions still holding? Are the strategies working? The flagship team should develop guidelines for the reflection, including a checklist of what to consider.

Session 11: Results-based Management Evaluation Criteria

Objective: To develop project performance evaluation criteria by which projects get evaluated periodically.

Output: Set of project performance criteria for a results-based management system.

Participants: This can be done among the programme management team and/ or prepared by a smaller task force team and then finalised and agreed upon by the management team.

Steps:

1. Think of the value system of your programme and what you would want each project's performance to be evaluated by annually. Note them down and if necessary reduce them (through prioritisation) to a reasonable number (we suggest between 3-5).
2. Explain them in more detail if necessary and come up with a weight for each of them. They might not all be of equal importance to the success of your programme.

CCAFS Annual Project Performance Evaluation Criteria	
<i>e.g.</i>	
• Have projects done and delivered what they said they would - annual outputs	→ 25%
• How have projects done in relation to their progress towards outcomes	→ 35%
• Degree to which the project is reflecting core CCAFS principles (<i>e.g. theory of change, quality of partnerships, communications, gender</i>)	→ 20%
• How well is the project team responding to opportunities and challenges <i>and adapting and self-reflecting</i>	→ 20%

3. Agree on who will be part of the evaluation team. Some possible candidates for the evaluation are, for example. *Program management liaisons, flagship and regional programme leaders, programme director, external consultant, M&E leader, project leaders.*

TIP
<ul style="list-style-type: none"> • Performance evaluation is closely tied to the shift towards an evaluative and learning culture within the programme, so that the evaluation process is also a key opportunity for the selected evaluators to learn more about the progress being made, achievements and challenges encountered.

- In a participatory process when presenting the criteria and the performance evaluation, it was also suggested to allow for a project self-evaluation that complements the evaluation through the evaluators and gives space for discussion in case of major disagreements.

4. Define follow-up consequences of the evaluation, in form of positive or negative incentives, for example bonus allocation, or budget cuts.
5. Make sure the performance evaluation system is communicated to the projects as early as possible, so that they know what to expect.

Conclusion

Congratulations! You have completed your flagship impact pathway and basic ML&E (monitoring, *learning* and evaluation) plan. Your flagship impact pathway and ML&E system form a very detailed plan. For communication purposes, you and your team, in close exchange with your communications people, can develop versions tailored to the specific audience you want to share your programme of work with, e.g. different stakeholders. Visual software is quite handy for this –Power Point, Prezi, Novamind, etc.

By planning your flagship’s work in this way, you have a solid plan for its implementation, management and evaluation. But it also allows you great flexibility. Your TOC and IP are your best hypotheses right now about how to contribute to the achievement of the CCAFS IDOs. Through the ML+E and adaptive management process you get to critically evaluate the validity of that plan over time, and can adapt your IP and TOC as required to regain momentum in a timely fashion and at as large a scale of impact as possible.

FACILITATION GUIDELINES FOR THE REGIONS

Introduction

In the case of CCAFS, the programme works in 5 global regions, with multiple research sites in each region:

- East Africa: Kenya (2 sites), Uganda (2), Ethiopia (1), Tanzania (1)
- West Africa: Burkina Faso (1), Niger (1), Senegal (1), Mali (1), Ghana (1)
- South Asia: India (2), Bangladesh (1), Nepal (1)
- Southeast Asia: Vietnam (3), Laos (2), Cambodia (1)
- Latin America: Columbia (1), Peru (1), El Salvador (1), Guatemala (1), Honduras (1), Nicaragua (1)

Below is a series of questions that will help you work through developing a Theory of Change (TOC), Impact Pathway and monitoring and evaluation (M+E) plan for your **region**. These notes are designed to facilitate the development of an impact pathway. You can use them for your own work, or you can use them to facilitate others in the impact pathway design process.

TIPS

- Work through the questions in order.
- We recommend breaking your meetings up into short sessions of 1,5 hours so that people stay fresh and have time for reflection. The questions below are divided into suggested sessions.
- In the regions especially it is good to have multiple partners and stakeholders contributing, so you may want to do this work with them in a workshop setting.

These questions are designed with the assumption that you are starting from the beginning. In cases where you have already made significant progress towards designing your impact pathways, you will find that going through the sessions will help you review and revise your work, while some sessions will allow you to take a step forward.

Important to note, feel free to be selective and use what you find useful and applicable to your own context while this guide offers a whole framework, it will most likely require some adjusting to your own operational requirements and setup.

TIPS

- Work through a question to the end, and don't let uncertainty "bog you down". Where there is confusion or disagreement, note down the ideas that come up, and then return to that question later.
- Remind your colleagues that:
 - Developing a TOC and impact pathway is an iterative process that will lead to improvements in the product **over time**,
 - Your impact pathway is a piece nested in a wider CCAFS impact pathway, and
 - Your impact pathway brings together all of the projects in your region to contribute to the flagships through your regional outcomes.
- Review, discussion and negotiation will be necessary to ensure the nesting occurs and all the impact pathways are harmonised in their contribution to the intermediate development outcomes (IDOs).

These facilitation notes provide you with examples. *All examples are in italics.* Tables are provided in each session to compile your notes and results. Please add more rows to capture all of the information you are developing.

You can also create a graphic impact pathway that captures the most important elements. This allows you to see linkages more readily. Power Point or any other flowchart design programme also works.

There are some terms used in these notes that may be new to some users. Please see the **glossary** annexed at the end of the document.

Each session is conceptualised to spend about 1 - 1,5 hours on to have a rough draft which can be revisited and honed should resources allow.

TIPS

You will find tips boxes throughout these facilitation notes. They remind you of key points, and provide you with facilitation recommendations. The methods you choose to facilitate different steps in a session will depend on what you're comfortable with, and social-cultural norms. But always encourage everyone to speak up, and always try to use active exercises. Be creative!

- You can use several methods to facilitate a session:
 - **Large group:** Sometimes it helps to have everyone in the session working all together. This works well if you have up to 10 people. It can cut down on time because you don't need to harmonise small group work during the session. But if the group is too large it will increase time because you need to capture everyone's ideas one-by-one.
 - **Small group:** If you have more than 10 people, consider breaking them into groups. The different groups can address the same task and you can harmonise the work in plenary afterwards. Or if there are multiple tasks, each group can do a separate piece of the work. For example, developing the impact pathways for different outcomes in the region.
 - **Note cards:** Each participant can write their idea on a note card. Then each person can present the idea. This is a helpful technique when there is a divisive issue under discussion, because everyone listens to the presenter without criticising. You can

- also collect the cards and present them yourself. This makes the ideas anonymous, which can also be helpful when there are competing ideas in your session.
- This guide has lots of tables to complete. Focusing only on tables in a computer can be exhausting. Consider creative ways to engage the discussion and develop the information, and then capture it in the tables afterwards:
 - **Drawing:** Small groups can draw a map or a picture, for instance of the outcome they would like to see.
 - **Reporter:** You can have a small group elect a ‘reporter’ that interviews the other group members to draw out the ideas and then present them to the larger group.
 - **Note cards and sticky notes:** When dealing with complex topics, like many different projects leading to different major research actions, people can write the different components of the impact pathway on note cards, sticky notes, etc. and move them around on a board to see different relationships.
 - **Symbols:** To capture nuanced information, symbols like colors, shapes, the thickness of lines, etc. can be used to capture them.
 - **Materials (optional):**
 - Flipchart paper
 - 3-4 coloured markers
 - Different coloured cards
 - Computer with graphic software, and
 - These facilitation notes

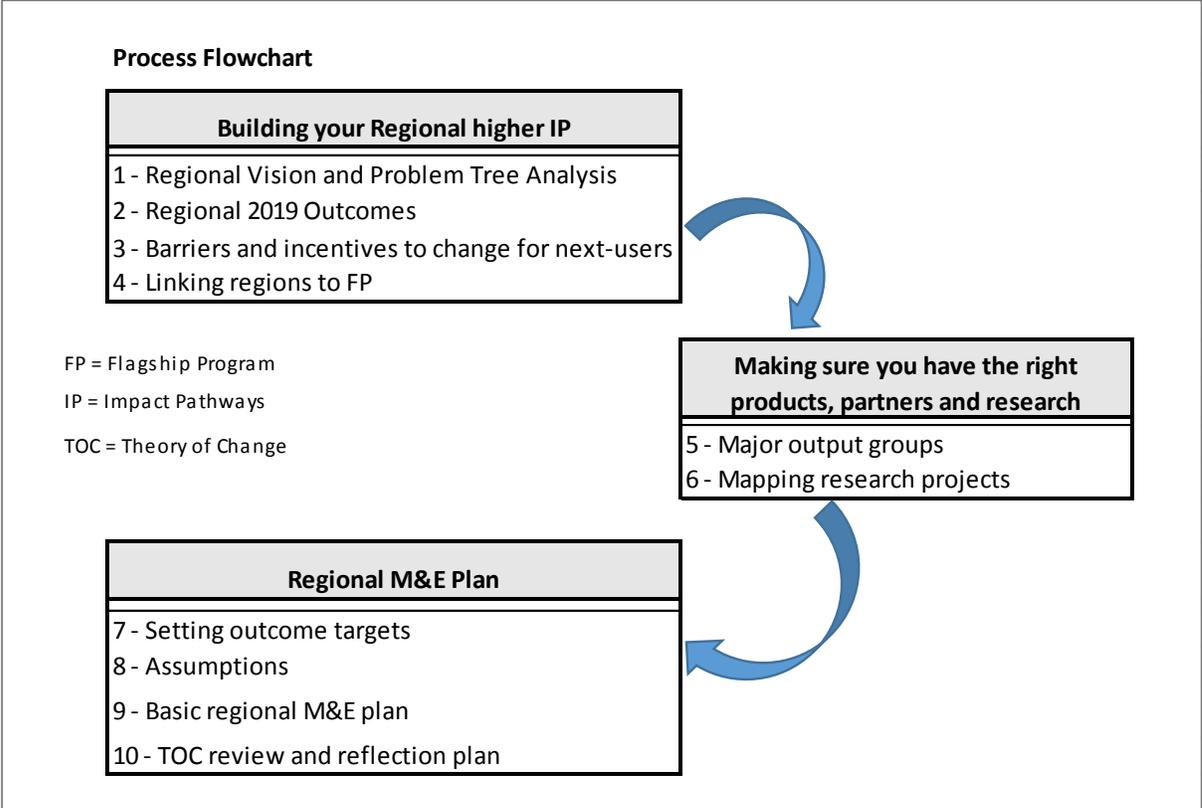


Fig. 1 Process flow chart for Regional Impact Pathways Building

Building the Upper Levels of your Impact Pathway

These guiding questions are a suggestion to help you develop the following elements of a regional impact pathway see schematic Fig. 2 below.



Figure 2: Simplified schematic overview of a regional impact pathway

Summary

The first 4 sessions will help you build the upper (aggregate) level of your regional impact pathway (Fig. 3). You will produce a visual looking something like Figure 1 below, but keep track of all of your notes as background to the diagram of your impact pathway! Much of this background information will form your theory of change (TOC).



Figure 3. Schematic representation of the upper levels of a CCAFS regional impact pathway. Each region will have one 2019 outcome per flagship they are contributing to.

The first 4 exercises lead into each other and involve the same participants. Therefore, consider conducting these sessions as a short workshop of e.g. 1,5 days, depending on the level of experience your participants have with outcomes thinking.

Participants: At a minimum, programme staff in your region and key advisors (e.g. from CGIAR centres and countries). Also try to include the relevant flagship leaders and scientists.

Session 1: Regional Vision and Problem Tree Analysis

Background Documents:

- Any programmatic strategic document, e.g. CCFS Phase 2 extension proposal
- Any strategic documents from the flagships, e.g. draft impact pathways

Objective: To develop a consensual programme vision for the region.

Output: A regional programme vision and a problem tree that identifies determinants (= problems to be addressed by the programme).

Steps:

1. Review with participants any available strategic programmatic documents, like the CCAFS phase 2 draft proposal, flagship impact pathways keeping in mind any system level goals, e.g. for the CGIAR their system level outcomes (SLOs) and intermediary development outcomes (IDOs), see box 1 and 2.
2. Ask participants to consider the higher level goals, like programme and flagship visions, IDOs, and SLOs, in terms of your region. Develop a vision statement (2-3 sentences) that describes your region 10 years from now, Remember, this vision is for the next generation. It should be quite aspirational, describing the world (in your region) we want our children to live in.
3. Now go through a 'problem tree' analysis. You can find a very useful guide for this exercise in the [PIPA website- Drawing Problem Trees section](#). Below is a simplified version of this exercise.

Box 1: CGIAR System Level Outcomes

- Less rural poverty
 - Better food security
 - Better nutrition and health
 - Sustainably managed resources
-

Box 2: CCAFS selected CGIAR Intermediary Development Outcomes

- Food security
- Gender & social differentiation
- Adaptive capacity
- Policies and institutions
- Mitigation

TIPS

In the exercise below the participants write directly on flipchart paper. An alternative is to provide them with different color cards to represent reasons and determinants. The steps for the problem tree analysis (4-10) are written as if you have one group.

- If you have more than 10 people, it may be too cumbersome to keep the whole group together and you may choose instead to break the participants up into 2 or more smaller groups.
- If you break into smaller groups, you may choose to break into 2-3 groups with each group addressing a single main problem. When all the small groups complete the work have them present their results to one another.
- If you have more than one group addressing the same problem you may choose to close the session by harmonising the differences between the group work in plenary.

4. Ask participants: 'What is the main problem in terms of achieving the vision we just described?' Write this problem on the extreme right side of a blank sheet of flipchart paper, one "main" problem per flip chart paper.
5. Then ask: 'Why is this problem happening?' It helps to think in terms of what the underlying social, economic and/or environmental causes of this problem are, particularly when it comes to climate change, agriculture and food security. You may find that there is one large reason, or you may identify a few. Write them to the left of the problem and connect them with arrows to the problem.
6. Now look at the reason(s) that you identified and ask for each: 'Why are those things or causes occurring?' Write those in the next column to the left and again connect them to the cause(s) they contribute to in the previous column with an arrow(s). Some of the reasons why the problem is occurring might be beyond your control. Focus mostly on developing the reasons where your programme has some influence and control over.
7. You will notice that you are drawing a tree with the branches pointing to the left see for example Fig. 4 and 5. Keep going. We call this exercise the "5 whys", because it usually takes asking 'why' five times to get to a root cause(s) or determinant(s). These are the things that the programme will address, in order to make progress towards the vision. These determinant problems help define the outputs CCAFS needs to produce to contribute to progress towards the regional vision.

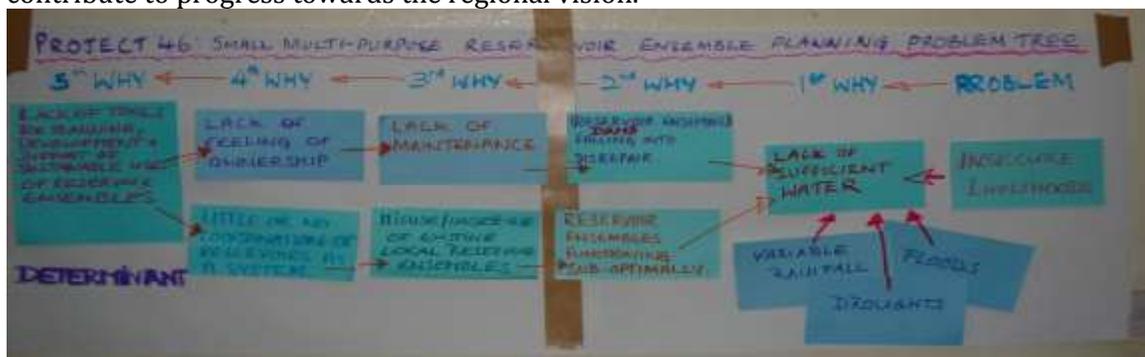


Fig. 4 Problem Tree Examples

8. Once all of the branches have been completed to a series of determinants (i.e. the leverage/ entry points where your regional programme can make a difference), you can stop. Now review the entire tree. Identify those problems that you can address within your programme and those that are beyond your programme's control.
9. Capture your full 'problem tree' electronically using Power Point or another graphic programme. You can even use Excel see Fig. 2.

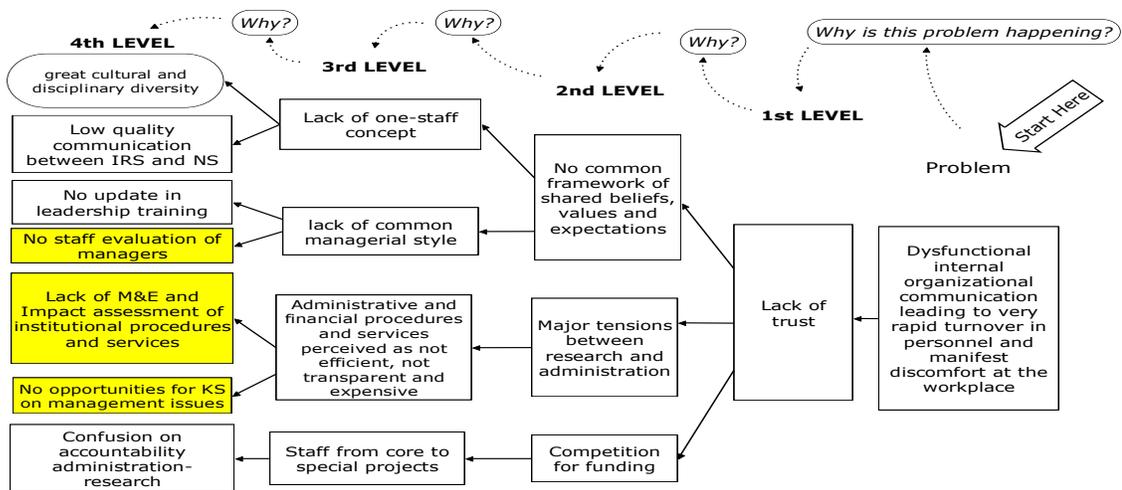


Fig. 5 Problem tree example drawn in Excel

TIP

Try to steer away from determinants or final problems that are the “absence” or “lack of” what you are producing. Look at each problem in its own value, and trying not to arrive at any predetermined conclusions. *For example, if at some point you were to look at the problem “Local government agencies do not apply/ look for systemic solutions” don’t assume the cause- or the answer to “Why is this problem happening” is “because they don’t have x or y guidelines”- the very guidelines you intend to produce! Thinking this way will not allow you to see corresponding problems or flag other issues that need to be addressed.*

Session 2: Regional 2019 Outcomes

Background Documents:

- Any programmatic strategic document, e.g. CCFS Phase 2 extension proposal
- Any strategic documents from the flagships, e.g. draft impact pathways, call for concept notes

Objective: To develop a regional outcome for each of your programme’s flagship that is working in the region.

Output: Your Programme’s regional 2019 outcomes.

Steps:

1. Continue reviewing the programmes strategic documents with the participants. This time concentrating on the four flagship (thematic), e.g. flagships proposals, flagship calls for concept notes and their most recent draft flagship impact pathways.

TIPS

This exercise will produce one 2019 outcome per flagship in your region. The exercise is organised assuming you are working with a single group, and the group works on and completes the outcome for flagship 1 before moving on to the next flagship.

- **Single group:** This will likely lead to a lot of repetition of next-users when the group finishes flagship 1 and moves on to the next flagship. If you are working in a single group we recommend that in steps 2-3 participants develop a master list of all next-users considering all the flagships in your region. Then to continue on to step 4 by considering a single flagship at a time. To do this ask participants to cross off the master list of next-users those not pertinent to the flagship, and then ask them if there are any next-users missing in terms of the flagship.
- **Flagship groups:** It is easier to do this exercise in small groups based on flagships, where participants go to the flagship whose subject matter they are most familiar with. In their flagship group they complete from step 2 onward.

2. Ask participants ‘Who are the next-users that must participate in the achievement of the regional vision (in terms of flagship 1)?’ Be as detailed as possible, making a complete list of specific people and organisations. Make sure you are identifying next-users, not end-users, see definitions below in box 3.

Box 3: Definitions (see also glossary)

Next-users: national and international research and education institutions, private sector, extension organizations, governments both at local and national scales, regional organisations such as river basin organisations and NGOs. Next users access and use CG products directly. They can create an environment that enables the target impact for end-users; also decision makers that we want to influence to achieve outcomes. They help to bring ideas and tools to scale and into new arenas.

[**End-users:** The beneficiary population; usually quite massive, making it unfeasible for a project or program to work with them directly. - they are not of a focus and direct work partners]

Outcomes are changes in next-user knowledge, attitudes, skills and practices.

Example **outcome statement:** *International organizations like IFAD, WB, FAO, UNFCCC, etc. are engaging member countries to learn what their climate smart food system priorities are, and appropriately direct their investments.*

[An **impact statement** would be: 6 million climate resilient smallholder farmers in Kenya. This is not what we want as it deals with end-users.]

3. Now group the flagship 1 next-users into a short list of next-user groups. Group them by how they will use your programme’s products/ outputs to generate outcomes, and try to achieve a short list of no more than 5-6 groups. You can capture your groups in columns 1 and 2 of the following table.

Next-user Group	People/organisations in this group	Practice Change
Please add rows.		

4. Now ask the participants to consider each group of flagship 1 next-users. How do you expect each next-user group to use CCAFS products and change their practices in order to contribute to achieving the vision for the region? These we will call “practice changes”. Capture them in the third column of the above table.
5. Review the list of practice changes by each next-user that you have just documented for flagship 1: What is the single major practice change that can occur by 2019 that addresses the most important groups of flagship 1 next-users? Are there any next-user groups that need to experience the same practice changes as each other? Can these be further grouped?
6. Now rephrase that most important practice change that you wrote for flagship 1 as an **outcome statement**. Use active terms, like – *are using, are implementing, are accessing, are writing...* An outcome is expressed as:

Exactly **who** is doing **what...differently**?

Outcomes are changes in **next-user knowledge, attitudes, skills and practices**.

- **Do not!** Write an impact statement: *6 million climate resilient smallholder farmers in Kenya* (this is an impact, and it deals with **End-users**)

Example outcome statement: *International organisations like IFAD, WB, FAO, UNFCCC, etc. are engaging member countries to learn what their climate smart food system priorities are, and appropriately direct their investments.*

7. Return to your problem tree. Will this outcome allow these next-users to tackle and solve the first root cause(s) of the problem? If not, discuss and revise the outcome until it does. Remember, write outcome statements!
8. Repeat steps 2-7 for each of the flagships that is working in your region. You should end up with one 2019 outcome statement for each of your programme’s thematic flagships that work in your region.
9. Capture your flagship outcomes in the following table. Note that your region may not be participating in all of the flagships. If so, leave that cell blank.

Region:	
Flagship 1 2019 outcome:	
Flagship 2 2019 outcome:	
Flagship 3 2019 outcome:	
Flagship 4 2019 outcome:	

Session 3: Barriers and incentives to change for next-users

Objective: To identify the changes in knowledge, attitude and skills, and the incentives that need to be in place if CCAFS is going to achieve its practice outcomes.

Output: Knowledge, attitude and skills outcomes for each practice outcome.

TIP

This session again assumes that you will be working on flagship 1 and completing the exercise before moving on to another flagship and repeating the exercise. If your group is large enough, break it into small groups according to flagship and have each group do the exercise for its flagship.

Steps:

1. Review your problem tree, and then your 2019 outcome for flagship 1. Why aren't those next-users already making the necessary decisions to address the causes of the problem and achieve the outcome(s)? What barriers do they face in terms of incentives, agency, norms and external factors?

Complete columns 1, 2 and 3 in the following table for flagship 1. The practice changes come from step 4 in session 2:

Incentives – relates to more ‘rational choice’ concepts of behavior analysis that state that decisions to adopt specific behaviors are based on perceived costs and benefits. This applies to both individuals and institutions, and is related to the development of attitudes and values regarding the importance of, or potential returns from a particular action.

Capacities and competencies (real or perceived) of an individual or an institution to achieve an outcome by the adoption of certain behaviors, access to information, knowledge, skills and other financial and infrastructural resources.

Norms – relates to social norms, traditions and habits that shape the actions of individuals and institutions. Many individuals and institutions experience a certain amount of inertia, or mimicking that can shape actions even in the presence of other influencing factors.

External factors – relates to factors outside the individual or the institution that affect behaviors. In the case of CCAFS this more frequently involves the behavioral changes in other institutions within the system that affect the behaviors of another. This would traditionally be called the enabling environment, yet in the CCAFS program many of these systems and institutions are also stakeholders in the program itself, and thus are less ‘external’.

1	2	3	4	5	6	7
		Outcome(s)				
Next-user group	Barriers	Practice	K	A	S	Incentives
<i>Example: Internatl. Orgs. relevant to climate change, agriculture and food security: IFAD, WB, FAO, UNFCCC,</i>	<i>- Do not know what the CC priorities of the constituent countries are because successful engagement is blocked by bureaucratic structures and culture - Don't direct their investments towards the true CC priorities of constituent countries - Constituent countries lack the capacity to understand</i>	<i>- Are engaging member countries - Are appropriately directing their investments</i>	<i>Know what the priorities of constituent countries are</i>	<i>Believe that they must engage with constituent countries in order to be effective</i>	<i>Can identify and fix problems in their bureaucratic structures that are blocking successful communication with constituent</i>	

WTO, WFP	their own CC priorities, and to convey their priorities to funding organisations				countries	

2. What must these next-users groups learn, understand, learn how to do, appreciate, etc. in order to achieve those practice outcomes? Write those changes as Knowledge, Attitude and/or Skills (KAS) outcomes. To be able to change a practice or behavior, people usually need to first *know/understand* the change in practice and its advantages, and/or have *developed the skills* to do it, or at least to *believe or trust* the benefits of changing it. For each next-user group, make explicit 2-3 KAS outcomes that are key to their changing their practice. Enter these outcomes in columns 4-6 of the above table. (*now they know how to..., because now they can..., because now they understand better...*)
3. Finally, what incentives would help each next-user group overcome its barriers and achieve its KAS and Practice outcomes? Capture these in the last column of the above table.
4. Complete steps 1-3 for all of the flagships that your region is participating in. Your KAS outcomes will not be captured in your regional impact pathway. But you need to completely document your work for this exercise because they will become part of your TOC.

Session 4: Linking your region to your flagships

Objective: To make sure the regional flagship outcomes harmonise with the 2019 outcomes of the flagships working in your region.

Output: Linkages between the region and flagships documented and planned for in the regional TOC.

Background Documents:

- Any programmatic strategic documents from the flagships (thematic areas), e.g. draft flagship impact pathway

TIPS

This session again assumes that you will be working on flagship 1 and completing the exercise before moving on to another flagship and repeating the exercise. If your group is large enough, break it into small groups according to flagship and have each group do the exercise for its flagship.

Steps:

1. Review with the participants your regions' 2019 outcome for flagship 1. Copy it into column one in the table below, with the corresponding 2019 flagship outcome(s) in column 2.

Flagship: 1		
1	2	3
Regional 2019 outcome	Corresponding Flagship 2019 outcome	2019 outcome indicator

2. If the flagship has already defined or drafted a 2019 outcome indicator, you can use this as a starting point for review how you will measure the regional outcome. Ask yourselves: ‘How will we be able to know that this outcome has been achieved?’ Or, ‘what evidence will we have to show that we are achieving this outcome?’ ‘Will they also contribute to the flagship 1 2019 outcome?’ If yes, document these contributions by completing column 3 in the above table. If not, your 2019 outcomes do not harmonise well with the flagship 2019 outcomes, and need to be revised so that the linkages are clear. This is an iterative and negotiating process with the flagship to ensure that the 2019 outcome indicator will work for the regions as well as the flagship.
3. Now break down the 2019 outcome for flagship 1 for your region into its individual components, asking yourself for each component: ‘Is this really what we want? Can we measure it? And how?’

Example:

National/sub-national governments, in collaboration with the private sector and civil society,

- These are the specific next-users (public, private and civil society) that must come together. If one is missing, the behavior change won’t happen. In each CCAFS country we can survey ministries involved in CSA policy, and agribusinesses and civil society groups (e.g. national farmer associations), best placed to provide CSA information, technologies and support.

enact

- We want to measure evidence of actual policies, either revised or new.

equitable food system policies that take into consideration climate smart practices and strategies

- The issue of equity must be front and centre in any policy, so as to guide implementation towards poor and vulnerable members of society, particularly women. The group policies we consider must be broad enough to reflect that it is the interactions of policies in the food system (agriculture, food security, infrastructure, trade, etc. that must work together to support the adoption of CSA). The basic issue is CSA.

4. Repeat steps 1-3 for each flagship that your region is participating in.

Conclusion

Congratulations, you have now completed the upper level of your regional impact pathway! In doing this work you will have noted how important it is to harmonise the regional impact pathway with the pathways of the flagships that your region is participating in. The upper levels of each flagship impact pathway, when harmonised with the pathways of the regions, will link directly with the regions at the 2019 outcome level, while the flagship 2025 outcome will be a step in the progress to the regional vision statements (figure 6). This close harmonisation will continue into the lower levels of the impact pathway. Ideally, the flagship and regional impact pathways are developed together. The different flagship and regional teams come together from the very beginning to co-create their impact pathways.

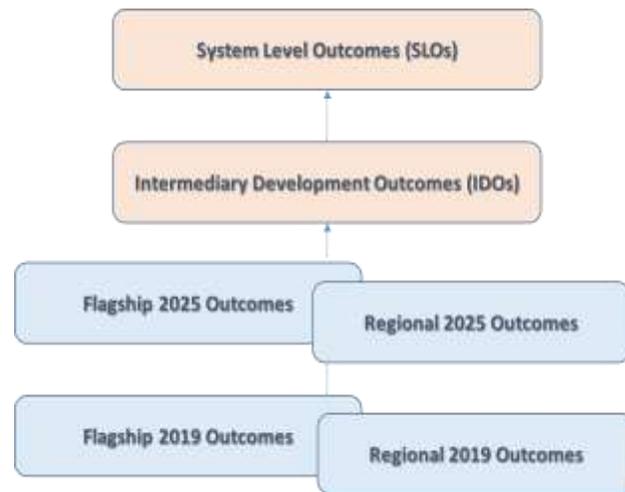


Figure 6. Schematic representation of the upper levels of a harmonised CCAFS impact pathway. Each flagship will harmonise with between 4 and 5 regional impact pathways through the 2019 outcomes.

CCAFS has been at the forefront of innovative programming in the design of its second phase, and elements such as the Phase 2 proposal and components of some regional and flagship pathways were already in place before we formally began working on an overall impact pathway that embraces all of our themes and regions. The process that CCAFS is using allows to draw upon and include previous work while completing an overall pathway towards impact for CCAFS that is fully owned by all team members and stakeholders. When possible join together with the flagship teams when you are doing this work so as to co-design these elements, and you will find that the process is easier and more creative because all priorities are explicit and managed at the same time by all parties.

Making sure you have the Right Products and Partners

Summary

The next session will help you identify the research outputs you need to successfully achieve the goal of your region: meaningful contribution to the programme higher level goals (e.g. IDOs) through research under different flagships that addresses the priorities of your region. In this session you will add major research outputs (MOGs) to your impact pathway (figure 7).

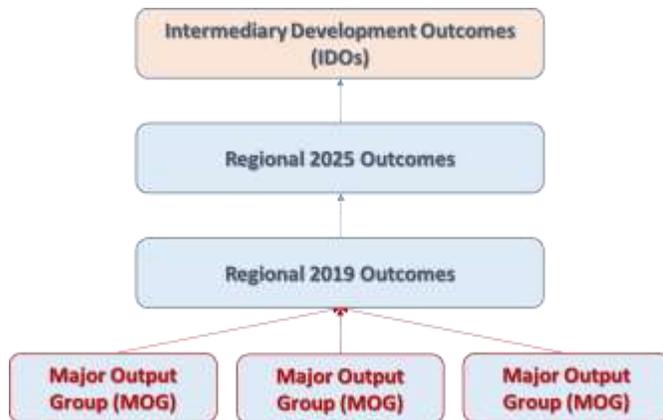


Figure 7. Schematic representation including the middle levels of a CCAFS regional impact pathway. Each 2019 outcome will be supported by a small set (1-3) of major research outputs (MOGs) and these will need to be harmonised with the flagship MOGs.

TIP

If you are working on the upper parts of your impact pathway in a workshop setting, you should consider combining this session with the previous 4 in a single workshop.

Session 5: Major Output Groups (MOGs)

Background Documents:

- Regional priorities table (if available)
- Programme strategic thematic documents, e.g. draft flagship impact pathways

Participants: At a minimum programme staff in your region and key advisors (e.g. from CGIAR centres and countries). It is also helpful to have the relevant flagship leaders. For this session it can be very helpful to have a larger group of stakeholders (research, government, private sector, farmer representatives, etc.) present.

Note on Major Output Groups (MOGs)

MOGs are theoretical and not too relevant to the projects. But they are key for the reporting to the higher programmatic framework in CCAFS case the CGIAR Consortium Office, which is done through the thematic areas, the flagships.

Objective: To identify the major output groups (MOGs) that are necessary for achieving your region’s 2019 outcomes, and harmonise them with the impact pathways of the flagships working in your region.

Output: MOGs for achieving the regional outcomes.

TIP

This session again assumes that you will be working on flagship 1 and completing the exercise before moving on to another flagship and repeating the exercise. If your group is large enough, break it into small groups according to flagship and have each group do the exercise for its flagship. If you expand your working group to include more stakeholders, be sure to break into flagship groups!

Steps:

5. Ask the participants to consider the 2019 outcome for flagship 1. Also review your regional priorities table in terms of flagship 1. What major groups of outputs, products and deliverables (*e.g. new knowledge from research together with new capacity in a specific group of stakeholders to use that knowledge and enact CSA policy*) does your regional programme, need to produce to achieve this outcome? These are your major research outputs/products/deliverables. We will call them MOGs for short. Capture them in the right columns of the table below.

Flagship	Corresponding regional 2019 outcome	Corresponding 1-3 major output groups (MOGs)
1		1. <i>Example: Decision support systems developed, evaluated and usefulness demonstrated, introduced to decision-makers and being used by them to create national strategies and policies in support of CSA</i> 2. 3.
2		1. 2. 3.
...		1. 2. 3.

TIPS

Keep the number of MOGs per outcome as small as possible, 1-3. There is a lot of work to do with these groups, and the more you have the more cumbersome the impact pathway is to design and manage.

- If you have more than 2-3, identify their relationships and bring them together into a shorter list. Remember, these are **MOGs!** It will take several research projects and partners to complete any one group.
- Avoid going into details, tasks, etc. That will be done when we start looking at individual projects. Think big picture.
- Remember the projected timeframe for achieving the outcomes in the upper level of your regional impact pathway.
- This means you want to have completion of some MOG components in 3 years so that

you can begin to measure progress towards your 2019 outcomes in a timely fashion.

6. Now review the MOGs that you have created under flagship 1 for your region, and compare them with the MOGs from the flagship 1 impact pathway. Are there synergies between some or all of your MOGs and those planned by the flagship? Discuss these synergies with the flagship 1 leader to ensure that the needs of the flagship and the region are both met without unnecessary repetition or gaps, revising both the flagship and regional MOGs as necessary based on the agreements taken in these discussions.

TIPS

Step 2, to harmonise the regional and flagship impact pathways may be something done outside of this session if the relevant flagship leader is not participating in the session. Using ICTs may be a good way to tackle this step. At a minimum, in addition to you the RPL and the flagship leader should be 'virtually' present. Consider using Skype and/or Google Docs so that:

- Can participate in a real-time discussion that doesn't require extensive back and forth (for instance via email).
- Every participant can see the major output groups and your major research actions in both the regional and flagship impact pathways that are being considered.
- And can see the changes as they are being made.

7. Now review the harmonised MOGs that you have created under flagship 1 for your region, and check if you have the right partners in place through the project consortia and their partnerships to achieve the delivery of these MOGs.

TIP

- The checking of partners and partnerships is an important step. It is necessary to do this again together with the whole regional project portfolio to ensure synergies are identified and opportunities for collaboration are taken on board into project plans.
- It is important to do this from a personnel, staffing point of view. We need to ask ourselves questions like: 'What skills and competencies have project team members?', 'Do we have the expertise that we need to support the changes that we want to make?', 'Who will make the changes happening?', 'What competencies, capacity, skills are we missing to achieve the anticipated changes?'; And from an organisational/ institutional point of view. We need to ask ourselves questions like: 'What is the mandate of the organisation that is a partner in the projects?', 'Are these the mandates that we need?', 'Are we missing anything?', 'What other organisations are key to help with our trajectories?'
- This can be done best in a network analysis, for example, a now and end-of-the-programme network map to show also which new partnerships we need to build. And there should be done some institutional analysis. We mostly use a simplified and adapted version e.g. of <http://netmap.wordpress.com/about/> and the World Bank Sourcebook.

8. Repeat steps 1 and 3 for each flagship that your region is participating in.

Conclusion

Congratulations, you have now completed your regional impact pathway except for mapping projects to the pathway! Again you will have noticed the close harmonisation between your regional impact pathway and the pathways of the flagships working in your region. All of your MOGs should be part of a flagship as shown in Figure 8.

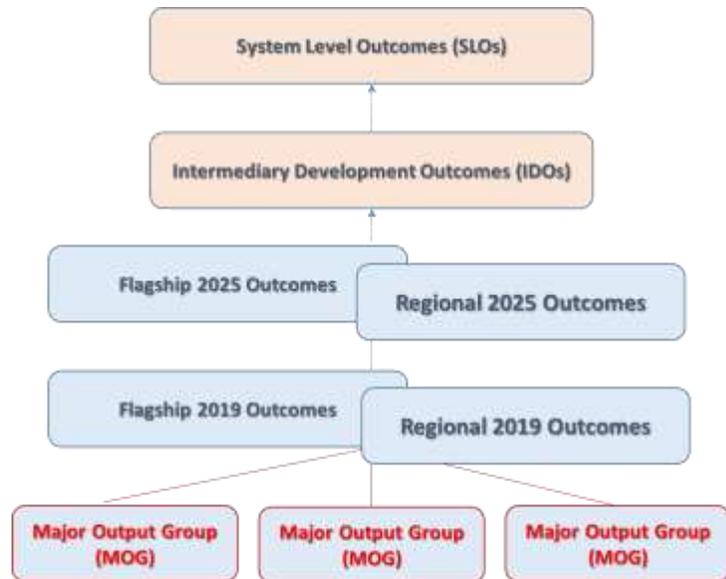


Figure 8. Schematic representation of a harmonised programme impact pathway. The diagram shows how harmonisation of the 2019 outcomes between flagships and regions has allowed these teams to identify common MOGs for both the flagship and the region. Each flagship will share MOGs with the respective regional impact pathways.

Making Sure you have the Right Research

Summary

In the next session you will identify the research *needed* in each flagship in your region to ensure that all of your MRAs are taking place and MOGs are being produced (Figure 9). Ideally this part of impact pathway design is done *before* any projects are agreed upon with partners, so that research design in your region is driven by the IDOs rather than the 'old' system of research outputs like making a working model or a new crop variety.

However, because great strides had already been made in the design of Phase 2 in CCAFS before we began designing our impact pathways, these facilitation notes bring together existing projects while identifying *synergies, redundancies and gaps* in the regional portfolio.



Figure 9. Schematic representation of a complete CCAFS regional impact pathway. Each major output group (MOG) will be supported by a set of projects.

TIPS

- This session can be done in a workshop where all flagship actors for your region are present. Because of the detailed nature of the work in this session, it is best to hold it in a second workshop, after the upper levels of the flagship impact pathway from sessions 1-5 have been, harmonised with the flagships and finalised. **But be careful!** The sheer number of scientists present from pre-existing projects from 4 to 5 flagships in a region risks biasing the mapping exercise towards pre-existing work rather than objectively reflecting on what work is needed to fulfill the regional impact pathway. If this happens, the critical steps of identifying synergies, redundancies and gaps will be lost. Consider including additional research and development stakeholders who can provide a bigger picture regarding flagship research that needs to take place in the region unencumbered by pre-existing projects and ideas. Aim for 5-10 participants per flagship group.
- Either way, don't skip on the time necessary for the workshop. Plan on 3 days. Spend

the entire first day helping new stakeholders become familiar with CCAFS and reviewing the upper parts of the impact pathway. The second day should be spent identifying existing research projects. When you do this, include all the research related to the flagship(s) that participants can identify, including that being done by national agricultural research services, international organisations, universities, CGIAR and other research organisations and development organisations. Spend the third day identifying synergies, redundancies and gaps in the portfolio.

Session 6: Mapping research projects

Background Documents:

- List of all research projects related to each flagship in your region

Participants: This session must be done with actors from the region as well as the flagships working in the region. Include leaders of projects that have already been funded by CCAFS, as well as development and research actors that can provide a *holistic perspective* on all the work that needs to be done to complete the regional impact pathway.

Objective: To identify all of the relevant current research and map it to the regional impact pathway, and identify gaps and synergies.

Output: A complete region impact pathway.

TIPS

- This session again assumes that you will be working on flagship 1 and completing the exercise before moving on to another flagship and repeating the exercise. If your group is large enough, break it into small groups according to flagship and have each group do the exercise for its flagship. If you expand your working group to include more stakeholders, be sure to break into flagship groups!
- This session involves a lot of ideas and relationships. It is difficult to capture all of this information using a linear table. We suggest provide the participants with different color note cards and sticky notes to write on and move around, representing major research actions and different projects.
- **Mapping of the projects should be done in collaboration with the flagship leaders.** If the relevant flagship leader isn't one of your participants, you may want to do the mapping with the group and then contact the flagship leader to review the work. Or consider using Skype and GoogleDocs to bring the flagship leader into the working group.

Steps:

1. Consider the MOGs in your region for flagship 1. Compile a list of all of the research projects that currently occur in your region that are related to these MOGs. Focus on projects funded by your programme.
2. Map the projects to the MOGs they are contributing to. As you map, identify exactly to what components of each MOG each project is contributing to. For example, the name of

the project can be written on a note card with a red marker. Red arrows can be drawn from the note card to the MOG(s) it contributes to. The exact component(s) of the MOG that the project contributes to can be underlined in red. Then a blue marker can be used for the next project. Remember, each MOG is a large target. Each will need several smaller pieces of research.

3. Identify those MOGs for flagship 1 in your region that **are not addressed** by any project, or are not fully met by the projects that contribute to them. These are critical gaps! You can write new projects to fill the gaps on note cards with black marker. Black arrows can be drawn from each gap note card to the MOG(s) it contributes to. The exact component(s) of the MOG that are current missing can be underlined in black, as can the exact component(s) of the corresponding 2019 outcome. What are your suggestions to fill these gaps? Note them in the box below:

Suggestions for filling gaps in MOGs:

4. You should also identify repetition and synergies. What projects are together contributing to certain MOGs? Where is this creating too much repetition that needs to be eliminated so that resources are efficiently used? Where is this creating synergistic opportunities for co-development of knowledge, joining resources, etc.? What are your suggestions for minimising the repetition and maximise the synergies? Note them in the box below:

Suggestions for minimising the repetition and maximise the synergies:

5. Consider the 2019 outcomes in your region for flagship 1. Compile a list of all of the research projects that currently occur in your region that are related to these 2019 outcomes. Focus on projects funded by your programme.
6. Map the projects to the 2019 outcomes they are contributing to. As you map, identify exactly to what components of the 2019 outcome each project is contributing to. Here too, you may continue to use the colour coding as suggested above one colour per project. Remember, each 2019 is a large target and will need several project to achieve it.
7. Identify those 2019 outcomes for flagship 1 in your region that are not addressed by any project, or are not fully met by the projects that contribute to them. These are critical gaps! You can write new projects to fill the gaps on note cards with black marker. Black arrows can be drawn from each gap note card to the outcome it contributes to. The exact component(s) of the outcome component that are current missing can be underlined in black. What are your suggestions to fill these gaps? Note them in the box below:

Suggestions for filling gaps in MOGs and 2019 outcomes:

8. You should also identify repetition and synergies. What projects are together contributing to certain 2019 outcome in a too similar way? Where is this creating too much repetition that needs to be eliminated so that resources are efficiently used? Where is this creating synergistic opportunities for co-development of knowledge, joining resources, etc.? What are your suggestions for minimising the repetition and maximise the synergies? Note them in the box below:

Suggestions for minimising the repetition and maximise the synergies:

9. Repeat steps 1-8 for the other flagships working in your region.
10. If this session was done without a full complement of research and development stakeholders from the flagships, you need to take your impact pathway to those flagships and harmonise the project mapping with the regions.

TIP

In the design of your Impact Pathways or Theory of Change, i.e., the pathways that connect what you do (research projects) to impact (or IDOs) you have made several assumptions of how things will work, and the effects your work will have. It is important to make the main of these assumptions explicit, and discuss with stakeholders the factors that influence how changes happen on the ground, and what can be done to both overcome obstacles and use leverage points. We regularly make many assumptions around how things like “reach”, “use”, “contribute” happen. These assumptions will all be captured in your M&E plan (session x).

Conclusion

Congratulations, you have completed your impact pathway so that it harmonises well with the scientific priorities of the flagships but meets the specific development priorities of your region (Figure 10).

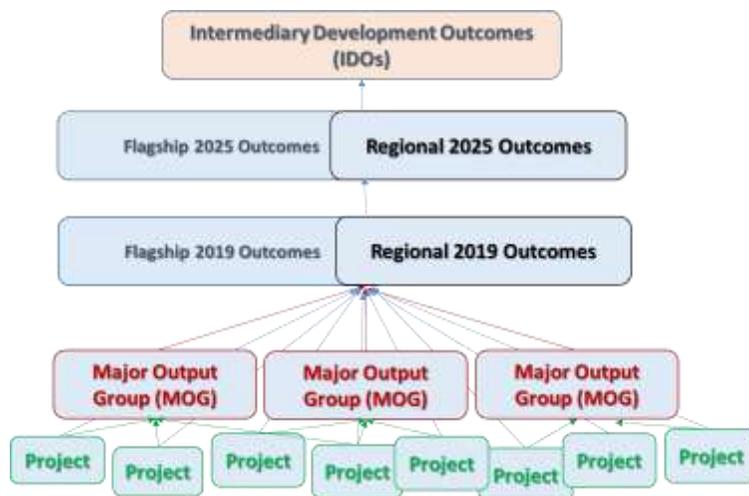


Figure 10. Schematic representation of a harmonised programme impact pathway, including projects. The diagram shows individual projects taking place in the different programme regions contribute to a programme flagship and support meeting its IDO targets.

Your Monitoring and Evaluation Plan

Summary

These last 4 sessions will help you draft a basic monitoring and evaluation plan for your region that uses the flagship perspective as the lense of reporting. These sessions are very important, as with the information provided by the regions to the flagships, the programme will have the evidence necessary to report on our programmatic progress towards achieving our development outcomes (IDOs)! Its M&E is embedded within the wider scope of a results-based management system as well as a utilisation-focused M&E. At the core of our M&E are the identified outcome indicators and progress along your impact pathway towards achieving your regional outcomes. You will also have an M+E plan that will allow you to report to your stakeholders about the specific impact that your programme is having in your region.

TIPS

- You will have seen that developing your impact pathway required close collaboration with the flagship leaders to harmonise outcomes and identify research synergies, gaps and opportunities. Likewise, close collaboration with them is critical when developing outcome indicators that fit both regional and flagship impact pathways. The regional impact pathways will be providing the most important evidence for the programme's progress towards and achievement of its development outcomes (IDOs). Data from different impact pathways must:
 - Harmonise across the regions to provide convincing evidence of progress towards the 2019 and 2025 outcomes.
 - Harmonise across the flagships to provide convincing evidence of progress towards the programme's goals, (e.g. CCAFS IDOs).
- This level of harmonisation requires good coordination, negotiation and compromise from all flagships and regions to create a system that provides the programme with the best possible evidence regarding annual progress towards the set outcomes.
- The process is iterative. You will find that as the coordination occurs changes will be necessary to the flagship indicators, and possibly to elements of your regional impact pathway.
- Completing the programmes regional and flagship impact pathways will involve the art of compromise.
- The end result will be a harmonised system of impact pathways that represents the complexity of the programme of a development driven agenda to meet regional scientific climate change, agriculture and food security priorities!

Session 7: Setting outcome targets

1. Flagships should take the lead in defining some draft outcome indicators, which will need to be discussed with your regional teams and if necessary were adjusted to be suitable for the regional and flagship programmes (see flagship facilitation note section session 2 and 5).

TIPS

- The next two steps need to be done in close collaboration with the projects leaders and possibly some of their team members.
- At CCAFS this was done in a two-phased approach. First the regional programme leaders made an estimate from the selection of their project concept notes. In a second (trothing) step during a regional planning workshops with projects, project team members, including the project leaders and partners, were asked to specify their outcome target value contributions.

2. Although the indicators you have identified will be collated and analysed across the flagships for in the case of CCAFS reporting towards its IDOs, the majority of the data will be collected by the regions! Discuss the indicators you have identified for each outcome with the flagship leaders that your region is contributing to. Ask them to share with you indicators they have identified for the 2019 outcome that corresponds to your region. Suggest adjustments to these indicator(s) to ensure your region can contribute to them and provide evidence, or sub-sets of data, for the flagship 2019 outcome.
3. After defining and agreeing on the outcome indicators with the flagships, there is the need to put forth some outcome target values for each indicator. To define your regional contribution to the relevant outcome indicators, revisit your project portfolio and add up each of the projects' contributions. This would need to be filled into columns 5 and 6 of the table below. While column 5 is for a pure figure, column 6 is some more detailed explanation of this value, i.e. where you expect these to happen (*e.g. number of farmers, number of initiatives*)

1	2	3	4	5	6
Flag-ship	Year	Indicator	Total # from regions	Region 1	Region 1 narrative explanation
1	2025	<i># (mio.) of farmers, incl. at least 40% women, with strengthened adaptative capacity and food security as a result of programmatic CSA investment</i>	30	7	<i>Laos, Cambodia, Vietnam, Philippines</i>
1	2019	<i># of (sub-)/national development initiatives and public institutions prioritise and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools</i>	15	4	<i>Vietnam, Cambodia, Laos</i>
1	2019	<i># of public-private actors at national and sub-national levels are using new incentive mechanisms or business models/ markets explicitly promoting climate smart approaches along the value chain, using CCAFS science</i>	10	2	<i>Worldbank, USAID</i>

- It is now necessary to break these 2019 outcome targets into annual steps and progress towards the bigger trajectories of change. You need to agree on how to add the numbers up over the years (i.e. additional ones or accumulated). The ones in the example below are accumulative. Note that it might be that there is no progress shown in the figures in one particular year, (e.g. in the example below the first year it is not anticipated that any of the initiatives prioritise and make use of CCAFS science for their decision making). It is therefore, important to have in the narrative some qualitative progress described towards the figures at planning and when it comes to reporting.

Flagship	Year	Indicator	Total # from regions	Region 1	Region 1 narrative explanation
1	2019	<i># of national and subnational development initiatives and public institutions prioritise and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools</i>	15	4	<i>Vietnam, Cambodia, Laos, Philippines</i>
1		2018	12	3	<i>Vietnam</i>
1		2017	9	2	<i>Philippines</i>
1		2016	4	1	<i>Laos</i>
1		2015	1	-	

Session 8: Assumptions

- Look at your MOGs (session 5), Strategies and Partnerships (session 6, your selected projects and partners to implement the projects): what assumptions have you made regarding these, especially in how they will contribute to the flagship 2019 outcomes? What needs to happen in terms of activities to produce these MOGs? Discuss how you expect these MOGs to reach next-users, and contextual factors that influence the process. What are you assuming about how the partners will help your outputs reach and influence next-users' practices? Document these assumptions in the following box:

MOGs, Strategies and Partnerships Assumptions:
--

- Look at your outcome statements for 2019 and 2025: what assumptions have you made regarding these outcomes, especially in how they will contribute to the programme's development outcomes (e.g. CCAFS IDOs)? What has to happen for these effects to happen? What factors influence these practice change processes? When you look at the total picture, do you believe that the theory makes sense? Is this theory of change FEASIBLE? Do we have the capacities and resources to implement the strategies that would be required to produce the outcomes in the pathway of change? Document these assumptions in the following box:

Outcomes assumptions:

Session 9: Basic regional M+E plan

Background Documents:

- Programme strategic thematic documents, e.g. flagship impact pathways, 2025 and 2019 outcome indicators, basic programme/flagship M&E plan

Participants: This session is best done by Flagship Leaders together with Regional Programme Leader to avoid harmonising work that was done separately.

Objective: To compile a basic overview of utilisation-focused M&E plan with indicators for the flagship impact pathway that (i) harmonise with evidence being produced by the regions where the flagship is working, (ii) harmonise with other flagships, and (iii) ensure that your programme has a complete and compelling body of evidence regarding its impacts.

Output: Basic programmatic flagship M+E plan.

TIPS

- This session again assumes that you will be working on flagship 1 and completing the exercise before moving on to another flagship and repeating the exercise. If your group is large enough, break it into small groups according to flagship and have each group do the exercise for its flagship.
- Instead of working directly in the table provided for the session, participants may find it easier to work with flipchart paper, note cards and stick notes. This way they can brainstorm, and then move their ideas around as they refine their ideas and come up with a final list of indicators for the flagship regional outcome.
- This session is best done together with the flagship leader so as to avoid your region and the flagship doing the work, and then having to take the difficult step of harmonising work that was done separately.

Steps:

1. What is it that you need to monitor from the regional perspective to ensure you can provide evidence of your regional contribution towards the programme/ flagship 2025 and 2019 development outcomes?
2. Discuss the 2025 indicators with the respective flagship leader. Ask them to share with you the indicators they have identified for their 2025 outcomes. Adjust your 2025 outcome indicator(s) to ensure that the full package of evidence being provided across the flagships is objective, representative and compelling.
3. Go through the 2019 outcome indicators your region is contributing to. Make sure that there is a logical progression from 2019 to 2025 (to IDO), providing a compelling and complete body of evidence in terms of how your flagship's contribution (to its IDOs). Capture in the table below what you want to monitor, which is defined through your indicators.

4. Go through the columns of the table below and fill the other columns for the identified items that are necessary to be monitored, i.e. who will use the information? What is the purpose of the information collected? When is the information required? Who will collect the information? How will it be collected and how often? And any suggested specific monitoring tools.

WHAT TO MONITOR? MONITORING PRIORITY (e.g. 2025 outcome, 2019 outcome, MOG, projects)	WHO WILL USE THE INFO?	PURPOSE OF THE INFO?	WHEN IS THE INFO NEEDED?	WHO WILL COLLECT THE INFO?	HOW OFTEN WILL IT BE COLLECTED?	HOW WILL IT BE COLLECTED	PROPOSED MONITORING TOOL
<i>CCAFS regional programme level:</i>							
<i>Aggregated projects contributions of the regional portfolio to the set of 2025 and 2019 outcome indicators</i>	<i>Programme team</i>	<i>To validate regionally and ensure that we not double counting</i>	<i>Feb.</i>	<i>RPLs will have to do some aggregation and consolidation across their portfolio.</i>	<i>Annually</i>	<i>Annual reporting period Traffic light</i>	<i>P&R with an iterative process to ensure learning and understanding of process towards outcomes</i>

7. The above table is the basic information for your flagship impact pathway M+E plan. When bringing the projects together in the region you need to have a discussion about necessary baselines as to be able to provide meaningful evidence for any contributions of your flagship towards the anticipated changes. It will require some thinking about what is needed, what is already available and where accessible and if not available who will carry these baselines out in a timely fashion. Likely your region wants to develop a document that provides an overview of what basic information is required and how it is being covered. See the table below for capturing this.

Required basic information (baseline work)	Is it available?	
	if yes, where/ who to contact	if not, who will carry it out and when

Session 10: Theory of Change review and reflection plan

Participants: Programme staff in your region and key advisors.

Objective: To discuss innovative ways to review progress along the impact pathway and the basic assumptions and strategies in the TOC, and create a plan for an annual review.

Output: An annual plan of reflection and review for the flagship TOC.

Steps:

1. Collect and agree on some ways how the regional teams would like to reflect on their Theory of Changes so that they are confident that their initial hypothesis of what the group thinks might happen will be reflected on and up-dated according to the insights and lessons from the implementation. This should happen periodically and ideally be part of and form some preparatory step for annual reporting of the previous and planning of the coming year. Collect the notes from this discussion in the box below:

Notes on methods for impact pathway and Theory of Change annual reflection:
--

TIP
Remember that at TOC is a hypothesis of what the group thinks is happening in the flagship, and will happen because of the work that CCAFS is doing. Think of this as a ' working hypothesis ' that should be reviewed regularly and revised based on that reflection process. The TOC annual review is an opportunity for the group to ask, "what is working", "what is not", and most importantly " what do we need to change in our TOC and/or impact pathway to make sure we achieve our outcomes in a timely fashion? "

2. Collect all of the notes you have made about assumptions, project portfolio (as your strategies, partnerships), monitoring, reflection and review plan. Create a single document from these notes that is your flagship's Theory of Change and annual plan for documentation and reflection. Your plan should have the following components.

IDOs	
<ul style="list-style-type: none">- One or more indicator per IDO that the flagship contributes to (quantitative)- Likely will developed at the consortium level and provided to the CRPs for compliance	
Outcomes	
<ul style="list-style-type: none">- One or more indicator per flagship 2025 and 2019 outcome (quantitative and qualitative)- Developed and agreed on through consultation between flagship and regions- Be open to documenting 'surprises'. Things that you hadn't planned but that are creating momentum towards your outcomes. This may lead to major changes in your impact pathway!	
Major output groups (MOGs)	Projects
<ul style="list-style-type: none">- Documents progress in achieving MOGs (quantitative and qualitative)	<ul style="list-style-type: none">- Documents contribution of each project to flagship actions and output group- Often based on verification of deliverables, but narrative annual reports should provide interesting anecdotal information about implementation,

- Developed and agreed on through consultation between flagship and regions	particularly in terms of partnerships and stakeholder interactions - Developed and agreed on through consultation between PIs and RPLs and flagship leaders
Backstory	
<ul style="list-style-type: none"> - Provides a rich narrative, about the four sets of indicators - Be creative in choosing your methods: video, photo narrative, infographic, etc. - Allows projects, regions, flagships to tell their story of progress and contribution to the overall CCAFS impact pathway 	
TOC Reflection	
<ul style="list-style-type: none"> - Review of the TOC in terms of progress, decisions and changes based on M+E and reflection. Pay special attention to the flagship's assumptions and strategies. Are the assumptions still holding? Are the strategies working? The flagship team should develop guidelines for the reflection, including a checklist of what to consider. 	

Conclusion

Congratulations! You have completed your flagship impact pathway and basic ML+E (monitoring, *learning* and evaluation) plan. Your flagship impact pathway and ML+E system form a very detailed plan. For communication purposes, you and your team, in close exchange with your communications people, can develop versions tailored to the specific audience you want to share your programme of work, e.g. different stakeholders. Visual software is quite handy for this –Power Point, Prezi, Novamind, etc.

By planning your flagship's work in this way, you have a solid plan for its implementation, management and evaluation. But it also allows you great flexibility. Your TOC and impact pathway are your best hypothesis right now on how to contribute to the achievement of the CCAFS IDOs. Through the ML+E process you get to critically evaluate the validity of that plan over time, and can adapt your impact pathway and TOC as required to regain momentum in a timely fashion and at as large a scale of impact as possible.

A next step to consider with stakeholders is an impact pathway and Monitoring, Learning and Evaluation plan for each site in the regions so that they are harmonized with the regional impact pathway.

Note on Results-based Management Evaluation Criteria

CCAFS as a programme has defined a value system of how they want to evaluate each project's performance annually. The list of criteria is shown in the box below. The four criteria were given different weights to indicate their importance.

Box: CCAFS Annual Project Performance Evaluation Criteria	
• <i>Have projects done and delivered what they said they would - annual outputs</i>	→ 25%
• <i>How have projects done in relation to their progress towards outcomes</i>	→ 35%
• <i>Degree to which the project is reflecting core CCAFS principles</i> <i>(e.g. theory of change, quality of partnerships, communications, gender)</i>	→ 20%

- | | |
|--|-------|
| <ul style="list-style-type: none">• <i>How well is the project team responding to opportunities and challenges and adapting and self-reflecting</i> | → 20% |
|--|-------|

Projects will be evaluated by flagship and regional management liaison persons, the programme director, and through a self-evaluation. Following the evaluation there will be some positive or negative motivation and incentives tied to it, for example a bonus allocation or budget cuts.

This performance evaluation is closely tied to the shift and development of an evaluative and learning culture within the programme, so that the evaluation process is also a key opportunity for the selected evaluators to learn more about the progress being made, achievements and challenges encountered.

FACILITATION GUIDELINES FOR PROJECTS

Introduction

Below is a series of questions that will help you work through developing a Theory of Change (TOC), impact pathway and monitoring and evaluation (M+E) plan for your **project**. These notes are designed to facilitate the development of an impact pathway. You can use them for your own work, or you can use them to facilitate others in the impact pathway process.

TIPS

- Work through the questions in order.
- We recommend breaking your meetings up into short sessions of 1-3 hours so that people stay fresh and have time for reflection. The questions below are divided into suggested sessions of each approx. 1,5 hours. This time is indicative and depends on the level of experience of the participants, resources available and the level of detail or perfection you expect the products to be. With 1,5 hrs you should have a good draft to build on and it being shaped further with input from potentially a wider group of people.
- You may want to do this work with your partners in a workshop setting.

These questions are designed with the assumption that you are starting from the beginning. But some have already made a start or progress towards designing a project impact pathway. If this is the case for you, then you will find that going through the sessions will help you review and revise your work, while some sessions will allow you to take a step forward.

Important to note, feel free to be selective and use what you find useful and applicable to your own context while this guide offers a whole framework, it will most likely require some adjusting to your own operational requirements and setup.

These notes assume that your project is to be designed and embedded with two dimensions, a thematic dimension (called in these notes flagships) and a regional dimension (or in some cases global). For example, CCAFS has four thematic flagships and focuses its work in five regions.

TIPS

- If your project takes place in more than one region, you will need to harmonize your impact pathway with each relevant region.
- If yours is a flagship project that is not region specific, you can use these notes to harmonize with the flagship's 'independent' impact pathway rather than with a specific region.
- You can also adjust these notes and use them to build a project impact pathway even if it isn't under the rubric of CCAFS!

TIPS

- Work through a question to the end, and don't let uncertainty "bog you down". Where there is confusion or disagreement, note down the ideas that come up, and then return to that question later.
- Remind your colleagues that:
 - Developing a TOC and impact pathway is an iterative process that will lead to improvements in the product **over time**,
 - Your impact pathway is a piece linked with a wider e.g. CRP impact pathway, through a flagship pathway that occurs in a specific region(s),
- Review, discussion and negotiation will be necessary to ensure the nesting occurs and all the impact pathways are harmonized in their contribution to the IDOs.

These facilitation notes provide you with many examples. *All examples are in italics.* Tables are provided in each session to compile your notes and results. Please add more rows to capture all of the information you are developing. If you find other ways of capturing your notes more efficient please use them and share your ideas with us.

You can also create a graphic impact pathway that captures the most important elements. This allows you to see linkages more readily. DoView (<http://www.doview.com/>) is an easy to use graphic software for impact pathways. Power Point also works.

There are some terms used in these notes that may be new to some users. A ***glossary*** has been provided.

TIPS

You will find tips boxes throughout these facilitation notes. They remind you of key points, and provide you with facilitation recommendations. The methods you choose to facilitate different steps in a session will depend on what you are comfortable with, and social-cultural norms. But always encourage everyone to speak up, and try to use active exercises. Be creative!

- You can use several methods to facilitate a session:
 - **Large group:** Sometimes it helps to have everyone in the session working all together. This works well if you have up to 10 people. It can cut down on time because you don't need to harmonize small group work during the session. But if the group is too large it will increase time because you need to capture everyone's ideas one-by-one.
 - **Small group:** If you have more than 10 people, consider breaking them into groups. The different groups can address the same task and you can harmonize the work in plenary afterwards. Or if there are multiple tasks, each group can do a separate piece of the work. For example, developing the impact pathways for different outcome.
 - **Note cards:** Each participant can write their idea on a note card. Then each person can present the idea. This is a helpful technique when there is a divisive issue under discussion, because everyone listens to the presenter without criticizing. You can also collect the cards and present them yourself. This makes the ideas anonymous, which can also be helpful when there are competing ideas in your session.
- This guide has lots of tables to complete. Focusing only on tables in a computer can be

exhausting. Consider creative ways to engage the discussion and develop the information, and then capture it in the tables afterwards:

- **Drawing:** Small groups can draw a map or a picture, for instance of the outcome they would like to see.
- **Reporter:** You can have a small group elect a 'reporter' that interviews the other group members to draw out the ideas and then present them to the larger group.
- **Note cards and sticky notes:** When dealing with complex topics, like many different projects leading to different major research actions, people can write the different components of the impact pathway on note cards, sticky notes, etc. and move them around on a board to see different relationships.
- **Symbols:** To capture nuanced information, symbols like colors, shapes, the thickness of lines, etc. can be used to capture them.
- You might find it useful to have available the following **materials:**
 - Flipchart paper
 - 3-4 colors or markers
 - Different color note cards (optional)
 - Digital camera (optional)
 - Computer with graphic software and these facilitation notes
- Before starting try to locate any **key background framework documents**, like the ones below:
 - Program proposal, like CRP Phase 2 extension proposal
 - Thematic/flagship program outline of work, flagship impact pathways, strategy or call for concept notes or expression of interests
 - Regional program outlines of work, Impact Pathways, strategy or call for concept notes or expression of interests

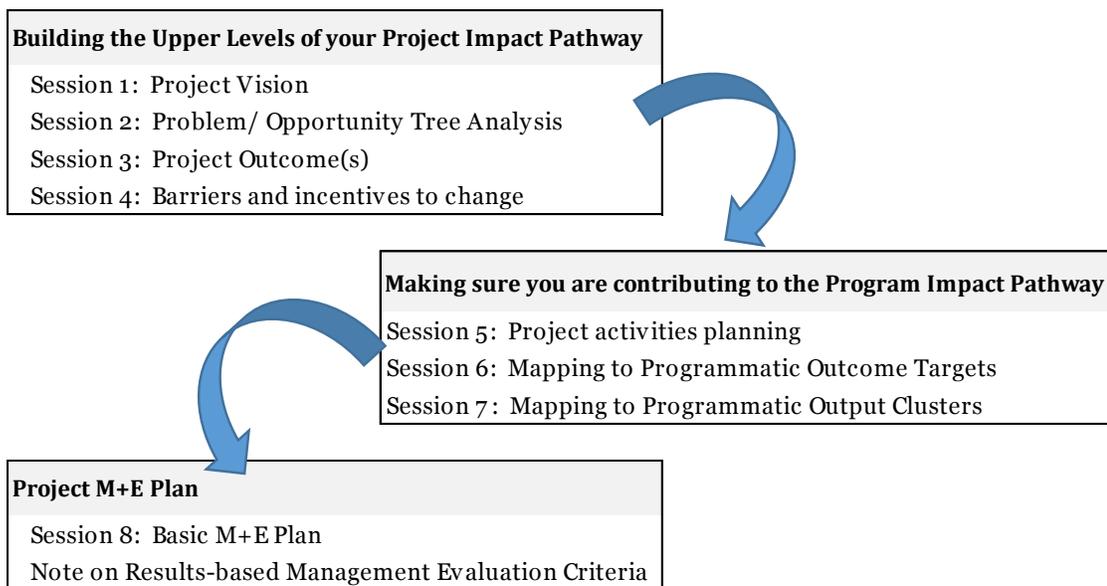


Figure 1 Process flow chart for building a project impact pathway

Building the Upper Levels of your Project Impact Pathway

Summary

The first four sessions will help you build the upper (aggregate) level of your project impact pathway (Figure 2). You will produce a visual looking something like this, but keep track of all of your notes as background to the diagram of your impact pathway! Much of this background information will form your theory of change (TOC).

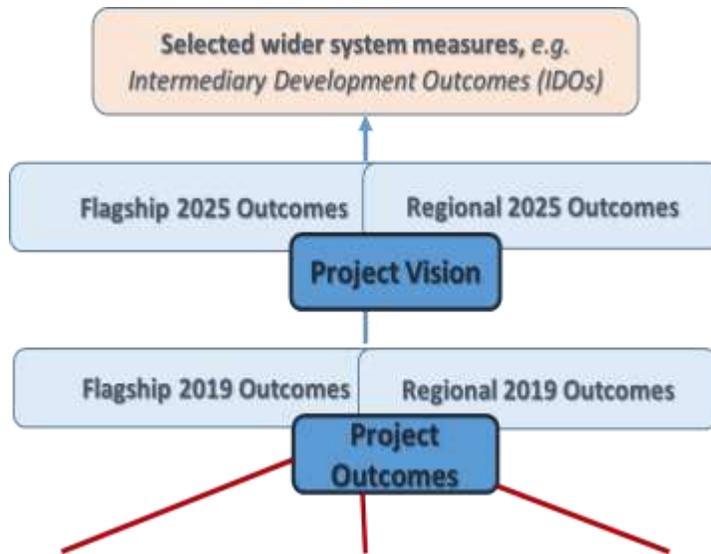


Figure 2. Schematic representation of the upper levels of a CCAFS project impact pathway, showing how the project relates to and supports achievement of the outcomes and vision of the region where the project works.

Participants: The project team. You should also include some of the region and flagship program staff. You may also consider including other key informants from the region (government, academia, NARS, private sector, etc.)

Session 1: Project Vision

Objective: To develop an agreed project vision.

Output: Project vision as a contribution towards the higher level program of work in the regions and flagships that your project is working in.

Steps:

1. Review the CCAFS vision for the region where you are working (see Box 1), the CCAFS flagship outcomes (see Box 2), (possibly any wider system measures, like the CGIAR IDOs (see Box 3) and CGIAR SLOs (see box 4) from the context in which CCAFS works – climate change, agriculture and food security).
2. Consider this guiding information in terms of your project in the region where you work. Write a short statement (2-3 sentences) that describes the region 50 years – a vision – from now, in terms of your project’s purpose. Remember, this vision is for the next generation. It should be quite aspirational, the world (in your region) we want our children to live in.

Your project’s vision:

Box 1: CCAFS 2025 regional visions (as per end of 2014)

In 2025, **East Africa** is a climate resilient region that is food and nutrition secure with equitable access to livelihood opportunities and reduced GHG emission intensity from food systems that is supported by well-coordinated institutional frameworks for enabling policies and increasing investments in agriculture and natural resource management.

2025, the **West Africa** regional food system is resilient to climate variability and change. Smallholder farmers widely adopt and implement CSA technologies, practices and knowledge to become less vulnerable and to improve (food security). National and regional partners implement appropriate strategies and policies.

In 2025, the **Southeast Asia** region has a stable food supply, with consumers, particularly rural and urban poor, having adequate access to food commodities. Farmers and communities practice climate-smart technologies and are resilient to climate change. Institutional, public and private sector, capacities to implement climate change measures are strong. Climate change adaptation and mitigation measures are integrated in regional and national development plans. These leads to more resilient agriculture in the region with reduced GHGs contribution.

In 2025, in **South Asia** large-scale investments in science-informed climate smart agriculture practices, institutions and policies lead to long-term food security and poverty alleviation

In 2025, the agricultural sector in **Latin America** manages climate to its advantage, or at least to avoid the bulk of negative consequences as much as possible independently from climate variability. Farmers and agricultural sector understand and react knowledgeably to climate variability and challenges, and implement sustainable and climate adapted practices to reduce food insecurity. Policy makers and planners at the national level are truly using climate information and tools to design and implement plans and strategies, and are finding ways to make climate information useful and applicable for end-users. Policy makers and planners are also promoting policy and interventions that combine and consider the trade-offs between adaptation and mitigation towards a low emissions agricultural development.

Box 2: CCAFS 2025 flagship outcomes

Flagship 1 Climate-smart agricultural practices : In 2025, public institutions, Civil Society and Non-Government Organizations at (sub-) national level are widely promoting equitable CSA adoption by supporting multi-actor networks to enable thirty million farmers, at least 40% of whom are women, to strengthen their adaptive capacity and food security.

Flagship 2 Climate-smart information systems and safety nets: In 2025, 30 million farmers, at least 8 million of which are women, improve their capacity to adapt to climate related risk by accessing effective climate services, and climate-informed safety nets.

Flagship 3 Reduction of greenhouse gas emissions: In 2025, 15% reduction of GHG emissions intensities has been achieved, while enhancing food security, in at least 8 countries in South Asia, Southeast Asia, East Africa and Latin America

Flagship 4 Policies and institutions for climate resilient food systems: In 2025, policies and institutions at different scales enable equitable food systems that are resilient to a variable and changing climate

Box 3: CCAFS selected CGIAR Intermediary Development Outcomes

- Food security
- Gender & social differentiation
- Adaptive capacity
- Policies and institutions
- Mitigation

Box 4: CGIAR System Level Outcomes

- Less rural poverty
- Better food security
- Better nutrition and health
- Sustainably managed resources

Session 2: Problem/ Opportunity Tree Analysis

Objective: Identify determinants/ leverage points and opportunities where your project can make a difference towards improving an identified problem.

Output: Project problem/ opportunity tree

Steps:

1. Keeping in mind any available strategic programmatic documents, like the CCAFS phase 2 draft proposal, respective regional and flagship impact pathways within which your project is being or planned to be implemented, we will now go through a 'problem tree' analysis. You can find a very useful guide for this exercise in the [PIPA website- Drawing Problem Trees section](#). Below is a simplified version of this exercise.

TIPS

In the exercise below the participants write directly on flipchart paper. An alternative is to provide them with different color cards to represent reasons and determinants. The steps for the problem tree analysis (4-10) are written as if you have one group.

- If you have more than 10 people, it may be too cumbersome to keep the whole group together and you may choose instead to break the participants up into 2 or more smaller groups.
- If you break into smaller groups, you may choose to break into 2-3 groups with each group addressing a single main problem. When all the small groups complete the work have them present their results to one another.
- If you have more than one group addressing the same problem you may choose to close the session by harmonising the differences between the group work in plenary.

2. Ask participants: 'What is the main problem in terms of achieving the vision we just described?' Write this problem on the extreme right side of a blank sheet of flipchart paper, one "main" problem per flip chart paper.
3. Then ask: 'Why is this problem happening?' It helps to think in terms of what the underlying social, economic and/or environmental causes of this problem are, particularly when it comes to climate change, agriculture and food security. You may

find that there is one large reason, or you may identify a few. Write them to the left of the problem and connect them with arrows to the problem.

- Now look at the reason(s) that you identified and ask for each: 'Why are those things or causes occurring?' Write those in the next column to the left and again connect them to the cause(s) they contribute to in the previous column with an arrow(s). Some of the reasons why the problem is occurring might be beyond your control. Focus mostly on developing the reasons where your programme has some influence and control over.
- You will notice that you are drawing a tree with the branches pointing to the left see for example Fig. 3 and 4. Keep going. We call this exercise the "5 whys", because it usually takes asking 'why' five times to get to a root cause(s) or determinant(s). These are the things that the programme will address, in order to make progress towards the vision. These determinant problems help define the outputs CCAFS needs to produce to contribute to progress towards the regional vision.

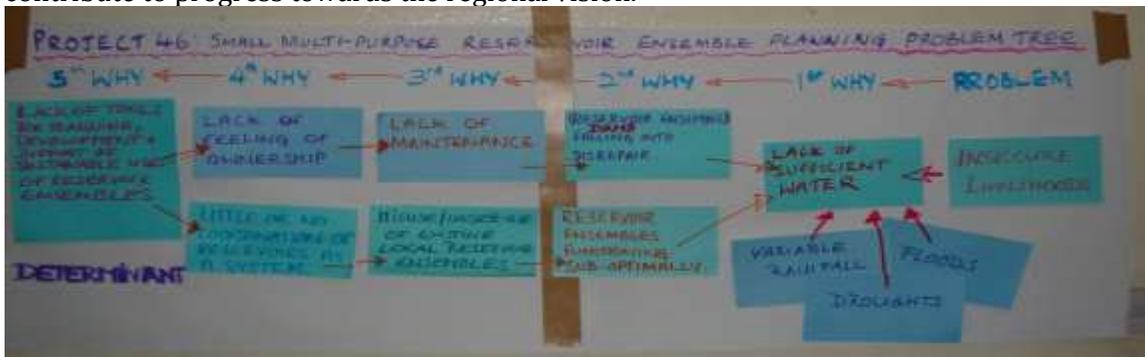


Fig. 3 Problem Tree Examples

- Once all of the branches have been completed to a series of determinants (i.e. the leverage/ entry points where your regional programme can make a difference), you can stop. Now review the entire tree. Identify those problems that you can address within your programme and those that are beyond your programme's control.
- Capture your full 'problem tree' electronically using Power Point or another graphic programme. You can also use Excel see Fig. 4 or PowerPoint.

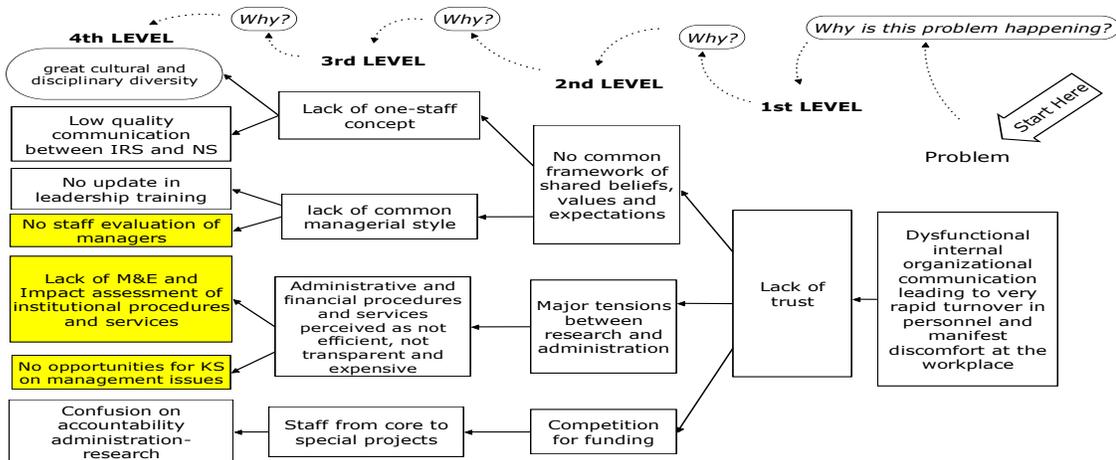


Fig. 4 Problem tree example drawn in Excel

TIP

Try to steer away from determinants or final problems that are the “absence” or “lack of” what you are producing. Look at each problem in its own value, and trying not to arrive at any predetermined conclusions. *For example, if at some point you were to look at the problem “Local government agencies do not apply/ look for systemic solutions” don’t assume the cause- or the answer to “Why is this problem happening” is “because they don’t have x or y guidelines”- the very guidelines you intend to produce! Thinking this way will not allow you to see corresponding problems or flag other issues that need to be addressed.*

Session 3: Project Outcome(s)

Objective: To develop an agreed project outcome statement.

Output: A project outcome five years in the future (in our case 2019).

Steps:

1. Using the CCAFS regional impact pathway for where you are working, ask the participants to review the 2019 outcome in your region that corresponds to the flagship that you are working under. Then use the flagship impact pathway to review its 2019 outcomes. Identify the 2019 outcome(s) that your project is contributing to in the flagship impact pathway and capture it.

TIPS

- Each flagship 2019 outcome is an ambitious target. A single project usually only *contributes* to one 2019 outcome.
- Remember, the more 2019 outcomes relevant to your project, the more you need to measure and the more evidence you need to provide!
- If your project is contributing to more than one 2019 outcome, copy and paste the project table into a new worksheet for each new 2019 outcome. Work on one 2019 outcome per worksheet.

2. In terms of your project, who are the next-users that must participate in the achievement of the regional and flagship 2019 outcome(s)? Be as detailed as possible, making a long list of specific people and organizations. Make sure you are identifying next-users, not end-users see box 5.

Box 5: Definitions (see also glossary)

Next-users: national and international research and education institutions, private sector, extension organizations, governments both at local and national scales, regional organisations such as river basin organisations and NGOs. Next users access and use CG products directly. They can create an environment that enables the target impact for end-users; also decision makers that we want to influence to achieve outcomes. They help to bring ideas and tools to scale and into new arenas.

→ [End-users: The beneficiary population; usually quite massive, making it unfeasible for a project or program to work with them directly. - they are not of a focus and direct work partners]

Outcomes are changes in next-user knowledge, attitudes, skills and practices.

Example **outcome statement:** *International organizations like IFAD, WB, FAO, UNFCCC, etc. are engaging member countries to learn what their climate smart food system priorities are, and appropriately direct their investments.*

→ [An **impact statement** would be: 6 million climate resilient smallholder farmers in Kenya. This is not what we want as it deals with end-users.]

3. Now group the next-users into a short list of next-user groups. Capture these groups. Ideally you should have no more than 5 or 6 next-user groups.
4. Look at each group of next-users. How does each group need to change their behaviour and practices in order to create an environment where they can contribute what is necessary for achieving the regional and flagship 2019 outcomes? These we will call “practice changes”. Review the list of practice changes you have documented. Combine these into a single major practice change that addresses the most important or even all of the groups of next-users.

Now rephrase the practice change that you wrote so that it is an **outcome statement**. Use active terms, like – are using, are implementing, are accessing, are writing... See box 5. An outcome is written as:

Exactly **who** is doing **what...differently?**

5. Return to your problem tree. Will this practice change/ outcome as formulated in your project outcome statement allow these next-users to tackle and solve the first root cause(s) of the problem? If no, you may want to revise the practice change until it does.
6. Draft your project’s outcomes statement in the following box.

Outcome statement:

Session 4: Barriers and incentives to change

Objective: To identify the changes in knowledge, attitude and skills, and the incentives that your project needs to provide to achieve its practice changes i.e. its outcomes.

Output: Knowledge, attitude and skills outcome for each practice outcome.

Steps:

1. Review your problem/ opportunity tree, and then your project’s outcome statement. Why are those next-user groups not already making the necessary decisions to address the causes of the problem and achieve the practice change? What barriers do they face in terms of incentives, agency, norms and external factors? See box 6 for detailed explanation.

Box 6: Explanation on incentives, capacities, competencies, norms and external factors

Incentives – relates to more ‘rational choice’ concepts of behaviour analysis that state that decisions to adopt specific behaviours are based on perceived costs and benefits. This applies to both individuals and institutions, and is related to the development of attitudes and values regarding the importance of, or potential returns from a particular action.

Capacities and competencies (real or perceived) of an individual or an institution to achieve an outcome by the adoption of certain behaviours, access to information, knowledge, skills and other financial and infrastructural resources.

Norms – relates to social norms, traditions and habits that shape the actions of individuals and institutions. Many individuals and institutions experience a certain amount of inertia, or mimicking that can shape actions even in the presence of other influencing factors.

External factors – relates to factors outside the individual or the institution that affect behaviours. In the case of CCAFS this more frequently involves the behavioural changes in other institutions within the system that affect the behaviours of another. This would traditionally be called the enabling environment, yet in the CCAFS programme many of these systems and institutions are also stakeholders in the programme itself, and thus are less ‘external’

2. Complete the first two columns of the following table, one row per next user group.

Next-user group	Barriers	Outcome(s)			Incentives
		Knowledge	Attitude	Skills	
<i>Example: International organizations relevant to climate change, agriculture and food security: IFAD, WB, FAO, UNFCCC, WTO, WFP</i>	<i>- Do not know what the CC priorities of the constituent countries are because successful engagement is blocked by bureaucratic structures and culture - Don't direct their investments towards the true CC priorities of constituent countries - Constituent countries lack the capacity to understand their own CC priorities, and to convey their priorities to funding organizations</i>	<i>Know what the priorities of constituent countries are</i>	<i>Believe that they must engage with constituent countries in order to be effective</i>	<i>Can identify and fix problems in their bureaucratic structures that are blocking successful communication with constituent countries</i>	<i>Thinking beyond monetary incentives, e.g. - capacitating people, - access to international regional networks (conferences), - helping to organize more man power for them increase their staffing</i>

3. What must these next-users groups learn, understand, learn how to do, appreciate, etc. in order to reduce those barriers? Write those changes as Knowledge, Attitude and/or Skills (KAS) outcomes. To be able to change a practice or behavior, people usually need to first *know/understand* the change in practice and its advantages, and/or have *developed the skills* to do it, or at least to *believe or trust* the benefits of changing it. For each next-user group, make explicit 2-4 KAS changes that are key to their changing their practice.

Example:

- *Agricultural extension workers believe that targeting women in their countries is the best opportunity for increasing adoption of climate smart agriculture.*
- *Extension series in the ministries of agriculture and environment are using CCAFS gender-targeting research and development tools to re-design extension programs.*

4. Enter these outcomes in the remaining three columns of the above table.
5. Finally, what incentives would help each next-user group overcome their barriers and achieve their KAS outcomes? Capture these in the last column of the above table. Think of these incentives also in terms of what tangible products/ deliverables/ outputs will your project produce which can enable the necessary changes.
6. List and capture your best-bet products (already existing) or deliverables from your project that will support the achievement of the changes that you describe (*e.g. decision support tool, training manual, guide, etc.*).

Best-bet products and deliverables for supporting change:

Conclusion

Congratulations, you have now completed the upper level of your project impact pathway! In doing this work you will have noted how important it is to harmonize the project impact pathway with the pathways of the region where the project takes place. This also ensures harmonization with the flagship impact pathway of your project.

The upper levels of each flagship impact pathway, when harmonized with the pathways of the regions, will link directly with the regions and your project at the 2019 outcome level while the flagship 2025 outcome will be a step in the progress to the regional and project vision statements (figure 5). This close harmonization will continue into the lower levels of the impact pathway.

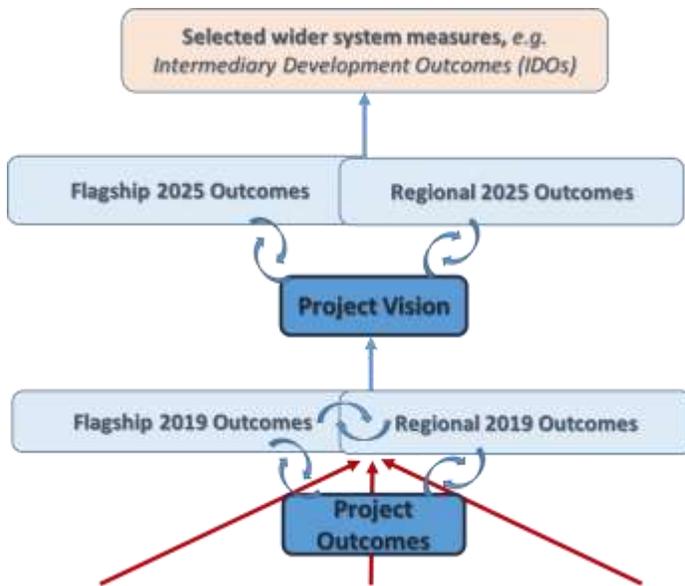


Figure 5 Schematic representation of the upper levels of a harmonized CCAFS impact pathway. Each flagship will harmonize with between 4 and 5 regional impact pathways and the pathways of multiple projects, through the 2019 outcomes.

Making sure you are contributing to the Program Impact Pathway

Summary

The next 3 sessions will elaborate your detailed project activities and how your project is linking in and contributing to programmatic framework. This linking happens on two levels. The first one is project contribution to programmatic outcome targets and the second is where projects contributing to major output groups (MOGs), see Figure 6. The latter are clusters of major research outputs. To the project they offer a tangible linking into the programmatic higher level impact pathways alongside the longer-term project contributions to programmatic outcomes 5 and 10 years in the future. Additionally, the project linking to the program MOGs allows for an annual measuring to ensure accountability and compliance, while the project contributions on the outcome target level are much more aspirational. Therefore, they are key for the program reporting through the thematic/ flagship lens, to the wider system, in CCAFS case the CGIAR Consortium Office. The output from these three sessions is a complete project impact pathway fully harmonized with relevant programmatic regional and flagship impact pathways.

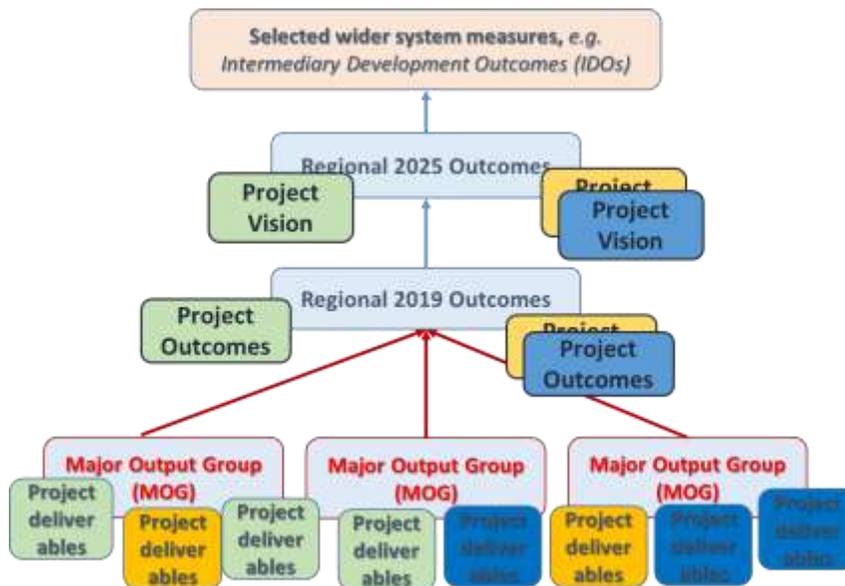


Figure 6. Schematic representation of a complete programmatic regional impact pathway. Each 2019 outcome will be supported by a small set (1-3) of major research outputs (MOGs) to which multiple projects in the region contribute. Thus a single project will contribute to the region through a set of MOGs.

Participants: The project team. You should also include some of the staff from the region and flagship. You may also consider including other key informants from the region (government, academia, NARS, private sector, etc.).

Background Documents:

- Project proposal
- For your project relevant programmatic regional impact pathways
- For your project relevant programmatic flagship impact pathways

Session 5: Project activities planning

Objective: To plan in detail the research and other activities the project needs to carry out to make sure it is contributing as expected to the regional and flagship impact pathways.

Output: Project activities plan related to the next-users and the anticipated changes that we want to foster.

Steps:

1. Now consider the specific research and engagement activities that your project will undertake and research deliverables the project will provide. Revisit the list of best bet outputs from session 4.
2. Ensure you have the right activities in place and capture your activities and deliverables in terms of the anticipated next-user group (columns 1-3 of the table below). Revisit what you have captured from the previous sessions 1-4 for the anticipated changes in practice, knowledge, attitude and skills in these next user groups and ensure that they relate to your activities and deliverables. Capture these anticipated related changes e.g. in column 4.

TIPS

- Keep the list of activities as short as possible, although you may combine sub-activities to produce a complete activity. It is ideal if your project team has already met to develop a detailed project work plan that can now refined and adjusted to the impact pathways logic. If not it is not a problem since this is an iterative process in which you will have opportunities to make adjustments along the way.
- Your activities should focus on both the production of the information and support your next-users need, AND the research that is needed to be conducted.
- You may find you have some activities that your current partners can't cover, capture them and then consider what additional partnerships you need to carry out that activity.

3. Now consider who will be responsible for the production and completion of each activity and deliverable. Ensure that there is one person responsible as your contact person. Capture this person and their affiliation (partner organization) e.g. in column 5 and 6 respectively of the below table.

1	2	3	4	5	6
Activity	Deliverable	Identified next-user group	What is the anticipated related change in practice, knowledge, attitude, skills	Responsible partner	Responsible partner organization

4. And finally, review your project proposal and make sure there is good correspondence between your project plan and the MRA(s) your project is contributing to. You may need to reconsider and revise the project plan in collaboration with the RPL and flagship leaders so that there is good correspondence.

Session 6: Mapping to Programmatic Outcome Targets

Objective: To identify what the project will contribute to programmatic set outcome targets.

Output: Project contributions to programmatic outcome target values.

Steps:

1. Ask the participants to return to the flagship 2019 outcome that your project is contributing to. Review the associated outcome indicator(s), and capture it.

Example: Flagship 4 2019 outcome: (Sub-)/ national governments enact food security policies and institutions that take into consideration climate smart practices/ strategies.

- **Indicator:** # of equitable/enhanced food security policies and institutions that take into consideration climatic and other uncertainties enacted by (sub-)/ national governments.

2. Put a number/ exact value towards the selected indicator(s) targets that your project can contribute to and complement the value with a short qualitative narrative.

Example: 6

- *2 gender inclusive national level policies (NAMA/NAP/other climate risk prevention/response protocols) (activity number 2014-28).*
- *1 NAP including subnational consideration elaborated and approved. Regional perspectives discussed and agreed in four regions are used as bases for the development of the final version of the Colombia NAP. The processes increased the capacity of national authorities to create NAP with regional perspective (activity number 2014-32).*
- *3 climate information systems for policy and decision-making adopted in Central America. In early 2017, Guatemala will fully adopt an information system to support policy decision-making (activity number 2014-26). Two other Central American countries will adopt a similar system in late 2017 (activity number 2014-27).*

3. In the case of CCAFS, an annual breakdown of these target values is required for the subsequent two years.

TIPS

- Keep in mind that you will need to be able to provide convincing evidence of progress towards delivery of these targets or why they needed to be adjusted. To define some intermediary steps and indicators for your projects will be part of the project M&E planning.
- The selected 1-2 indicator(s) per flagship 2019 outcome will apply to multiple project activities.
- When breaking the outcome targets down into annual progress, it might well be that the target value of the first year(s) might be 0. In such a case progress will need to be broken down so that you will be able to show that you are moving into the right direction towards the anticipated outcome. And the qualitative description of such is extremely important.

Session 7: Mapping to Programmatic Output Clusters/ Major Output Groups (MOGs)

Objective: To identify exactly how the project will contribute to programmatic output clusters, in CCAFS case they are called major output groups (MOGs) for the target flagship.

Output: Project contributions to programmatic MOGs.

Steps:

1. Ask the participants to review the major groups of outputs/products/ deliverables (*e.g. new knowledge from research together with new capacity in a specific group of stakeholders to use that knowledge and enact CSA policy*) of your flagship in the regional impact pathway where you work. We will call them MOGs for short. This refers to deliverables and products already planned into projects, the ones approved in the concept calls, which may be modified, added to, altered a bit, but not really change completely at this stage. Identify the MOG(s) that your project contributes to, keeping in mind that likely no single project can deliver an entire MOG.

TIPS

- Each MOG is an ambitious target. A single project usually only contributes to one such group.
- Remember, the more MOGs that you contribute to, the more you need to measure and the more evidence you need to provide!

2. Once you have identified the programmatic MOG(s) of the flagship in the region where you are working, break it down into its component parts, identifying those parts that your project will cover. Remember, it will take several projects working together to fully create a MOG. Capture your notes e.g. in columns of the following table.

Regional MOG we contribute to	Parts of this MOG your project provides

3. Next review and improve the list of best-bet products and deliverables for supporting change from session 4 so that they correspond to the MOGs your project is committed to. **Note** that these are in most cases not your project's research outputs but more likely communication and other materials to support your next-users so that they can make the planned practice and KAS changes and capture these.

Conclusion

Congratulations, you have completed your impact pathway so that it harmonizes well with the scientific priorities of the flagships and meets the specific priorities of the region where you work (Figure 7).

TIPS

- As a project you will likely be asked to participate in regionally-based planning sessions where some or all project leaders working in the region plan how their specific research activities and deliverables contribute to the regional MOGs and MRAs. This is very important for identifying synergies, redundancies and gaps in the regional portfolio of projects.
- The region may facilitate your completion of these two mapping sessions during a larger regional meeting.
- Either way, it is helpful for your project team to work through these two sessions prior to joining a larger meeting so that you have sufficient background information and level of planning to fully contribute to the larger meeting.

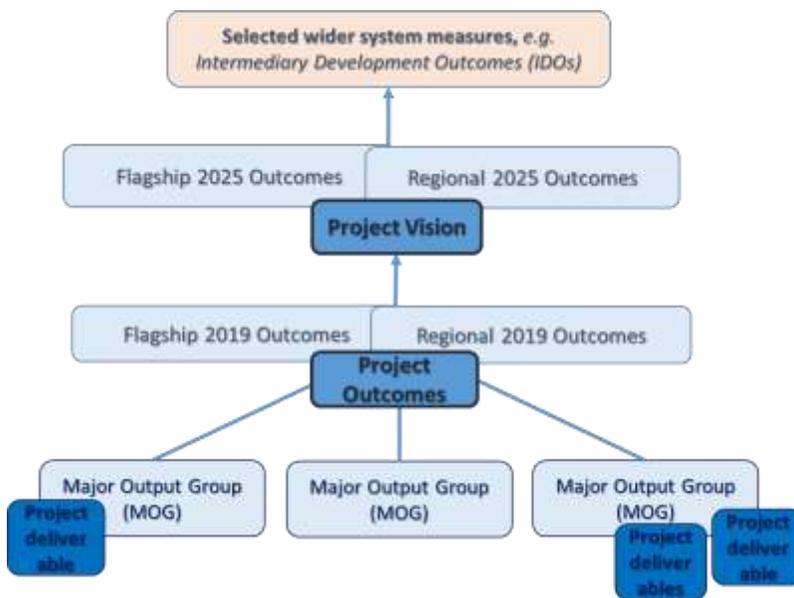


Figure 7. Schematic representation of a harmonized CCAFS impact pathway, including projects. The diagram shows individual projects taking place in the different CCAFS regions contribute to a CCAFS flagship and support CCAFS in meeting its IDO targets.

Your Project M+E Plan

Summary

The last session will help you identify indicators of progress along your impact pathway towards achieving your project outcome and what baseline work might be required to be done in the first year of implementation. This is very important, because these indicators are your project's contribution to the programmatic M+E (in CCAFS). With the information provided, the program (CCAFS) will have the evidence necessary to report on the collective programmatic progress towards achieving higher level outcomes and other system measures, like IDOs. You will also have an M+E plan that will allow you to report to your stakeholders about the specific impact that your project is having.

TIPS

- You will have seen that developing your impact pathway required close collaboration with relevant flagship and regional leaders to harmonize outcomes and identify research synergies, gaps and opportunities. Likewise, close collaboration with is critical when developing your impact pathway indicators. The data from the different regional impact pathways must:
 - Harmonize across the regions to provide convincing evidence of progress towards the 2019 and 2025 flagship outcomes.
 - Harmonize across the flagships to provide convincing evidence of progress towards the CCAFS IDOs.
- This level of harmonization requires good coordination, negotiation and compromise to create a system that provides CCAFS with the best possible evidence regarding annual progress towards the IDOs.
- The process is iterative. You will find that as the coordination occurs changes will be necessary to your indicators, and perhaps even to elements of your impact pathway.
- Completing the impact pathways will involve the art of compromise.
- The end result will be a nested system of impact pathways that represents the complexity of the CCAFS program of a science driven agenda to meet regional climate change, agriculture and food security priorities!

Session 8: Basic M+E Plan

Objective: To create a plan that allows for innovative reflection and review of progress along the project’s impact pathway.

Output: A project M+E plan.

Participants: The project team. You should also include some of the program staff from the region and flagship.

Steps:

1. Review the selected 2019 program outcome indicators your project is making a contribution to (refer to session 6) and ask your project team what the project will need to monitor to collect evidence of actually making a contribution to this. This should also include baselines required. Capture this in column 1 of the table below.

1	2	3	4	5	6	7	8	9
What to monitor?	For what?	For whom?	Indicator	How will you monitor?	How often? (Frequency)	Source	Means of verification	Responsible person

2. Now review the table of practice and KAS change (refer to session 5), and define some sensible indicators for how you will be able to see if you are progressing and capture their monitoring details e.g. in the above table column 4.
3. Complete the remaining columns of the table as much as possible.

TIPS

When putting together your project M&E plan, remember that some of your partners, especially the development partners have often more experience in monitoring outcomes and impact than the research centers. They have often data bases which should be considered for when looking at necessary baselines. They might have specific dedicated resources through other ongoing initiatives. Be creative, innovative and resourceful through your partnerships!

4. Revisiting your project research and engagement activities (session 5), your project contribution to program outcome indicators (session 6) and to MOGs (session 7). What were the key underlying assumption that you made. Document these e.g. in the following box.

Assumptions:

5. What are your project’s key strategies to make sure 1) that your activities contribute to the identified necessary practice and KAS changes (outcomes)? 2) negative

assumptions are managed and outcomes achieved? 3) your project will contribute to the major output groups.

Strategies can be the way (e.g., co-develop instead of impose) you do things. Strategies are also the timing, methods, partnerships, 'language'. Capture these e.g. in the box below.

Strategies:

6. How will you monitor to ensure those strategies are fruitful?

Monitoring:

These assumptions, strategies and monitoring plan are part of your TOC! Review them to make sure they are correct and will create an enabling environment for achieving your project's targets.

7. Discuss with the group how they would like to reflect on the impact pathway and TOC so that they are confident that the TOC has been reviewed, tested and revised annually. Complete sections c-e of the above outline. Your TOC M+E plan should include the following:

Backstory <ul style="list-style-type: none">- Provides a rich narrative, about the project and outcome indicators- Be creative in choosing your methods: video, photo narrative, infographic, etc.- Allows projects to tell their story of progress and contribution to the overall CCAFS impact pathway
TOC Reflection <ul style="list-style-type: none">- Review of the TOC in terms of progress, decisions and changes based on M+E and reflection. The project team should develop guidelines for the reflection, including a checklist of what to consider.

TIPS

Remember that at TOC is a hypothesis of what the group thinks is happening in the region, and will happen because of the work that CCAFS is doing. Think of this as a '**working hypothesis**' that should be reviewed regularly and revised based on that reflection process. The impact pathway and TOC annual review is an opportunity for the group to ask, "what is working", "what is not", and "**what do we need to change in our TOC and/or impact pathway to make sure we achieve our outcomes in a timely fashion?**"

Conclusion

Congratulations! You have completed your project impact pathway and M+E plan. Your impact pathway and M+E system is a very detailed plan. For communication purposes, develop a simplified version that gets the important points across to your stakeholders. Visual software is quite handy for this – DoView, Power Point, Prezi, Novamind, etc.

By planning your project’s work in this way, you have a solid plan for its implementation, management and evaluation. But it also allows you great flexibility. Your TOC and impact pathway are your best hypothesis right now on how to achieve your project outcome. Through the M+E and reflection process you get to critically evaluate the validity of that plan over time, and can adapt your impact pathway and TOC as required to regain momentum towards your outcome in a timely fashion and at as large a scale as possible. Considering revisions usually takes place during the annual reflection, and should be done in collaboration with the relevant RPL and flagship leader.

Note on Results-based Management Evaluation Criteria

CCAFS as a programme has defined a value system of how they want to evaluate each project’s performance annually. The list of criteria is shown in the box below. The four criteria were given different weights to indicate their importance.

Box: CCAFS Annual Project Performance Evaluation Criteria	
• <i>Have projects done and delivered what they said they would - annual outputs</i>	→ 25%
• <i>How have projects done in relation to their progress towards outcomes</i>	→ 35%
• <i>Degree to which the project is reflecting core CCAFS principles (e.g. theory of change, quality of partnerships, communications, gender)</i>	→ 20%
• <i>How well is the project team responding to opportunities and challenges and adapting and self-reflecting</i>	→ 20%

Projects will be evaluated by flagship and regional management liaison persons, the programme director, and through a self-evaluation. Following the evaluation there will be some positive or negative motivation and incentives tied to it, for example a bonus allocation or budget cuts.

This performance evaluation is closely tied to the shift and development of an evaluative and learning culture within the programme, so that the evaluation process is also a key opportunity for the selected evaluators to learn more about the progress being made, achievements and challenges encountered.

ANNEX 1: Glossary of Definitions used by CCAFS

Adoption: In research in development impact pathways, adoption refers to the primary and direct use of the research output by beneficiaries. This use may lead to changes; i.e. outcomes and impacts.

Beneficiaries: the individuals, groups or organisations, whether targeted or not, that benefit, directly or indirectly, from the chain of events that research has contributed to.

Baseline: analytical description of the situation prior to research activities, against which progress can be assessed or comparisons made.

Change Indicator: A variable that provides evidence that sustainable change in next-user behavior has occurred that is consistent with the planned outcome.

End-user: The beneficiary population, usually quite massive, making it unfeasible for a project or program to work with them directly.

Impact Indicator: A variable that provides evidence that a sustainable development impact has occurred that is consistent with the planned IDO.

Indicator: a quantitative or qualitative variable that represents an approximation of the characteristics, phenomenon or change of interest (e.g. efficiency, quality or outcome). Indicators can be used to monitor research or to help assess for instance organisational or research performance.

Intermediate development outcome (IDO): targets are CRP level representing CRP specific target domains that are generated as a result of multiple activities by diverse actors outside CGIAR. Their scales reflect CRP target domain and estimated volume of benefits.

Evidence: The information presented to support a finding or conclusion. Such evidence should be sufficient, competent and relevant. There are several sources for evidence: observations (obtained through direct observation of people or events); documentary (obtained from written information); analytical (based on computations and comparisons); self-reported (obtained through, for example, surveys) and experiential (based on professions understanding and expertise that is accumulated over time).

Impact: the changes in welfare of final users (or beneficiaries), mostly farmer communities and others, as in the case of environmental impacts in the long-term (20, 50, 100 years), resulting from a chain of events to which research has contributed, directly or indirectly, intended or unintended.

Impact Pathways (IPs): Describe results chains, showing the linkages between the sequence of results in getting to impact (including assumptions underpinning the causal chain); causal pathways for research project or program that outlines the expected sequence to achieve desired objectives beginning with inputs, moving through activities and outputs, and culminating in outcomes and impacts.

Major output groups (MOGs): The large groups of outputs, products and deliverables (*e.g. new knowledge from research together with new capacity in a specific group of stakeholders to use that knowledge and enact CSA policy*) that are necessary for achieving an outcome.

Next-user: actors such as national research institutions, extension organizations, NGOs and others, which access CG products directly. Next users can create an environment that enables the target impact for end-users; decision makers that we want to influence to achieve outcomes.

Outcome: The changes in next-users that need to happen so that an enabling environment is created and the impact target can occur. These are medium-term practice changes that occur through the adoption, use or influence of the research product by the next-users, who end up doing things in different ways. These practice changes are underpinned by the related necessary changes in knowledge, attitudes and/or skills. What do next-users need to **DO** to contribute to the enabling environment needed for achieving the impact target? In CCAFS we have 2 levels of outcomes, with 2019 outcomes shared between regions and flagships contributing to 2025 outcomes. The timestamp on the outcome represents the year by which CCAFS anticipates meeting the related outcome target in each flagship.

Partners: Individuals and organizations that we work with to generate our outputs and products and to interact with next users

- Expertise, network and influence with next-users
- Implementers

Project: The individual projects of research or development that contribute to a major research action.

Results-based management: management strategy focusing on performance and achievement of outputs, outcomes, and impacts.

Theory of Change (ToC): Complements impact pathways by describing the causal linkages through which it is expected that an intervention will bring about the desired results. Theory of Change is expressed as a causal model or a series of hypotheses of how the intervention worked or is expected to work.

Use: See Adoption

Update: See Adoption

ANNEX 2: Theory of Change Format*

**This is a joint format for regions and flagships. Where appropriate region or flagship specificity is indicated.*

1. Background
 - a. Brief description of CCAFS
 - b. Brief description of your CCAFS unit (flagship or region) – objectives, priorities, etc.
 - c. Vision (regions)
 - d. Flagships the region is participating in and why (regions)
 - e. Brief description of how the unit’s impact pathway was developed

2. Wider system measures, e.g. IDOs – the IDOs that the unit contributes to – why and how
 - a. Assumptions regarding this contribution to IDOs
 - b. Strategies to ensure assumptions are positively managed
 - c. Monitoring of strategies

3. Next-users
 - a. Problem tree analysis (regions)
 - b. Next-user groups, barriers and changes (import your table from your worksheets)

Regional worksheet table:

Next-user group	Barriers	Outcome(s)			Incentives
		Knowledge	Attitude	Skills	

Flagship worksheet table:

Next-user group	Barriers	Practice change

4. Outcomes

- a. 2025
 - i. 2025 outcome(s) relevant to your unit (1 for flagships, 3-4 for regions)
 - ii. Explanation of why these next-users and practice changes were prioritized (flagships)
- b. 2019
 - i. 2019 outcomes (regions complete for all flagships you're participating in)
 - 1. Flagship 1
 - a. Flagship 2019 outcomes
 - b. Corresponding regional 2019 outcomes
 - c. Explanation of why these next-users and practice changes were prioritized
 - d. How/why the flagship outcomes capture the regional ones (flagships)
 - e. Assumptions about how the 2019 outcomes contributes to the 2025 outcome(s)
 - f. Strategies to ensure assumptions are positively managed
 - g. Monitoring of strategies
 - 2. Flagship 2 (as above)
 - 3. Flagship 3 (as above)
 - 4. Flagship 4 (as above)

5. Major Output Groups (regions complete for all flagships they're participating in)

- a. Flagship 1 (table expanded from flagship worksheets to capture info from each region)

Flagship 2019 outcomes	Corresponding regional 2019 outcomes	Corresponding 2-3 major output groups
1.	EA WA SA SEA LA	EA WA SA SEA LA Global
2.		

- i. Assumptions about how the major research actions will create the major output groups, and how the major output groups will contribute to the 2019 outcomes
 - ii. Strategies to ensure assumptions are positively managed
 - iii. Monitoring of strategies
- b. Flagship 2 (as above)
- c. Flagship 3 (as above)
- d. Flagship 4 (as above)

6. Research projects

- a. Flagship 1 current projects under each major research action (regions will complete one table for each flagship they are participating in)

Region (EA, WA, LA, SA, SEA or Global)	Corresponding major research actions	Synergies	Gaps

- i. Assumptions about how these projects contribute to the major research actions
- ii. Strategies to ensure assumptions are positively managed
- iii. Monitoring of strategies

- b. Flagship 2 (as above)
- c. Flagship 3 (as above)
- d. Flagship 4 (as above)

7. Indicators

- a. Outcomes (regions will complete one table for each flagship they are participating in)

- i. Flagship 1

IDO indicator	2025 outcome indicator(s) per IDO	Flagship 2019 outcome indicator(s)	Regional 2019 outcome indicator(s) per flagship indicator

- ii. Flagship 2 (as above)
- iii. Flagship 3 (as above)
- iv. Flagship 4 (as above)

- b. Unit M+E template

Level (e.g. project, major research action, major output group, outcome)	Indicator	Source	MoV	Responsible person

- c. Overall assumptions and strategies – those that cut across entire impact pathway

- i. Assumptions
- ii. Strategies to ensure assumptions are positively managed
- iii. Monitoring of strategies

8. Review and reflection for unit

<p>Outcomes</p> <ul style="list-style-type: none"> - 2025 indicator(s) - 2019 indicators 	
<p>Major output groups</p> <ul style="list-style-type: none"> - Documents progress in achieving the output groups - Include indicators from M+E template as well as a qualitative reflection 	<p>Projects</p> <ul style="list-style-type: none"> - Documents contribution of each project to flagship actions and output group - Include indicators from M+E template as well as a qualitative reflection
<p>Backstory</p> <ul style="list-style-type: none"> - Provides a rich narrative - Be creative in choosing your methods: video, photo narrative, infographic, etc. - Allows projects, regions, flagships to tell their story of progress and contribution to the overall CCAFS impact pathway 	
<p>TOC Reflection</p> <ul style="list-style-type: none"> - Review of the TOC in terms of progress, decisions and changes based on M+E and reflection. The flagship team should develop guidelines for the reflection, including a checklist of what to consider. 	

ANNEX 3: Theory of Change Format for Projects

1. Background

- a. Brief description of CCAFS
- b. Brief description of your CCAFS unit (flagship and region) – objectives, priorities, etc.
- c. Vision (project) – from session 1
- d. Brief description of how the project impact pathway was developed

3. Next-users

- a. Problem tree analysis (project) – from session 2
- b. Project Outcome – from session 3
- c. Next-user groups, barriers and changes – from session 4

Next-user group	Barriers	Outcome(s)			Incentives
		Knowledge	Attitude	Skills	

4. Project planning

Project activities planning table – from session 5

1	2	3	4	5	6
Activity	Deliverable	Identified next-user group	What is the anticipated related change in practice, knowledge, attitude, skills	Responsible partner	Responsible partner organization

5. Linking to programmatic outcome targets – from session 6

- a. quantitative target value
- b. qualitative explanatory narrative

6. Linking to programmatic research output clusters/ major output groups (MOGs) from Session 7

- a. Selected MOGs the project contributes to
- b. Description of specific contribution to the MOG

7. Project M&E Plan - from Session 8

- a. Introduction, incl. Description of the project and its contribution to the program (CCAFS)
- b. Basic project M&E plan (table)

What to monitor?	For what?	For whom?	Indicator	How will you monitor?	How often? (Frequency)	Source	Means of verificat.	Resp. person

- c. Theory of Change (TOC) with its overall assumptions and strategies – those that cut across entire impact pathway
 - i. Assumptions
 - ii. Strategies to ensure assumptions are positively managed
 - iii. Reflection/Monitoring of how successful strategies are
 - iv. M+E – including backstory and TOC reflection with guidelines
- d. Appendix – project impact pathway
- e. Appendix – project partners and personnel