

# **Understanding behavioural change**

A GUIDE FOR ANALYSING FACTORS INFLUENCING  
PROGRESS TOWARDS OUTCOMES

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## Contents

Acronyms .....	3
Abstract .....	4
Background.....	4
The Guide .....	7
Objectives of the Guide .....	7
What the guide covers .....	7
Important terms .....	7
The Methodology .....	9
Tool 1: Unpacking impact pathways and reviewing outcomes .....	9
Step 1: Clarify steps and links in the impact pathway .....	9
Step 2: Unpacking outcomes.....	11
Tool 2: Understanding determinants of next-user behaviours .....	12
Tool 3: Analysing drivers of behavioural change in CCAFS.....	14
Step 1: Identifying drivers of change.....	15
Step 2: Analysing CCAFS approaches.....	17
a. Investigating the programme’s achievements.....	18
b. Identifying how the programme contributes to behavioural change .....	19
Tool 4: Consolidating the Analysis.....	21
Step 1: Reviewing the information.....	21
Step 2: Your conclusions and recommendations .....	23
Step 3: Reporting.....	23
Additional guidance for users.....	25
Desk reviews.....	25
Consultative workshops .....	25
Preparing for field work.....	26
Key Informants .....	26
Glossary of terms .....	28

## Acronyms

CCAFS	CGIAR Research Program on Climate Change, Agriculture and Food Security
CSA	Climate-smart agriculture
DEFRA	Department for Environment Food and Rural Affairs
FGD	Focus-group discussion
GEF	Global Environment Fund
ICRAF	World Agroforestry Centre
KARI	Kenya Agricultural Research Institute
KAS	Knowledge Attitudes and Skills
MoA	Ministry of Agriculture
NGO	Non-governmental organisation
ROtI	Review of outcomes to impact
ToC	Theory of change

## Abstract<sup>1</sup>

This guide provides users with a way to analyse the factors that enable progress along CCAFS impact pathways, as a means to contribute to improved program planning. The approach focuses on understanding what factors are enabling or preventing the achievements of site, national and regional level outcomes. Given that development outcomes relate to changes in the behaviours of next-users, the guide provides users with an analytical framework for understanding behavioural change in relationship to CCAFS. It provides tools for gathering and analysing information on behaviours, the barriers and promoters of behavioural change, and for analysing mechanisms within the CCAFS program for enhancing and supporting positive change.

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<sup>1</sup> This guide was prepared for CCAFS by Sarah Gibbons as a consultancy organized by the CCAFS Science Officers. The Science Officers thank Ms. Gibbons for the hard work and effort that went into developing this methodology. It was developed in parallel with other Theory of Change and Impact Pathway work underway in CCAFS at the time (see <http://ccafs.cgiar.org/impact-pathways> and <http://ccafs.cgiar.org/publications/lessons-theory-change-experiences-ccafs> for more information). As such, CCAFS does not currently use the approach outlined here, but is making it publically available for use by others who may be interested.

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## Background

The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) is a strategic research partnership between CGIAR and Future Earth, the global environmental change community. The program goal is to promote a food secure world through the provision of science-based efforts that support sustainable agriculture and enhance livelihoods while adapting to climate change and conserving natural resources and environmental services. The program is a unique partnership involving all 15 CGIAR Centres and research, government, academic, civil society and private sector actors, and uses science and action to test and model solutions to agricultural challenges in a context of climate variation and uncertainty. The program now works in 5 regions, East and West Africa, Latin America, South and Southeast Asia.

CCAFS is in its first phase of implementation (2011-2016), and is in the process of planning for the second phase (2017-2022). The past years has seen a significant shift towards focusing on the achievement of developmental impacts, rather than research outputs To support this, the program is developing an overall impact pathway that brings together individual pathways at flagship, regional and site levels which detail the activities, outputs and outcomes necessary to achieve desired impacts in terms of food security, gender and social differentiation, adaptive capacity, mitigation and supportive policies and institutions for climate-smart agriculture, together with a theory of change that documents the assumptions and engagement strategies required to achieve these impacts.

The achievement of CCAFS outcomes is suggestive of sustainability and scalability of the impacts being targeted beyond the life of the programme. These notions of sustainability and scalability of outcomes in turn suggest fundamental changes in technologies, practices and production systems, and thus in the behaviours of the individuals, institutions<sup>2</sup> and systems that shape and utilise them. CCAFS theory of change (Figure 1) rests heavily on the development of partnerships and relationships with research agencies, public and private sector institutions, policy makers, civil society organisations, NGOs and farmer associations, and through social learning approaches. These partnerships both support the delivery of the immediate program, and engage the groups and institutions within which sustainable behavioural changes are required, if sustainable impact is to be achieved.

The CCAFS impact pathway presents a science-driven agenda meeting regional priorities. Five regional impact pathways are embedded in a CCAFS programmatic impact pathway. Within each region, site-specific impact pathways contribute to the achievement of regional actions. Four flagship research programs contribute to the achievement of each of these regional impact pathways, and directly through global programmatic contributions (Figure 2).

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<sup>2</sup> 'Institutions' refers to CCAFS, CGIAR centres, government, community and private sector institutions, as well as the rules and regulations that govern them.

Figure 1: Diagram of the CCAFS Theory of Change, showing the influence of CCAFS's strategies on flagship research programmes leading to the CCAFS intermediate development outcomes.<sup>3</sup>

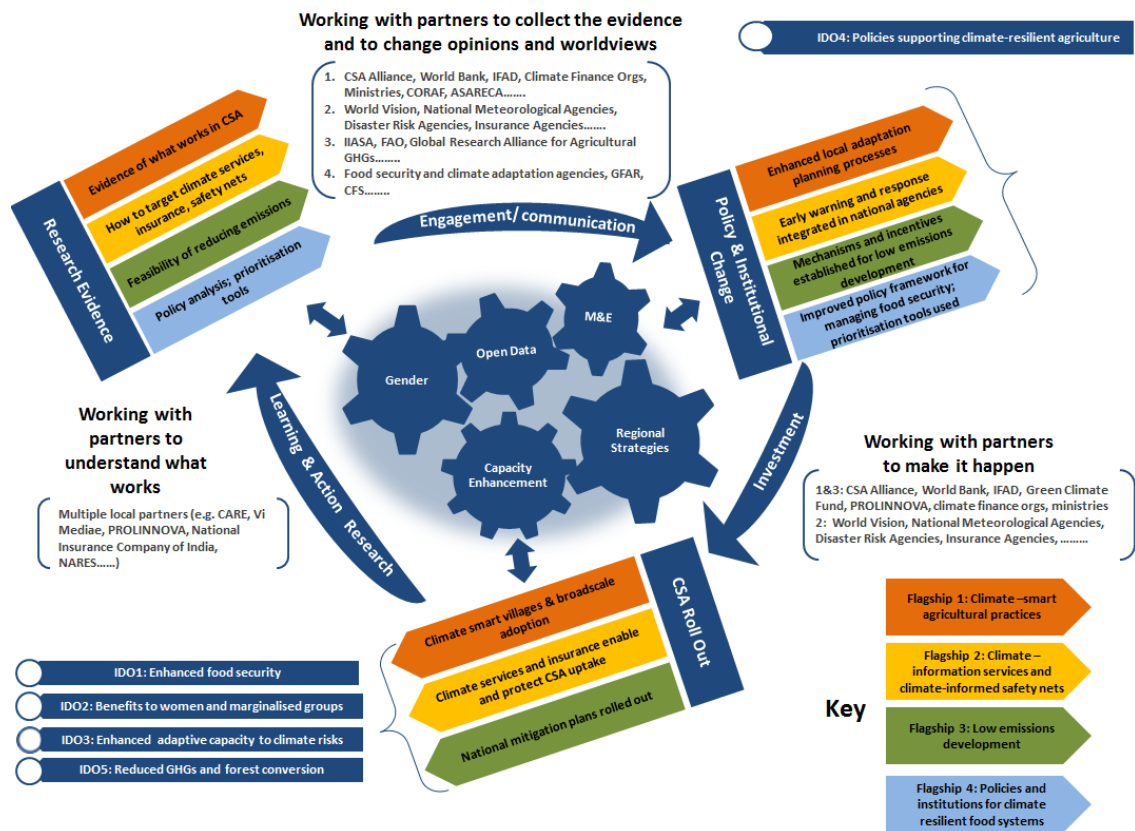
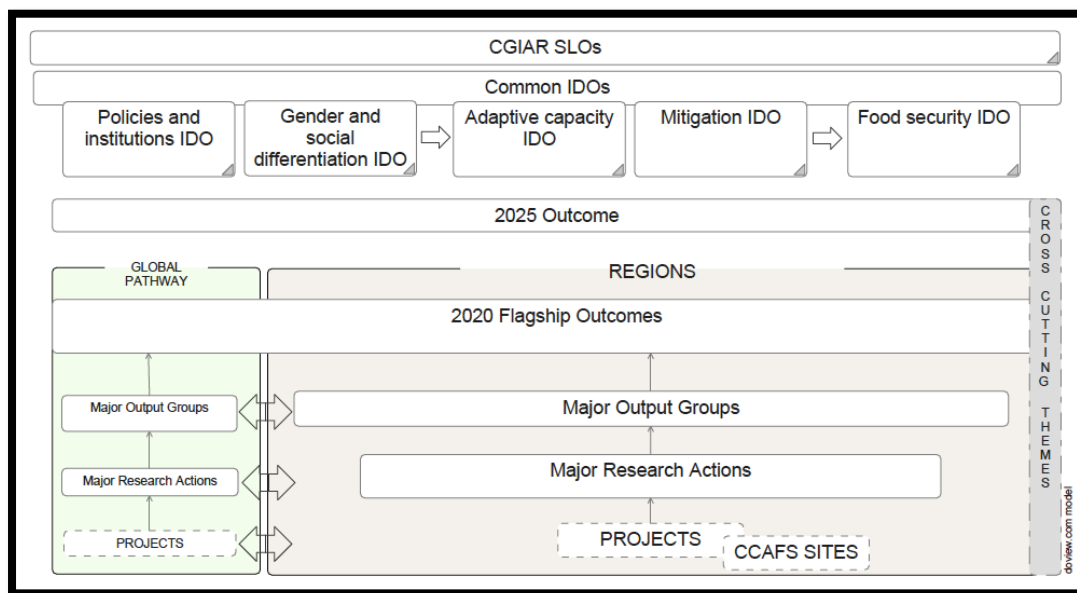


Figure 2: Diagram of the CCAFS Impact Pathway, showing the nesting of flagship and regional programs<sup>4</sup>



<sup>3</sup> CCAFS Extension Proposal 25 April, submitted to Consortium Office.

<sup>4</sup> This diagram was current in early 2014, but has since been altered to reflect changes in CCAFS thinking.

# The Guide

## Objectives of the Guide

This guide provides users with a way to analyse the factors that enable progress along CCAFS impact pathways, as a means to contribute to improved CCAFS planning. The approach focuses on understanding what factors are enabling or preventing the achievement of site, national and regional level outcomes. Given that these outcomes relate to changes in the behaviours of next-users, the guide provides users with an analytical framework for understanding behavioural change in relationship to CCAFS. It provides tools for gathering and analysing information on behaviours, the barriers and promoters of behavioural change, and for analysing mechanisms within the CCAFS program for enhancing and supporting positive change.

With this guide users will be able to answer the following questions:

- 1) How is CCAFS influencing determinants that promote behavioural change?
  - a. Through what it delivers?
  - b. Through how it delivers it? – focus on CCAFS mechanisms of partner<sup>5</sup> engagement
- 2) What lessons can be learned from the first phase of implementation to improve CCAFS partnership and engagement to promote its impact pathway outcomes?

## What the guide covers

This guide provides a method for understanding how CCAFS is enabling outcome level changes within its next-users, and the systems and institutions in which those outcomes occur. It does not enable a full theory of change analysis of the program, in which assumptions and causal pathways are tested.

Each tool in the guide is presented in a format that allows the user to apply it in different contexts. The user is encouraged to apply the tools so that they become contextually specific and stakeholder sensitive. It is important to remember that any impact pathway represents a multiplicity of diverse stakeholders. Therefore, open-ended, participatory methods of engagement are emphasized in this guide to bring out areas of agreement as well as disagreement in the variety of stakeholder points of view.

## Important terms

**End-users:** The beneficiary population, usually very large; making it unfeasible for a project or programme to work with them directly to achieve an impact.

**Impact Pathway:** Describes the results chain, showing the linkages from activities through outcomes to impact.

**Implementing Partners:** Individuals and organisations that a programme works with. These partners implement programme activities to influence change in next-users.

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<sup>5</sup> Partner refers to CCAFS partners in country with government, research, private sector agencies, civil society, and CGIAR centres

**Next-users:** Boundary partners that can create an enabling environment for the target impact. These are decision-makers in which the programme would want to see behavioural changes.

**Outcome:** The short- to medium-term behavioural or systemic effects that a programme makes a contribution towards, and that are designed to help achieve impacts.

**Theory of change:** The theory of change complements the impact pathway by describing the causal linkages through which it is expected that an intervention will bring about the desired results. It describes programme strategies and assumptions for achieving change.



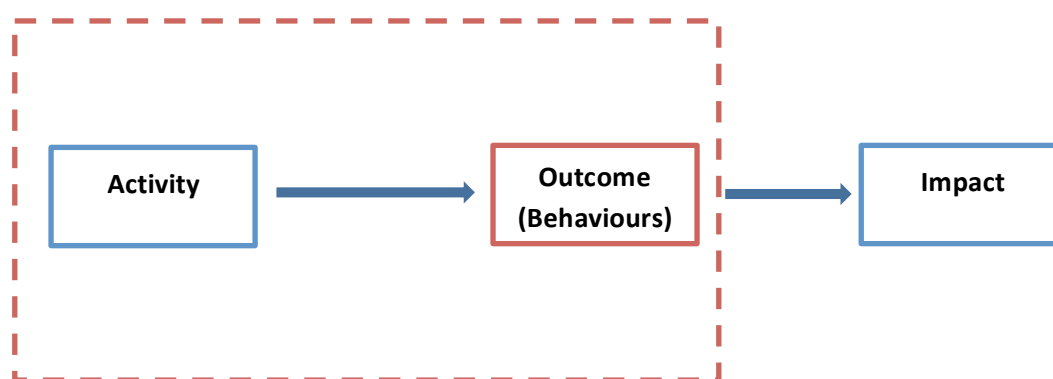
## The Methodology

### Tool 1: Unpacking impact pathways and reviewing outcomes

This tool is best implemented using key informant interviews. We start by understanding the impact pathway(s) we are studying. To ascertain the extent to which CCAFS is promoting positive behavioural outcomes, there's a need to first understand the behaviours that the program is seeking to change.

#### Step 1: Clarify steps and links in the impact pathway

To begin with we need to confirm the intended impact pathway(s) outcomes we are studying. Next we should consider how these relate to and support each other.



**Figure 3: Outcomes in an impact pathway**

Figure 3 above shows a simplified diagram of the steps in an impact pathway, with activities leading to outcomes leading to impact. As we move through this guide we will focus on the area within the red box, to consider the extent to which CCAFS approaches and strategies, particularly regarding partnerships, support the achievement of these outcomes.

Obtain copies of the impact pathway(s) you are studying. Note the CCAFS program has a set of nested impact pathways. Below is a guide to help you identify the pathway(s) relevant to your study.

**Site.** If you are studying a single site, then you need the site pathway and the regional pathway to which it contributes.

**Region.** If you are studying a region, then you need all of the site pathways in the region, the regional impact pathway, and flagship pathways to which the region contributes.

First, review the pathway(s) and identify the different steps in the pathway as either an (i) activity, (ii) outcome, (iii) impact. Note, the activities, projects, and major output groups presented in the CCAFS impact pathway schematic (Figure 2) all fall under the 'activity' box of the simplified diagram in figure 3. Also note, flagship impact pathways have multiple levels of outcomes, with 1-3 2019 outcomes leading to a later 2025 outcome. Finally note each region has a 2019 outcome for each flagship that it is participating in. So, for example, Southeast Asia has four 2019 outcomes, because it is participating in all four flagships.

So that you have a clear understanding of the steps in the impact pathway(s) relevant to your study, you need to review it with key informants, including CCAFS personnel and lead partners. For this review, you need two lists: one of the people you will interview, and one of the topics you'd like to cover in the interview. Compose a list of key informants that you would like to interview:

1. *E.g. CCAFS regional program leader*
2. *CARE East Africa director*
3. *Vi Agroforestry, Nyando District, Kenya*
4. ...

You can use and add to the following checklist of topics to guide this review:

- Identify the impact pathway(s) steps: (i) activity, (ii) outcome, (iii) impact
- Identify the impact pathway partners
- Identify the outcomes
- Identify linkages between different pathways (site, regional, flagship)
- ...

Below is a table where you can enter and keep track of the information you are gaining from your interviews.

**Table 1: Information gathered per key informant interview regarding the CCAFS impact pathway(s) under study.**

Key Informant	Key information from interview
1. <i>e.g. Regional programme leader</i>	<ul style="list-style-type: none"> <li>- Impact pathway steps:</li> <li>- Partners:</li> <li>- Outcomes:</li> <li>- Linkages:</li> <li>- ...</li> </ul>
	<ul style="list-style-type: none"> <li>- Impact pathway steps:</li> <li>- Partners:</li> <li>- Outcomes:</li> <li>- Linkages:</li> <li>- ...</li> </ul>
	<ul style="list-style-type: none"> <li>- Impact pathway steps:</li> <li>- Partners:</li> <li>- Outcomes:</li> <li>- Linkages:</li> <li>- ...</li> </ul>
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	<ul style="list-style-type: none"> <li>- Impact pathway steps:</li> <li>- Partners:</li> <li>- Outcomes:</li> <li>- Linkages:</li> <li>- ...</li> </ul>

## Step 2: Unpacking outcomes

Now that we have understood the outcomes being targeted and linkages between site, regional and flagship processes, each outcome should be unpacked to fully understand the stakeholders involved in creating the outcome.

**Mapping Stakeholders:** Stakeholders should be mapped to consider their role in CCAFS and their contribution to achieving outcomes. The mapping process should categorise stakeholders into implementing partners, next-users and end-users. Here is an example outcome for us to consider, the Southeast Asia regional outcome for Flagship 1 on climate-smart agriculture:

*“Local public and private sector stakeholders (service providers, farmer leaders, etc.) are engaged in identifying and meeting priorities of farmers, including women and other marginalized groups, and accessing CSA knowledge, technologies, and tools so that they have increased awareness and enhanced capacity to advise on evidence and knowledge based climate smart technologies.”*

When naming the stakeholder, be as specific as possible. In the above example, the next-users are local public and private sector stakeholders. Examples of service providers may be a government department, ICT companies or seed companies, while farmer leaders may be a national farmer association or a local key farmer. In interviewing your key informants you will seek to pin them down exactly. For example, in Cambodia at the national level this would be the Ministry of Agriculture, Forestry and Fisheries and the public sector. However, national agricultural programmes are managed by the Provincial Department of Agriculture, and extension workers are employed by the District Offices of Agriculture. Thus, in Cambodia all three stakeholder-groups are important to this outcome.

Thus, your key informant checklist from step 1 above continues here in step 2:

- Identify the outcome stakeholders
- Classify the stakeholders
- Discuss stakeholder contributions to the outcome

Below is a table where you can enter and keep track of the information on CCAFS stakeholders.

**Table 2: Information gathered regarding the different stakeholders involved in the outcomes contained in the CCAFS impact pathway(s) under study.**

Outcome*	Stakeholder name	Stakeholder type (next-user, end-user, implementing partner)	Stakeholder contribution to achieving the outcome
<i>e.g. Local public and private sector stakeholders (service providers, farmer leaders, etc.) are engaged in identifying and meeting priorities of farmers, including women and other marginalized groups, and accessing CSA knowledge, technologies, and tools so that they have increased awareness and enhanced capacity</i>	<i>Cambodia Ministry of Agriculture, Forestry and Fisheries</i>	<i>Next-user</i>	<i>Behaviour change – engaging with farmers to identify national priorities; accessing CSA and advising based on evidence</i>
	<i>Cambodia Provincial Department of</i>	<i>Next-user (implementing partner in Kandal</i>	<i>Behaviour change – engaging with farmers to identify -</i>

<i>to advise on evidence and knowledge based climate smart technologies</i>	<i>Agriculture</i>	<i>province)</i>	<i>provincial priorities; accessing CSA and advising based on evidence</i>
	<i>Cambodia District Offices of Agriculture</i>	<i>Next-user</i>	<i>Behaviour change – engaging with farmers to identify - priorities; accessing CSA and advising based on evidence</i>

\*From CCAFS impact pathway(s) under study

## Tool 2: Understanding determinants of next-user behaviours

This tool is best implemented in key informant interviews. You should also review existing baseline surveys, in particular information on institutions, to better understand the factors that influence next-user behaviours - i.e. what are the behavioural determinants? (See figure 4).

There are a number of theories for identifying what factors influence the behaviours of individuals, groups and systems. These theories are predominantly based on economic and psychological concepts and the analysis of social systems, and they seek to determine ‘**why**’ and ‘**how**’ new behaviours would be adopted<sup>6</sup>. A useful categorisation of factors include: Incentives, Agency, 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 of a particular action. 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.
- **Agency** – relates to the real or perceived capacities of an individual or an institution to achieve an outcome by the adoption of certain behaviours. Agency concerns 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 programme itself, and thus are less ‘external’.

<sup>6</sup> Darnton, A. 2008, Reference Report: A review of behaviour change models and their uses. GSR.

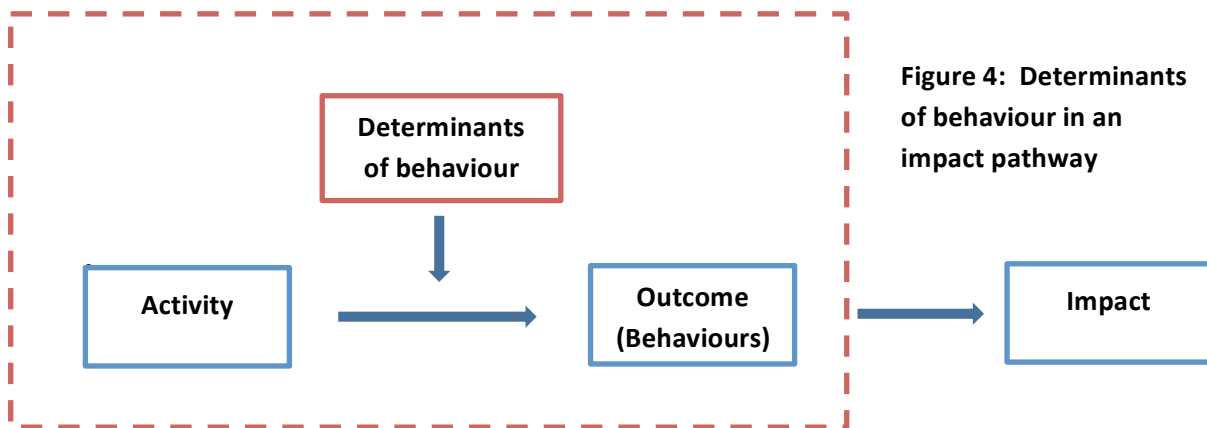


Figure 4: Determinants of behaviour in an impact pathway

These categories are a useful framework to consider when analysing how a program is influencing behavioural change. We can add more detail to these categories by posing the following questions to CCAFS next-users:

- 1) What actions did you take to respond to climate change before the CCAFS programme? What influenced and limited these actions? **(This question provides you with information on incentives, agency, norms, and external factors that have shaped past behaviour)**
- 2) Consider the results you would like to see enabled by CCAFS work. What would you like to see happen because of your future climate change actions? **(This question provides you with information on incentives that encourage continued behavioural change)**

From the information you gathered using tool 1, compile a list of specific next-users that you would like to interview:

1. *E.g. Director of extension services, Cambodia Ministry of Agriculture, Forestry and Fisheries*
2. *Director of extension services, Kandal Provincial Department of Agriculture*
3. *Head extension officer, Kien Svay District, Kandal Province, Cambodia*
4. ...

Use the above two questions to conduct the interviews. Information from your interviews and review of background documents should be captured in the following tables.

**Table 3: Information gathered from next-users involved in the CCAFS impact pathway(s) under study on past actions, influences and expectations.**

Next-User	Actions before CCAFS	Influences and limitations of actions before CCAFS	Future expectations
<i>e.g. Kenya Ministry of Agriculture:</i>	<i>Provision of agricultural extension support to communities</i>	<ul style="list-style-type: none"> <li>• <i>Limited knowledge of technology</i></li> <li>• <i>Lack of capacity to reach all communities.</i></li> <li>• <i>Lack of financial resources</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Reduced vulnerability to climate change</i></li> <li>• <i>Improved agriculture and production</i></li> </ul>


**Table 4\*: The target next-user behaviours in the CCAFS impact pathway(s) under study, and current behavioural determinants that serve as barriers or promoters of the target CCAFS outcomes.**

Target next-user behaviour**	Behavioural Determinants of Change			
	Incentive	Agency	Norms	External Factors
<p><i>e.g. Kenya Ministry of Agriculture:</i></p> <p><i>Sustained extension support to communities for continued uptake and use of climate smart technology in response to changing climatic conditions</i></p>	<ul style="list-style-type: none"> <li><i>Financial incentives for carrying out extension services</i></li> <li><i>Improved agricultural production</i></li> <li><i>Improved food security of communities</i></li> <li><i>Reduced climate vulnerability of communities</i></li> </ul>	<ul style="list-style-type: none"> <li><i>Financial and human resources to reach communities</i></li> <li><i>Institutional development support</i></li> <li><i>Sustained access to knowledge of appropriate extension for climate smart technologies</i></li> </ul>	<p><i>Institutional systems and inertia</i></p>	<ul style="list-style-type: none"> <li><i>Budget allocation for climate smart extension support</i></li> <li><i>County government support to coordinated agricultural practice</i></li> </ul>

\*Note: you will populate table 4 based on an analysis of the information in table 3.

\*\*Import from last column of table 2.

### **Tool 3: Analysing drivers of behavioural change in CCAFS**

This tool is best implemented in focus group interviews with a variety of CCAFS stakeholders, including next-users, partners and end-users (however, note that step 1 may be partially or fully completed as a desk analysis prior to engaging in interviews). This means that you will be implementing this tool in a variety of settings, from CCAFS villages to next-user offices.

Now that we have understood what influences the behaviours of next-users, you need to analyse the mechanisms within CCAFS that bring about the desired outcomes. This requires investigation of **what** the programme is delivering, and **how** it is delivering it. You need to identify what CCAFS has achieved to date; and if, how and how much these achievements have contributed to more sustainable behavioural changes. The mechanisms through which CCAFS activities and approaches

contribute to the adoption of new behaviours can be termed the programme’s *drivers of change*<sup>7</sup>, as indicated in figure 5.

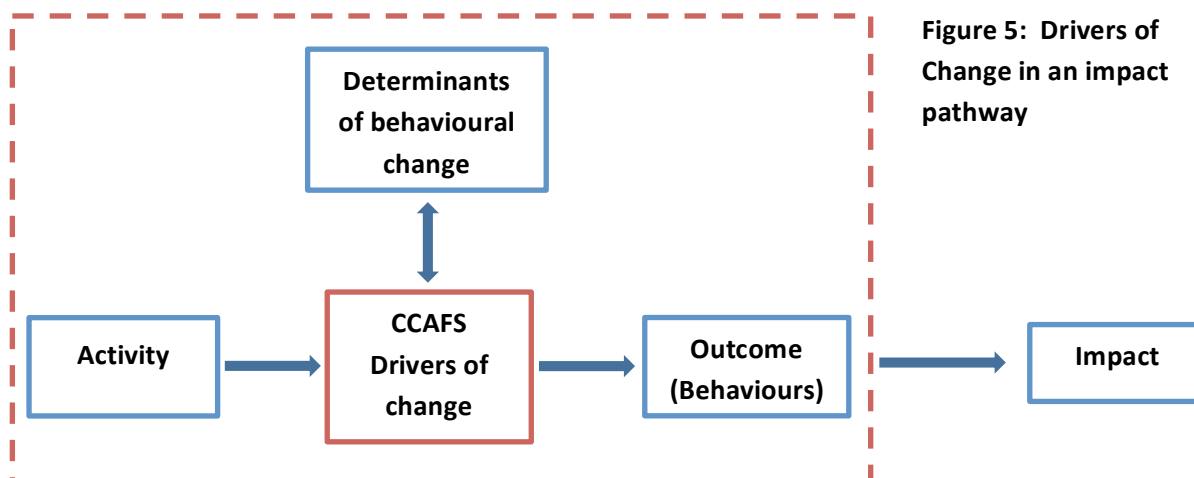


Figure 5: Drivers of Change in an impact pathway

### Step 1: Identifying drivers of change

The CCAFS impact pathway does not explicitly document drivers of change. So before interviewing others about the approaches and achievements of CCAFS, you should use the information you collected from tool 2 to derive drivers of change as they relate to the behavioural determinants of CCAFS next-users. For example, drivers of change should indicate how CCAFS:

- Creates incentives: How is the programme creating ownership and responding to a felt need? How is it meeting the expectations of the next-users, and generating and evidence on the value of adopting new climate smart behaviours?
- Builds agency: How is the programme addressing capacity, information and resource gaps in next-users?
- Influences norms: How is the programme utilising processes that shape social and institutional norms?
- Addresses external factors: How is the programme influencing wider systems and connecting stakeholders across multiple levels and sectors?

Drivers of change are conditions that if met will contribute to the realisation of the programme’s outcomes. They act by overcoming the barriers to more sustainable and scalable behavioural change, or by influencing the positive determinants of change.

**Example:** ‘improved agricultural production’ is an incentive that would encourage change in the behaviours of many CCAFS next-users in Kenya: farmer associations, Ministry of Agriculture, Kenya Agricultural Research Institute. But you need to ask yourself, what should CCAFS do to help these next-users capitalize on this incentive? The delivery of actions such as ‘testing climate smart technologies and innovations’ produces information. But how can CCAFS bridge the gap between delivering the results of trials to sustained and scalable change in the way institutions engage on climate change issues to ensure measurably improved production on a large scale? The programme must ensure that drivers of next-user behaviour change are in place, such as: **1) Programme**

<sup>7</sup> Drivers of change are modelled on the ROTI methodologies’ definition of Impact Drivers.

**monitoring and evaluation systems are developed in participation with stakeholders and partners and providing evidence of programme impacts and 2) Successful cases and lessons learned from learning sites/regions are promoted and disseminated.**

Derive drivers of change for the CCAFS programme and capture them in the following table (table 5), against each next-user. This step is usually done as a desk analysis, but you may also choose to ask next-users what kinds of drivers would motivate them. Information generated in table 4 on behavioural determinants of change should be imported into column 2, and the drivers of change should be captured in column 3.

**Table 5: Driver of change statements developed according to behavioural determinant.**

<b>Next-user</b>	<b>Behavioural determinants*</b>	<b>Drivers of Change</b>
<i>e.g. Kenya Ministry of Agriculture</i>	<b>Incentives:</b> 1. <i>e.g. Improved agricultural production</i> 2. 3....	1. <i>e.g. Programme monitoring and evaluation systems are developed in participation with stakeholders and partners and providing evidence of programme impacts.</i> 2. 3....
	<b>Agency:</b> 1. <i>e.g. Limited knowledge of or continued access to climate smart technologies.</i> 2. 3....	1. <i>e.g. Stakeholders and partners have the capacities to promote, adopt or scale up new CS innovations.</i> 2. 3....
	<b>Norms:</b> 1. <i>e.g. Institutional inertia</i> 2. 3....	1. <i>e.g. Social learning and networking opportunities exist to encourage the sharing of knowledge and learning to wider audiences within communities and institutions.</i> 2. 3....
	<b>External factors:</b> 1. <i>e.g. Budget allocation for climate smart extension support.</i> 2. 3....	1. <i>e.g. Policy evidence and messaging is developed and provided in useful and appropriate forms to those who can influence change in policies and budgetary allocation at local, national and regional levels.</i> 2. 3....
	<b>Incentives:</b> 1. 2. 3....	1. 2. 3....
	<b>Agency:</b> 1. 2. 3....	1. 2. 3....
	<b>Norms:</b> 1. 2. 3....	1. 2. 3....
	<b>External factors:</b> 1.	1.



	1. 2. 3....	2. 3....
	<b>Incentives:</b> 1. 2. 3....	1. 2. 3....
	<b>Agency:</b> 1. 2. 3....	1. 2. 3....
	<b>Norms:</b> 1. 2. 3....	1. 2. 3....
	<b>External factors:</b> 1. 2. 3....	1. 2. 3....

\*From columns 2-4, table 4.

Note, many drivers of change will be generic across different next-users in CCAFS, but some may be specific to a particular barrier a particular next-user faces. Where commonalities occur note the same driver of change for the different next-users.

## Step 2: Analysing CCAFS approaches

Having derived the drivers of change statements you now need to analyse the programme to determine the extent to which it is providing these drivers through its activities and approaches.

Develop a set of questions that will help your informants ascertain the extent to which the drivers of change are active within CCAFS's approaches and actions. Below are relevant questions according to whether the driver relates to incentives, agency, norms or external factors. You should add to these questions depending on the specific drivers of change that have been derived.

Incentives:

- How does the CCAFS programme build ownership?
- How are research agendas developed? Who is involved?
- Are M&E systems generating evidence of improved yield/income?
- Are there any examples of CCAFS changing its research agenda based on this feedback?
- How were programme M&E systems developed? Who was involved?
- How is evidence communicated to stakeholders and wider audiences?
- .....

Agency:

- What are the mechanisms for capacity building among and between partners and stakeholders?
- What capacity gaps do partners/ stakeholders still face? Why?
- Are partners changing their practices as a result of CCAFS engagement, or being funded to scale up existing programmes?
- How easily can partners access learning and information from within CCAFS? How are they supported to use this learning?

- How does the programme support institutional development?
- .....

Norms:

- How effective is CCAFS in promoting engagement between partners? And why? Which were the reasons for success (or not reaching full potential success)?
- What is the scope for networking and collaborating beyond programme sites/countries/regions?
- What mechanisms for communicating learning and knowledge are used?
- Who are these most accessible to?
- .....

External factors:

- How consistently are county government engaged in the programme? How?
- To what extent do regional or national policy agendas shape local action research?
- What is the link between national government representatives and programme site actions? How is local action prioritised, within what framework, and how is learning fed back up?
- How does the programme promote links to the private sector?
- .....

Interviews should be in depth, enabling time for discussion and probing as to how the CCAFS programme has been working to support the adoption of new behaviours within different next-users.

#### **a. Investigating the programme's achievements**

To begin your interviews, it is useful to map out CCAFS activities and the most significant changes in next-user knowledge, attitudes and skills (changes in next-user behaviour) that they have influenced. This will help to determine the progress made by CCAFS in delivering behaviour changes, and will warm up the minds of respondents for further discussions about **how** these activities were delivered.

Questions should focus on:

- Q1. How have you engaged with CCAFS?
- Q2. What are the most significant changes in next-user knowledge, attitudes and skills you have seen as a result of CCAFS to date? What contributed to this? Who was involved?
- Q3. What are you doing differently as a result of engaging with the CCAFS programme?

The answers to these questions will give you a sense of what CCAFS has delivered and how this has resulted in changes in the way that next-users do things. It is important to note that this is not a performance evaluation, and as such these discussions are predominantly used to provide a foundation for analysing **how** activities should be delivered to achieve change.

If you are in a workshop with literate respondents, you can provide them with the table below for capturing their responses to the above questions. Or, if you are interviewing a single informant or working with a group of non-literate respondents, you will want to complete the table yourself.

**Table 6: Activities undertaken by stakeholders in CCAFS, resulting changes, and new ways of doing things.**

<b>Engagement</b>	<b>Most Significant Next-user knowledge, attitude or skill Change</b>	<b>Working/engaging differently?</b>
<i>e.g. Training on new technologies</i>	<i>e.g. Ability to implement existing technologies</i>	<i>e.g. Doing same work but scaled up</i>

If implementing this tool in a focus group session, consider noting these results on flip charts or using a projector to display them for the whole group. This provides a visual aid to initiate the next discussions on **‘how these behaviour changes can be sustained to achieve CCAFS outcomes?’**

**b. Identifying how the programme contributes to behavioural change**

Having considered **what** the programme has delivered, we now need to unpack **how** it is delivering it, by posing the questions that you developed earlier for the various drivers of change. These questions will give you a sense of the extent to which the behavioural determinants are being influenced by the programme, through the presence of drivers of change. Many questions relate to the way in which CCAFS operates, how it engages its partners and next-users, and how it builds sustainability into the delivery of its activities. The questions you have developed should act as your guide to the discussions, but not limit the debate. Allow participants to express their own opinions and ideas, and raise new issues if relevant. Where appropriate use the information gathered on **what** the programme has achieved during the earlier session to probe further on **how** this change occurred.

### **Farmer Groups FGD: Suggested Format**

Farmer groups' consultations should be carried out as focus group discussion to allow debate and views from a wide range of community members. Focus groups should be between 10-15 people. It may be useful to split these groups into champion and normal farmer groups as they may have a very different engagement with the programme and different suggestions for how it can be improved. It might also make sense to split by gender.

Introduce yourselves and the reasons for the meeting, and thank the participants for their attendance. Explain that CCAFS is planning for Phase 2 and would like to gather information of what is working well in the programme, and what can be improved. Explain that in order for CCAFS' work to lead to long-term changes it requires change within many organisations and groups, including their own, and we are here to discuss how CCAFS is supporting that change.

#### **Group Work:**

- Q1. What activities have you undertaken as a result of CCAFS?
- Q2. What are the most significant changes you have seen as a result of CCAFS to date? What actions contributed to this? Who was involved?
- Q3. What would you like to see in the future as a result of CCAFS?

**Plenary:** Discuss the activities, and changes from Q1 and Q2. Analyse what went well and what was a challenge. Then ask IF and how these activities lead to the long term expectations they want to see in Q3. This is the opportunity to discuss how CCAFS supports long term changes.

Groups Discussion: How does (and/or could if not yet?) CCAFS help you and others to change?

#### Ownership

- a. Is CCAFS responding to issues that you have identified?
- b. If new issues emerge are their examples of where CCAFS have taken them up?

#### Capacity Building

- a. What capacity building opportunities have you had? Are there still gaps?

#### Network/Social Learning

- a. What is your role in sharing what you have learned with others? Does CCAFS support this? Can you give examples of where this has happened?
- b. Are there examples of where people have learnt from you and taken up new approaches without CCAFS support? How did this happen
- c. Are there other people who should be involved in the programme, who currently are not? What would their role be?

These questions are guides as to the types of investigation required to understand the drivers of change within CCAFS Ask the participants for any other reflections on CCAFS, and its achievements of challenges.

Use the following table to capture the results of these discussions with each next-user, end-user or implementing partner.

**Table 7: Indicators of the presence of drivers of change in the CCAFS program related to the impact pathway(s) under study.**

Informant:		
Category	Driver of Change*	Indicator of Driver Presence
Incentives		
Agency		
Norms		
External Factors		

\*From table 5.

## Tool 4: Consolidating the Analysis

This tool will help you consider all of the information you have gathered and provide a final analysis. The final stage of the analysis is to say ‘so what’? What does this analysis tell us about the programme and what recommendations can we make for improvements during phase 2 of CCAFS?

### Step 1: Reviewing the information

The responses gathered from informants, as captured in table 7, should be reviewed against the corresponding drivers of change, as captured in table 5, to determine how effectively the programme is achieving these drivers of change through its partnership and programme delivery mechanisms. This review and analysis will allow you to rate the programme, within the impact pathway under study, for its achievement of the drivers of change that you developed as conditions for achieving next-users’ behavioural changes.

Once reviewed you should use the following rating system to present your results.

Rating	Description
0	Not Achieved
1	Poorly Achieved
2	Somewhat Achieved
3	Fully Achieved

This rating system is subject to value judgements by the user. The overall purpose of the rating is not so much as an evaluation but to provide a more quantitative framework for determining the extent to which the programme is effectively providing the conditions and mechanisms for promoting change.

Table 8 below can be used to document the results of the rating process. The various drivers of change developed under tool 3 (table 5) should be imported into column one. Column three indicates the rating that you have given to the driver of change, based on your review of the presence of those drivers within the CCAFS program. Column two enables you to provide a more qualitative assessment and justification for your rating.

**Table 8: CCAFS drivers of change rating sheet.**

Drivers of Change*	Qualitative Assessment	Rating (0-3)
<i>e.g. Programme monitoring and evaluation systems are developed in participation with stakeholders and partners and providing evidence of programme impacts.</i>	<i>e.g. Monitoring and evaluation systems have been developed but are currently only capturing performance data. A participatory process of developing impact level indicators has not yet taken place and therefore evidence of impact level change is not yet available.</i>	<i>e.g. 1</i>

\*From table 5.

Having rated the achievement of drivers of change you should now reflect back on what this means for progress towards the achievement of the outcomes that CCAFS is seeking within each impact pathway(s) you are studying. Table 9 below presents a format for commenting on progress towards this achievement, and on the factors that are enabling or inhibiting this. These enabling and inhibiting factors will relate directly to the presence of the drivers of change within the programme’s approach. They may, for example, relate to ownership, learning, capacity building or networking, etc. The table below gives an opportunity to reflect specifically on how these factors affect the achievement of change for specific next-users. You should complete one table for each outcome and associated next-user in the impact pathway(s) under study.

**Table 8: Factors supporting or inhibiting progress towards the CCAFS outcomes in the impact pathway(s) under study.**

<b>Outcome:</b>
<b>Next-User:</b>
<b>Behavioural Change:</b>
<b>Progress towards outcomes:</b>
<b>Enabling/inhibiting factors:</b>

Below is an example of how the table can be completed for one CCAFS outcome and associated next-user:

<b>Outcome:</b> <i>e.g. Local public and private sector stakeholders (service providers, farmer leaders, etc.) are engaged in identifying and meeting priorities of farmers, including women and other marginalized groups, and accessing CSA knowledge, technologies, and tools so that they have increased awareness and enhanced capacity to advise on evidence and knowledge based climate smart technologies</i>
<b>Next-User:</b> <i>e.g. Cambodia District Offices of Agriculture</i>

**Behavioural Change:**

*e.g. Engaging with farmers to identify national priorities; accessing CSA and advising based on evidence*

**Progress towards outcomes:**

*e.g. DoA is working closely with local farmers to identify and implement CSA based on CCAFS research. Some new technology is being modelled but support is predominantly enabling extension scale up due to the availability of programme finances, and there is not a clear sense of whether this would continue in the absence of CCAFS funding. Links to the national ministry related to this work are not very strong, and need to be strengthened in order to ensure evidence of change is influencing budgeting and planning decisions. Most learning occurs at extension officer level through engagement in the programme, few cross programme learning opportunities for district level, or opportunities to shape priorities.*

**Enabling/inhibiting factors:**

*Access to CSA information - E*

*Access to finances – E*

*Access to learning – I*

*Ability to shape research - I*

*Engagement with provincial and national departments – I*

*Generation of clear evidence of change – I*

**Step 2: Your conclusions and recommendations**

It is now time for you to triangulate all of the information you have gathered and present your conclusions and recommendations. The information you gathered by using this guide will provide you with the information you need to assess how well we are progressing along the CCAFS impact pathway(s) you are studying and what about the environment in which that pathway(s) is taking place is either enabling or inhibiting progress. This is what we are most interested in, what about an environment enables the achievement of outcomes and where has CCAFS succeeded in enhancing that enabling environment? What lessons have we learnt so far about creating enabling environments for the achievement of outcomes, and what can we upscale in Phase 2? These recommendations will centre on how CCAFS can ensure it develops and maintains relationships with next-users in ways that encourage the longer-term behavioural change captured in our outcomes.

**Step 3: Reporting**

Conclusions and recommendations should be written up in a detailed report, along with the findings of the study. The following format is suggested.

**Executive Summary**

Up to one page summary of the key findings and recommendations of the study.

**Introduction**

This section includes a brief background to CCAFS, the impact pathway(s) under study and the purpose of the study in determining progress towards outcomes. It also covers the background to the work of CCAFS in the particular area of focus and its particular aims and objectives.

**Methodology**

This section includes a description of the methodology used to gather the information, explaining the focus on behavioural change as a contribution to achieving outcomes. This section should provide an overview of the research tools and the analytical framework used.

## **Findings**

### **Review of pathways and outcomes:**

This section includes information gathered in tool 1. It should lay out the information captured in tables 1 and 2, presenting a clear representation of the different outcomes and linkages within an impact pathway, and the behavioural changes required in the mapped stakeholders that contribute to the outcome. This section is very important to indicate how the pathways are nested and as such how behaviours of different actors may affect the achievement of outcomes at many different levels.

### **Identification of behavioural determinants:**

This section presents information gathered in tool 2 and in table 4, and examines the factors that influence the behaviours of the different next users identified in the mapping. Be sure to look for the commonalities within the behavioural determinants of next-users, to consider how common factors can inhibit or promote change.

### **Analysing the programme:**

#### **a. Developing of drivers of change**

This section presents the drivers of change that you have derived in tool 3 to indicate the conditions that must be met in order to promote behavioural change. These drivers of change are captured in table 5. It is useful to consider commonalities across next-users. Many drivers of change will be common, but there may be particular barriers that you have identified in tool 2 that means a particular next-user may have a specific driver of change. For each driver of change, you will have developed questions to determine its presence in the programme. You may note these questions here too in order to give the reader a clearer picture of how you analysed the programme.

#### **b. Assessment and rating of the achievement of drivers of change**

This section presents your findings and ratings as captured in table 7 and 8. This section of the report is an opportunity for you to examine in more detail how the project delivers on these drivers of change, and the impact that this is having on the achievement of behavioural outcomes. Be sure to clearly explain and justify the ratings given to each driver of change, with examples of what has or has not worked. Draw upon the information you gathered in table 6 on the programmes achievements to date to add context and depth to your analysis, and where possible explain the mechanisms that supported this achievement.

The discussion in this section can be presented against individual next-users, or against drivers of change. If the latter, be sure to make distinction between next-users where their experiences differ. An overview of the achievement towards each next-user outcome will also provide a useful summary to complete the presentation of results.

It may be too early in the CCAFS programme to comment on how well outcomes have been achieved, but through the examination of drivers of change as factors that support behavioural change you can comment on how well the programme is set up to achieve these outcomes.



## **Conclusions**

This section provides a summary of your main findings. Highlight specific areas of concern or success, and the key conditions that support positive change.

## **Key lessons learnt**

Draw together the main learning from this exercise with regards to the mechanisms within CCAFS for enabling positive behavioural change, and present as a bullet point listing.

## **Recommendations**

Consider the recommendations from these findings for CCAFS Phase 2, and present these here.

Examine:

- Research gaps and opportunities,
- Partnership arrangements,
- Programming systems.

## **Additional guidance for users**

This methodology is primarily based on desk research of CCAFS theory of change and impact pathway documentation, and workshops, consultations and focus group discussions with CCAFS staff, partners and wider stakeholders in regions and sites.

## **Desk reviews**

An initial review of the CCAFS theory of change (ToC) and impact pathways will provide you with a working knowledge of the impact pathway(s) relevant to your study that will serve as the basis for your study. If you are interested in developing a greater understanding of the concepts of Theory of Change, please consult the CCAFS working group on impact pathways and M&E for results-based management [Wiki](http://ccafs-ip-toc-cd.wikispaces.com/Home) page: <http://ccafs-ip-toc-cd.wikispaces.com/Home>

## **Consultative workshops**

Some of the stages of this analysis, particularly tools 2 and 3, could be carried out through a consultative workshop. These workshops should include invitees who are actively engaged in CCAFS as next-users, end-users or implementing partners. They must have a strong knowledge of the programme and be able to consider the changes required within their own institution and others in order to achieve the programmes outcomes. Invitations for such events should be sent at least one month in advance, to ensure that the necessary people are available.

<b>Stakeholder – group or institution</b>	<b>Stakeholder Category (next user, end user, implementing partner)</b>	<b>Contact person</b>	<b>Invitation sent (Y/N)</b>

The following checklist will help ensure that your workshop is well prepared and attended.

Action	Responsibility	Timeframe
Prepare workshop agenda		
Identify invitees		
Prepare and send out invitations		
Organise venue		
Organise facilitator(s)		
Contact and arrange speakers and presenters		
Prepare workshop materials		
Organise participants logistics – flights/accommodation		
Send out reminder with final agenda		
Organise translation if required		
Organise rapporteurs		
Write up and disseminate workshop report		

## Preparing for field work

Several tools in this guide involve the gathering of information through focus group discussions and key informant interviews. The mapping of stakeholders and behavioural outcomes completed in tool one provides a list of all the stakeholders that should be consulted and the stakeholder categories into which they fall.

### Key Informants

#### Next-users

Where possible all relevant next-users should be consulted. They will provide key information as to how positive they consider their engagement with CCAFS is for achieving their own behavioural change. Most notable next-users will include:

- Local producers and local producer groups – communities are the ultimate beneficiaries of CCAFS. However the farmer groups that work directly with CCAFS have a role to play in achieving the broader impacts of the programme through social learning, promotion and the creation of demand for services and inputs.
- Local government departments – these departments are those that provide agricultural extension and information services to communities engaged in climate smart practices, as well as the local administrations and national ministries who decide on budget allocation for climate smart agriculture and develop and implement policies.
- Research institutes – these are governmental and private academic and research institutes who work with the local government to support the continued input of new knowledge and innovation into agricultural practice and into climate monitoring and modelling.

- Private sector organisations – these are the organisations that will enable the sustainable engagement with the agricultural and financial market by local producers; they are both input suppliers and output markets.
- National government ministries – higher level national ministries that support the development of policies to enable the sustained uptake of climate smart technologies, promote coordination amongst ministries and can shape future research focus based on existing policy agendas.
- Regional bodies – higher level regional organisations that support policy development and changes and provide the framework for engaging in global policy debates and negotiations on climate adaptation and mitigation.
- NGOs – partners who provide links to farmers and farmer organisations, and who may adopt new practice due to CCAFS engagement.

### **Implementation partners**

These partners are not those in which we would expect to see significant behavioural changes. They are those who support the implementation of the programme and through their own partnerships support the achievement of change within CCAFS next-users. Most notable implementation partners will include:

- CGIAR centres – these are implementing partners within CCAFS. The analysis is useful to understand how they can change the ways in which they engage partners to bring about more sustainable changes within the next users.
- NGOs/INGOs – some key NGOs will be implementing partners within CCAFS. The analysis is useful to understand how they can change the ways in which they engage partners to bring about more sustainable changes within the next users.

Note there are at times overlaps between next-users and implementing partners. For instance, a CGIAR Centre may work with the extension services of Hoima district in Uganda as an implementing partner to test an extension approach while at the same time district extension services in Uganda are the target next-users.

### **Additional Stakeholders**

Where possible it may be useful to talk to additional actors who are working on climate change or agricultural projects in the area. These stakeholders may give useful background information on interventions and insights into examples of achieving effective behavioural change processes.

Prior to field work a list of these respondents should be compiled and requests for consultation sent. The following checklist can be used for tracking invitations.

<b>Institution</b>	<b>Contact information</b>	<b>Appointment Date</b>	<b>Type of consultation</b>

## Glossary of terms

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### Climate Adaptation

Adaptation refers to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change.<sup>8</sup>

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### Climate Change

Means a change of climate, which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

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### Climate Mitigation

In the context of climate change and CCAFS, the IPCC definition of mitigation is most relevant. Mitigation is an anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases. In other words, reducing the causes of climate change.<sup>9</sup>

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### Climate-smart Agriculture

Is an approach to developing technical, policy and investment conditions to achieve sustainable agricultural development for food security under climate change<sup>10</sup>

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### End User

The beneficiary population, usually very large; making it unfeasible for a project or programme to work with them directly to achieve an impact.

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### Food Security

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.<sup>11</sup>

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### Impact Pathway

Describes the results chain, showing the linkages from activities, through outcomes, to impact

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### Implementing Partner

Individuals and organizations that we strategically choose to work with because of their expertise, network and influence with next-users.

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### Next User

Boundary partners that can create an environment that enables the target impact for end-users. These are decision makers, in which the programme would want to see changes.

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### Outcome

The short to medium term behavioural or systemic effects that a programme makes a contribution towards, and that are designed to help achieve impacts

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### Stakeholder

All the different people and institutions, both insider and outsider, who stand to gain or lose, given a particular activity

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### Theory of Change

The theory of change complements the impact pathway by describing the causal linkages through which it is expected that an intervention will bring about the desired results. It describes programme strategies and assumptions for achieving change.

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<sup>8</sup> <http://unfccc.int/focus/adaptation/items/6999.php>

<sup>9</sup> [WWW.FAO.ORG/CLIMATECHANGE/65923/EN/](http://WWW.FAO.ORG/CLIMATECHANGE/65923/EN/)

<sup>10</sup> <http://www.fao.org/docrep/018/i3325e/i3325e.pdf>

<sup>11</sup> [WWW.FAO.ORG/DOCREP/003/W3613E/W3613E00.HTM](http://WWW.FAO.ORG/DOCREP/003/W3613E/W3613E00.HTM)