

Excerpt from Annexes: CCAFS CRP

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3.5 Results based management and MELIA

(a) Incorporating RBM into CCAFS Management Structures

RBM is key to CCAFS' program management and programmatic accountability towards outcomes and impacts, as it places emphasis on systematic, iterative learning and modification ([UNDP 2011](#)). RBM follows the logical causal chain that project activities produce tangible research outputs. The strategic use of these outputs can help transform them into appropriate outcomes (i.e. changes in practice and behavior of key next users, preceded by changes in knowledge, attitude, and skills). By tying the RBM approach to impact pathways as elucidated in theories of change (ToC) at CRP, FP, Region and project levels, CCAFS focuses on people, given that these are the ones who ultimately will change their behavior and thus contribute to developmental impact. This is reflected in CCAFS's "three thirds" management principle: one-third of programmatic effort goes into engaging with partners to decide what needs to be done and how, one-third into doing cutting-edge research, and one-third into strengthening capacity of next users to use the results of the research to achieve outcomes ([Fullana i Palmer et al. 2011](#)).

Working in a constantly changing environment requires a strategic approach with built-in reflection, monitoring and evaluation, as well as flexibility for corrective actions when needed (adaptive management). This means working with ToC and making assumptions on how we anticipate change to happen on the one hand, and accepting that change does not always happen as predicted on the other (Schuetz et al. in press).

All of the ICRPs have agreed on the fundamental conditions of a single, integrated online ICT platform to be in place from 2017 onwards. The process of designing this platform began in February 2016. The advantages of cross-CRP collaboration on a single ICT platform include reduced transaction and management costs, standardization of nomenclature and frameworks, and with time the integration and aggregation of data across participant CRPs. This is expected to benefit both the CRPs involved, and CGIAR as a whole (with and through the CGIAR System Office) in terms of providing automated data and information for the annual Plan of Work and Budget, reporting and with time, on progress towards the SRF SLOs. The system will be interoperable, enabling data to be accessible and usable by other CRPs and the System Office.

The online ICT platform (MARLO, Managing Agricultural Research for Learning and Outcomes) covers the CRP program and project management cycles, including planning, monitoring, reporting, and synthesis. The platform is structured around the ToC at programmatic, FP, Region and project levels enabling the inclusion and review of key results and assumptions on a periodic basis. The platform being developed is based on the existing CCAFS planning and reporting platform which is being modified to meet the requirements of each CRP while adhering to common principles.

For performance management, a set of annual indicators will be tracked for each program participant. These will form the basis of two-way learning between management and participants, and will be used by the Program Management Committee to incentivize good performance. The Program Management Committee, under the direction of the ISC, will commission external evaluations on issues or research topics that the ISC believes need attention. These and other ex post impact assessments will also form a core element of learning. An additional learning tool will be the risk catalogue, which will identify risks and means of mitigating these. This will be updated at least annually and be on the agenda of all ISC meetings. Given the shift to greater cross-CRP collaboration, the functioning of the LPs will be closely monitored (and be the subject of external evaluation – see below).

(b) CCAFS Monitoring, Evaluation, Learning and Impact Assessment (MELIA) strategy

CCAFS' approach to RBM is encapsulated in its Monitoring, Evaluation, Learning and Impact Assessment (MELIA) strategy. This is centred on adaptive management, outcome delivery, impact assessment, internal and external evaluations and performance management. CCAFS employs RBM to operationalize research for development (R4D) aimed at contributing to the SDGs and is therefore focused on impact pathways based on theories of change. The pathways are defined from research and its outputs and results towards outcomes and impacts. Outcomes are defined as changes in practices of the next-users of research outputs, such as policy makers, development

organizations, and farmers. The goal of the CCAFS MELIA is to provide an approach to, and guidance for, monitoring assumptions along the impact pathway (IP), and collection and documentation of evidence towards outcome contributions and impacts achieved. It encourages adaptive management through self-reflection and iterative learning, as well as experimentation and change so that monitoring, evaluation, learning and impact assessment become integral components of the CRP. The objective is to answer the following questions: what has changed, for whom, how significant are the changes, in what ways did the program contribute to these changes, are they likely to be sustainable, and at what cost. CCAFS puts emphasis on performance management, whereby the performance of participants is regularly assessed, and incentives are applied to improve performance.

During the extension phase CCAFS initiated the transition to a RBM framework with a focus on outcome delivery and monitoring progress of outcome contribution, as described in CGIAR's SRF. CCAFS's RBM framework for Phase II builds on lessons learnt from a trialing of RBM in 2014-15 for one FP. CCAFS scientists, managers, and research and development partners have helped shape this new way of doing business and have been empowered as key stakeholders in the process. The RBM framework has been considerably simplified over time, to make for more efficient program management. The shift in focus towards the delivery of outcomes that are influenced by multiple factors often beyond the direct control of CCAFS means that performance evaluation has to go well beyond the delivery of research outputs. A performance management system was used throughout Phase I and has guided funding allocations. This experience will guide Phase II, and the current [indicative CCAFS operational MELIA Plan](#) will be updated.

(c) Four pillars of the MELIA Strategy

The CCAFS MELIA strategy has four key characteristics:

A focus on users, utilization and accountability to ensure efficiency and effectiveness: The strategy needs to be user- and utilization-focused to ensure that it responds to users' needs in terms of the demand for specific information for specific purposes. CCAFS has a responsibility to account for the use of resources and management decisions made, as well as an obligation to demonstrate that work has been done in compliance with agreed-upon rules and standards, and to report fairly and accurately on performance results vis-a-vis mandated roles and plans.

An emphasis on adding value and creating space for learning through strategic and systematic MELIA activities, which need to be linked to learning and integrated into each FP and Region. As for CCAFS's Climate Change and Social Learning initiative ([Carlile et al. 2013](#)), the aim is for "transformational learning", or triple-loop learning, so that CCAFS teams and partners can learn from their work and make necessary adjustments in an outcome-focused environment.

A modular approach to ensure robustness and fitness for purpose, that combines the setting of meaningful performance expectations and targets for key results, measurement and analysis of the contribution being made to observed outcomes and impact, modifying project or program design when necessary, and reporting on performance compared with expectations.

Impact Pathways (IPs) and Theories of Change (ToC) at different levels within CCAFS (CRP, Regional Programs, FPs and projects) lie at the heart of the MELIA strategy. The Impact Pathway and ToC for CCAFS as a whole and for the four FPs are described in Section 1.0.3 and the respective FP sections of the proposal. The trajectory of CCAFS's contributions to change will be periodically revisited and subsequently adjusted throughout the implementation of the CRP work plan. Through systematically built-in reflexive spaces and mechanisms, research questions, hypotheses, assumptions and evidence of strengths of these, may be refined or changed, and solutions and innovations adjusted accordingly during annual planning and reporting. Where significant changes are called for, these will be discussed by the ISC. The same will be done at the Flagship level, with the provision of a baseline reference and measuring progress and results through revision and reflection on the initial ex-ante impact assessment laid out in the FP IPs and ToCs.

The MELIA framework contains strategic guidance and practical information and tools, to allow both quantitative and qualitative approaches. A "[MELIA Support Pack](#)" provides access to, and information on, a suite of tools, approaches and references for MELIA. It is anticipated to be a dynamic and collaborative deliverable as it integrates and connects CCAFS with other ongoing efforts in this field.

(d) Monitoring and Reporting

The following steps and approaches will be used for monitoring and reporting **on research activities** and **outcome delivery** in CCAFS Phase II:

- All project activities will continue to be **mapped into the CGIAR SRF** in relation to the appropriate sub-IDOs, IDOs and SLOs. At the same time, appropriate sets of indicators will be defined or identified (Annex Table 4). Use will be made of **existing indicator sets**, where this is possible (such as SDGs and CGIAR gender and CapDev indicators). If no suitable indicators exist, these will be **developed as appropriate**, possibly in **collaboration with other CRPs and other groups working on similar issues**, so that they can be monitored collectively. Standardization across projects, Regions and FPs (and even CRPs) will be undertaken as far as is practical to facilitate aggregation without sacrificing specificity. CCAFS actively contributes to a sub-working group on indicators and their possible standardization.
- **Targets will continue to be set**, in part drawing on extensive multi-level baseline surveys conducted in all CCAFS target regions between 2011 and 2014 (see ccaafs.cgiar.org/baselines Förch et al. 2014) and on literature, thematic and regional experience and consultation. CCAFS will build on existing partnerships and processes (such as UNFCCC) and new ones (such as active engagement with SDG working groups for identifying indicators and monitoring).
- **Progress towards these targets** is evaluated through **periodic monitoring and built-in impact assessments** (see below) involving appropriate indicators, complemented by narratives that capture sufficient context and detail to allow independent evaluation.
- **Annual reporting** takes place in a **program management online platform (MARLO)** (Förch et al. 2015), which guides users through a series of questions to monitor the evolution of the ToCs and sub-IDO contributions, document any changes made, and provide adequate justification for them. Reported progress and contribution to outcome targets are linked with key deliverables and outputs, so that reported progress and contributions can be backed up with appropriate evidence. Over the past few years, “Outcome Case Studies” and “Project Highlights” have proven to be excellent communication products for the CCAFS core team and will continue to be a key part of annual reporting (Schuetz et al. 2015).
- **Project performance monitoring** presented through the annual reporting is then evaluated for quality via an iterative feedback and performance assessment process involving CCAFS staff (e.g. FPLs, RPLs, Gender and Social Inclusion Coordinator), and external subject-matter experts. Within MARLO, deliverables can be consolidated and synthesized for reporting back to donors and others.
- Once annual reporting is complete, **risk monitoring** will be done as part of the **annual reflection of CCAFS’s ToC**, when key assumptions and risks will be reviewed and refined, possibly leading to adjustments in the CRP and Flagship IPs.
- Within MARLO, **financial planning** will be carried out annually, and **financial reporting** will be harmonized with requirements at CGIAR system level.

(e) Impact Assessment

Impact assessment is a key method of evaluating the progress, quality and performance of a program and its components. Within CGIAR, impacts are defined as the consequences of the CRPs on the status and state of selected development variables concerning the SLOs, which are themselves related to the SDGs. Impacts are the overall and long-term effects that are attributable in part to a CRP. Interventions that contribute to complex, indirect causal chains, with multiple partnerships, and with data limitations that are inherent in contemporary development programming (and by extension, in CGIAR work), require a broad range of methods to evaluate effectively (Stern et al. 2012). CCAFS will thus adopt a mixed methods approach to impact assessment that considers ex-post impact assessment along with efforts to trace impacts in the more conventional sense, but also building on CCAFS’s experience with ex-ante impact assessment along the evolution of its ToC as a complementary, more innovative and participatory approach to assessing impacts. Currently there is a lack of tools for effectively assessing such impacts (Stern et al. 2012); development and testing of new designs and methods is a key research activity towards which CCAFS Flagships and other CRPs will contribute.

Ex-post impact assessment (EPIA) in CCAFS will build on the theory-based approach discussed above. Evidence of positive outcomes consistent with anticipated (or revised) IPs will be linked to quantified changes (e.g. in livelihood status) compared with baseline assessments in CCAFS locations (building on surveys carried out in Phase 1, see <https://ccaafs.cgiar.org/resources/baseline-surveys>) and where possible with CGIAR Centres in CRPs through Site

Integration and with the Standing Panel on Impact Assessment (SPIA). Because CCAFS interventions will have influence at many different scales, and because they will operate as contributory causes in complex environments, it is unlikely that it will be possible to compare treatment and control groups in any strict sense. Counterfactuals (what would have occurred in the absence of CCAFS) cannot be directly observed and can only be estimated. A mixed methods approach employing a variety of quantitative and qualitative methods will often be needed to understand why and how changes have taken place, and what role CCAFS has played in those changes. Impacts which are not readily expressed in a quantitative sense ([Walker et al. 2008](#)) will need to be assessed through participatory approaches, where beneficiaries help to define the important impacts. Assessments will be conducted for a representative set of CRP portfolio activities so that overall impact can be appropriately extrapolated. Coordination of design and methods is important so that all CCAFS projects and activities are aligned in the way they contribute to impact assessment. For example, where impacts could be additive across projects, they need to be defined and measured in consistent ways; one example is the way in which poverty reduction is calculated. Often, impacts are not additive and this presents challenges in design to be able to understand the relative importance of different outputs and outcomes in achieving impact.

EPIA will be complemented by impact assessment as related to the evolution of the ToC. Projects in CCAFS attempt to describe and specify, as far as possible, anticipated impacts and outcomes in the narrative ToC in terms of quantity, location, and beneficiaries. These contributions are then mapped to the SLOs. It will not be possible for any one CRP to rigorously assess all these outcomes. Different degrees of monitoring will be required and a process of prioritization will need to take place. Furthermore, outcomes may be related to improved decision making by various stakeholders, or improved access or capacity. Factors related to the improved effectiveness or efficiency of organizations or systems are not straightforward to measure, and changes in such outcomes may require creativity and resources in their measurement. CCAFS has some experience in this new field and will collaborate with other interested CRPs in developing the area. Part of this will involve developing effective systems and approaches to use results from such work as part of impact assessment.

CCAFS intends to improve its use of IA for hypotheses testing, and validation of TOC and research results by (a) creating a design for measurement against the 2011-2013 CCAFS baseline surveys in 2018 so that it explicitly tests the FP and LP hypotheses, supplementing where necessary with project baselines at higher governance and spatial levels, (b) changing the requirement for ePIAs so that the impacts assessed are explicitly linked to the outcomes reported annually, and that the IA specifically tests the theory of change at project and FP levels, and (c) ensuring that all ePIAs address hypotheses on gender, youth and social inclusion.

(f) Evaluations

Evaluations can play a crucial role in providing credible and useful information for accountability and learning purposes. These include the following:

Internal Evaluations: CCAFS will conduct regular internal evaluations of its FPs, selected components, and regional sets of activities. Evaluations will draw on established IPs and regular monitoring information, with additional data collection and analyses of overall processes (process evaluation), outcomes (outcome evaluation), and the longer-term impacts. A typical internal evaluation will develop a record of work, including partnerships, stakeholder engagement, explicit and implicit IPs, main outputs, and project- and system-level outcomes. A range of methods is available for such evaluations and are included in the MELIA support pack: Outcome Mapping, Participatory Impact Pathway Analysis, theory-based approaches, Most Significant Change, Social Network Analysis, Discourse Analysis tools, Bibliometric analysis, Before/after-with/without quantitative analyses of impacts, Contribution Analysis, Triple loop learning approaches, Institutional and Innovation Histories, for example.

The main challenge is to trace the links between the collective set of activities, partnerships, outputs and project level outcomes to larger impacts and to understand whether, why and how the program has contributed to change. It is neither practical nor desirable to attempt to attribute major outcomes exclusively or even directly to CCAFS interventions. CCAFS will work closely with other CRPs, partnering in particular through the Site Integration work and its monitoring. The process of change is understood as a complex, iterative and multi-agent process. The evaluation task is to assess whether and how parts of CCAFS work have contributed by tracing back to the research and other interventions to show evidence (indicators) that the theoretical IP(s) was realized. CCAFS has put in place a system that encourages qualitative descriptions of the outcome target contribution, feedback loops, and identification of the weaknesses and/or missed opportunities that can be addressed in future work. Once outcomes

are documented, their impacts can be estimated in terms of impacts such as reduced GHG emissions and livelihoods improvements. Such internal evaluations will be done by interdisciplinary teams of CCAFS scientists and staff, supplemented by external consultants as appropriate.

Independent External Evaluations: CGIAR has established an Independent Evaluation Arrangement (IEA), with the policy for Independent External Evaluation and a set of standards intended to guide CRPs. This includes a cycle of CRP-Commissioned External Evaluations (CCEEs), as a systematic and objective assessment of the program and as building blocks to the external evaluations conducted by the IEA. IEA evaluations will have a strong focus on accountability and value for money, explicitly considering the comparative advantage of CGIAR and CGIAR reforms in efficiently contributing to the SLOs. They will examine the clarity, relevance and priority of the objectives of CRP work; original and continued validity of the intended IPs; adequacy and integration of ethical and equity considerations; efficiency and effectiveness of institutional, governance, oversight and managerial arrangements; quality and efficiency of the research; mutual accountability and responsibility in line with forecasts and budget; progress and potential for achieving outcomes and ultimate development impacts; potential for sustainability and multiplier effects of investments.

CCAFS assessments will constitute a primary source of evidence for IEA evaluation, including outcome and impact assessments, annual monitoring reports, and internal evaluations. CCAFS will seek to leverage resources with other CRPs' performance within a mutual geographic focus in line with the Site Integration plans and/or cross-cutting thematic areas (see Annex 3.6). A process has been initiated in close collaboration with IEA and MEL COP to identify synergies in carrying out baselines and evaluations across the portfolio of CRPs.

(g) Performance Management

Above the level of the research project, partner, Region and Flagship performance will be monitored through the collection of data related to key performance areas. These will include (a) scientific quality of research outputs; (b) degree to which gender and social inclusion issues are mainstreamed in research activities; (c) degree to which partnerships and capacity development are embraced; (d) appropriateness and depth of engagement across CRPs; (e) appropriateness and quality of communication activities; and (f) ability to garner resources that can help deliver outcomes. The Program Management Committee will use results to help redirect budget allocations to achieve objectives with the greatest efficiency. The results of performance management will be discussed with the ISC to ensure as much objectivity as possible. Results will be used for two-way learning between management and research participants.

(h) Budget allocation to MELIA

CCAFS recognizes that generating evidence to support key assumptions supporting a ToC are an important part of the core research agenda, and that much of the work required to strengthen and validate the ToC during early stages of research needs to be done by researchers themselves. The implementation of CCAFS's MELIA strategy relies on a broad spectrum of team members and partners. Responsibility will be split between the Coordinating Unit, Regions, FPs, projects, and Centres. Implementation will require staff with appropriate experience and skills, involving possibly up to 15% of their time. CCAFS will build as much as possible on CGIAR Centres' and partners' existing indicator monitoring systems that are already in place, and will develop partnerships for this purpose. Where this is unavoidable, CCAFS will undertake measurement itself. Implementation of the MELIA strategy will be guided and backstopped by a highly experienced consultant with up to 120 days of input per year, to be used when needed.

A rolling five-year plan of CCEEs is being developed for CCAFS starting in 2017. With the assistance of the IEA, joint CCEEs will be sought to leverage the resources of multiple CRPs and to assess performance within a geographic focus and/or thematic area. A preliminary, indicative list of CCEEs is shown in Annex Table 5. Development of the integrated online MARLOplatform across the ICRPs is expected to amount to some USD 250,000 in 2017, and its maintenance some USD 100,000 per year thereafter, 75% of these amounts being contributed by the other ICRPs that committed to the joint system. Funds for impact assessment will be set aside from 2018 and beyond, at USD 250-300,000 per annum.

Annex Table 4. List of proposed IDO indicators and approach to monitoring

The table shows a list of the IDOs that CCAFS contributes to. The indicators proposed are based primarily on global monitoring systems such as the SDGs, and will be further refined through time. The MEL COP will design a coordinated and cohesive approach across CRPs to develop joint indicators and plan an approach to show contribution to the IDOs in relevant countries.

IDO	Proposed IDO indicators	Proposed monitoring approach
IDO Increase resilience of the poor to climate change and other shocks	# of people with increased awareness and knowledge of sustainable practices	Where possible, we rely on existing indicators and monitoring frameworks, such as the SDGs and FAOStat. The monitoring approach to be developed across CRPs will establish how best to show contribution.
	# of people who claim to have increased capacity to cope with risks	
	# of people with improved hazard information	
	# of people familiar with national, subnational or landscape-level visions, strategies or plans that address sustainability	Existing monitoring frameworks we are drawing from (color-coded) include:
	# of people in area covered by a sustainable management plan	
	# of people interacting with information sharing mechanisms	SDG Indicator report by SDNS Thematic Group (SDSN 2015)
	# of people participating in rural development organizations, including informal groups	
	# of people participating in local planning exercises	2. Monitoring instrument for resilience report by Hills et al. (2015)
	# of people with positive perceptions of government accountability and transparency	
	# of people able to participate in the workforce	3. FAO State of Food and Agriculture (FAO, 2015)/ FAO STAT database
	# of people accessing financial services	
	# of people accessing market services	4. UNDP Human Development Report and statistics (UNDP 2015)
	# of people with increased farm asset base	
	# of people with new on-farm/off-farm income streams	5. Global Environment Monitoring Unit (Nelson 2008)
	# of people with increased number of farm enterprises (non-financial)	
	# of people with increased efficiency of water use/product unit	6. CapDev COP Indicators (CapDev CoP 2015). Available monitoring frameworks will be analyzed to determine frequency and level of data collection.
	# of people with increased efficiency of land/product unit	
	# of people with increased efficiency of nutrient/product unit	
	# of people with increased efficiency of labour/product unit	
	# of people with access to higher value water regulation services	
	# of people with access to higher value climate regulation services	
	# of people with access to higher value pollination services	
	# of people with access to higher value pest and predator control	

	services	
	# of people with access to higher value soil formation services	
	# of people with access to higher value nutrient cycling services	
	% of eligible population covered by national social protection programs (SDG Goal 1)	
	# Homeless people due to natural disaster (average annual per mio. people) (UNDP)	
IDO Enhanced smallholder market access	Estimated travel time to nearest city	
	Agriculture value added (% per GDP) (FAO)	
	Access to all-weather road (% access within [x] km distance to road) (SDG Goal 9)	
	Mobile broadband subscriptions per 100 inhabitants, by urban/rural (SDG Goal 9)	
	Public and private R4D expenditure on agriculture and rural development (% of GNI) (SDG)	
IDO Increased incomes and employment	Employment in agriculture (% of total employment) (UNDP)	
	Proportion of population below USD 1.25 (PPP) per day (SDG Goal 1)	
	% of households with incomes below 50% of median income ("relative poverty") (SDG Goal 10)	
	Household income, including in-kind services (PPP, current USD) (SDG)	
	Employment to population ratio (EPR) by gender and age group (15–64) (SDG)	
	Youth employment rate, by formal and informal sector (SDG Goal) [ILO]	
	Youth not in school or employment (% ages 15-24) (UNDP)	
	Vulnerable employment (UNDP)	
	Private net flows for sustainable development at market rates as share of high-income country GNI, by sector (SDG, Goal 17)	
	Gini Coefficient (SDG)	
	Share of the population using reliable electricity, by urban/rural (SDG, Goal 7)	
	Share of population covered by social assistance (disaggregated by rural by income quintile) (FAO)	
IDO	Average dietary supply adequacy (%) (FAO STAT)	

	Depth of food deficit (kCal/person/day) (UNDP)	
	Child malnutrition stunting (UNDP)	
	% of population with shortfalls of: iron, zinc, iodine, vitamin A, folate, vitamin B12, [and vitamin D] (SDG, Goal 2)	
	Prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day (SDG)	
	Cereal yield growth rate (% p.a.) (SDG)	
	Crop yield gap (actual yield as % of potential or water limited potential yield) (SDG, Goal 2)	
	Livestock yield gap (actual yield as % of attainable yield) (SDG)	
IDO Natural capital enhanced and protected, especially from climate change	Disaster Risk Reduction Indicator (SDG, Goal 1)	
	Ratio of land consumption rate to population growth rate, at comparable scale (SDG, Goal 11)	
	% population living on degraded land (UNDP)	
	Annual change in degraded or desertified arable land (% or ha) (SDG, Goal 15)	
	Annual change in forest area and land under cultivation (modified MDG Indicator) (SDG, Goal 15)	
	Net GHG emissions in the Agriculture, Forest and other Land Use (AFOLU) sector (tCO ₂ e) (SDG, Goal 13, #79)	
	Fertilizer use intensity (kg/ha) (FAO)	
IDO Adaptation and mitigation achieved	Climate Change Action Index (SDG, Goal 13)	
	Losses from natural disasters, by climate and non-climate-related events (in USD and lives lost) [SDG, Goal 1]	
	Official climate financing from developed countries that is incremental to ODA (in USD) (SDG, Goal 13)	
	Farmers with nationally appropriate crop insurance (%) (SDG, Goal 2)	
	Domestic revenues allocated to sustainable development as percent of GNI, by sector Financing for development, domestic resource mobilization (SDG, Goal 17)	
	% of official development assistance (ODA), net private grants, and official climate finance channeled through priority pooled multilateral financing mechanisms (SDG Goal 17)	
	Perceptions of government: action to preserve the environment (% satisfied) (UNDP)	

IDO Equity & inclusion achieved	% of women, men, indigenous peoples, and local communities with secure rights to land, property, and natural resources, measured by (i) percentage with documented or recognized evidence of tenure, and (ii) percentage who perceive their rights are recognized and protected. (SDG Goal 1)	
	Gender gap in wages, by sector of economic activity (SDG Goal 5)	
	Employment to population ratio (EPR) by gender and age group (15–64) (SDG Goal 8)	
	Gender Inequality Index (UNDP)	
	Funding made available for design/review of gender sensitive approaches in partner projects /programs/policies (disaggregated by type of organization). (#5 Gender sensitivity)	
	# of new policies that support gender transformative measures (disaggregated by country) (#6 Institutional Strengthening)	
IDO National partners and beneficiaries enabled	# of agricultural extension workers per 1000 farmers [or share of farmers covered by agricultural extension programs and services] (SDG Goal 2)	
	Personnel in R4D (per million inhabitants) (SDG Goal 9)	
	% of people and businesses that paid a bribe to a public official, or were asked for a bribe by a public official, during the last 12 months (SDG)	
	Perceptions of government - trust in national government (% yes) (UNDP)	
	# of partner organizations who use materials and approaches (CapDev Learning materials and approaches)	
	# of new regulations, practices implemented following training (CapDev Organizational development)	
	# of policy decisions taken (in part) based on engagement and information dissemination by CRPs. (CapDev Institutional strengthening)	

Annex Table 5. Tentative list of CCEEs and other reviews & evaluations, 2017-2022

Below is a highly tentative list of evaluations and reviews for CCAFS over the period 2017-2022.

*contact person: Philip Thornton, p.thornton@cgiar.org

Review or Evaluation	Dates	Evaluation Focus	Main Evaluation Topic/ Issue	Geographic Focus	Budget	Participating Centres/ Partners
Review	2017	Strategic approach	Synthesis of lessons learnt from CSVs as testing and LPs	LAM, WA, EA, SEA, SA	USD 60,000	CIAT, ICRISAT, ILRI, ICRAF, CIMMYT, IRRI
Evaluation	2018	FP	FP4, Climate Services and Safety	WA, EA, SA,	USD	ICRISAT, ICRAF,

			Nets	LAM	120,000	CIMMYT, IWMI, CIAT
Review	2018	FP	FP4: Review of FP portfolio, geographic balance, emerging opportunities to scale	LAM, WA, EA, SEA, SA	USD 30,000	ICRISAT, ICRAF, CIMMYT, IWMI, CIAT
Review	2018	Strategic approach	Review of CCAFS data and tools: uptake and impact	Global	USD 60,000	CIAT, ILRI
Review	2019	Strategic approach	Integrative work of ICRPs: integrating tools and mechanisms	Global	USD 10,000	A4NH, WLE, PIM
Review	2019	Strategic approach	Review of the regional strategy and target countries – should the focus change?	All regions	USD 60,000	Coordinating unit
Evaluation	2019	Strategic approach	Functioning and effectiveness of LPs	All regions	USD 100,000	CIAT, ILRI, IRI, Vermont, WISAT
Evaluation	2020	FP	FP2: evaluation of CSA effectiveness for improving the food security of the climate vulnerable	WA, EA	USD 120,000	CIAT, ICRISAT, ILRI, ICRAF, IITA
Review	2020	Strategic approach	Review of CCAFS's partnerships within and outside the CGIAR, and associated capacity development: can they be made more effective for outcome delivery?	LAM, WA, EA, SEA, SA	USD 40,000	All Centres
Review	2021	Cross-cutting research	Review of the G&SI research portfolio and the regional gender impact pathways	LAM, WA, EA, SEA, SA	USD 50,000	All Centres
Evaluation	2021	FP	Evaluation of FP1 and the effectiveness of CSA policy & investment on enhancing food security and adaptive capacity of vulnerable men and women	LAM, WA, EA, SEA, SA	USD 120,000	ILRI
Review	2022	Strategic approach	End of program evaluation of integrative work of ICRPs: integrating tools and mechanisms	global	USD 40,000	A4NH, WLE, PIM
Evaluation	2022	FP	Evaluation of FP3 and the effectiveness of integrating LED into agricultural development to reduce GHG emissions	LAM, EA, SEA, SA	USD 120,000	ILRI, IRRI, CIMMYT, CIAT

3.10.3 Acronyms and Abbreviations

A4NH – CGIAR Research Program on Agriculture for Nutrition and Health
 ACCRA – The Africa Climate Change Resilience Alliance
 ACF – Action Against Hunger (Action Contre la Faim)
 ACPC – African Climate Policy Centre
 ACRE – Agriculture and Climate Risk Enterprise
 ACSAA – Africa Climate-Smart Agriculture Alliance
 AEZ – Agro-ecosystem zones
 AfDB – African Development Bank
 AFOLU – Agriculture, Forestry and Other Land Use
 AFS CRPs/AFS – CGIAR Research Program on Fish Agri-Food Systems
 AFS-CRPs – Agri-food systems CGIAR research programs
 AgMIP – Agricultural Model Inter-comparison and Improvement project
 AGN – African Group of Negotiators
 AGNES – African Group of Negotiators Expert Support
 AGRHYMET – Centre Regional de Formation et d'Application en Agrométéorologie et Hydrologie Opérationnelle
 AGRONET – National Agricultural Information and Communication Network
 ANU – Australian National University
 APAARI – Asia-Pacific Association of Agricultural Research Institutions
 APAN – Asia Pacific Adaptation Network
 AR4 – IPCC Fourth Assessment Report
 AR5 – IPCC Fifth Assessment Report
 ARI – Agricultural research institute
 ASARECA – Association for Strengthening Agricultural Research in Eastern and Central Africa
 ASEAN – Association of Southeast Asian Nations
 ASEAN CRN – Association of Southeast Asian Nations Climate Resilience Network
 BAU Scenario – Business as Usual Scenario
 BNI – biological nitrification inhibition
 C – Celsius
 CAADP – Comprehensive Africa Agriculture Development Programme
 CAC – Central America Agricultural Council
 CAfr – Central Africa
 CapDev – Capacity Development
 CARE – Cooperative for Assistance and Relief Everywhere
 CATIE – Centro Agronómico Tropical de Investigación y Enseñanza
 CC – climate change
 CCAC – Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants
 CCAFS – CGIAR Research Program on Climate Change, Agriculture and Food Security
 CCEE - CRP-Commissioned External Evaluation
 CECOCAFEN – Central Association of Northern Coffee Cooperatives, Latin America
 CH₄ – Methane
 CIAT – International Centre for Tropical Agriculture
 CIFOR – Centre for International Forestry Research
 CIMMYT – The International Maize and Wheat Improvement Centre
 CIMSANS – Centre for Integrated Modeling of Sustainable Agriculture & Nutrition Security
 CIRAD – Centre de Coopération Internationale en Recherche Agronomique pour le Développement
 CLIFF – Climate, Food and Farming Network (research network of F3)
 ClimDev-Africa - The Climate for Development in Africa
 CO₂e/yr – carbon dioxide equivalent per year
 CoA – cluster of activities
 COMESA – Common Market for Eastern and Southern Africa
 COP – Conference of Parties
 CORAF – Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles
 CORFOGA – Corporación Ganadera (Livestock Corporation), Colombia
 CRP – CGIAR Research Program
 CSA – Climate-smart agriculture

CSAP – Climate-Smart Agriculture Programme
CSIRO – Commonwealth Scientific and Industrial Research Organization
CSO – Civil Society Organization
CSV – Climate-smart village
CTA – Technical Centre for Agricultural and Rural Cooperation
CTCN – Climate Technology Centre and Network
DCLAS - Dryland Cereals and Legumes Agri-food Systems
DfID – Department for International Development, United Kingdom
DG – Director general
DIW – German Institute for Economic Research
DMS – Data Management Strategy
EA – East Africa
EAFF - East Africa Farmers Federation
ECI – Environmental Change Institute at the University of Oxford
ECLAC - Economic Commission for Latin America and the Caribbean
ECOWAS – Economic Community of West African States
EDF – Environmental Defense Fund
EIGE – European Institute for Gender Equality
ENACTS – Enhancing National Climate Services initiative
ENSO – El Niño–Southern Oscillation
EPIA – Ex-post impact assessment
ESG – Environmental, social and governance
EU – European Union
EX-ACT – The Ex-Ante Carbon-balance Tool
FAIR – Findable, Accessible, Interoperable, Re-usable
FANRPAN – Food, Agriculture and Natural Resources Policy Analysis Network
FAO – Food and Agriculture Organization of the United Nations
FAOSTAT – The Food and Agriculture Organization Corporate Statistical Database
FEDEARROZ – Federación Nacional de Arroceros (National Federation of Rice Growers), Colombia
FEDEGAN – Federación Colombiana de Ganaderos (Colombian Cattle Ranchers’ Federation)
FENALCE – National federation of cereal growers, Colombia
FEWSNET – Famine Early Warning Systems Network
FIPAH – Fundación para la Investigación Participativa con Agricultores de Honduras
FISH – CGIAR Research Program on Fish Agri-Food Systems
FLW – Food Loss and Waste
FPL – Flagship Leader
FLAR – Latin American Reserve Fund
FONGS – Federation of NGOs of Senegal
FONGS – Federation of Non-Governmental Organizations in Senegal
FP – Flagship Program (of CCAFS)
FP1 – Flagship Program 1 (of CCAFS)
FP2 – Flagship Program 2 (of CCAFS)
FP3 – Flagship Program 3 (of CCAFS)
FP4 – Flagship Program 4 (of CCAFS)
FRI – Farm Radio International
FTA – CGIAR Research Program on Forests, Trees and Agroforestry
FTE – Full time equivalent
GACSA – Global Alliance for Climate-Smart Agriculture
GCARD – Global Conference on Agricultural Research for Development
GCF – Green Climate Fund
GCM – General Circulation Model
GFAR – Global Forum on Agricultural Research
GFCS – Global Framework for Climate Services
GFDRR – Global Facility for Disaster Reduction and Recovery
GHG – Greenhouse gas

GIZ - German Corporation for International Cooperation
 GLOBIOM – IIASA's Global Biosphere Management Model
 GLOPAN - Global Panel on Agriculture and Food Systems for Nutrition
 GRA – Global Research Alliance on Agricultural Greenhouse Gases
 GRSB -The Global Roundtable for Sustainable Beef
 GSI – Gender and social inclusion
 Gt – gigatonne
 GTPS: Brazilian Roundtable on Sustainable Livestock
 H – hypothesis
 ha – hectare
 HEIG-VD – La Haute Ecole d'Ingénierie et de Gestion du Canton de Vaud
 HLPE – The High Level Panel of Experts on Food Security and Nutrition
 ICRP – Integrative CGIAR Research Program
 IA – Intellectual Assets
 IADB – Inter-American Development Bank
 IAE – Institute for Agricultural Environment, Vietnam
 ICAR – International Committee for Animal Recording
 ICPAC – Intergovernmental Authority on Development (IGAD) Climate Prediction and Applications Centre
 ICRAF – World Agroforestry Centre
 ICRISAT – International Crops Research Institute for the Semi-Arid Tropics
 ICT – Information and communication technology
 IDO – Intermediate Development Outcome
 IDS – Institute of Development Studies
 IEA – Independent Evaluation Arrangement
 IFAD – International Fund for Agricultural Development
 IFAD-ASAP – The International Fund for Agricultural Development’s Adaptation for Smallholder Agriculture Program
 IFC – International Finance Corporation
 IFPRI – International Food Policy Research Institute
 IGAD – Inter-Governmental Authority for Development
 IIASA – International Institute for Applied Systems Analysis
 IICA - Inter-American Institute for Cooperation on Agriculture
 IIED – International Institute for Environment and Development
 IIRR – International Institute of Rural Reconstruction
 IISD – International Institute for Sustainable Development
 IITA – International Institute of Tropical Agriculture
 IITM - Indian Institute of Tropical Meteorology
 ILRI – International Livestock Research Institute
 IMAGE – Integrated Model to Assess the Global Environment
 IMPACT – International Model for Policy Analysis of Agricultural Commodities and Trade
 INDC – Intended nationally determined contribution
 INERA - Institute de l'Environnement et de Recherches Agricoles de Burkina Faso
 INRA – French National Institute for Agricultural Research
 INTA – Instituto de Innovación y Transferencia de Tecnología Agropecuaria (Institute for Innovation and Transfer of Agricultural Technology), Costa Rica
 IPCC – Intergovernmental Panel on Climate Change
 IPG – International public good
 IPOP – The Indonesian Palm Oil Pledge
 IRI – International Research Institute for Climate and Society
 IRRI – International Rice Research Institute
 ISC – Independent Steering Committee
 ISI – International Scientific Indexing
 ISI-MIP – Inter-Sectoral Impact Model Intercomparison Project
 ISP – Independent Science Panel of CCAFS (Phase I)
 ISPC – Independent Science and Partnership Council
 ISPO – Indonesian Sustainable Palm Oil

ISRA – Institut Sénégalais de Recherches Agricoles
IWMI – The International Water Management Institute
L&F – CGIAR Research Program on Livestock and Fish
LAM – Latin America
LAMNET – Latin America Greenhouse Gas Mitigation Network
LAPA – Local Adaptation Plans of Action
LED – Low emissions development
LEDS – Low emissions development strategy
LEDSPG – Low Emission Development Strategies Global Partnership
Leeds – University of Leeds
LEI – The leading institute for social-economic research of Wageningen University and Research Center
LP – Learning Platform
LIVESTOCK – CGIAR Research Program on Livestock
MAGNET – Model description of Agricultural economy
MAIZE – the CGIAR Research Program on Maize
MARLO – the CCAFS planning and reporting system
MEL – Monitoring, Evaluation and Learning
MICCA – Mitigation of Climate Change in Agriculture Program
MoALF – Ministry of Agriculture, Livestock and Fisheries, Kenya
MOT – Mitigation Options Tool
MRV – Monitoring, reporting and verification
Mt – Metric tonnes
N₂O – Nitrous oxide
NAFSIP – National agriculture and food security implementation plan
NAIP – National Agricultural Investment Plan
NAMA – Nationally Appropriate Mitigation Action
NAPA – National Adaptation Programmes of Action
NAPs – National adaptation plans
NARES – National Agricultural Research and Extension Systems
NARS – National Agricultural Research System
NEPAD – New Partnership for Africa's Development
NERC – National Environmental Research Council
NGO – non-governmental organization
NMS – National Meteorological Services
NUI – National University of Ireland
OA – Open Access
OADMP – Open Access and Data Management Policy
OAI-PMH – Open Archives Initiative Protocol for Metadata Harvesting
OD – Open Data
ODA – official development assistance
ODI – Overseas Development Institute
P&R – the CCAFS planning and reporting system
PAC – Partnership Advisory Committee
PAFO – Pan African Farmers' Organisation
PAR – Participatory action research
PICSA – Participatory Integrated Climate Services for Agriculture
PIK – Potsdam Institute for Climate Impact Research
PIM – CGIAR Research Program on Policies, Institutions, and Markets
PMC – CCAFS program management committee
PMU – Program Management Unit
POWB – Program of Work and Budget
PPCR – Pilot Program for Climate Resistance
Prolinnova – PROMoting Local INNOVation in ecologically-oriented agriculture and NRM
QUT – Queensland University of Technology
R4D – Research for development

RAFS – Retirement Assistance for Farmers Scheme
RBM – Results-based management
RCP – Representative concentration pathway
Reading – University of Reading Walker Institute
RHO – Risks Household-Options
RICE - CGIAR Research Program on Rice
RIMES – Regional Integrated Multi-Hazard Early Warning System for Africa and Asia
RPL – CCAFS Regional program leader
RSPO – Roundtable on Sustainable Palm Oil
RTB – CGIAR Research Program on Roots, Tubers and Bananas
SA – South Asia
SAfr – Southern Africa
SACAU – Southern African Confederation of Agricultural Unions.
SAI-Platform – Sustainable Agriculture Initiative Platform
SAMPLES – Standard Assessment of Agricultural Mitigation Potential and Livelihoods Program
SAN – Sustainable Agriculture Network
SBSTA – Subsidiary Body for Scientific and Technological Advice
SDG – Sustainable Development Goal
SEA – Southeast Asia
SEARCA – Southeast Asian Regional Center for Graduate Study and Research in Agriculture
SECAC – Executive Secretariat of the Central American Agricultural Council
SHAMBA – The Small-Holder Agriculture Mitigation Benefit Assessment
SLO – System-Level Outcomes
SMS – Short Message Service
SPIA – Standing Panel on Impact Assessment of CGIAR
SRF – Strategic results framework of CGIAR
SSA – Sub-Saharan Africa
SSP – Shared socio-economic pathway
SuPER – sustainability, productivity (including profitability), equity and resilience
SUSFANS – Sustainable Food And Nutrition Security
SwissRe – Swiss Reinsurance Company Ltd.
TFA 2020 – Tropical Forest Alliance 2020
TNC – The Nature Conservancy
ToC – Theory of change
TRANSMANGO – Assessment of the impact of drivers of change on Europe's food and nutrition security
TSBF – Tropical Soil Biology and Fertility Institute
U Vermont – University of Vermont
UCI – University for International Cooperation
UN – United Nations
UN-REDD – United Nations collaborative initiative on Reducing Emissions from Deforestation and Forest Degradation
UNFCCC – United Nations Framework Convention on Climate Change
URAC – Union des Radios Associatives et Communautaires du Sénégal
US – United States of America
USAID – United States Agency for International Development
USD – United States dollar
WA – West Africa
WB – World Bank
WBCSD – World Business Council for Sustainable Development
WBG – The World Bank Group
WEDO – Women's Environment and Development Organization
WEF – World Economic Forum
WFP – World Food Program
WFO - World Farmers' Organisation
WHEAT – The CGIAR Research Program on Wheat

WHO – World Health Organization
WISAT – Women in Global Science and Technology
WLE – CGIAR Research Program on Water, Land and Ecosystems
WMO – World Meteorological Organization
WRI – World Resources Institute
WUR - Wageningen University
WWF – World Wide Fund for Nature
YPARD – Young Professionals for Agricultural Development