CCAFS Phase II Capacity Development Strategy

(i) CapDev role in impact pathway

Capacity development is pivotal to the impact pathways of CCAFS as a whole and the individual FPs, providing the mechanisms whereby increasing abilities to demand, undertake and utilize research lead to sustainable improvements in capacity to manage climate change. Thus the CCAFS capacity enhancement strategy addresses the full ToC cycle, from discovery through to scaling, monitoring and evaluation, as the sub-section below show. CCAFS will work at individual, organizational and institutional levels of capacity development, and with both researchers and research users, including organizations and networks. In Phase I and the Extension Phase CCAFS has undertaken capacity needs assessments at broad-ranging national levels (e.g. CSA country profiles) and at more specific levels of particular technological and institutional innovations (e.g. index insurance and GHG inventories). CCAFS is committed to improving its monitoring and evaluation of capacity development outcomes and impacts during Phase II, for example through rigorous ex-post impact assessments.

(ii) Strategic CapDev actions

CCAFS capacity development actions address all nine elements of the CGIAR CapDev framework, but focus in particular on four elements: (2) Learning materials and approaches; (5) Gender-sensitive approaches; (6) Institutional strengthening; and (8) Organizational development. Wherever possible, the four FPs will link capacity development actions for greater effectiveness and efficiency, and work with other CRPs.

Learning materials and approaches

CCAFS will invest in innovative content development and knowledge sharing mechanisms to increase the uptake of research outputs at all levels. All materials, trainings and outreach will be grounded in theory and designed in direct consultation with partners and intended end-users. To maximize uptake and sustainability, the intention of CCAFS is that all learning materials and associated decision tools and information resources should be under the direct control and ownership of partners and users as early in the research cycle as possible. For example, the National Environmental Information System, co-led by all FPs, will be under national ownership in Cote d'Ivoire from the start, with the assistance of the UN agency CTCN, providing environmental data of relevance to national policy-makers. The online South Asia Drought Monitoring System (FP4 linked to WLE) will serve as an interface between climate service providers and users, with local co-ownership.

CCAFS will maximize scalable learning materials and capacity development at the level of extensionists and farmers through the appropriate use of communications technologies and approaches. In particular, work will continue with partners to develop, test and scale up agro-advisories that enhance farmers' decision-making capacity under uncertain climatic conditions. In Rwanda, for example, intermediaries will be trained to communicate climate information services at large scale, reaching thousands of farmers through seasonal planning workshops, rural radio and a

cellphone-based SMS platform (FP4). In Uganda, emphasis will be placed on putting climate change decision tools – and the capacity to use them – in the hands of private and public sector extension agencies (FP2). New flexible training materials will be developed in local languages (FP2 and FP3), through partnerships.

CCAFS will also take advantage of opportunities to increase the uptake and learning value of existing tools and protocols. For example, work with AgMIP is intended to accelerate the use of integrated food security assessments in Africa and SA, as government agencies actively use the online protocols as a result of shared capacity development efforts between AgMIP and CCAFS (FP1). Likewise, CCAFS will work with users to improve the nitrous oxide protocol in the Cool Farm Tool, raising capacity among users of the foremost field-level emissions assessment tool in the private sector (FP3). The already widely used ICT-based Crop Manager will be enhanced, with relevant trainings, for all major food crops in SA and SEA (FP4).

Gender-sensitive approaches

CCAFS places particular emphasis on capacity development that is gender-sensitive. In some cases this involves capacity development activities that appreciate the different needs and capacities of men and women, while in other cases the emphasis is on providing specific opportunities for women, in recognition of the enormous participation and agency of women in global agriculture, yet weaker access to key resources and services. Phase I of CCAFS provided insights into the differing needs of women and men with regard to multiple climate-smart options, such as climate information services and adapted crop varieties. A gender toolkit developed with partners has been taken up widely. Phase II will continue to build this knowledge, and apply it directly in capacity development activities, working closely with key partners WISAT, Prolinnova and FAO.

Gender sensitivity will be built into the design of capacity development actions. For example, the content and format of farming advice provided through agro-advisory services will be adjusted to accommodate preferences of women farmers and of women within farm households (FP2 and FP4). Research will test the degree to which these services can be gender transformative by improving control of resources and participation in decision-making (FP4). Current evidence will be synthesized and new knowledge and evidence will be generated to inform investment, design and implementation of these services. CCAFS will invest in deliberate and measurable inclusion of local capacity development initiatives led by women, such as the Triple A agroforestry project in Western Kenya, in which the local partners are either gender-sensitive or women-only self-help groups (FP2). Trade-offs between competing outcomes, such as emissions reductions and gender equity, will be researched and addressed (FP3).

In building capacity of future research leaders, CCAFS will focus on women scientists. For example, global programs such as CLIFF-LAMNET and improvement of the MOT tool will prioritize training of women scientists and policy makers, to enhance their opportunities for contributing directly to national reporting and decision-making on agricultural greenhouse gas emissions (FP3). Post-doctoral positions for gender specialists from developing countries in selected sectors will support more gender-sensitive research. CCAFS will work with partners to measure continuous improvement in gender-sensitivity at individual, organizational and institutional levels of capacity development, including at the level of national policy. This will include research on approaches to capacity development, for example within the Climate Change and Social Learning initiative (FP1) and the National Assessments on Gender and STI ,which track the representation of women in key national sectors including agricultural and environmental sciences and decision making, the economy, and the agricultural labour force (WISAT).

Institutional strengthening

CCAFS will make strong investments in capacity development interventions at the institutional level, with a focus on the intersection between emerging climate change policies and processes on one hand, and pre-established policy frameworks and non-governmental mechanisms on the other. In all regions, CCAFS will provide integrative cross-CGIAR LPs on climate change. Building on existing national science-policy platforms led by CCAFS and partners, these will bring together relevant decision-makers to learn from CGIAR climate-related science in a consistent way, to inform key policies and programs such as National Adaptation Plans (NAPs), Nationally Appropriate Mitigation Actions (NAMAs) and submissions to the UNFCCC including INDCs. CCAFS facilitation of these multi-stakeholder platforms will provide direct institutional strengthening with regards to adaptation and mitigation capacity, including access to climate finance via for example the Green Climate Fund in individual countries, and at regional and higher levels via collaboration with partners such as NEPAD and ASEAN. Where necessary, sector-wide LPs will be complemented by more specific multi-stakeholder working groups, for example on insurance (FP4) and paddy rice management (FP3).

Policy-makers will be directly involved in all stages of research relevant to policy design and implementation. For example in SA, CCAFS scientists will join with policy-makers to undertake case studies of Local Adaptation Plans of Action (LAPAs) to generate guidelines for practices, governance, business cases, incentives and institutional arrangements that will scale up climate-smart agriculture (FP2). Testing of a set of alternative institutional arrangements will be built into scaling up of the CSV model in India (FP1). In Colombia and other countries, researchers will work side by side with policy-makers to generate policy-relevant information on emissions reduction options, in the process building long-term institutional capacity to develop low emissions agricultural development pathways and to negotiate effectively in the global arena (FP3).

Some institutional agendas require capacity development across multiple levels of governance. For genetic resources under climate change, for instance, processes to develop access and benefits sharing agreements will demand robust linkages between national public agencies and local communities (FP2). Other projects will use horizontally networked institutions among farmers and farming communities as a mechanism for capacity development. For example, in Kenya, best practices identified in local Community Action Plans will be implemented through farmer-to-farmer extension and training (FP2). The local institutional analysis carried out by CCAFS during its Phase I baseline enables identification of local self-help groups, and other formal or informal organizations, as effective partners for development of institutional capacity among farmers and their immediate boundary organizations. Crowd-sourcing will be tested in LAM for its effectiveness in enhancing adaptive capacity among farmers (FP2).

Organizational development

CCAFS recognizes the need to work closely both with research partners, especially NARS, and with boundary partners to address the new set of opportunities and challenges under climate change. These include new technical skill sets (e.g. models, future scenarios, greenhouse gas measurement) as well as a strong working knowledge of the many new mechanisms for linking from research to development outcomes (e.g. policy vehicles like the UNFCCC, finance mechanisms like the Green Climate Fund, disaster and risk management, private sector emissions targets).

A set of highly focused capacity development actions will enhance the abilities of NARS in specific research approaches that will enable sustained inputs to national policy and to international science. For example, a focus in SA and SEA will be training of NARS and extension services in remote sensing information with applications in crop insurance (FP4). Direct collaboration with meteorological services will secure organizational capacity to provide farmer-friendly climate information services and to reconstruct historical climate records across Africa (FP4). Under the SAMPLES project and related work, considerable effort will be put into building knowledge and skills of national

agricultural researchers around greenhouse gas analysis and more specifically mitigation options (FP3). These capacity development efforts will go beyond technical skills to include legal protocols, reporting systems, cost-efficiency and sources of finance.

At a broader level of organizational development, CCAFS and its strategic partners will work with NARS and national-level boundary partners to manage internal and external processes in ways that increase research impact. Building on experience in the Extension Phase, CCAFS will work directly with NARS in several countries on fundraising for national-level research on climate change solutions in agriculture, for example from the Green Climate Fund. CCAFS will maintain annual targets for authorship of CCAFS-funded papers by NARS scientists. Capacity of NARS and boundary partners to influence policy will be enhanced by facilitating their inclusion and leadership in national and regional policy LPs. For example, SAG-DICTA (Secretariat of Agriculture and Livestock in the Directorate of Agricultural Science and Technology) in Honduras is strengthening its capacity on agroclimatic services and leading a LP to support policy actions. At higher levels, CCAFS will finance and facilitate NARS scientists to participate in processes such as The African Group of Negotiators Expert Support (AGNES) to maximize the evidence base and research impact in key forums that have a direct impact on allocation of resources to adaptation and mitigation in agriculture.

(iii) Indicators that track progress and contribution to CapDev Sub-IDOs

At the level of the whole program, each FP will target one of its five outcomes as a specific CapDev outcome. The selected outcome is "Policy-making capacity of government agencies enhanced". This outcome was selected because of the outcome-orientation of CCAFS, the focus on policy as a route to scaling CSA and the crucial role of boundary partners. Thus at the level of the program, we place emphasis in capacity development on institutional strengthening. All project participants will be required to report on outcomes, so that the indicator "Number of policy decisions taken (in part) based on engagement and information dissemination by CRPs" can be tracked. Verification will be through external reviewers and ex-post impact assessments, against counterfactuals. In addition, to this program-level outcome/indicator, a number of other indicators will be tracked (Annex Table 3) through CCAFS data management strategy (e.g. in relation to learning materials and publications), through the GSI LP (the CaPDev indicators focused on gender) and through specific stakeholder surveys.

CCAFS indicators to track progress and contribution to CapDev sub-IDO

a) Learning materials and approaches

CapDev Outputs (CRP/FP level)	CapDev Outcomes (CRP/FP level)	CapDev Outcomes (Boundary partner level)
Output 1: Learning materials designed according to context and audience. **Indicators**: Proportion of learning materials developed for external audiences reviewed with relevant partners **Output 2: Learning materials pilot tested with target audience.** **Indicator:** Proportion of learning materials developed for external audiences piloted with representative audiences	**Outcome 1: Learning materials accessible to targeted users.** **Indicator**: Proportion of intended users who rate learning materials as accessible in participant feedback surveys **Outcome 2: Users implement the learnings and take decisions based on materials.** **Indicator**: Increase in number of outputs and decisions made by users that demonstrate application of learnings and materials	**Outcome 1: Partner research and development organizations use learning materials and approaches.** **Indicator**: Number of partner organizations that use materials and approaches **Outcome 2: Training/workshops based on learning materials and approaches leads to changes in practice.** **Indicator:** Incidence of new regulations, practices implemented following training or workshops

b) Gender-sensitive approaches

CapDev Outputs (CRP/FP level)	CapDev Outcomes (CRP/FP level)	CapDev Outcomes (Boundary partner level)
Output 1: Engagement with key partners for gender-sensitive approaches, including learning agendas. **Indicators:** Number of learning agendas evaluated and implemented **Output 2: Provision of options for capacity development in gender approaches & toolkits.** **Indicators:** Number of gender toolkit (& similar) activities with partners	**Outcome 1: Enhanced capacity and willingness of CRP staff and partners to understand and embrace gender-sensitive approaches in the design and implementation of projects, programs, and policies.** **Indicators:** Proportion of projects that include gender-sensitive approaches	**Outcome 1: Conducive agricultural policy environment for gender-sensitive and gender-transformative measures.** **Indicator:** Number of new policies that support gender-sensitive and gender-transformative measures (disaggregated by country)

c) Institutional strengthening

CapDev Outputs (CRP/FP level)	CapDev Outcomes (CRP/FP level)	CapDev Outcomes (Boundary partner level)
Output 1: CRPs/FPs support institutional strengthening activities of boundary partners with a focus on policy makers from government agencies. **Indicators:** Number of policy platforms supported	**Outcome 1: Strategic plans for institutional strengthening of policy capacity implemented.** **Indicator:** Number of strategic plan recommendations implemented (disaggregated by agency or policy process)	**Outcome 1: Policy-making capacity of government agencies enhanced.** **Indicators:** Number of policy decisions taken (in part) based on engagement and information dissemination by CRPs

d) Organizational development

CapDev Outputs (CRP/FP level)	CapDev Outcomes (CRP/FP level)	CapDev Outcomes (Boundary partner level)
Output 1: Engagement with NARS and research partners throughout the research cycle **Indicator:** Proportion of meetings (of Regional Program Leaders) at all stages of CRP cycle that include research partners and NARS (planning, implementation, progress review, evaluation) **Output 2: Strengthen NARS and research partner skills related to research cycle** **Indicators:** Number of participants from NARS and research partner organizations	**Outcome 1: Stronger skills of individuals and organizations in policy engagement for uptake** **Indicator:** Increase in proportion of policy engagement activities (e.g. events, online platforms, networks, policy briefs, public speaking appearances) led by NARS partners **Outcome 2: More effective R4D is produced by NARS** **Indicator:** Increase in number of peer-reviewed publications co-authored by NARS	**Outcome 1: Institutional support at national level for effective R4D** **Indicator:** Increase in funding provided for (a) research and (b) engagement between research and research users **Outcome 2: Productive university-industry collaboration** **Indicator:** Increase in number of private sector adoptions of CRP innovations led by NARS

(iv) Budget and resource allocation

The capacity development budget is calculated as 18% of total budget, some allocated through the partnership budget and some coming from CGIAR staff costs and operational expenses.