CGIAR Program on Climate Change, Agriculture and Food Security (CCAFS)
2013 Annual report

A. KEY MESSAGES

CCAFS has 12 Objectives in four Themes. Each Objective has a 10-year Outcome Target and a 3-year intermediate performance target. CCAFS has surpassed the 3-year targets for two of the Objectives, achieved the targets for seven Objectives and is behind target for three Objectives (Table 1). Most progress has been made in East Africa (EA), West Africa (WA) and South Asia (SA) – the regions established at the start of CCAFS; but there have been significant outcomes in the recently established region of Latin America (LAM), with less progress in South East Asia (SEA).[1]

Progress has been made from field level with farmers, to work in policy arenas (Table 1). For example: in India over 50,000 farmers have been insured with new index-based products; in Senegal, weather forecasts using new approaches are reaching 3 million farmers, with attention to reaching both male and female farmers; many national meteorological services (NMS) are shifting practices as a result of CCAFS R&D; nearly 15,000 women village leaders were trained in climate-smart agriculture (CSA) in Bihar and Nepal in 2013. Engagement in policy processes has influenced the national adaptation strategies in numerous countries. For example: Nicaragua's new national adaptation strategy has resulted in major investments for coffee and cocoa as a direct result of CCAFS research; agricultural ministers endorsed a major strategy for plant genetic resources in Mesoamerica. CCAFS-generated downscaled climate data was downloaded more than 100,000 times in 2013, including by key development partners. CCAFS research is helping set breeding strategies for beans, maize, rice, cassava and potatoes. The achievements are generally a result of partnerships – co-design, co-production and co-dissemination with major development agencies, private companies (e.g. insurance), farmer organisations, communication services (e.g. rural radio) and other CRPs.

In 2013 CCAFS also began phase 2 planning. Five Intermediate Development Outcomes (IDOs) are proposed. The IDOs will only be incorporated into programming in 2015, but in 2014 a performance-based management trial is being conducted on what is proposed as Flagship 4 in CCAFS phase 2. Performance-based management is not new to CCAFS, with performance measures used each year to give performance-based allocations to participating Centres.

Within CCAFS, cross-Center work is now vibrant, and we would argue that this has resulted in CCAFS becoming the "go-to" place for climate change and developing country agriculture, an outcome that no single Center could achieve. But challenges remain, and perhaps one of the greatest relates to coordination amongst CRPs (e.g. different Centers and CRPs working with the same farmers, or the same regional organisations, in an uncoordinated manner) and boundaries amongst CRPs. Five CRPs started a trial in Burkina to coordinate impact pathways and activities.

Synthesis of the two most significant achievements/success stories

1. Delivering climate forecasts to smallholder farmers in 7 African countries. When CCAFS was initiated, research on climate information services became a new area of research for the CGIAR. As a result of research and capacity investments by CCAFS and partners, especially the International Research Institute for Climate and Society (IRI), University of Reading, the World Meteorological Organization (WMO), USAID, national meteorological services (NMS) and the regional service AGRHYMET, significant progress has been made. (a) The NMS in three countries and AGRHYMET now produce and disseminate historic and monitored climate information at a scale that is relevant to rural communities, with complete spatial coverage, by blending satellite and station data, using methods, tools and results from CCAFS. (b) There have been changes in the policies and activities of at least four NMS, as a result of improved understanding of farmers' perceptions and information needs together with the design and implementation of methods for providing climate information services that better reflect smallholders' requirements. WMO has endorsed the approach and is involved in further scaling up initiatives, while the major NGOs Oxfam, Farm Africa, Practical Action and World Vision have

incorporated the approach into training materials and activities. (c) In Senegal, as an example, CCAFS has been working with the Senegal Meteorological Agency (ANACIM), Senegal NARES (ISRA), Department of Agriculture, local farmer associations and NGOs (World Vision, Red Cross), and rural radio networks. The detailed work, with attention to gender inequities, has been conducted in Kaffrine District where climate-informed advisories now reach 2000 farmers. CCAFS has stimulated the agricultural agencies and NMS to integrate activities for the benefit of farmers. Fifteen community-based radio stations in 4 administrative regions of Senegal now deliver seasonal forecasts to an estimated 3 million farmers, using CCAFS and ANACIM forecast and communication approaches.

2. Increasing incomes and reducing GHG emissions in the dairy sector. CCAFS has played a role in putting CSA on the global agenda, together with key partners, e.g. World Bank, FAO. This work is complemented by national policy engagement and action research on CSA technologies in about 20 countries. One example of action research is the contribution by CCAFS to the East African Dairy Development (EADD) program of Heifer International. ICRAF and ILRI are partners in this program, supporting EADD in the animal fodder, husbandry and extension components, and thus helping Heifer reach 179,000 families and increasing their earnings by a collective $131 million[2]. Heifer focused on improving milk production and quality, and access to markets through the formation of Dairy Farmer Business Associations. The science underpinning the use of improved feed to reduce GHG emissions has been documented by ILRI[3], while ICRAF have worked at one of the EADD sites in Kenya, together with FAO, estimating GHG emissions and productivity.[4] For CGIAR, this is part of a cross-Center effort – "Standard Assessment of Mitigation Potential and Livelihoods in Smallholder Systems (SAMPLES)" – to develop methods for GHG accounting in smallholder systems. EADD has now adopted CSA as a program objective, partly based on engagement with CCAFS, and the mounting evidence that better feeding/manure management can contribute to GHG reduction and improved income for farmers.

Financial summary

CCAFS' 2013 total budget was $71.6 million including funds from the CGIAR Fund and bilateral sources. Total execution in 2013 was $68.3 million (95%). Gender and social differentiation research activities were in the order of $5.5 million, approximately 8% of the total execution. Final and total 2013 allocated W1&2 budget as per the final Financing Plan received early in December was $44.8 million. First tranche of W2 2013 funds (2%) was received in mid-June and the first W1 tranche (30%) late in July. Thereafter, several other disbursements were made, amounting to 67% of the total 2013 W1&2 budget as of end of 2013. In January 2014 two more tranches were received (28%) which means that as of March 31st 2014 95% of the 2013 budget was funded.

B. IMPACT PATHWAY AND INTERMEDIATE DEVELOPMENT OUTCOMES (IDOS)

When CCAFS was initiated, 10-year outcome targets were specified for each of the 12 Objectives. In addition, for each Objective a 3-year intermediate performance target was established (Table 1). The CCAFS Theory of Change is given in the original program plan.[5] Baselines have been established at all sites.[6] CCAFS has now established Intermediate Development Outcomes (IDOs) for Phase 2, focussing on the proposed common IDOs amongst CRPs related to: Food security; Gender and social differentiation; Adaptive capacity; Policies and institutions; and Mitigation. These will be incorporated into CCAFS programming in 2015, though the performance-based trial does focus on these outcomes not the original outcomes. Impact pathways for all these outcomes are currently being finalised.[7]

C. PROGRESS ALONG THE IMPACT PATHWAY

C.1 Progress towards outputs

CCAFS produced seven flagship products and seven flagship tools in 2013 (Annex 1).

Flagship products

AgMIP Phase 2 outputs: CCAFS has been a partner in the Agricultural Model and Intercomparison and Improvement Project (AgMIP) to compare 10 global agro-economic models by standardizing their

initial conditions, in order to achieve a better understanding of model results and variance among models. One paper in the *Proceedings of the National Academy of Sciences*[8] and seven papers in a special issue of *Agricultural Economics*[9] presented the detailed findings.

African Agriculture and Climate Change Series: Three research monographs on West, East and Southern Africa, co-authored by NARS and CGIAR authors and published by IFPRI, provide country-by-country analyses of the impacts of climate change on future food security.[10]

Meta-synthesis of National Adaptation Plans: CCAFS produced a synthesis of national climate change adaptation plans in WA, EA and SA,[11] and used this product to help policy-makers enhance their capacity in adaptation planning for agriculture, via a multi-country workshop linked to the UN Climate Conference in Warsaw[12] and a country-specific workshop for Kenya, one of the first movers on adaptation planning. Kenya has now released its official national plan with CCAFS support.[13]

Standard Assessment of Mitigation Potential and Livelihoods in Smallholder Systems (SAMPLES): Both a product and a program of work, SAMPLES aims to build effective systems for understanding smallholder emissions and enabling mitigation options. SAMPLES includes protocol development, global priority setting, capacity building, and field-testing and research. SAMPLES involves ICRAF, ILRI, IRRI, CIFOR, CIMMYT and many NARS partners.[14]

Shamba Shape Up: CCAFS supports scaling out of gender-sensitive climate smart practices in this Kenyan reality TV show on farm makeovers, watched by over 3 million viewers weekly. Viewers can request leaflets (in English or Swahili) that summarize content, and uptake of CSA practices is being evaluated. CSA episodes led by CCAFS have been produced, using examples from many Centers.[15]

Tailored advisories through mobile phones. A gender-disaggregated pilot by CIMMYT of a product generated with private sector partners IFFCO Kissan Sanchar Limited, a telecom content provider, and Kisan Sanchar, an implementing agency, to provide tailored voice-based agro-advisories to 1200 farmers in Haryana and Bihar, India. Messages include weather forecasts and recommended actions that farmers should take, and information about pests and remedies, seed varieties, and climate-smart technologies. Additional messages provide up-to-date- market information and contact details for seed providers.[16]

Radio jingles in Nepal: Following a pilot study that showed radio to be the preferred source of information among women and men, CCAFS collaborated with the Nepal Development Research Institute to develop one-minute radio jingles and Public Service Announcements to reach a million farmers with information on climate change adaptation.[17]

Flagship tools

Climate Analogues and Farms of the Future approach are linked tools that were tested in 3 regions. They provide farmers with information to plan and conduct exchange visits to sites that represent their likely climatic farming futures. Women and men from 5 countries in West Africa have been trained in use of the tool, in partnership with the Institute for Sahel (INSAH).[18]

Crop Wild Relatives (CWR) Gap Analysis Methodology, from CIAT, provides a method to identify priority taxa and geographic areas to cover gaps in genebank accessions based on analysis of climate.[19]

Nutrient Expert™ is an interactive, computer-based decision support tool for farmers, initially developed by the International Plant Nutrition Institute (IPNI) in collaboration with CIMMYT and multiple partners. The tool is being used and modified for wheat and maize systems of India as part of a 'nutrient smart' approach to fertilizer use in CCAFS Climate Smart Villages – providing smallholder farmers with access to a key strategy for adaptation and mitigation in cropping systems.[20]

Methodological guide on participatory analysis of vulnerability and adaptation is a field guide for gender-disaggregated research by ICRAF.[21] ICRAF also produced *The Talking Toolkit: How smallholder farmers and local governments can together adapt to climate change*, a field tool to help farmers,

extension agents and local government staff to work together to understand the role of trees and agroforests in reducing the impact of extreme weather events and long-term climate change.[22]

G-range model, developed by ILRI, Colorado State University and USDA, builds on established models CENTURY and SAVANNA to give rapid forecasting of biomass production, soil condition and carbon stocks in dryland pastures. The model's comparability with field measurements ranges from reasonable to excellent for different sites.[23]

Maprooms, from IRI, is an online tool to enable analysis of rainfall variability and seasonal predictability at CCAFS sites in Nepal, Bangladesh and Northern India. Users can assess the probabilities of above-normal, near-normal, and below-normal rainfall and temperature during each stage of the El Niño/Southern Oscillation cycle.[24]

Data assimilation-crop modelling framework, developed by IRI and NASA, is available to assimilate remotely sensed data with a crop model to improve crop yield forecasting at a given lead-time within the growing season.[25]

Open-access databases and publications

CCAFS maintained the open-access databases reported in 2012, and recorded more than 60,000 unique users in 2013. AgTrials, a repository of climate-specific agricultural trial data,[26] now contains 34,535 trials, up from 4,600 trials in 2012. Work was done to link databases where appropriate; for example, 29,633 data files in AgTrials are now identified against the trait terms of the Crop Ontology database, which harmonizes crop-specific terminology on climate-relevant genetic information to inform breeding for current and future climates.[27] Some 135,000 files were downloaded from CCAFS-Climate, which contains downscaled GCM data.[28] In 2013 there were nearly 1,900 downloads of CCAFS baselines material from Dataverse,[29] including by GIZ, World Bank, and International Relief for Development. One new database was added: *RE-FARM Database.* It contains 276 case studies on diversification for climate change adaptation to assist in identifying successful adaptation strategies based on diversification, and identify best bet technologies to increase the overall resilience of agro-ecological systems.[30] The number of CCAFS publications in ISI journals increased by over 25% on 2012, to 98, reflecting the increasing maturity of climate change research in the CGIAR. Several articles were in high-impact journals, including Science, Nature, PNAS and Global Environmental Change.

C.2 Progress towards the achievement of research outcomes and IDOs

Targets 1.1 and 1.2 in Theme 1 (Progressive Adaptation to Climate Change) were achieved. In 1.2 the Climate-Smart Village (CSV) approach – local learning platforms for a portfolio of adaptation (and mitigation) options (reported in 2012) to be trialled with men and women farmers – has been established at 15 sites in three regions.[31] The CSV approach is now being used by implementation agencies. Practical Action in Nepal, e.g., will implement CSVs in three districts. Target 1.2 has largely been accomplished through collaboration with some of the commodity CRPs. Climate modelling has helped to inform global and national breeding strategies. For example, the Global Cassava Partnership, an alliance of many agencies and including at least a dozen breeding organisations, has adopted the concept of the Rambo root, promoting cassava as a substitution crop and identifying biotic constraints as the priority for future breeding efforts. Target 1.3 was surpassed, with CCAFS science informing adaptation policy processes in three regions. The work with the Nicaragua adaptation plan, e.g., has resulted in a US$24 million investment to climate-proof the coffee and cocoa sectors.

Progress has been good in Objective 2.1 of Theme 2 (Managing Climate Risk). One of the most promising outcomes involves the partnership with the Agricultural Insurance Company of India which already insures 12 million farmers. CCAFS has been improving the indices used to determine whether pay-outs occur, leading to protection of more than 50,000 rainfed farmers in one crop season alone. The number will go up in the next crop seasons. Progress in 2.2 has been slow, mostly because this is largely a new area for the CGIAR – dealing with the whole food system and crisis response.

Nonetheless the pipeline of activities is promising. Target 2.3 has been surpassed, with some major successes (see 1st success story in key messages).

For two Objectives in Theme 3 (Pro-poor mitigation) the targets were achieved, but targets for Objective 3.2 were not met. This Theme focuses on mitigation, an area of major differences in opinion in the global climate negotiations, making progress on the ground difficult. The two new regions established by CCAFS (LAM and SEA) were partly selected because of their higher mitigation potential. They have only recently become fully functional. These issues explain the slow progress on target 2.2 related to institutions and incentives for mitigation. In Theme 3 new pathways and practices for agriculture – to achieve low emissions agricultural development – were developed with partners, resulting in new polices and strategies; in Vietnam related to Alternate Wetting and Drying (AWD) in rice; in the East African Dairy Development program of Heifer International through its adoption of CSA as a program objective (see 2nd success story); in Colombia through incorporating agricultural mitigation in the national climate strategy; in India through adopting a new agroforestry policy that seeks 33% tree cover and creates incentives to farmers; and in China by establishing the methodology that will link herders to the carbon market. CCAFS also focussed on global policies, and had successes related to both the UNFCCC and IPCC.

Targets 4.1 and 4.2 in Theme 4 (Integration for decision-making) were achieved. In 4.1 CCAFS has played a major role in various global processes, in collaboration with other regional and global bodies (e.g. Common Market for Eastern and Southern Africa {COMESA}, UN African Climate Policy Centre {ACPC}) and has worked directly with negotiators to strengthen knowledge on agriculture. CCAFS has conducted scenario development (visioning and modelling) in all target regions – participatory processes involving key stakeholders. At least US$ 600,000 has been contributed to the processes by partners. Objective 4.2 focusses on data and models. CCAFS-Climate continues to be a success. International and regional agencies that downloaded climate data and/or produced publications that made use of the data include FAO, GIZ, CDC, CIRAD, JRC, World Bank, the Asian Development Bank, WWF, SADC, ASARECA and CORAF. Objective 4.3 did not meet its target. This is partly related to restructuring in relation to phase 2 of CCAFS. Resources have been withdrawn from this Objective and redirected to what will become a new policy-dedicated program in CCAFS ("Flagship 4"). Nonetheless some significant achievements were made by 4.3. The set of African policy monographs co-produced with African agencies (CORAF/WECARD, ASARECA, FANRPAN) have seen use by a number of development and policy agencies, or key individuals (e.g. IFAD Niger, AGRHYMET, Hub-rural of ECOWAS, Environment Unit of the Ministry of Food and Agriculture (MoFA) in Ghana, Advisory Committee on Agricultural Resilience (ACARN) in Nigeria, Coordinator on Climate Change Enabling Activities at the Environmental Protection Agency of Liberia, lead author for the national climate change strategy and action plan (NCCSAP) in Swaziland.

Table 1. Intermediate performance targets for 2013, the associated achievements from 2011-2013 and our self-assessment of overall progress towards the targets

Intermediate performance targets (abbreviated, see endnote)[32]	**Outcome-related achievements in relation to the targets (always achieved with numerous partners)**	**Progress**	**Surpassed**	
			Achieved	
			Failed	
1.1: 1-5 flagship technical and/or institutional approaches identified/ developed with stakeholders in three regions	• Climate-Smart Village concept developed, established in three regions, and now being scaled up, firstly in Nepal. • Farms of the Future approach (inc. analogue model) developed/tested in 9 countries in SA, WA and EA • Conservation Agriculture model developed, tested and scaled out in EA, Southern Africa, SA • Broadening the genetic base of crops to empower Indian farmers for climate change adaptation through crowdsourcing (with 5000 farmers) • Banana-coffee technologies developed in East Africa			
1.2: Breeding strategies of regional/national	• CCAFS-climate data providing inputs for modelling; analyses completed in all 5 regions for a range of crops; significant progress has been made in modelling genotypic impacts, and using these to inform global breeding strategies for banana, cassava, potato and beans.			

crop breeding institutions in three regions are coordinated and CCAFS-informed	• National programs for maize (Zimbabwe, Ethiopia) and rice (Vietnam) using CCAFS tools; community of practice for testing potato varieties for 12 African countries; Pan-Africa Bean Research Alliance (PABRA), involving 22 national bean programs in Africa, using CCAFS research. • 10-year US$50 million programme focused on crop wild relative collection and pre-breeding for climate change adaptation established	
1.3: Integrated adaptation strategies at regional, national or sub---national level in 2 regions informed by CCAFS science	• Nicaragua established the National Adaptation Plan for agriculture, with immediate impacts on the coffee and cocoa sectors through new investments • Strategic action plan to strengthen conservation and use of Mesoamerica plant genetic resources signed by Agriculture Ministers • Climate change adaptation strategy adopted by Ethiopian government • National Climate Change Adaptation Strategy established in Sri Lanka • Design of the watershed component of the Pilot Program for Climate Resilience (PPCR) using Climate Investment Fund (CIF)	
2.1: 1-5 flagship risk management interventions evaluated and demonstrated by stakeholders in 3 regions	• Improved rainfall threshold in index insurance developed and now being used by the Indian National Insurance Company with 56,000 farmers • Index-based livestock insurance developed and trialled in Kenya and Ethiopia • Climate-specific management approaches developed and now trialled by the rice, cereal and grain producers associations in Colombia • Mobile services for farmers related to irrigation needs and flood warnings established in Ethiopia, Sudan and Egypt	
2.2: 3 food crisis response, post-crisis and food trade strategies evaluated with partners in 3 regions	• Methodology for assessing climate risk exposure and targeting food security interventions used to inform WFP, Nepal Government, and World Bank food security programmes in Nepal • Integrated food security modelling in Philippines which increases rigor for predicting and targeting household food insecurity is being evaluated by the national meteorological and disaster risk management agencies	
2.3: National and regional met. services trained to produce downscaled seasonal forecast products in 2 countries in each of 3 regions	• National Meteorological Services (NMS) in 3 countries and the regional agency AGRHYMET produce/disseminate climate information at a relevant scale • Changes in the activities of at least 4 NMS, as a result of improved understanding of farmer needs, together with improved climate information services. WMO has endorsed the approach and 5 major NGOs are using it • In Senegal, climate-informed advisories now reach 2000 farmers. 15 radio stations now deliver seasonal forecasts to an estimated 3 million farmers • NMS trained by global experts in seasonal forecasting to produce seasonal forecasts for rural communities in Columbia and Brazil.	
3.1: Findings on mitigation of alternative development pathways used in 2 countries in each of 3 regions	• In Vietnam and the Philippines, awareness of Alternate Wetting and Drying (AWD) greatly increased among stakeholders. AWD was integrated into the Vietnamese mitigation strategy 20-20-20 • Climate-smart agriculture (CSA) taken up in the East African Dairy Development program of Heifer International • Colombia established priorities for agricultural mitigation that will contribute to the national climate strategy	
3.2: Decision-makers in 3 regions informed for rewarding farmers for GHG reductions	• Rules for carbon schemes in coffee smallholder contexts being established and Green Mountain Coffee Roasters now funding a pilot project • Carbon project partners use institutional innovation lessons in project design and development in East Africa • New agroforestry policy in India seeks 33% tree cover and creates incentives to farmers	
3.3: Project design and monitoring guidelines for smallholders produced and contributing to global standards	• Contribution to a UNFCCC CDM methodology for methane emission reduction by adjusted water management practice in rice cultivation • SAMPLES contributed to Global Research Alliance Paddy Rice GHG measurement protocol with 5 countries • Substantial input into new Climate, Community and Biodiversity (CCB) Standards for smallholders (EA) • Contributed substantially to wetlands supplement to IPCC guidelines, which is now a part of mandatory country reporting to the UNFCCC • Grassland methodology established in China to link herders to carbon market	
4.1: Agriculture in the global climate change policies, and major	• Collaborated with COMESA and ACPC to support Technical and Position Papers for use by African negotiators to the UNFCCC. • In 4 regions and at the global level, international organizations (FAO, Oxfam, UNEP WCMC), and economic communities invest in the CCAFS Scenarios, and use these for planning	

international food initiatives fully incorporate climate change	agricultural adaptation under climate change. • Agriculture recognised in the UNFCCC Durban Agreement, with CCAFS contributing numerous activities/products, including the Commission on Sustainable Ag. & CC • CCAFS plays major role in "Food Security and Climate Change" report, published by HLPE on food security and nutrition, Committee on World Food Security (CFS), FAO	
4.2: Global database and tools for CSA established and used by key international and regional agencies	• CCAFS-Climate had over 30,000 visits from more than 160 countries in 2013. Many agencies made use of the data • Cropland extent data has been used by IIASA and many major projects (EuroGEOSS, GEOBENE, CC-TAME) – details on geo-wiki.org • In 2013 there were nearly 1,900 downloads of material from Dataverse on the CCAFS baselines, including by GIZ, World Bank, and IRD.	
4.3: New knowledge on policy impacts under CC used by at least 3 national agencies, and 3 international and regional agencies	• IMPACT studies and associated monographs used by multiple agencies and key individuals. • Through AgMIP, significant changes to the leading crop modelling suite (DSSAT) and to 10 leading global economic models, including those used by: Trade and Agriculture Directorate (TAD), OECD, Australian Bureau of Agricultural and Resource Economics and Sciences, Australian Government Department of Agriculture, Resource and Rural Economics Division, Economic Research Service (ERS), U.S. Department of Agriculture; Agricultural Development Economics Division (ESAD), Food and Agriculture Organization of the United Nations (FAO)	

C.3 Progress towards Impact

Under the program plan, CCAFS is scheduled to conduct its first impact studies after three years

D. GENDER RESEARCH ACHIEVEMENTS

CCAFS has been successful at mainstreaming gender throughout the program, and has met the requirements specified in Annex 2, and beyond, with the development of gender impact pathways in each region that include measures of evaluating progress towards the CCAFS gender IDO. However, gender targets for tools and products (Annex 1) have not been met (see section H). Gender-related progress in 2013 includes the following:

Gender Impact Pathways capacity. In 2013, CCAFS facilitated the formation of region-specific gender impact pathways in a participatory approach with 40 female and 5 male CCAFS partners from 5 regions. The regional gender teams have formed a network to facilitate working together.[33]

Building the evidence base addressing CCAFS key gender research questions. Baseline surveys in all CCAFS sites include a gender component, and cover all CCAFS Themes. The questionnaires and training materials have been downloaded over 4,000 times and are being shared freely and widely.[34] Significant findings for both the climate smart agriculture (Theme 1) and climate information (Theme 2) work are that women receive significantly less information about CSA practice options and climate information than do men, but when they are receiving it, they are just as likely to adopt the practices. These results are being used in our sites in all 5 regions to co-design gender-targeted action research with local partners. We also found institutional and policy constraints are limiting the benefits reaching women and other disadvantaged groups from climate-related finance initiatives, and this informed the call for proposals in the low-emissions development work (Theme 3) for Phase 2. These results have also been shared with development partners such as IFAD and CARE, who are also designing programs to better target climate and CSA practice information to women and the poor.

An intra-household data collection effort by three Centers (IFPRI, ILRI, CIAT) was completed and analysis is underway. It addresses the key gender questions found in the CCAFS gender strategy (e.g. gender differentiated adoption potential of climate smart agricultural practices in different agricultural systems). This questionnaire and training manual has been downloaded 50 times in 2 months. CCAFS also contributed to the design of a CG-wide global comparative research initiative on innovation through transformation of gender norms. We will be contributing several case studies.

Gender-CC Knowledge and Capacity. In 2013 the CCAFS-FAO 'Gender and Climate Change Research in Agriculture and Food Security for Rural Development Training Guide'[35] was translated into French and

Spanish, and saw over 10,000 downloads. A 'practitioners guide' aimed at supporting development partners in gathering information for designing inclusive and gender sensitive CSA programs is being developed, using a participatory co-development approach with experts, technical personnel, and farmers. A strategic group of partners – FAO, CCAFS, CARE, IFAD, We Effect and GROOTS – are testing it, and training and capacity building (i.e. scaling out use of these gender tools widely) will be taking place within these partner organizations. A training-of-trainers manual aimed at building capacity of rural women in relation to climate change and gender was shared widely, and women leaders were trained in S. Asia.[36] 160 women in western Kenya received training in climate-smart agricultural practices.[37]

Innovation. CCAFS and many of our centre partners have been supporting innovative gender-transformative research partnerships with private sector communication firms such as BBC-Media (LA), Mediae (East Africa), PANOS (EA and SAsia), Art for Change Trust (Nepal), African Farm Radio Initiative (West Africa) to test crowdsourcing, social media, radio and television-based approaches to reaching tens of thousands of diverse farmers (female and youths in particular).

Key gender-related publications: A large number of gender- and social differentiation-focused articles and stories were produced by CCAFS teams in 2013.[38]

Gender in the workplace. Since the beginning of CCAFS, both the number of female researchers and the diversity of researchers working substantially or totally on CCAFS management and governance have steadily increased. 36% of the 14 core staff (coordinating unit, region and theme leaders) are women, 33% in the 6-person Program Management Committee, and 33% in the 12-person International Science Panel (ISP) (inclusive of ex-officio members). CCAFS management has less control on the composition of scientists working within CCAFS who are selected by Centers. Only 20% of Contact Points in Centers are female.

E. PARTNERSHIP BUILDING ACHIEVEMENTS

CCAFS was designed as a collaborative programme between CGIAR and the Earth System Science Partnership (ESSP), to bring CGIAR's agricultural expertise and local networks together with the climatological and other expertise of the Global Environmental Change academic community. In 2013 the ESSP transitioned into a new body known as Future Earth. CCAFS enriched its partnership with Future Earth by recruiting a Future Earth representative as an *ex officio* member of the CCAFS Independent Science Panel (ISP), contributing to the development of a EUR10.5 million Belmont Forum and FACCE-JPI call for proposals on Food Security and Land-use Change that align with CCAFS priorities, and serving on the steering committee of AgMIP.

At national and regional levels, CCAFS continued to work with NARS, farmers' organisations and regional research bodies in 2013, with a particular focus in supporting alignment of the African Union/ New Partnership for Africa's Development (NEPAD) / Comprehensive Africa Agriculture Development Programme (CAADP) framework and country investment plans with UNFCCC-linked climate policy tools such as National Adaptation Plans (NAPs) and Nationally Appropriate Mitigation Actions (NAMAs). This involved close collaboration with the Forum for Agricultural Research in Africa (FARA), for example on two sessions on Climate-Smart Agriculture at Africa Agricultural Science Week, involving NARS partners, and provision of research support and technical expertise to the African Group of Negotiators in the UNFCCC, working closely with COMESA, the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) and ACPC.

At the global level, in 2013 CCAFS focused on strategic engagement with a small number of high-impact agents of change. CCAFS placed a senior staff member for four months at International Fund for Agricultural Development (IFAD), which has a major program on climate change adaptation (ASAP) that aims to improve the adaptive capacity of 10 million farmers. CCAFS and IFAD began to develop a "knowledge partnership" that will include CCAFS research at IFAD sites, and co-delivery of global policy engagement activities. Two other major global partnerships were with the World Bank, for

example on the development of prioritisation tools for CSA, and with the Global Alliance for Research on Agricultural Greenhouse Gases (GRA). Communities of practice on crop breeding, such as the Global Cassava Partnership, have been important partners on climate-informed breeding strategies.

CCAFS continued to coordinate with other CRPs in 2013, including a planning meeting among CRPs 5, 6 and 7 linked to a joint presentation to the CGIAR donor community in Montpellier, shared research sites in South Asia and West Africa (with CRPs 1.1, 1.3, 2 and 5), crop-climate modelling under CCAFS by centres CIAT, CIMMYT, CIP, ICARDA, ICRISAT, IITA and IRRI to inform breeding strategies in CRP3, and a joint event (Global Landscapes Forum) at the Warsaw UNFCCC COP with CRP6. While inter-CRP coordination was found to be more effective and efficient in 2013, as the boundaries and synergies between CRPs gain clarity, some challenges remain, as outlined in Section A (Key Messages) above.

Key partners have taken up multiple CCAFS outputs in 2013 to bring about outcomes for policy, livelihoods and food security. CCAFS participants have reported evidence of direct influence of CCAFS outputs on policies in several countries, including Vietnam (IRRI), Nepal (Bioversity), Ethiopia (CIMMYT), Kenya (ILRI) and Colombia (CIAT). In Nicaragua, CCAFS science outputs have informed both national policy and new finance of USD 24 million from IFAD, a key CCAFS partner. More widely in the UN, CCAFS research was instrumental in the IPCC Wetlands Supplement of the UNFCCC, a methodology that is now mandatory for all countries preparing national GHG inventories (CIFOR), and CCAFS supported the first national implementation project of the UN Global Framework for Climate Services, in Tanzania and Malawi. A key private sector partner that took up CCAFS outputs in 2013 was the Agriculture Insurance Company of India, who acted on CCAFS technical advice and training to develop a community-based index-based weather insurance scheme for crops.

The partnership model used for CCAFS governance and management was praised in the CGIAR-commissioned external reviews of governance and management, and in that commissioned by CCAFS.

F. CAPACITY BUILDING

CCAFS capacity enhancement activities are mainstreamed within research and engagement activities, to raise both research capacity among partners (post-graduate students and early or mid-career researchers) and the capacity of research users and co-creators (including farmers, policy-makers and technical staff in implementing agencies, companies and NGOs). In 2013, CCAFS supported 14,602 women and 9,455 men on short-term programs, and 522 women and 622 men on long-term programs. (Annex 1).

Enhancement of research capacity involves training, ongoing support and networking. For example, the CCAFS Network of Gender and Climate Change Scientists was formed with training in gender methods and impact pathway development for over 40 local partners from 5 regions. Under SAMPLES (see Section C1), CCAFS has been working towards creating a critical mass of young researchers (especially women), skilled in the assessment and management of greenhouse gas emissions and mitigation options in smallholder systems in the CCAFS regions. Centres such as CIMMYT and IRRI have provided intensive training, while the CLIFF network (Climate Food and Farming), coordinated by Aarhus University in collaboration with CCAFS Theme 3, has provided field grants on a competitive basis plus a networking platform for young researchers in this field, leading to their publication of seven journal articles in 2013.

Among policy-makers, CCAFS has enhanced capacity by providing south-south exchanges, field visits, lecture and discussion series, policy learning platforms and training sessions. A particular success in 2013 was the visit by the Colombian Ministry of Agriculture and Rural Development, National meteorological institute and other agencies to Senegal to learn about options for provision of seasonal forecasts to farmers. The visit inspired implementation of three pilots in Colombia, based on the CCAFS model in Senegal. Among technical staff, CCAFS capacity enhancement has included training of 100 people in GIS and climate modelling tools for crop experimentation in multiple countries (Bioversity), and similar numbers in flood forecasting and mapping in Sudan and Bangladesh (IWMI).

Among farmers, highlights in 2013 included successful training of over 600 farmers in precision nutrient management based on the Nutrient Expert Decision Support tool in South Asia, leading to yield gains of 0.5 to 1.5 t/ha (CIMMYT); over 600 farmers on crop planning linked to weather forecasts in West Africa (ICRAF); and over 2,800 farmers on a web-based diagnostic tool for farming decisions in Colombia (CIAT).

G. RISK MANAGEMENT

CCAFS management updated its risk catalogue in late 2013. The top three risks identified were: (1) Weak commitment or capacity of CGIAR Centers to deliver science to CCAFS given the increased number of CRPs (i.e. more are now fully functioning) and incorporation of climate change issues in the other CRPS, (2) Lack of global consensus on climate change and continuing deadlock at the UNFCCC resulting in a reduced interest in funding for climate change research and agricultural mitigation, (3) CCAFS not delivering on outcomes and impacts in relation to the urgent high expectations. To mitigate these risks, for (1) we will need to put more effort into stimulating interest in CCAFS science and clarifying the boundaries amongst CRPs. Clarifying boundaries will require strong leadership from the Consortium Office, for while we have successes discussing the issues with some CRPs/Centres, others do not recognise the problem. For (2) we will continue our considerable work in global processes to demonstrate the negative impacts of climate change on agriculture and food security, and the important win-win options for combined adaptation and mitigation in agriculture. Several activities and products are planned in 2014 to support our vision of combined adaptation and mitigation actions. For (3) we need to continue working on impact pathways and improving the outcome strategies amongst participants. Several impact and outcome studies, combined with an internal communication strategy, are planned for 2014 to focus attention on outcome-orientated research approaches.

H. LESSONS LEARNED

The program was implemented more or less according to plan. It is probably a good time to return to the table of indicators (Annex 1) and provide some further clarifications and simplifications, as we recorded a number of instances of different understanding behind the same indicators.

We have identified CRP boundary issues and coordination at country and field levels as important issues to resolve in the coming years. In Burkina Faso we have joined with several other CRPs to plan a joint approach to impact pathways, M&E and coordinated activities. We have also initiated discussions with various CRPs to plan collaborative work. Nonetheless, strong leadership from the Consortium Office is needed to sort out some boundary issues as there is reluctance to deal with them at CRP-level.

CCAFS has been practicing performance-based management since its inception, but within the constraints of the initial CCAFS proposal (where the rule was that Centres decided how much of their previous core they would invest in different CRPs). We see phase 2 as an opportunity for quite a radical shift, where activities are 100% aligned with regional priorities in global themes. To this end we have initiated a process to reorganise the CCAFS portfolio, with expected shifts in Centre contributions to CCAFS.

While CCAFS has made great strides in implementing its gender strategy, progress in terms of gender-differentiated tools and products have been slower than targeted (Annex 1). This is partly a result of continuing lack of human resources in many Centers to tackle gender issues in a rigorous manner, but the recent hiring of staff will hopefully improve progress. CCAFS will also implement some new incentives to achieve greater progress.

I. CRP FINANCIAL REPORT

There are 9 financial reports:

1. Report L101 - Annual CRP Financial Summary – by CG Participant
2. Report L102 – Cumulative CRP Financial Summary – CG Participant
3. Report L111 - CRP Annual Finance Plan Summary (by Center, Windows 1 and 2)
4. Report L121 - CRP Expenditure by natural classification- by CG Center
5. Report L131 – CRP Expenditure by Theme/Flagship Project and by Cluster of activities
6. Report XXX- CRP expenditure on gender research by Theme/Flagship Project and by Cluster of activities
7. Report L201 - CRP Bilateral Grants Summary - by CG Center
8. Report L211 - CRP Partnerships Report- by CG Center
9. Report L401 - CRP Funding Statement – Windows 1 and 2

The templates for CRP financial reporting by CRP Directors and Lead Centers are attached as Appendix 3.

Note that there is also a requirement for interim financial reports – the first four reports are also submitted to the Consortium at the half-year stage, and Report L401 is required quarterly.

Annex 1: CRP indicators of progress, with glossary and targets

CRPs	Indicator	Glossary/guidelines for defining and measuring the indicator, and description of what the CRP includes in the indicator measured, based upon the glossary	Deviation narrative (if actual is more than 10% away from target)	2012		2013		2014
				Target (if available for 2012)	Actual	Target	Actual	Target
KNOWLEDGE, TOOLS, DATA								
All	1. Number of flagship "products" produced by CRP	Glossary: These are frameworks and concepts that are significant and complete enough to have been highlighted on web pages, publicized through blog stories, press releases and/or policy briefs. They are significant in that they should be likely to change the way stakeholders along the impact pathway allocate resources and/or implement activities. They should be products that change the way these stakeholders think and act. Tools, decision-support tools, guidelines and/or training manuals are not included in this indicator. Specify what type of products, from above glossary, you have included in the number indicated under 2013; if relevant specify geographic locations			**4**	**7**	**7**	**8**
All	2. % of flagship products produced that have explicit target of women farmers/NRM managers	Glossary: The web pages, blog stories, press releases and policy briefs supporting indicator #1 must have an explicit focus on women farmers/NRM managers to be counted Provide concrete examples of what you include in this indicator	Gender-differentiated products are still in the pipeline		**25%**	**35%**	**29%**	**40%**
All	3. % of flagship products produced that have been assessed for likely gender-disaggregated impact	Glossary; Reports/papers describing the products should include a focus on gender-disaggregated impacts if they are to be counted Provide concrete examples of what you include in this indicator	Gender-disaggregated impacts yet to be assessed		**0%**	**20%**	**0%**	**20%**
All	4. Number of "tools" produced by CRP	Glossary: These are significant decision-support tools, guidelines, and/or training manuals that are significant and complete enough to have been highlighted on web pages, publicized through blog stories, press releases and/or policy briefs. They are significant in			**5**	**8**	**7**	**8**

		that they should be likely to change the way stakeholders along the impact pathway allocate resources and/or implement activities Based on the glossary, describe the types of outputs you include in this indicator						
All	5. % of tools that have an explicit target of women farmers	Glossary: The web pages, blog stories, press releases and policy briefs supporting indicator #4 must have an explicit focus on women farmers/NRM managers to be counted			**33%**	**35%**	**29%**	**40%**
All	6. % of tools assessed for likely gender-disaggregated impact	Glossary: Reports/papers describing the products should include a focus on gender-disaggregated impacts if they are to be counted			**0%**	**20%**	**0%**	**20%**
All	7. Number of open access databases maintained by CRP	Indicate the type of data bases (e.g., socio-economic survey data; crop yields in field experiments…) you are reporting on in the following columns			**6**	**8**	**7**	**7**
All	8. Total number of users of these open access databases		Reported "visits" in previous year. Believe "unique visitors" is better measure		**43,220**	**60,000**	**23,377**	**25,000**
All	9. Number of publications in ISI journals produced by CRP		Output of publications increased significantly		**77**	**85**	**98**	**105**
1,2,3, 4, 6	10. Number of strategic value chains analyzed by CRP	Clearly indicate the type of value chains you are reporting on in the next columns	While we work on multiple value chains that is not necessarily the focus in CCAFS		**N/A**	**N/A**	**N/A**	**N/A**
1,5,6, 7	11. Number of targeted agro-ecosystems analysed/characterised by CRP	Specify the type of system, using its main products as descriptors (e.g., mixed crop, livestock system; monoculture of XX; agroforestry with maize, beans, etc..; mixed cropping with upland rice, cassava, etc...)by geographical location and agro-ecological zones (FAO typology)			**9**	**4**	**3**	**3**
1,5,6, 7	12. Estimated population of above-				**TBD**	**TBD**	**TBD**	**TBD**

	mentioned agro-ecosystems							
CAPACITY ENHANCEMENT AND INNOVATION PLATFORMS								
All	13. Number of trainees in short-term programs facilitated by CRP (male)	Glossary: The number of individuals to whom significant knowledge or skills have been imparted through interactions that are intentional, structured, and purposed for imparting knowledge or skills should be counted. This includes farmers, ranchers, fishers, and other primary sector producers who receive training in a variety of best practices in productivity, post-harvest management, linking to markets, etc. It also includes rural entrepreneurs, processors, managers and traders receiving training in application of new technologies, business management, linking to markets, etc., and training to extension specialists, researchers, policymakers and others who are engaged in the food, feed and fibre system and natural resources and water management. Include training on climate risk analysis, adaptation, mitigation, and vulnerability assessments, as it relates to agriculture. Training should include food security, water resources management/IWRM, sustainable agriculture, and climate change resilience Indicate, from the above list, the general subject matters in which training was provided .	Several partners had new opportunities for capacity enhancement		**4,679**	**7,000**	**9,455**	**7,000**
All	14. Number of trainees in short-term programs facilitated by CRP (female)	(see above, but for female)	There was a major new effort on women's leadership training in S Asia		**3,989**	**6,500**	**14,602**	**7,000**
All	15. Number of trainees in long-term programs facilitated by CRP (male)	Glossary: The number of people who are currently enrolled in or graduated in the current fiscal year from a bachelor's, master's or Ph.D. program or are currently participating in or have completed in the current fiscal year a long term (degree-seeking) advanced training program such as a fellowship program or a post-doctoral studies program. A person completing one long term training program in the fiscal year and currently participating in another long term training program should be counted only once.	WorldFish informed that they had misunderstodd the category		**488**	**500**	**214**	**225**

		Specify in this cell number of Master's and number of PhD's						
All	16. Number of trainees in long-term programs facilitated by CRP (female)	(see above, but for female)	WorldFish informed that they had misunderstood the category		**474**	**500**	**171**	**175**
1,5,6, 7	17. Number of multi-stakeholder R4D innovation platforms established for the targeted agro-ecosystems by the CRPs	Glossary: To be counted, a multi-stakeholder platform has to have a clear purpose, generally to manage some type of tradeoff/conflict among the different interests of different stakeholders in the targeted agro-ecosystems, and inclusive and clear governance mechanisms, leading to decisions to manage the variety of perspectives of stakeholders in a manner satisfactory to the whole platform. Indicate the focus of each platform in this cell, including geographical focus			**24**	**5**	**3**	**4**
TECHNOLOGIES/PRACTICES IN VARIOUS STAGES OF DEVELOPMENT								
All	18. Number of technologies/NRM practices under research in the CRP (Phase I)	Glossary: Technologies to be counted here are agriculture-related and NRM-related technologies and innovations including those that address climate change adaptation and mitigation. Relevant technologies include but are not limited to: • Mechanical and physical: New land preparation, harvesting, processing and product handling technologies, including biodegradable packaging • Biological: New germplasm (varieties, breeds, etc.) that could be higher-yielding or higher in nutritional content and/or more resilient to climate impacts; affordable food-based nutritional supplementation such as vitamin A-rich sweet potatoes or rice, or high-protein maize, or improved livestock breeds; soil management practices that increase biotic activity and soil organic matter levels; and livestock health services and products such as vaccines; • Chemical: Fertilizers, insecticides, and pesticides sustainably and environmentally applied, and soil amendments that increase fertilizer-use efficiencies; • Management and cultural practices: sustainable water	In 2012 IFPRI reported on all the technologies they were considering in their work on Global Futures (which are often the same in Centres, so this double counting has been removed)		**256**	**250**	**88**	**80**

		management; practices; sustainable land management practices; sustainable fishing practices; Information technology, improved/sustainable agricultural production and marketing practices, increased use of climate information for planning disaster risk strategies in place, climate change mitigation and energy efficiency, and natural resource management practices that increase productivity and/or resiliency to climate change. IPM, ISFM, and PHH as related to agriculture should all be included as improved technologies or management practices. New technologies or management practices under research counted should be only those under research in the current reporting year. Any new technology or management practice under research in a previous year but not under research in the reporting year should not be included. Clearly indicate, from the list above, the type of technology and geographical location that you are reporting on in next columns						
All	19. % of technologies under research that have an explicit target of women farmers	The papers, web pages, blog stories, press releases and policy briefs supporting indicator #x must have an explicit focus on women farmers/NRM managers to be counted	Scaled up focus on gender		**7%**	**10%**	**31%**	**20%**
All	20. % of technologies under research that have been assessed for likely gender-disaggregated impact	Reports/papers describing the products should include a focus on gender-disaggregated impacts if they are to be counted			**9%**	**20%**	**25%**	**30%**
1,5,6, 7	21 Number of agro-ecosystems for which CRP has identified feasible approaches for improving ecosystem services and for establishing positive incentives for farmers to improve ecosystem functions as per the	Use the same classification of agro-ecosystem as for indicator 11 above, including geographical location and agro-ecological zone			**19**	**15**	**20**	**17**

	CRP's recommendations							
1,5,6, 7	22. Number of people who will potentially benefit from plans, once finalised, for the scaling up of strategies	Indicate the potential number of both women and men			**TBD**	**TBD**	**TBD**	**TBD**
All, except 2	23. Number of technologies /NRM practices field tested (phase II)	Glossary; Under "field testing" means that research has moved from focused development to broader testing (pilot project phase) and this testing is underway under conditions intended to duplicate those encountered by potential users of the new technology. This might be in the actual facilities (fields) of potential users, or it might be in a facility set up to duplicate those conditions. Clearly identify in this cell the type of technology and the geographical locations of the field testing/pilot projects reported in next columns	Major difference here is due to improvement in reporting and eliminating double counting		**57**	**60**	**20**	**20**
1,5,6, 7	24. Number of agro-ecosystems for which innovations (technologies, policies, practices, integrative approaches) and options for improvement at system level have been developed and are being field tested (Phase II)	Clearly identify in this cell the type of technology and the geographical location of the field testing/pilot projects, and use the same classification of agroecosystem as for indicator 11, specifying the type of agroecosystems in which field testing is taking place			**12**	**15**	**15**	**15**
1,5,6, 7	25. % of above innovations/approaches/options that are targeted at decreasing inequality between men and				**29%**	**35%**	**31%**	**35%**

	women							
1,5,6, 7	26. Number of published research outputs from CRP utilised in targeted agro-ecosystems		Publication output has generally improved		**19**	**30**	**63**	**50**
All, except 2	27. Number of technologies/NRM practices released by public and private sector partners globally (phase III)	Glossary: In the case of crop research that developed a new variety, e.g., the variety must have passed through any required approval process, and seed of the new variety should be available for multiplication. The technology should have proven benefits and be as ready for use as it can be as it emerges from the research and testing process. Technologies made available for transfer should be only those made available in the current reporting year. Any technology made available in a previous year should not be included. Clearly identify in this cell the technologies/practices thus released (scale up phase), the geographical areas concerned			**1**	**5**	**15**	**10**
	POLICIES IN VARIOUS STAGES OF DEVELOPMENT							
All	28. Numbers of Policies/ Regulations/ Administrative Procedures Analyzed (Stage 1)	Number of agricultural enabling environment policies / regulations / administrative procedures in the areas of agricultural resource, food, market standards & regulation, public investment, natural resource or water management and climate change adaptation/mitigation as it relates to agriculture that underwent the first stage of the policy reform process i.e. analysis (review of existing policy / regulation / administrative procedure and/or proposal of new policy / regulations / administrative procedures).Please count the highest stage completed during the reporting year – don't double count for the same policy. Clearly identify in this cell the type of policy, regulations, etc. from the above list	Policy work has been stepped up		**59**	**50**	**118**	**50**
All	29. Number of policies / regulations / administrative procedures drafted and presented for	….. ……that underwent the second stage of the policy reform process. The second stage includes public debate and/or consultation with stakeholders on the proposed new or revised policy / regulation / administrative procedure. Clearly identify in this cell the type of policy, regulations and so on,	Policy work has been stepped up		**18**	**15**	**53**	**15**

	public/stakeholder consultation (Stage 2)	and the geographical location of the consultations						
All	30. Number of policies / regulations / administrative procedures presented for legislation(Stage 3)	: … underwent the third stage of the policy reform process (policies were presented for legislation/decree to improve the policy environment for smallholder-based agriculture.) Clearly identify in this cell the type of policy and the country/region concerned			**4**	**5**	**7**	**10**
All	31. Number of policies / regulations / administrative procedures prepared passed/approved (Stage 4)	: …underwent the fourth stage of the policy reform process (official approval (legislation/decree) of new or revised policy / regulation / administrative procedure by relevant authority). Clearly identify in this cell the type of policy and the country/region concerned			**4**	**5**	**6**	**10**
All	32. Number of policies / regulations / administrative procedures passed for which implementation has begun (Stage 5)	: …completed the policy reform process (implementation of new or revised policy / regulation / administrative procedure by relevant authority) Clearly identify in this cell the type of policy and the country/region concerned			**3**	**5**	**1**	**10**
OUTCOMES ON THE GROUND								
All	33. Number of hectares under improved technologies or management practices as a result of CRP research	Clearly identify in this cell the geographic locations where this is occurring and whether the application of technologies is on a new or continuing area			**287,792**	**450,000**	**TBD**	**500,000**
All	34. Number of farmers and others who have applied new technologies or management practices as a result of CRP research	Clearly identify in this cell the geographic location of these farmers and whether the application of technologies is on a new or continuing area and indicate: 34 (a) number of women farmers concerned 34(b) number of male farmers concerned			**928,312 a/b TBD**	**2,000,000 a/b TBD**	**TBD**	**2,000,000 a/b TBD**

Annex 2: Performance indicators for gender mainstreaming with targets defined

Performance Indicator	CRP performance approaches requirements	CRP performance meets requirements	CRP performance exceeds requirements
1. Gender inequality targets defined	Sex-disaggregated social data is being collected and used to diagnose important gender-related constraints in at least one of the CRP's main target populations	Sex-disaggregated social data collected and used to diagnose important gender-related constraints in at least one of the CRP's main target populations And The CRP has defined and collected baseline data on the main dimensions of gender inequality in the CRP's main target populations relevant to its expected outcomes (IDOs)	Sex-disaggregated social data collected and used to diagnose important gender-related constraints in at least one of the CRP's main target populations And The CRP has defined and collected baseline data on the main dimensions of gender inequality in the CRP's main target populations relevant to its expected outcomes (IDOs) And CRP targets changes in levels of gender inequality to which the CRP is or plans to contribute, with related numbers of men and women beneficiaries in main target populations
2. Institutional architecture for integration of gender is in place	- CRP scientists and managers with responsibility for gender in the CRP's outputs are appointed**,** have written TORS. - Procedures defined to report use of available diagnostic or baseline knowledge on gender routinely for assessment of the gender equality implications of the CRP's flagship research products as per the Gender Strategy -CRP M&E system has protocol for tracking progress on integration of gender in research	- CRP scientists and managers with responsibility for gender in the CRP's outputs are appointed, have written TORS and funds allocated to support their interaction. - Procedures defined to report use of available diagnostic or baseline knowledge on gender routinely for assessment of the gender equality implications of the CRP's flagship research products as per the Gender Strategy -CRP M&E system has protocol for tracking progress on integration of gender in research And A CRP plan approved for capacity development in gender analysis	CRP scientists and managers with responsibility for gender in the CRP's outputs are appointed, have written TORS and funds allocated to support their interaction. - Procedures defined to report use of available diagnostic or baseline knowledge on gender routinely for assessment of the gender equality implications of the CRP's flagship research products as per the Gender Strategy -CRP M&E system has protocol for tracking progress on integration of gender in research And A CRP plan approved for capacity development in gender analysis And The CRP uses feedback provided by its M&E system to improve its integration of gender into research

[1] Where CCAFS did not achieve its targets, this was largely due to the slow start in the 5th CCAFS region (the Regional Program Leader in SEA was only appointed in the last half of 2013), the relative lack of attention to mitigation in developing countries due to politically-charged positions related to responsibilities for mitigation, and embarking on areas of research that are rather new to the CGIAR. None of these are insurmountable challenges for CCAFS for future progress.
[2] http://www.heifer.org/join-the-conversation/blog/2014/January/heifer-launches-eadd-ii.html
[3] Thornton PK, Herrero M. 2010. Potential for reduced methane and carbon dioxide emissions from livestock and pasture management in the tropics. Proceedings of the National Academy of Sciences 107(46):19667-19672.
[4] See Theme 3 2013 Technical Report: https://cgspace.cgiar.org/bitstream/item/36322/T3_2013_technical_report.pdf?sequence=19
[5] http://ccafs.cgiar.org/publications/ccafs-program-plan
[6] http://ccafs.cgiar.org/baseline-surveys
[7] http://ccafs.cgiar.org/impact-pathways
[8] http://dx.doi.org/10.1073/pnas.1222463110
[9] http://onlinelibrary.wiley.com/doi/10.1111/agec.2014.45.issue-1/issuetoc
[10] http://www.ifpri.org/publication/west-african-agriculture-and-climate-change; http://www.ifpri.org/publication/east-african-agriculture-and-climate-change-0; http://www.ifpri.org/publication/southern-african-agriculture-and-climate-change
[11] http://ccafs.cgiar.org/publications/planning-climate-adaptation-agriculture
[12] http://ccafs.cgiar.org/national-adaptation-plans-and-agriculture-learning-workshop
[13] http://ccafs.cgiar.org/blog/tackling-climate-change-kenya-holds-first-national-adaptation-planning-meeting-agriculture ; http://ccafs.cgiar.org/blog/Action-climate-Kenya-New-plan-launched
[14] http://www.icraf.org/samples
[15] http://www.shambashapeup.com
[16] See Case Study 1 in CIMMYT Technical Report: https://cgspace.cgiar.org/bitstream/item/36322/CIMMYT_2013_Technical_Report.pdf?sequence=12 ; http://www.aesa-gfras.net/images/Surabhi.pdf ; http://www.new-ag.info/en/view/point.php?a=3123 ; http://ccafs.cgiar.org/blog/project-tests-new-ways-deliver-climate-related-messages-farmers-cell-phones
[17] See Case Study in South Asia 2013 Technical Report https://cgspace.cgiar.org/bitstream/item/36322/RPL_SAs_2013_technical_report.pdf?sequence=24; http://ccafs.cgiar.org/blog/radio-jingles-climate-change-aim-reach-million-listeners-nepal
[18] http://analogues.ciat.cgiar.org/climate/index.html; http://ccafs.cgiar.org/blog/%E2%80%9Cfarms-future-arrives-west-africa
[19] http://gisweb.ciat.cgiar.org/GapAnalysis/?p=139
[20] http://software.ipni.net/article/nutrient-expert
[21] http://www.worldagroforestry.org/downloads/publications/PDFs/OP17611.PDF
[22] http://worldagroforestry.org/regions/southeast_asia/vietnam/products/tools/talking-toolkit
[23] http://ccafs.cgiar.org/publications/g-range-intermediate-complexity-model-simulating-and-forecasting-ecosystem-dynamics-and
[24] http://iridl.ldeo.columbia.edu/maproom/Agriculture/index.html
[25] http://dx.doi.org/10.1016/j.rse.2013.07.018
[26] http://www.agtrials.org
[27] www.cropontology.org
[28] www.ccafs-climate.org

[29] http://thedata.harvard.edu/dvn/dv/CCAFSbaseline
[30] http://agrobiodiversityplatform.org/refarm/about/
[31] http://ccafs.cgiar.org/atlas-ccafs-sites
[32] http://ccafs.cgiar.org/publications/ccafs-program-plan Table 4, page 36. One part of CCAFS was reorganised in 2012 to give greater focus on adaptation policy and institutional issues, and thus the Target for Objective 1.3 became: "1.3: Integrated adaptation strategies for agricultural and food systems inserted into policy and institutional frameworks at regional, national or sub---national level in 2 target regions. Policy makers and key stakeholders use CCAFS research outputs - guidelines, tools and methods--- to support the development of NAPAs, sector specific adaptation plans, or germplasm benefit sharing policies". This change was requested and approved by the Independent Science Panel (ISP).
[33] http://ccafs.cgiar.org/blog/challenging-gender-assumptions-within-farming-and-climate-change-research
[34] http://thedata.harvard.edu/dvn/dv/CCAFSbaseline
[35] http://ccafs.cgiar.org/blog/expanding-scope-gender-and-climate-research-training-guide-now-translated-french-and-spanish
[36] http://ccafs.cgiar.org/blog/training-women-train-others-smart-way-spread-message-about-gender-and-climate-change
[37] http://ccafs.cgiar.org/blog/empowering-women-farmers-feed-world
[38] The CCAFS Gender webpage http://ccafs.cgiar.org/gender includes links to dozens of blog stories and research articles