CCAFS Program of Work and Budget 2015

Name of the CRP: CCAFS

Official start date of the CRP: January 1st 2011

A. Narrative of major planned work

Flagship 1: Climate Smart Agricultural (CSA) Practices. The focus in 2015 will be on establishing a new portfolio around 3 major objectives: (1) Improved CSA technologies, practices and portfolios for farmer's, including women and marginalised groups; (2) Methods and approaches for equitable local adaptation planning and governance, including transformative options; (3) Innovative incentives/mechanisms for scaling up that address the needs of farmers, including women and marginalised groups. Specifically, Flagship 1 will prioritize the production of a compendium of CSA practices, with associated costs, benefits and constraints to adoption that builds off previous years of evidence generation in CCAFS, and in collaboration with other CRPs. It is intended that the decision support tools (e.g. country CSA profiles, compendium, prioritization tool) being produced will be used to prioritize CSA investments in at least 4 major development initiatives. Work in South Asia will target sub-national planning with the hope of establishing state adaptation plans, and value chain work in Latin America will begin to explore entry-points for innovative finance to incentivize adoption of CSA. This Flagship will continue to support technical aspects in the roll out of the Alliance for Climate Smart Agriculture (ACSA), and engage with major development initiatives, e.g. IFAD's ASAP program, USAID's efforts to support CSA in Africa.

Flagship 2: Climate Information Services and Climate-Informed Safety Nets. In 2015 the focus will be on establishing a portfolio that advances demand-driven, equitable, climate-informed services and index-based insurance. Flagship 2 will (1) engage an expanded set of development partners (e.g. USAID, WMO, ACPC, World Bank, Farm Radio International, World Vision, CARE) to scale up climate information and advisory services for agriculture, with emphasis on equitable access/benefit; (2) mobilize a community of practice to respond to growing demand for weather-related agricultural insurance solutions that benefit smallholder farmers, particularly women; (3) work with African and Latin American meteorological services (Mali, Ghana, Rwanda, Tanzania, Colombia, Guatemala, Hondurus) to develop capacity to produce locally-relevant historical and forecast information tailored to the needs of farmers, food security decision-makers and insurance providers; and (4) initiate improvements to agricultural (e.g. livestock disease) and food security early warning systems and the decision processes that they inform.

Flagship 3: Low Emissions Agricultural Development. In 2015 this will: (1) identify mitigation targets and priorities by region and country using improved decision support tools; (2) expand low-cost GHG quantification and comparative analysis of mitigation options and trade-offs to include livestock, fertilizer management and larger landscapes (6 Centers, 10 countries, working with the WLE CRP); (3) improve quantification of nitrous oxide based on meta analysis and modelling; (4) test promising entry points for implementing mitigation, including nationally appropriate mitigation actions (NAMAs, in Kenya, Colombia, Peru, Costa Rica), sustainable commodity supply chains (Indonesia and Brazil, involving work with FTA CRP) and scoping exercises for planning large-scale implementation of mitigation (Vietnam, Colombia, USAID and Feed the Future Program); and (5) identify mitigation practices and implementation mechanisms that improve gender equity and social justice. The decision-support research includes major partners in the global change community: land use scenarios (IIASA); spatial optimization of mitigation options (U. Aberdeen); and data platforms with the Global Research Alliance for Agricultural Greenhouse Gases (GRA) and the Climate and Clean Air Initiative (CCAC).

Flagship 4: Policies and Institutions for Climate-Resilient Food Systems. 2015 will see the continuation of the 6 projects in the Results Based Management (RBM) trial. These projects operate in all five CCAFS target regions and involve nine CGIAR Centers along with national and regional partners. These are mainstreaming climate change into national agricultural and food security planning processes. The Flagship is involved in engagement with and capacity strengthening for national planning processes and evaluating climate-smart

alternatives with respect to their gender-differentiated impacts and trade-offs. Strategic foresight analysis of plausible global futures for agriculture and food security will continue at regional and global levels (IFPRI, IIASA, CIAT, IITA, ILRI, University of Oxford and many national partners), and foresight skills are starting to be embedded in the decision making mechanisms of some partner institutions. The associated quantification work will incorporate important methodological developments in the tools being used, including more appropriate inclusion of social equity issues. Social learning and engagement approaches are being tested with CCAFS partners and will contribute to an "evidence base" that will distil lessons about upscaling these approaches. Work is being undertaken with the Commission on Genetic Resources for Food and Agriculture (CGRFA) on developing national guidelines to integrate use of agricultural genetic diversity to adapt to climate change in national adaptation plans. Multi-scale governance research is also being undertaken on the processes of policy formulation and implementation, as well as scoping studies on: effective governance mechanisms and indicators for climate resilient food systems; non-traditional actors in food systems governance; discourses and power; and the governance of transformation.

To **support impact pathways,** CCAFS invests in synthesis, partnerships, policy engagement, communications and events, both at the global level and in each of the five CCAFS regions. There are two priorities at the **global level** in 2015. The first is the UNFCCC processes leading up to and including the COP in Paris in December, at which a post-2015 agreement is expected. CCAFS participation will include a White Paper on agriculture in partnership with the COP Presidency and strategic side events at SBSTA and COP. The second priority is the new Alliance on Climate Smart Agriculture (ACSA), which facilitates voluntary actions on CSA by members. FAO and CCAFS co-lead the Knowledge Action Group of ACSA and will facilitate production and distribution of knowledge products on CSA during 2015, with wide participation of ACSA members. CCAFS also holds an **innovation and knowledge partnership** fund, to support RBM and demand-driven innovative research directions.

At the regional level, there will continue to be cross-regional coordination on synthesis, partnerships, policy engagement, communications and events, plus specific regional priorities. In **Latin America**, the emphasis will be on gathering evidence from climate-smart villages (CSVs) and together with key partners implementing a joint strategy to scale it up and out, focusing on agroclimate and extension services as key components. In **West Africa**, CCAFS will expand the scaling up of equitable climate services, support the development of country action plans for CSA, and also conduct pilot tests on CSV models with the ROPPA farmer networks. In **East Africa**, CCAFS will advance work on expanding innovations among partners, with decision tools and business models for scaling out CSA as well as continue to promote the science-policy dialogues on national adaptation plans in Kenya and Uganda. In **South Asia**, the focus will be on developing the evidence base for CSVs, working with partners to improve crop insurance products, and developing decision support tools for national and sub-national adaptation plans. In **Southeast Asia**, CCAFS will focus on implementing participatory approaches in organizing the CSVs and sustaining their viability; assessing and evaluating CSA innovations from other partners that can be integrated in activities in the CSVs and for scaling up; and partnering with national programs in developing joint CSA activities and programs that will help integrate CCAFS science in national policies and development agendas.

Research related to **gender and social differentiation** is mainstreamed in all thematic and regional work. In 2015, Flagship 1 will evaluate the gender "smartness" of emerging CSA practices and technologies through participatory approaches and household modelling, and incorporate gender smartness as an indicator in CSA planning processes. Flagship 2 will incorporate gender equity challenges and solutions into climate services training, undertake ex-ante assessments of gender-specific needs and outcomes associated with index-based insurance, and build gender indicators into food security monitoring and response systems. Flagship 3 will focus on the gender dimensions of scaling up technical options for mitigation in agriculture, including high-impact journal publications and awareness raising at the policy level. Flagship 4 will include gender disaggregation in social learning processes, tools for priority-setting and analysis of governance systems at multiple levels. At the global level, CCAFS will deliver a high-level seminar on gender, climate change and agriculture in the run up to the Paris COP.

B. Tables
See next pages.

Table 1 - Planned key activities for 2015 to produce IDOs and outputs, with associated planned budgets

Level n-1 Flagships	Description of planned key activities at each level of internal organization	Expected results of planned key activities	Planned budget ($ 69,424,325)
Flagship Project 1: Climate-smart agricultural practices	**Activities are grouped under the following major output groups:** **1. 1.** Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (in the 5 CCAFS regions) **1.2**. Biophysical, socio-economic and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customised decision support tools for CSA prioritisation, wide scale adoption, local adaptation and investment planning (in the 5 CCAFS regions) **1.3.** Approaches, strategies and scaling up/out mechanisms (e.g. CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (in the 5 CCAFS regions) **1.4**. Innovative knowledge management systems and approaches (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc.) and strategic engagement approaches and partnerships that promote access, co-creation, capacity building, learning, 2 way sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc.) (in the 5 CCAFS regions) **1.5.** Evidence on equitable CSA certification schemes, new agri-business models, financial incentive mechanisms and policy instruments to promote and mainstream CSA adoption at different levels of the value chain (in LAM, WA, SA, SEA)	Expected outcomes of this work in 2015 include: • 4 national (or subnational in the case of India) major development initiatives (with targets of at least 50,000 beneficiaries) and public institutions prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools • 2 public-private actors at national and subnational levels are using new incentive mechanisms and business models that explicitly promote equitable climate smart approaches along the value chain, using CCAFS science 2019 Outcomes: • 25 national and subnational major development initiatives[1] and public institutions prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools • 15 public-private actors at national and subnational levels are using new incentive mechanisms or business models that explicitly promote equitable climate smart approaches along the value chain, using CCAFS science 2025 Outcome: • By 2025, Public institutions (e.g. governments, extension services, farmer organizations), Civil Society Orgs and NGOs at national and sub-national level are widely promoting equitable CSA adoption by supporting multi-actor networks to enable thirty million farmers, at least 40% of whom are women, to strengthen their adaptive capacity and food security	**W1&2** $ 19,198,820 **W3** $ 4,299,989 **Bilateral** $ 4,509,013 **Total: $ 28,007,822**

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[1] Initiatives that have targets of at least 50,000 to 10 million beneficiaries

Level n-1 Flagships	Description of planned key activities at each level of internal organization	Expected results of planned key activities	Planned budget ($ 69,424,325)
	Work under this theme will focus in 5 regions in 2015: Latin America, Southeast Asia, South Asia, East Africa and West Africa as well as involve global activities		
Flagship Project 2: Climate information services and climate-informed safety nets	This work comprises five major output groups, as follows: **2.1.** New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries **2.2.** New knowledge, capacity, and tools that support the provision of equitable climate services for farmers **2.3.** Weather-related insurance products and programs designed, tested, and brought to scale with implementing partners **2.4.** Decision support systems improved or developed for incorporation into national food security safety net programs **2.5.** Engagement, knowledge synthesis and evidence to guide regional and global investment in climate services for agriculture and food security management	Expected outcomes of this work in 2015 include: • 2 regional, national and sub-national institutions or consortia develop or improve major[2] demand-driven, equitable, climate informed services supporting rural communities, using CCAFS research outputs • US$2 million increase in demand-driven investments in climate services for agriculture and food security decision-making, that are informed by CCAFS science and engagement, relative to 2014 2019 Outcomes: • 15 regional, national, and sub-national institutions or consortia develop or improve major demand-driven, equitable, climate-informed services supporting rural communities, using CCAFS research outputs • US$ 15 million increase in demand-driven investments in climate services for agriculture and food security decision-making, that are informed by CCAFS science and engagement, relative to 2014 2025 Outcome: • 30 million farmers, at least 12 million of whom are women, with improved capacity to adapt to climate-related risk by accessing climate services and/or well-targeted safety nets that are informed by CCAFS science.	**W1&2** $ 8,766,798 **W 3** $ 2,060,810 **Bilateral** $ 1,708,686 **Total: $ 12,536,294**
Flagship Project 3: Low-emissions agricultural development	This work comprises three major output groups, as follows: **3.1.** Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers **3.2.** Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives such as food security and	Expected outcomes of this work in 2015 include: • 3 low emissions plans developed for implementation, based on CCAFS science, that have significant mitigation potential, i.e. will each contribute to a reduction of at least 5% GHG emissions intensities or reach at least 10,000 farmers, including at least 10% women. • 0.2 million hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation.	**W1&2** $ 8,939,018 **W3** $ 1,141,388 **Bilateral** $ 1,882,416 **Total: $ 11,962,822**

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[2] "Major" here implies that the initiative realistrically aims to reach at least 50,000 farmers by 2019.

Level n-1 Flagships	Description of planned key activities at each level of internal organization	Expected results of planned key activities	Planned budget ($ 69,424,325)
	social equity **3.3.** Incentives and innovations for scale-up of low-emissions practices and avoided deforestation by agricultural commodities Work under this theme will focus in 4 regions in 2015: Latin America, Southeast Asia, South Asia, and East Africa, as well as involve global activities. Work will be carried out in CCAFS focal countries as well as select countries with potential to be mitigation leaders in the regions (e.g. Mexico, Costa Rica).	2019 outcomes: • 8 low emissions plans developed for implementation that have significant mitigation potential, i.e. will each contribute to a reduction of at least 5% GHG emissions intensities or reach at least 10,000 farmers, including at least 10% women; • 4 million hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation 2025 outcome: • By 2025, a 15% reduction of GHG emissions intensities has been achieved, while enhancing food security, in at least eight countries in South Asia, Southeast Asia, East Africa and Latin America.	
Flagship Project 4: Policies and institutions for climate-resilient food systems	This work comprises four major output groups, as follows: **4.1.** Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues **4.2.** Priority setting contextualized with national stakeholders and capacity strengthened to apply outputs in policy formulation; including trade-off analyses, foresight activities, and quantification of regional socio-economic scenarios **4.3.** Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy, and strengthened capacities to integrate local prioirities into global fora **4.4.** Improved regional/global investment choices through appropriately contextualized priority setting, drawing on global foresight and socio-economic regional scenarios Work under this flagship will focus in 5 regions in 2015 (Latin America, Southeast Asia, South Asia, East Africa and West Africa) and will also involve global activities.	Expected outcomes of this work in 2015 include: • 2 equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies, informed using knowledge, tools and approaches derived from CCAFS science • 1 regional/global organisation informs their equitable institutional investments in climate smart food systems using CCAFS outputs 2019 Outcomes: • 15 equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies, informed using knowledge, tools and approaches derived from CCAFS science; • 10 regional/global organisations inform their equitable institutional investments in climate smart food systems using CCAFS outputs. 2025 Outcome target: • 20 national/subnational jurisdictions increased their equitable institutional investments in climate smart food systems.	**W1&2** $ 12,549,422 **W3** $ 499,750 **Bilateral** $ 3,868,215 **Total: $ 16,917,387**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
1.1 Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity	The 2019 outcome for **1.1** is: 25 national and subnational major development initiatives and public institutions prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools. 2015 activities will : • Identify scalable CSA practices and technologies in the pipeline with other CRPs • Compile evidence on CSA practices and technologies benefits through the CSA Compendium online information repository and Agtrials • Establish a network for evaluating CSA practices through Citizen Science approaches • Involve development of predictive technologies for climate smart agriculture In 2015, work will be carried out in all 5 CCAFS regions	Key results: • Robust spatial targeting tools for specific technologies (including maize, banana, rice, beans, wheat amongst other crops) • Greatly enhanced databases on CSA evidence base available through online interface(s) • Establishment of tools, methods and approaches in support of a global platform for Citizen Science of CSA • Policy brief and strategies for CSA outscaling co-developed with the African CSA Alliance 2015 activities will result in: • At least 2 major development initiatives using CSA evidence to target outscaling of promising CSA practices and technologies	**W1&2** $ 8,005,908 **W3** $ 1,793,096 **Bilateral** $ 1,880,258 **Total $ 11,679,262**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
1.2 Biophysical, socio-economical and tradeoffs nalyses analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning	The 2019 outcome for **1.2** is: 25 national and subnational major development initiatives and public institutions prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools. 2015 activities will : • Develop a CSA prioritization tool, and finalization of pilots in Vietnam, Mali, Guatemala plus 1 country TBD in East Africa • Identify appropriate indicators for CSA effectiveness • Develop household modelling approaches to evaluate effectiveness of CSA options on household livelihood indicators and to evaluate trade-offs • Co-develop with local government of adaptation plans that incorporate CSA options In 2015, work will be carried out in Latin America (Peru, Colombia, El Salvador, Grenada, Costa Rica, Guatemala, Argentina, Mexico), and East and West Africa (Ethiopia, Kenya, Senegal), Southern Africa, South Asia (India) and South East Asia (Vietnam).	Key results: • CSA Country profiles for at least 10 countries (LAM, EA, WA) published, co-developed with major development initiatives • Reports and/or policy briefs with robust cost/benefit analysis of CSA options at national and local levels for 2- 3 countries • Methodological paper on indicators for CSA • Publication of household modelling approaches and case studies in East and West Africa and South Asia • State adaptation plans co-developed with regional government institutions in India 2015 activities will result in: • National policies and institutions prioritizing CSA practices and technologies identified through robust cost/benefit analysis • National public and private institutions using CSA indicators to measure progress • Establishment of adaptation plans at sub-national scale • Institutions using CCAFS decision support tools to make the right choices with regard to CSA	**W1&2** $ 4,937,937 **W3** $ 1,105,957 **Bilateral** $ 1,159,718 **Total $ 7,203,612**
1.3 Approaches, strategies and scaling up/out mechanisms (e.g. CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level	The 2019 outcome for **1.3** is: 25 national and subnational major development initiatives and public institutions prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools. 2015 activities will: • Involve systematic testing of CSA options, individually and in portfolio, in climate smart villages in all 5 regions • Development of robust evaluation methods for CSA effectiveness through participatory approaches In 2015, work will be carried out in all 5 CCAFS regions	Key results: • Participatory platforms for evaluating CSA options established in all 5 regions • Establishment of locally appropriate and robust approaches for evaluating CSA effectiveness at field level • Data on CSA options effectiveness feeding into CSA databases and tools 2015 activities will result in: • Demonstration and robust testing of CSA options providing greater evidence for enhancing investment in CSA and scaling out of viable practices and technologies	**W1&2** $ 1,770,131 **W3** $ 396,459 **Bilateral** $ 415,731 **Total $ 2,582,321**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
1.4 Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc.	The 2019 outcomes for **1.4** are: - 25 national and subnational major development initiatives and public institutions prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools; - 15 public-private actors at national and subnational levels are using new incentive mechanisms or business models that explicitly promote equitable climate smart approaches along the value chain, using CCAFS science. 2015 activities will : • Generate site and climate specific management systems for rice in Colombia, explore opportunities for Peru and Nicaragua • Use citizen science approaches for testing, evaluating and scaling out CSA options • Generate evidence based strategies to strengthen extension systems in Latin America (Colombia and Nicaragua) • Involve training on citizen science approaches with local actors and institutions • Involve engagement with RECs and national institutions on CSA inclusion in agricultural development plans and strategies • Involve learning platforms for banana sector planning In 2015, work will be carried out in East Africa (Ethiopia, Kenya and Uganda) and West Africa, South Asia (India), LAM (Colombia, Peru, Nicaragua,Honduras/El Salvador)	Key results: • ICT data collection applications in the hands of rice farmers in at least 2 countries in Latin America • Low cost monitoring networks established for climate and crop monitoring in Latin America and South Asia • Training materials on Citizen Science approaches • Country profiles identifying entry points for CSA investment • Knowledge platforms for co-learning with IFAD ASAP program • Training on climate analogues approaches with interested institutions in target regions 2015 activities will result in: • ICTs generating data on CSA effectiveness, and providing appropriate recommendations to stakeholders on CSA options and management decisions • Enhanced capacity of local and regional organisations to understand CSA and mainstream into development agendas	**W1&2** $ 4,060,550 **W3** $ 909,448 **Bilateral** $ 953,656 **Total $ 5,923,654**
1.5 . Evidence on equitable CSA certification schemes, new agri-business models, financial incentive	The 2019 outcome for **1.5** is: 15 public-private actors at national and subnational levels are using new incentive mechanisms or business models that explicitly promote equitable climate smart approaches along the value chain, using CCAFS science.	Key results: • Initial vulnerability assessments for cocoa and coffee in West Africa and Latin America • Establishment of a value chain partnership consisting of public and private sector actors in the coffee/cocoa sector • Establishment of a seconded position of CCAFS in the	

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
mechanisms and policy instruments to promote and mainstream CSA adoption at different levels of the value chain	2015 activities will : • Identify vulnerability in coffee and cocoa value chains for Latin America (Nicaragua and Peru) and West Africa (Ghana) • Explore potential for CSA certification schemes to incentivize adoption of CSA practices and technologies in the coffee and cocoa value chain • Explore impact investment for incentivizing CSA adoption in the coffee and cocoa value chain • Identify novel financial instruments for incentivizing CSA In 2015, work will be carried out in Nicaragua, Peru, Ghana and in a global context.	World Bank to explore financial instruments and identify opportunities for testing in CCAFS climate smart villages 2015 activities will result in: • Piloting of novel financial instruments along the value chain for incentivizing CSA practices and technologies, demonstration of viability in coffee/cocoa • Identification of new financial instruments for scaling out CSA	**W1&2** $ 424,294 **W3** $ 95,030 **Bilateral** $ 99,649 **Total $ 618,973**
2.1 New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries	The 2019 Outcome for **2.1** is: 15 regional, national, and sub-national institutions or consortia develop or improve major demand-driven, equitable, climate-informed services supporting rural communities, using CCAFS research outputs. 2015 activities will: • Initiate development of locally-relevant agro-climate information in Latin America, East Africa and Southeast Asia • Continue development of capability to produce tailored agro-climate services through national and regional institutions in West Africa • Initiate development of improved early warning systems for seasonal climate impacts on agricultural pests and diseases in Southeast Asia, and food security in East Africa In 2015, work will be carried out in Guatemala, Colombia, Honduras, Rwanda, Tanzania, Malawi, Vietnam, Laos, Cambodia, Mali and Ghana.	Key results: • Methods to produce high-resolution historic climate data and predictions adapted to meet National Meteorological institutions demands in Colombia, Guatemala, and Honduras • Methodology for integrating climate forecasts with crops models and indigenous knowledge in Colombia • Capacity to produced farmer-relevant climate information in Rwanda, Tanzania, Malawi, Mali and Ghana • Crop models, spatial data sets and tools calibrated and validated to model impacts of seasonal climate on food production in East Africa • Expand capabilities of CRAFT tools for within-season forecasting of crop production, risk analysis, and climate change impact studies • Rubber plantation distribution and livestock disease risk analysis and mapping in Vietnam and Laos 2015 activities will result in: • A regional observatory platform for improved climate risk management in the Colombian agricultural sector • Initial development of agro-climate advisory products that	**W1&2** $ 2,191,700 **W3** $ 515,203 **Bilateral** $ 27,171 **Total $ 3,134,074**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
		integrate farmer-generated observations with downscaled weather forecast and location specific agriculture management options tailored to next users in Vietnam, Cambodia and Laos	
2.2 New knowledge, capacity, and tools that support the provision of equitable climate services for farmers	The 2019 Outcome for **2.2** is: 15 regional, national, and sub-national institutions or consortia develop or improve major demand-driven, equitable, climate-informed services supporting rural communities, using CCAFS research outputs. 2015 activities for will: • Expand and improve climate services for farmers in 6 countries • Design, assess needs, and initiate development of national climate services for agriculture in Rwanda • Develop capacity of climate service communication channels in 3 countries • Assess and address gender equity challenges for climate services for farmers in 2 countries • Develop a range of training and capacity development resources In 2015, work will be carried out in Vietnam, Cambodia, Laos, Colombia, Guatemala, Rwanda, Tanzania, Malawi, Senegal, Ghana and Mali.	Key results: • Evidence of effective scaling of climate services for farmers in Senegal • Evidence of gender equity challenges, and effective solutions, for climate services in Senegal and Tanzania • Gender-disaggregated needs assessment, and training of trainers for communicating climate information services to farmers, in Rwanda • Farmer seasonal forecast communication, planning and training workshops in Rwanda, Tanzania, Colombia, Guatemala, Mali and Ghana • Research protocols for developing evidence and knowledge products on effectiveness and equitability of rural climate services (Vietnam, Cambodia, Laos) • Training materials on climate services for communications intermediaries (agricultural extension, development NGOs), including gender-related communication challenges and solutions • Interactive radio training materials and prototype programming for rural climate services 2015 activities will result in: • Design (in Rwanda) and piloting (in Tanzania and Malawi) of an ICT-based 2-way communication system linking farmers with national climate service providers • Design (in Rwanda) and implementation (in Tanzania, Malaii) of participatory rural radio programming to scale up climate services for smallholder communities • Prototype mobile phone-accessible agro-meteorological advisory service for rice in the Mekong Delta and Red River Delta of Vietnam	**W1&2 $** 2,279,367 **W3**$ 535,811 **Bilateral** $ 444,258 **Total $ 3,259,436**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
2.3 Weather-related insurance products and programs designed, tested, and brought to scale with implementing partners	The 2019 Outcome for **2.3** is: 15 regional, national, and sub-national institutions or consortia develop or improve major demand-driven, equitable, climate-informed services supporting rural communities, using CCAFS research outputs. 2015 activities will: • Engange and inform national upscaling of insurance for smallholder farmers in Nigeria • Improve methodology and enhance capacity to design and implement index-based insurance for farmers in 5 regions • Develop new methodology to insure flood-related losses in South Asia • Analyse how complementarities enhance update of both weather-related insurance and CSA technologies in 3 countries In 2015, work will be carried out in India, Bangladesh, Nigeria, Ghana, Senegal and Honduras; and regionally in East Africa.	Key results: • Design of drought insurance bundled with climate-adapted germplasm for project areas in East Africa proposed, discussed and approved by partners (insurance, reinsurance, input suppliers and farmers representatives) • Evaluation of existing index insurance programs in East Africa • Tested weather index insurance prototype in Honduras, to inform commercialization 2015 activities will result in: • Improved implementation of input-linked and index-based agricultural insurance upscaling in Nigeria • Bundled weather insurance products in India, in partnership with local financial institutions, that promote the adoption of trlrbsny CSA technologies • Meso-level index-based flood insurance scheme for Bangladesh and India using flood hazard model and remote sensing data	**W1&2** $ 1,490,356 **W3** $ 350,338 **Bilateral** $ 290,476 **Total $ 2,131,170**
2.4 Decision support systems improved or developed for incorporation into national food security safety net programs	The 2019 outcome for **2.4** is: 15 regional, national, and sub-national institutions or consortia develop or improve major demand-driven, equitable, climate-informed services supporting rural communities, using CCAFS research outputs. 2015 activities will: • Initiate development of a robust, science-based food security forecasting system for East Africa that integrates improved seasonal climate, production and price forecasts • Initiate development of an improved food security information system in Guatemala and Colombia • Advise regional organizations and SBSTA on improvements to climate-related food security early warning and response systems across Africa In 2015, work will be carried out in Ethiopia, Kenya, Tanzania,	Key results: • Synthesis of opportunities to enhance the contribution of climate-related early warning systems across Africa to climate-resilient development and adaptation goals, informing COMESA, AU and SBSTA. • Review and evaluation of existing food security information systems, including gender considerations, across institutions in East Africa • Characterizatopm of food security and climate information flows and decision processes in Guatemala and Colombia • Consolidated food security sentinel site database for Guatemala	**W1&2** $ 1,753,360 **W3** $ 412,162 **Bilateral** $ 341,737 **Total $ 2,507,259**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
	Guatemala and Colombia; and regionally in Africa.		
2.5 Engagement, knowledge synthesis and evidence to guide regional and global investment in climate services for agriculture and food security management	The 2019 outcome for **2.5** is: US$ 15 million increase in demand-driven investments in climate services for agriculture and food security decision-making, that are informed by CCAFS science and engagement, relative to 2014. 2015 activities will: • Support USAID investment in climate services in Africa through: regional capacity development, improved methods to design and communicate agriculturally-relevant servces, and guidance and evidence for national climate services investment • Synthesize knowledge, and provide partnership support, for Flagship projects that include climate services • Engage and infom Global Framework for Climate Services, Climate Services Partnership, and major climate services donors and development organizations In 2015, work for **2.5** will be primarily global.	Key results: • CGIAR Climate Services Community of Practice workshop and report, on global climate services engagement and funding opportunities • Publication on institutional mechanisms to support co-production of climate services • Publication on coordinating investment in climate services • Analysis and synthesis of evidence of the economic benefits of climate service investment in Africa • CS4D program secretariat and governance established at CIAT • CCAFS representation at major events on climate services	**W1&2** $ 1,052,016 **W3** $ 247,297 **Bilateral** $ 205,042 **Total $ 1,504,355**
3.1 Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers	The 2019 outcome for **3.1** is: 8 low emissions plans developed for implementation that have significant mitigation potential, i.e. will contribute to a reduction of at least 5% GHG emissions intensities or reach at least 10,000 farmers, including at least 10% women. 2015 activities will: • Expand low cost GHG quantification and comparative analysis of mitigation options and trade-offs to include livestock, fertilizer management and larger landscapes (6 Centers, 10 countries, WLE links), research priorities identified by previous CCAFS work • Improve quantification of nitrous oxide based on meta analysis and modelling of data from the developed world • Adaptation of biogeochemical models for use in	Key results: • Active SAMPLES website providing resources to mitigation scientists from multiple countries (SAMPLES) • Peer-reviewed manuscript of GHG quantification from Latin America published (SAMPLES) • Soil fluxes of GHGs under different tillage, residue and nutrient management quantified in rice-wheat and maize-wheat system in two agroecologies in the Indo Gangetic Plain (CIMMYT) • Mitigation co-benefits of resilient and productive agricultural practices (tillage, residue and nutrient management) quantified to determine their climate smartness (CIMMYT). • 10 – 20 scientists from developing countries trained in low-cost quantification methods, at least 40% of them women.	**W1&2** $ 2,502,925 **W3** $ 308,175 **Bilateral** $ 527,076 **Total $ 3,338,176**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
	developing countries • Quantify potential emissions reductions from agricultural practices, emissions factors and agricultural activity data • Establish emissions baselines • Develop and share low-cost quantification procedures. • Analysis of agricultural practices will include social and economic methods to assess acceptability of practices in terms of food security impacts and differential effects on women and men. • Build capacity of government and local partners. In 2015, work will be carried out in Colombia, Costa Rica, India, Kenya, Mexico, Nicaragua, Peru, Tanzania, Uganda, and Vietnam	2015 activities will result in: • 2-5 emissions factors contributed to global data bases • 3-5 countries using elements of protocol for improved GHG quantification methods from online data base	
3.2 Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives	The 2019 outcome for **3.2** is: 8 low emissions plans developed for implementation that have significant mitigation potential, i.e. will contribute to a reduction of at least 5% GHG emissions intensities or reach at least 10,000 farmers, including at least 10% women. 2015 activities will: • Identify mitigation targets and priorities by region and country using improved decision support tools • Develop or identify user-friendly tools/ models/ maps that estimate emission reduction potentials, trade-offs (cost-benefits), synergies, feasibility, and gender impacts of LEA practices • Quantify mitigation co-benefits of climate smart village scale-up • Populate decision-support tools with field-based quantification data in strategic locations • Engage stakeholders to assess and increase uptake of proven reduced agricultural emissions initiatives • Provide technical assistance and communication tools to enable government climate change planning	Key results: • Widely disseminated report analysing global priorities for mitigation activities utilized by national and international decision makers such as climate finance organizations and agricultural standards (IIASA) • Journal articles on global targets for climate change mitigation (FP3) • Global synthesis of gender and mitigation technologies (FP3) • Draft tool for identifying low emissions development pathways shared utilized by national researchers in CCAFS regions (IIASA) • Wide dissemination of and publication of peer-reviewed article on online platform for presenting mitigation benefits of smallholder farmers (U Edinburgh) • User-friendly, scalable decision-support tool for spatially-linked identification of effective mitigation options for sites and regions available online for projects in East Africa (University of Aberdeen) • Comparative study on the social contexts and structural	**W1&2** $ 4,469,509 **W3** $ 490,797 **Bilateral** $ 884,736 **Total $ 5,845,042**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
	In 2015 activities will take place in Bangladesh, Colombia, Costa Rica, India, Kenya, Mexico, Mongolia, Nicaragua, Peru, Tanzania, Uganda, and Vietnam	and normative conditions affecting opportunities for increasing gender equality in East African Dairy Development project livestock value chains (ILRI) • Journal article analysing the social distribution of participation in targeted livestock value chains in terms of gender and socio-economic status (ILRI) • Pilot implementation of practices (e.g. feeds, manure management) in selected dairy value chains, with an analysis of potential for scale-up (ILRI) • Initial draft of a NAMA proposal for Kenya's dairy sector, including climate finance investment propositions (UNIQUE Forestry and Land Use, ICRAF) • Governments of Costa Rica and Colombia have baseline information on type, state, management and distribution of different pasture-based cattle production systems (CIAT) • National decision makers in India have in-depth analysis of economically viable mitigation potential for subsectors in agriculture (CIMMYT) • National decision makers have comprehensive, high-quality information and consistent metrics on rice management practices, their methane and other GHG mitigation and food security impacts, and opportunities and barriers to implementation at a central kiosk (CCAC) • Modelling framework for ex ante comparisons of locally optimized climate-smart trajectories with production and land use outcomes determined by global/external forces, for use in Vietnam (IFPRI) • Methodology and framework to elicit how men and women are likely to differentially use and value different elements and services of landscapes, to support national mitigation planning in SEA (IFPRI) • Gender-differentiated, participatory selection of mitigation options in rice systems for dissemination and inclusion in NAMA plans in SEA (IRRI)	

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
		2015 activities will result in: • 10 – 20 decision-makers involved in the development and implementation of tools (disaggregated by gender) • 2-4 strategies and policies to which CCAFS scientists, methods and tools are contributing • Mitigation goals included in Vietnam's Green Growth Strategy (IFPRI) • Low Emissions Development strategies for Colombia and Peru discussed, agreed upon with government officials and producers associations (IFPRI) • Practical GHG MRV system supporting NAMA based on the Mongolian National Livestock Programme (ICRAF)	
3.3 Incentives and innovations for scale-up of low-emissions practices and avoided deforestation by agricultural commodities	The 2019 outcome for **3.3** is: 4 million hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation. 2015 activities will: • Test promising entry points for implementing mitigation, including nationally appropriate mitigation actions (NAMAS, in Kenya, Colombia, Peru, Costa Rica), sustainable commodity supply chains (Indonesia and Brazil, cross-CRP links) and scoping exercises for planning large-scale implementation of mitigation (Vietnam, Colombia, USAID and Feed the Future Program). • Test models for NAMAs appropriate to smallholders and support countries to develop feasible MRV systems • Analyze potential effects of climate finance initiatives on smallholder farmers with gender lens • Analyze opportunities and challenges to, and test, scaling up low-emissions systems, raise awareness and profile of low-emissions initiatives (e.g. communications activities, demonstrations, south-south learning on low-emissions incentives) • Document promising innovative institutional approaches to achieving sustainable commodities (e.g. jurisdictional	Key results: • Review on financing the transition to low-emission agriculture (FP3) • Analysis of mitigation opportunities within USAID Feed the Future programming (FP3) • National decision makers in Kenya will review options for monitoring, reporting and verification of agricultural NAMAs at the level of local government (UNIQUE Forestry and Land Use, ICRAF) • Multi-stakeholder working groups in Bangladesh, Colombia, and Vietnam will use information to design agricultural development programs that scale up mitigation in paddy rice systems while also maintaining or improving food security, farmers' livelihoods, and gender equity(CCAC) • Evidence for reduced deforestation from increase in participation in and refined methodology and processes for sustainable beef certification in Brazil (IIE) • Multi-stakeholder platform in the Municipality of Paragominas, Brazil agree on a road map and common social, economic and environmental targets in support of sustainable beef cattle production as part of the Green Municipalities initiative to reduce deforestation (CIFOR)	**W1&2** $ 1,966,584 **W3** $ 342,416 **Bilateral** $ 470,604 **Total $ 2,779,604**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
	governance, certification, alliance-building regulation, consumer awareness) and examine their impacts In 2015 activities will take place in Bangladesh, Brazil, Cambodia, Colombia, Costa Rica, Indonesia, Kenya, Laos, Tanzania, Uganda, and Vietnam	• Typology and database on oil palm company practices and gendered impacts of oil palm development in Kalimantan (CIFOR) • Local government decision makers have assessment of promising models for governance of sustainable palm oil and forest conservation in Central and West Kalimantan (CIFOR) 2015 activities will result in: • 3-6 research and communications activities that support specific low-emissions institutions and incentive mechanisms • 1000- 2000 farmers involved in low-emissions agriculture initiatives, disaggregated by gender (location, type of initiative, date) • 2-10 organizations incorporating lessons learned from tests of innovations and analyses of value chains	
4.1 Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues	The 2019 Outcome for **4.1** is: 15 equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies, informed using knowledge, tools and approaches derived from CCAFS science. 2015 activities will involve: • Identifying key stakeholders, national priorities and national policy contexts (SE Asia, W Africa) • Network and stakeholder analyses to understand drivers of climate smart technology uptake and key actor linkages (E Africa) • Policy analyses to map the current status of adaptation policies and identify entry points for improvement (E Africa, S Asia) • Supporting development of national mitigation action and adaptation plans for different sectors (Latin America)	Key results: • Enhanced engagement with met services, including capacity strengthening in the development and use of tools that can enhance their effectiveness in influencing decision making (E Africa, W Africa; University of Reading) • Use of climate and weather information by smallholders in pilot sites in E Africa, to support their decision making and enhance their production and resilience (Tanzania, University of Reading) • Establishment of national-local policy interfaces in nine representative districts in three countries of W Africa, and their capacity strengthened (Senegal, Mali, Burkina Faso; ICRISAT) • A climate change and social learning community of practice strengthened by social learning case studies at different scales, implemented in several sites (Latin America, W Africa, E Africa; ILRI, ICRISAT, CIAT, CARIAA, IIED, CSIRO)	**W1&2** $ 5,057,417 **W3** $ 201,399 **Bilatera**l $ 1,558,891 **Total $ 6,817,707**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
	• Actions to improve climate decision making at national to local levels, including social learning approaches (Latin America, E Africa) • Working with stakeholders to improve engagement and communication using regional platforms (S Asia, W Africa, E Africa, Latin America) • Creating evidence-based gender awareness among policy actors with intent to influence gender responsive implementation of climate change adaptation policies (E Africa and Latin America) • Setting up of strategic alliances to improve communication and impact policy at different levels (SE Asia) • Setting up of a knowledge management system for facilitating policy dialogue (Philippines) • Co-leadership of Knowledge Action Group of Global Alliance on Climate-Smart Agriculture to generate and share knowledge products that enable scaling up of CSA (global)	• Documented dialogues on institutional learning and an evidence base strengthened and expanded; sets of guidelines developed, disseminated, evaluated, and refined on learning in rice systems (SE Asia, IRRI) and on monitoring and evaluating CCAFS interventions in W Africa (ICRISAT), as well as on science-policy interface in E and W Africa (ILRI) 2015 activities will result in: • Improved next-user understanding of policy gaps and conflicts and potential solutions, important policy actors and networks and how they can be strengthened (E Africa, IITA; W Africa, ICRISAT) • Improved capacity in the National Economic and Development Authority (NEDA) of the Philippines to analyse strengths and weaknesses of policies and explore the resilience and the provisioning capacity of the agricultural sector given future climate scenarios (IFPRI)	
4.2 Priority setting contextualized with national stakeholders and capacity strengthened to apply outputs in policy formulation; including trade-off analyses, foresight activities, and quantification of regional socio-	The 2019 Outcome for **4.2** is: 15 equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies, informed using knowledge, tools and approaches derived from CCAFS science. 2015 activities will involve: • Vulnerability mapping, integrated modeling and adaptation policy planning, capacity strengthening and rice knowledge bank support (SE Asia) • Scenario building and food policy analysis in relation to climate change, agriculture and food security (SE Asia) • Development of decision support systems and validation	Key results: • Policies tested and developed using the CCAFS regional scenarios in several regional / national case studies revised and finalized (Honduras, Cambodia, University of Oxford, IRRI) • Multi-scale analyses of different CSA practices completed to outscale appropriate practices (W Africa, ILRI, ICRSAT, CSIRO) • CCAFS inputs made to the formulation of the NAP in Colombia (CIAT, Ministry of Agriculture) • Innovative climate data and products developed to improve downscaling, set priorities and evaluate national and local impacts of climate change (Global, Latin America:	**W1&2** $ 4,618,187 **W3** $ 183,908 **Bilateral** $ 1,423,503 **Total $ 6,255,598**

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
economic scenarios	through case studies of investment prioritisation of climate-smart agriculture at national and sub-national levels (W Africa, S Asia, Global) • Assessment of regionally and temporally differentiated impacts of climate change scenarios on natural resources and food production (S Asia) • Climate, weather and agricultural systems modeling at multiple scales, to enhance engagement with national partners (including met services) and for outscaling appropriate CSA practices (Global, W Africa, E Africa, Latin America, S Asia) • Regional scenarios and policy analysis being used as a mechanism to build foresight capacity and carry out trade off analyses of locally-appropriate CSA practices across scales (W Africa, E Africa, SE Asia and Latin America) • Prioritised plan of action to strengthen resilience in Pacific Island communities (Pacific region) • Modelling climate change impacts in agriculture for 8 countries in Latin America (Mexico, Guatemala, Honduras, El Salvador, Nicaragua, Colombia and Peru) to inform policy makers and donors	CIAT, ILRI, CIP) • A wide range of stakeholders in Uganda and Tanzania working and planning together to enact food security policies that promote adaptation of climate smart agricultural practices (E Africa, IITA) • Toolkits and databases modified, based on interaction with and feedback from users, to enable and train stakeholders to assess climate change impacts and evaluate options to prioritise future research, and new models and tools applied to evaluate different adaptation options in croplands and rangelands (Global, E Africa, Latin America, S Asia; CIAT, ICRAF, ILRI, IWMI) • Set of Monographs for Adaptation to Climate Change in Latin America that apply several different modeling techniques to better understand what impacts climate change will likely have, and potential adaptation options that could help farmers compensate for negative impacts to assist policymakers in their ability to make policy using evidence-based inputs 2015 activities will result in: • CCAFS science used in three National Adaptation Plans and State Action Plans at sub-national level (India; IWMI, IFPRI) • Downscaling tools, climate data and other CCAFS science used in national programs to help evaluate impacts of climate change and adaptation options (Peru, CIP; E Africa, Ghana, ILRI, University of Reading) • CCAFS information on climate change impacts and adaptation being used by policy makers in Viet Nam and Myanmar (IRRI) • Strategic foresight analysis of plausible global futures for agriculture and food security institutionalised and embedded in the decision making mechanisms of the partner institutions (Latin America, SE Asia, IFPRI, CIAT)	

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
4.3 Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy, and strengthened capacities to integrate local prioirities into global fora	The 2019 Outcome for **4.3** is: 10 regional/global organisations inform their equitable institutional investments in climate smart food systems using CCAFS outputs. 2015 activities will involve: • Empirical analyses of policy formation and implementation as a social process that involves complex interactions between a wide variety of stakeholders at various scales (East Africa, West Africa) • With partners such as CGRFA, assist in development of national guidelines to integrate use of agricultural genetic diversity to adapt to climate change in NAPs (Global, S Asia) • Evidence base of social learning approaches developed, and framework and tools applied by various CCAFS partners to contribute to it (Global) • Social learning approaches for stakeholder engagement: case studies documented (E Africa, W Africa, S Asia, SE Asia, Latin America) • Regional engagement strategies and platforms documented and capacity strengthened, to build capacity of regional negotiators to contribute to international processes (W Africa, Global) • Initial implementation of macro-scale governance and institutions research, with focuses on cross-scale linkages, effective governance mechanisms and indicators for climate resilient food systems, non-traditional actors in food systems governance, discourses and power, and the governance of transformation (Global) • Engagement in SBSTA proceedings and deliberations in different venues of the UNFCCC (Global)	Key results: • Articulation of a coherent research agenda on global governance and institutions across scales in climate resilient food systems and its initial implementation (Global: ILRI, IFPRI, Bioversity, CIFOR, ICRAF, IDS, FAO) • An evidence base of the value of social learning approaches to enhance the development outcomes of agricultural research exists. This evidence base is being used to try to influence global organisations to make institutional investment changes in support of learning based approaches 2015 activities will result in: • Tranche of policy measures adopted to implement the ITPGRFA/MLS in harmony with the CBD/NP (Bhutan, Nepal, and other countries in S Asia during 2015; Bioversity) • National and local policy makers sharing an understanding of the cross-level governance processes that shape the impact of national policy on the climate resilience of food systems (E Africa, W Africa; ILRI) • Due in part to the uptake of CCAFS products, attendance at CCAFS events, and use of CCAFS resources, agriculture is considered a sector in which effective action on adaptation and mitigation can be taken. As a result, agriculture is not excluded from a post-2015 global climate agreement under the UNFCCC (Coordinating Unit)	**W1&2** $ 1,669,073 **W3** $ 66,467 **Bilateral** $ 514,472 **Total $ 2,250,012**
4.4 Improved regional/global investment choices through	The 2019 Outcome for **4.4** is: 10 regional/global organisations inform their equitable institutional investments in climate smart food systems using CCAFS outputs.	2015 activities will result in: • A contribution in the UNFCCC negotiation that reflects the inputs of the African Group of Negotiators (AGN) on agriculture supported by CCAFS science (E Africa)	

Level n-2 Cluster of Activities	Description of planned key activities	Expected results of planned key activities	Planned Budget ($ 69,424,325)
appropriately contextualized priority setting, drawing on global foresight and socio-economic regional scenarios	2015 activities will involve: • CCAFS regional scenarios development and engagement with international organisations including FAO and UNDP (Global) • Global foresight model development, application and capacity strengthening (Global) • Using CCAFS science to inform priorities and investment decisions of international partners, and investments by partners in the Global Alliance on Climate Smart Agriculture (Global)	• National (India) and international donors (World Bank, IFAD, ADB, IFC) targeted to finance massive upscaling of climate smart interventions in South Asia (IWMI, IFPRI) • Science informs CSA investments and practice by IFAD, World Bank and their country-level partners, particularly in 14 countries where IFAD is implementing its Adaptation for Smallholder Agriculture Program (Global) • At least 4 regional/global organizations will have used CCAFS scenarios methodology and outputs to start informing their strategic planning and priority setting processes (Global) • FAO (Economic and Social Development Department), OECD (Trade and Agriculture Directorate), and partners under the CAADP process, better able to analyse the impacts of climate change on agriculture and food security via quantified policy scenarios (Global, IFPRI)	**W1&2** $ 1,204,745 **W3** $ 47,976 **Bilateral** $ 371,349 **Total $ 1,624,070**

Table 2 – Planned CRP gender research budget: expected gender research results and associated budget

Level of organisation within the CRP	Expected Gender research results as described in Table 1	Planned gender research budget ($ 9,201,355)
Flagship Project 1: Climate-smart agricultural practices	Gender "smartness" evaluated for climate smart agricultural practices and technologies through a range of approaches, including participatory assessment in climate smart villages in all 5 regions, household modelling techniques in East and West Africa, and inclusion of gender indicators in climate smart agriculture prioritization tools and in the compendium of practices and technologies. Treatment of gender in sub-national adaptation planning will also be evaluated in South Asia and East Africa. This will include strengthening of researchers, national and local partners' capacity on socially and gender-sensitive methods and strategies for incorporating the gender lens in agricultural innovation and planning processes.	**W1&2 $** 2,616,314 **W3**$ 580,940 **Bilateral $** 342,592 **Total $ 3,539,846**
Flagship 2: Climate Information Services and Climate-Informed Safety Nets	Gender equity challenges and solutions incorporated into climate services communication intermediary curriculum, and training activities in E Africa and SE Asia; profiles of knowledge, attitudes, skills and practices of women farmers and community-based women's organizations involved in climate-informed agro advisories in SE Asia; ex-ante assessment of the potential impacts of index-based insurance on gender equity in E Africa; assessment of gender-specific flood insurance needs and potential impact in S Asia; intra-household food security analysis to inform food security information systems in LAM; incorporate gender-sensitive indicators into food security information and safety nets in E Africa	**W1&2 $** 1,222,931 **W3**$ 235,256 **Bilateral $** 42,528 **Total $ 1,500,715**
Flagship 3: Low emissions development	LED plans to which CCAFS methods and tools are contributing consider gender impacts associated with technical options for mitigation; Improved awareness and role of women's roles in scaling up technologies for rice-based mitigation, agroforestry, livestock and nutrient management in seven countries; female national agriculture researchers from EA, LAM, SA, SEA trained in low-cost GHG quantification methods.	**W1&2** $ 891,766 **W3** $ 275,358 **Bilateral** $ 10,065 **Total $ 1,177,189**
Flagship 4: Policies and institutions for climate-resilient food systems	Increased knowledge and awareness about the gender-differentiated impacts of climate change on agriculture and food security, via stakeholder analyses, social learning evidence base and syntheses of stakeholder engagement processes; Improved tools for priority setting and quantification of alternative scenarios that disaggregate simulation results and model outputs on the basis of farming system and social differentiation; Effective supra-national governance mechanisms/systems, taking into account equity, social differentiation, discourse and cross-scale linkages, as well as governance of transformation.	**W1&2 $** 2,317,163 **W3**$ 181,910 **Bilateral $** 484,532 **Total $ 2,983,605**

Level n-2: Cluster of activities	Expected research outcomes and outputs that have a gender/equity dimension (from Table 1).	Planned budget ($ 9,201,355)
1.1 Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity	In 2015 the following major outputs will be achieved: • Citizen Science approaches collecting gender disaggregated data on CSA options, farmer preferences and seed performance in Latin America and South Asia • Collection of data on gender transformation potential of maize and bean CSA options in East Africa	**W1&2 $** 1,091,003 **W3**$ 242,252 **Bilateral $** 142,861 **Total $ 1,476,116**
1.2. Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customised decision support tools for CSA prioritisation, wide scale adoption, local adaptation and investment planning	In 2015 the following major outputs will be achieved: • Incorporation of gender smartness into country profiles in African countries, and a synthesis of findings presented in gender-related events in run-up to UNFCCC COP21 • Production of gender "smartness" indicators for prioritization tools and inclusion as a metric in the Compendium of CSA practices and technologies • Implementation of gender survey in Latin America CSVs to develop strategies to support best CSA interventions that consider gender roles and social differentiation • Production of gender "smartness" indicators for prioritization tools and inclusion as a metric in the Compendium of CSA practices and technologies • Sector specific adaptation strategies and plans produced based on socially and gender-differentiated adaptation options using cost/benefit analysis in at least 4 countries, results shared with key policy makers in target countries	**W1&2 $** 672,916 **W3**$ 149,418 **Bilateral $** 88,115 **Total $ 910,448**
1.3 Approaches, strategies and scaling up/out mechanisms (e.g. CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level	In 2015 the following major outputs will be achieved: • Socially and gender- disaggregated participatory methods tested in climate smart villages in at least 4 CCAFS regions • Household models for West and East Africa evaluate gender transformation potential of different adaptation options	**W1&2 $** 241,224 **W3 $** 53,563 **Bilateral $** 31,587 **Total $ 326,374**
1.4. Innovative knowledge management systems and approaches (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc.) and strategic engagement approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA	In 2015 the following major outputs will be achieved: • Collection of gender disaggregated data on CSA recommendation domains for climate specific management in rice in Colombia, and potential of ICTs to deliver gender specific recommendations explored • Researchers, national and local partners and development agents trained on socially and gender-sensitive methods and strategies for incorporating the	**W1&2 $** 553,350 **W3 $** 122,869 **Bilateral $** 72,458 **Total $ 748,677**

information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc.)	gender lens in agricultural innovation	
1.5. Evidence on equitable CSA certification schemes, new agri-business models, financial incentive mechanisms and policy instruments to promote and mainstream CSA adoption at different levels of the value chain.	In 2015 the following major outputs will be achieved: • Initial exploration of opportunities for gender specific incentive mechanisms for CSA through certification evaluated • The development of training materials in CSA practices for coffee and cocoa in Central America and West Africa will place special emphasis on women farmers and the crops they typically manage within the farming systems. Training events will ensure that women are appropriately represented in the target groups. • Initial exploration of opportunities for gender specific incentive mechanisms for CSA through impact investment evaluated for East Africa and Central America	**W1&2** $ 57,821 **W3** $ 12,839 **Bilateral** $ 7,571 **Total $ 78,231**
2.1 New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries	In 2015 the following gender outputs will be achieved: • Review of gender considerations within existing food security information systems in E Africa	**W1&2** $ 305,733 **W3** $ 58,814 **Bilateral** $ 10,632 **Total $ 375,179**
2.2 New knowledge, capacity, and tools supporting the provision of equitable climate services for farmers are developed	In 2015 the following gender outputs will be achieved: • Assessment of women farmer needs for climate information and communication channels in W Africa and SE Asia • Assessment of gender-specific climate communication challenges and solutions in Tanzania and Senegal • Incorporation of gender challenges and solutions into climate communications training for intermediaries	**W1&2** $ 317,962 **W3** $ 61,167 **Bilateral** $ 11,057 **Total $ 390,186**
2.3 Weather related Insurance products are designed, tested, and brought to scale with implementing partners	In 2015 the following gender outputs will be achieved: • Ex-ante assessment of the potential impacts of index-based insurance on gender equity in E and W Africa • Assessment of gender-specific flood insurance needs and potential impact in S Asia	**W1&2** $ 207,898 **W3** $ 39,994 **Bilateral** $ 7,230 **Total $ 255,122**
2.4 Decision support systems improved or developed for incorporation into	In 2015 the following gender outputs will be achieved: • Intra-household food security analysis and baseline survey to inform food security	**W1&2** $ 244,586

national food security safety net programs	information systems and interventions in LAM	**W3** $ 47,051 **Bilateral** $ 8,506 **Total $ 300,143**
2.5 Engagement, knowledge synthesis and evidence to guide regional and global investment in climate services for agriculture and food security management	In 2015 the following gender outputs will be achieved • Review and assessment of indicators used by climate service initiatives in Africa to measure progress towards gender targets • Revision of methodology for gender sensitive needs assessment when scoping and initiating climate service projects	**W1&2** $ 146,752 **W3** $ 28,231 **Bilateral** $ 5,103 **Total $ 180,086**
3.1 Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers	In 2015 the following major outputs will be achieved: • Review and analysis of farm-level outcomes (including gender-differentiated effects) and mitigation potential of CSA practices for inclusion in online CSA compendium • Data on the roles of women and youth and indicators of women's empowerment in the cattle production systems and processing related products in Latin America • Training of female practitioners on low-cost methods and data for quantifying GHG emissions in Latin America, E. Africa, SE Asia	**W1&2** $ 249,694 **W3** $ 74,347 **Bilateral** $ 2,818 **Total $ 326,859**
3.2 Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives	In 2015 the following major outputs will be achieved: • Review of gender relations in mitigation technologies • Methodology and framework to elicit how men and women are likely to differentially use and value different elements and services of landscapes, to support national mitigation planning in SEA • Comparative study on the social contexts and structural and normative conditions affecting opportunities for increasing gender equality in East African Dairy Development project livestock value chains • Journal article analysing the social distribution of participation in targeted livestock value chains in terms of gender and socio-economic status	**W1&2** $ 445,883 **W3** $ 118,404 **Bilateral** $ 4,730 **Total $ 569,017**
3.3 Incentives and innovations for scale-up of low-emissions practices and avoided deforestation by agricultural commodities	In 2015 the following major outputs will be achieved: • Lessons learned on women's roles in upscaling low emissions development in SEA, LAM • Participatory field testing of low-emissions agricultural options with male and female farmers	**W1&2** $ 196,189 **W3** $ 82,607 **Bilateral** $ 2,516

	• Incentives for mitigation options in cattle and rice landscapes, efficient fertilizer use. and reduced expansion of agriculture in forest areas	**Total $ 281,312**
4.1 Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues	In 2015 the following major outputs will be achieved: • Improved next-user understanding of policy gaps and conflicts and potential solutions, analyzed by gender and other factors of social differentiation, important policy actors and networks and how they can be strengthened and supported to be more equitable (E Africa, IITA; W Africa, ICRISAT) • A climate change and social learning community of practice strengthened by social learning case studies at different scales that analyze elements of gender, social learning, power and equity, implemented in several sites (Latin America, W Africa, E Africa; ILRI, ICRISAT, CIAT, CARIAA, IIED, CSIRO) • Documented dialogues on institutional learning and an evidence base of social learning with a gender element strengthened and expanded; sets of guidelines developed, disseminated, evaluated, and refined on learning in rice systems (SE Asia, IRRI) and on monitoring and evaluating CCAFS interventions in W Africa (ICRISAT)	**W1&2** $ 933,817 **W3** $ 73,310 **Bilateral** $ 195,266 **Total $ 1,202,393**
4.2 Priority setting contextualized with national stakeholders and capacity strengthened to apply outputs in policy formulation; including trade-off analyses, foresight activities, and quantification of regional socio-economic scenarios	In 2015 the following major outputs will be achieved: • Equitable policies tested and developed using the CCAFS regional scenarios, which were developed with attention to gender and social differentiation, in several regional / national case studies revised and finalized (Cambodia, University of Oxford, IRRI) • A wide range of stakeholders in Uganda and Tanzania working and planning together to enact equitable food security policies that promote adaptation of climate smart agricultural practices with a gender perspective (E Africa, IITA)	**W1&2** $ 852,716 **W3** $ 66,943 **Bilateral** $ 178,308 **Total $ 1,097,967**
4.3 Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy, and strengthened capacities to integrate local prioirities into global fora	In 2015 the following major outputs will be achieved: • National and local policy makers sharing an understanding of the cross-level governance processes and the equity, gender and social differentiation implications of these in shaping the impact of national policy (E Africa, W Africa; ILRI) • An evidence base of the value of social learning approaches to enhance the development outcomes of agricultural research exists, with gender and social differentiation as one indicator. This evidence base is being used to try to influence global organisations to make institutional investment changes in support of learning based approaches • A high-level gender seminar will be held in the lead-up to COP 20, with potentially an associated Special Issue	**W1&2** $ 308,182 **W3** $ 24,194 **Bilateral** $ 64,443 **Total $ 396,820**
4.4 Improved regional/global investment choices through appropriately contextualized priority setting, drawing on global foresight and	In 2015 the following major outputs will be achieved: • At least 4 regional/global organizations will have used CCAFS scenarios methodology and outputs to start informing their strategic planning and priority setting processes with consideration for gender and social differentiation (Global)	**W1&2** $ 222,448 **W3** $ 17,463

socio-economic regional scenarios		**Bilateral** $ 46,515
		Total $ 286,426
	TOTAL GENDER BUDGET FOR THE CRP	**($ 9,201,355)**