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**USAID/UGANDA EDUCATION AND RESEARCH TO  
IMPROVE CLIMATE CHANGE ADAPTATION  
ACTIVITY FY2015 ANNUAL REPORT  
OCTOBER 1, 2014 - SEPTEMBER 30, 2015**

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## **USAID/UGANDA EDUCATION AND RESEARCH TO IMPROVE CLIMATE CHANGE ADAPTATION**

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### **SUBMITTED BY**

Lynne Carter, PhD  
Chief-of-Party  
FHI 360

### **SUBMITTED TO**

Mr. Robert Senkungu, Agreement Officer's Representative (AOR)  
Office of Economic Growth  
USAID/Uganda  
Kampala, Uganda  
Tel: +256 (0) 414 306 001  
Email: [rsenkungu@usaid.gov](mailto:rsenkungu@usaid.gov)

### **DATE**

Submission Date: October 29, 2015

### **DISCLAIMER**

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<b>Acronyms</b>	
AOR	Agreement Officer's Representative
AR5	Assessment Report Number Five
BHAP	Back Home Action Plans
CAADP	Comprehensive African Agriculture Development Plan
CAEC	Continuing Agriculture Education Center
CAES	College of Agricultural and Environmental Sciences
CAPSNAC	Regional Capacity Building for Sustainable Natural Resource Management and Agricultural Productivity under Climate Change
CBA	Community Based Adaptation (with numbers is a conference series)
CBO	Community Based Organization
CCA	Climate Change Adaptation
CCD	Climate Change Department
CCU	Climate Change Unit
CEES	College of Education and External Studies, Makerere University
CHAI	Climate Change Adaptation & ICTs
CIMMYT	International Maize and Wheat Improvement Center
CLA	Collaboration, Learning, Adapting
CoCIS	Makerere University College of Computing and Information Sciences
COP	Chief of Party
COP 21	Conference of the Parties 21 <sup>st</sup>
DENIVA	Development Network of Indigenous Voluntary Associations
DGGCS	Department of Geography, Geo-informatics and Climatic Sciences
DICTS	Directorate for ICT Support
DO	Development Objective
DSIP	Agricultural Sector Development Strategy & Investment Plan
EAC	East African Community
EEA	USAID/Uganda Feed the Future Enabling Environment for Agriculture Activity
ECOTRUST	Environmental Conservation Trust of Uganda
FtF	USAID/Uganda Feed the Future activities
GIS	Geographic Information System
GoU	Government of Uganda
ICPAC	International Climate Predictions and Application Center
ICRAF	World Agroforestry Centre
ICT	Information Communication Technology
IITA	International Institute for Tropical Agriculture
IPCC	Intergovernmental Panel on Climate Change
IR	Intermediate Result
KCCA	Kampala Capital City Authority
LIP	Location Intelligence Platform
LOA	Life of Activity
M & E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MAK	Makerere University
MoFPED	Ministry of Finance Planning and Economic Development

MOOC	Massive, Open, Online Course
MOU	Memorandum of Understanding
MSc	Master of Science
MUCCRI	Makerere University Centre for Climate Change Research and Innovations
MUST	Mbarara University of Science and Technology
MWE	Ministry of Water and Environment
NAADS	National Agricultural Advisory Services
NAPA	National Adaptation Programmes of Action
NARO	National Agricultural Research Organisation
NCAR	National Center for Atmospheric Research
NDP	National Development Plan
NEMA	National Environment Management Authority
NGO	Non-governmental Organization
NORAD	Norwegian Agency for Development Co-Operation
NPA	National Planning Authority
OPM	Office of the Prime Minister
PCV	Peace Corps Volunteers
RDBM	Relational Database Management
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RFP	Request for Proposals
SCALE	System-wide Collaborative Action for Livelihoods and the Environment
SFECS	School of Forestry, Environmental and Geographical Sciences
SNA	Social Network Analysis
SOW	Scope of Work
STTA	Short term Technical Assistance
TOC	Theory of Change
ToT	Training-of-Trainers
UNAP	Uganda Nutrition Action Plan
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	U.S. Agency for International Development
USG	U.S. Government
WSR	Whole-System-in-the-Room
WWF	World Wildlife Fund

## I. INTRODUCTION

### A. Activity Description

The overall goal of the *USAID/Uganda Education and Research to Improve Climate Change Adaptation Activity* (the Activity) is to help establish the Makerere University (MAK) Centre for Climate Change Research and Innovations (MUCCRI) as a recognized national and regional hub of academic, professional development and research excellence in climate science, climate adaptation, and related disciplines. The Activity will strategically deploy human, financial and technology resources with the target continually focused on building Ugandan capacity and proficiency to address climate adaptation and related issues. More specifically, the Activity will mobilize leading academics, scientists, and researchers to work side-by-side and in partnership with Ugandan colleagues to build upon the foundational efforts made by the College of Agricultural and Environmental Sciences (CAES) and others to date in developing and establishing MUCCRI. In so doing, MUCCRI will become a fully functional, operational, and sustainable center within MAK/CAES and it will encourage campus-wide participation in activities. The Centre will have the requisite staff, knowhow, capacity, and resources to be a sought-after location to focus and support climate and climate adaptation education and research for the benefit of the University and the Nation.

*USAID/Uganda Education and Research to Improve Climate Change Adaptation Activity* has the following results:

**Result 1: Institutional structure of MUCCRI is established and supports MUCCRI objectives:** The first step in this result area is to support the official University-wide establishment of MUCCRI at MAK. To support MUCCRI establishment, this Activity is undertaking a number of actions. An informational campaign is being undertaken to increase knowledge and understanding about the science, potential impacts, and responses from/to climate change and climate adaptation through a variety of methods at various times. The methods include: formal and informal presentations at college/school/departmental meetings, in classrooms, and in seminars. Postings on websites, announcements in campus media, and adding modules on climate change to established courses, and other options. The Activity will work to reach both the campus community and outside of the campus through traditional media outlets and by partnerships with various Government of Uganda departments such as the Climate Change Department (CCD) at the Ministry of Water and Environment and other such connections with locally based organizations that could include non-governmental organizations (NGOs) and community based organizations (CBOs). Cooperative activities with international groups such as bringing international conferences to Uganda and showcasing MUCCRI in international climate meetings will also be promoted to help to identify MUCCRI as a serious potential international partner. An information management hub with a digital repository, e-learning and networking platforms is being established in partnership with CCD that will act as a linkage between and among students, staff and other interested parties to share information on climate change and climate change adaptation work throughout the region. Once MUCCRI is approved the Activity will provide timely support for reconfirming and functioning of both the MUCCRI Steering and Science Committees. Official approval and these committees will become the backbone of the MUCCRI institutional structure that will allow future development and the building of a resilient and long lasting center.

## **Result 2: MUCCRI provides cutting edge short and long-term training to students, staff, and external stakeholders**

### **•Result 2a: Undergraduate and graduate coursework on climate change improved:**

The Activity supports the enhancement of a wide range of formal academic offerings for undergraduate through post-graduate students. Those offerings include: a college-wide undergraduate climate change course; program specific trainings based on the latest research findings and innovations gleaned from around the world (e.g. through aWhere); and updating of progress toward the development of a new Master of Science (MSc) program on climate change science as proposed by the School of Forestry, Environment, and Geographical Sciences. It will also include: collaborative teaching, learning, and research arrangements with other parts of the university, notably with the Department of Women and Gender Studies, the Department of Development Studies, the Department of Journalism and Communication, the School of Education, and School of Social Sciences, specifically the Department of Development Studies. There will also be non-degree related activities such as: the establishment of an e-learning platform with access to numerous identified online courses and an informal monthly lecture series to introduce climate change issues to the broader university and public.

• **Result 2b: Short term training to external stakeholders provided:** Over the life of this Activity (LOA), an array of short-term training options and vehicles to increase climate change and adaptation knowledge for key stakeholder groups will be created. These groups are external to but linked to the university, and include select public sector institutions, civil society groups, and the private sector. Where appropriate and through agreements, trainings will be jointly designed and led by Activity staff and other partners in conjunction with academic staff and students from CAES and other MAK schools and departments as a way to create a “climate smart” institution. Training types will include: in-service training modules, webinars, policy briefs, and informational packets, presentations for various key stakeholders such as the Uganda Law Society, and a special series of trainings to create a network of Ugandan Climate Champions with representatives from multiple districts and in partnership with the Ugandan National Agricultural Research Organization (NARO).

### **Result 3: MUCCRI is generating high quality climate change and climate change adaptation research:**

The Activity will strengthen the relationship between CAES, the International Institute for Tropical Agriculture (IITA), and the National Agricultural Research Organisation (NARO) to conduct joint research and field trials that reflect actual demands and needs of Ugandan smallholder farmers. The students chosen to conduct the research and field trials will be jointly managed and jointly financially supported. In addition, the Activity will introduce aWhere’s *Location Intelligence Platform (LIP)*. This new platform enables integration of complex environmental, agricultural and public health data into local, actionable insight. aWhere will provide technical inputs, staff, and tailored support to the Activity and link joint MUCCRI-NARO research and field trials. The aWhere platform will also provide actionable information and weather data to support agricultural and climate research, as well as serve as an instructional and learning tool for students. The Activity is also developing an undergraduate research training effort in partnership with a variety of departments on campus and will field a number of undergraduate interns with the Climate Champions and other organizations if possible.

**Result 4: MUCCRI is communicating with external stakeholders and disseminating climate change adaptation information:** The Activity will play a facilitative role fostering collaboration with other institutions such as the National Agricultural Advisory Services (NAADS) and others to convert the student research findings and other appropriate information into simple, understandable, cost-effective and accurate guidance. Guidance resulting from Activity supported research and other relevant information and research results will be disseminated through the most appropriate channels specifically to stakeholders, including farmers, for use at the appropriate time. Dissemination efforts include: through the system of extension workers at the district and sub-county levels, relied upon/popular radio programs listened to by farmers, use, and application of information communication technology (ICT), and through community agents (trusted community individuals). Dissemination efforts will also include regular editorials and articles on adaptation, student research findings, and resilience issues in key Ugandan newspapers and other media outlets.

### **B. Year Two Activity Highlights**

Result 1: The MAK University Senate requested a stakeholders' meeting where a vote was to be taken on support for a university-wide MUCCRI. There was overwhelmingly positive (100%) response of the stakeholders (e.g. representatives of university disciplines not only from natural sciences; media personalities; UNFCCC regional office representatives; NGOs; others) when asked to support University recognition of MUCCRI.

Moving MUCCRI forward as a serious and important university center is helped through the recognition of the potential that MUCCRI offers for linkages and partnerships in addressing climate change related issues for now and into the future. This recognition is coming in many ways, one of the most prominent is the invitation to submit a proposal for a side event at the upcoming COP-21 meeting in Paris by the African Development Bank for their Africa Pavilion.

Result 2: The apparent successes of both the Boot Camp training program for University students in climate issues and the Regional Climate Champions training sequence: It is becoming apparent that both networks would be strengthened and leveraged toward a long-term sustainability if they could be brought together. Ideas on how to accomplish such a merge are being formulated.

Result 3: Undergraduate multidisciplinary research effort: In addition to expected research successes of graduate students, the pilot tested undergraduate multidisciplinary research opportunity is interesting many students in climate issues and is generating cooperative research efforts among a wide range of disciplines that would not normally work together. This effort is identifying a new opening for interesting approaches and new information resulting from a new approach to understanding and resolving climate issues and responses for both students and faculty.

Result 4: IITA senior scientist reinforces that IITA researchers find the time and make the effort to summarize their research findings into brief lay language descriptions and fill-in the dissemination template to support wider use of research results and applications of findings. This support will help to move this dissemination strategy forward in a sustainable way.

**C. Activity Matrix**

Activities	Specific Action Implemented	Description	Progress/Achievements	Remarks	Q 1	Q 2	Q 3	Q 4	Milestone(s)
<b>RESULT 1: Institutional structure of MUCCRI is established and supports MUCCRI Objectives</b>									
Support official recognition of MUCCRI by the University	Follow-up with CAES/MUCCRI for support on the approval process by MAK senate	Through the year, the Activity kept track of progress on consideration of the MUCCRI proposal for approval as a university-wide center by MAK senate through meetings with MUCCRI interim coordinator	Senate considered MUCCRI proposal and recommended for CAES/MUCCRI to consult with stakeholders within and outside the university to obtain inputs and opinions on MUCCRI proposal. The Activity provided financial and technical support to organize a stakeholders' consultative workshop. The workshop generated outputs for improving the proposed functions and governance of MUCCRI	From the workshop it was apparent that the various stakeholders are very supportive of an institution of MUCCRI. The Activity will continue to follow-up with CAES/MUCCRI on the subsequent senate decisions	√	√	√	√	MUCCRI stakeholders unanimously recommended approval of MUCCRI by MAK as a University-wide Centre. This vote was required by the Senate to re-consider approval
Develop MUCCRI/Activity informational campaign	Prepared and distributed climate change, Activity and MUCCRI information packages	MUCCRI /USAID branded flash drives with climate change information and Activity and MUCCRI I-pagers were developed and distributed during formal and informal meetings within and outside MAK	Nearly 1,000 I-pagers and 200 flash drives with a great deal of climate information on them have been distributed as information packages	There is need for more diversified climate change information packaging	√	√	√	√	The information campaigns have continued to attract a wide range of people to MUCCRI and Activity for more information consultations
Networking with partner organizations	Participated in partnership and network building meetings	Continued to invite individuals and organizations to participate in the Activity/MUCCRI planned actions. Responded to	The contributions and significance of MUCCRI are increasingly becoming known to a wide range of partners	The number of visitors and inquiries to MUCCRI/Activity seeking for technical	√	√	√	√	The Activity/MUCCRI are now key partners in national climate related engagements

		invitations to collaborate and increase partnership-building opportunities. This included working with UNMA, ACCRA, ECOTRUST, IIED, MAK departments, etc. on various research and education engagements and dissemination of information		guidance and partnerships on climate change have continued to increase					
Review and update CAES strategic plan	Follow-up with CAES/MUCCRI on the needs and preparations to have MUCCRI integrated in CAES strategic plan	Through meetings, the Activity continued to offer technical support and engaged in technical discussions with CAES/MUCCRI on the need and how to explicitly integrate MUCCRI in CAES strategic plan	The integration of MUCCRI in the strategic plan by CAES has been welcomed and will be undertaken with technical support from the Activity. However, the College has asked that this takes place as soon as MUCCRI is approved by MAK senate - not prior.	The CAES strategic plan is due for review which offers a good opportunity to realize the planned MUCCRI integration	√	√			The Activity has already reviewed the current CAES strategic plan and identified the entry points for MUCCRI integration. The Activity is now awaiting permission to move forward with this inclusion effort.
Set-up MUCCRI website with an information sharing platform	Testing and advancing the platform prototype to be fully functional	The Activity is providing technical support including coordination for developing a website and an information management hub to be co-hosted and managed by MUCCRI and CCD	Prototypes for both the website and information hub have been selected/agreed upon by both CAES and MUCCRI. Software and hardware have been procured. Content creation and uploading are ongoing	There is need to support technical staff on a part-time basis to complete full establishment and use of the website and the hub	√	√	√	√	Website will be ready for launching as soon as CAES/MUCCRI can provide the required information to complete essential content upload. MOU for the MUCCRI and CCD partnership is under development

Activity	Specific Action Implemented	Description	Progress/Achievements	Remarks	Q 1	Q 2	Q 3	Q 4	Milestone(s)
<b>RESULT 2: MUCCRI provides cutting edge short and long term training to students, staff and external stakeholders</b>									
<b>Result 2a: Undergraduate and graduate coursework on climate change improved</b>									
Support for MUCCRI/CAES cross-college climate change approval process	Technical support toward the development and approval of a cross-college course on climate change	The Activity provided technical support for development and approval process of a cross-college course entitled: <i>Atmospheric Processes, Weather and Climate</i> to CAES by SFECS	The course has been approved at departmental and school levels. It has been submitted to college for approval consideration as a college-wide course	The Activity, together with MUCCRI, are tracking the progress on consideration of the course for cross-CAES teaching approval	√	√	√	√	The course can now be officially taught across the three departments of SFECS
Support the approval process for the MSc in climate sciences	Follow-up with MUCCRI/CAES for technical support to respond to inputs from MAK Senate	The Activity made technical contributions to the programme prior to its submission to MAK senate during Year One of the Activity. Regular follow-ups for approval updates are being done with MUCCRI/CAES so as to offer further technical support for approval and development of teaching materials where possible	The programme is still under consideration at senate level	The progress was delayed by the MAK-wide suspension on approval of new programmes resulting from a requirement by the GoU for a University-wide programme assessment and evaluation effort	√	√	√	√	The development process of the programme was consultative. This raised awareness about it which has in turn raised interest in and demand for the programme
Support the development of climate change content for input into MAK courses	Provide identified MAK departments with information on the importance of all members of society having understanding of climate change	Technical support and awareness raising on the need to integrate climate change teaching in courses and programmes through meetings, and presentations with targeted departments.	Held formal and informal discussions/meetings and presentations with CEES, Departments of Geomatics and Land Management; Environmental Management; Development Studies; Religious & Peace Studies among others	There is growing demand and interest in climate change content within MAK	√	√	√	√	The Department of Development Studies has already started teaching and examining the climate change information as a result of Activity technical support. Additional courses are under consideration for adding climate content

	Support and conduct curriculum review with the SFEGS	The Activity is providing technical support for the curriculum review process at CAES through MUCCRI and SFEGS to include climate change content in courses and programmes	Twelve programmes (each programme is made up of many courses) in SFEGS have been reviewed and provided with information for new or improved climate change curriculum content	About 90% of the suggested climate change information was accepted for inclusion in the curriculum	√	√	√	√	Increased climate change information coverage in the courses and teaching programmes offered in SFEGS
Identify and access online course offerings	Identifying and reviewing online course options and other research and educational climate change materials	The Activity continued to collate climate change information materials for online learning and sharing	The materials accumulated during Yrs 1 and 2 of the Activity have been prepared for uploading on MUCCRI website and the information management hub through partnership with EEA and their collaboration with CCD		√	√	√	√	There is growing partnership for distribution and use of the online materials
Plan and offer a monthly climate change seminar	Organised and held monthly climate change seminars for students and the general public	Worked with partners from within and outside MAK to organize seminar series on climate change topical issues. The seminars covered topics such as climate change policy; Climate change response options adaptation and vulnerability; climate change and forestry; role of agriculture in climate change mitigation among others	Eight seminars were organized and held. Attendance included MAK students and staff and the general public. 129 have participated this year (some in multiple lectures)	The number of participants is gradually increasing which is an indication of increased interest. There has been improvement in the level of discussions during the seminars	√	√	√	√	The seminars are becoming an important and predictable platform for climate change related networking and information sharing

Follow-up training and use of the aWhere Location Intelligence Platform (LIP) as an instructional and research tool	Follow-up on the use of aWhere knowledge and skills in studies/research	aWhere Inc. continued to offer technical support to groups and individual Activity-funded students, faculty and partners such as NARO and IITA through trainings on the applications of the aWhere platform in research	Training materials have been developed, over 10 trainings (both face to face and online) have been conducted		√	√	√	√	Trainees, especially students, have started applying data, skills and knowledge from the aWhere platform and trainings
	Identification and assessment of the Activity training needs from aWhere	The aWhere technical team continuously assessed the needs of users to serve as a basis for planning and developing trainings and other information packages	User assessment reports, and user specific feedback information have been compiled to guide training efforts. Customized dashboards, storylines and case studies have been developed		√	√	√	√	Improved feedback and awareness on the importance of aWhere platform as a research and educational tool
<b>Activity</b>	<b>Specific Action Implemented</b>	<b>Description</b>	<b>Progress/Achievements</b>	<b>Remarks</b>	<b>Q 1</b>	<b>Q 2</b>	<b>Q 3</b>	<b>Q 4</b>	<b>Milestone(s)</b>
<b>Result 2b: Short term training to external stakeholders</b>									
Design and develop short term training efforts	Training for University students	An informal training programme to equip Ugandan youth in Universities with knowledge and skills on climate change was designed and is being implemented	Over 70 youth from various universities in Uganda have been equipped with basic knowledge and skills in climate change. The students are being supported to develop climate change awareness raising materials to reach other youth in the country	Partnerships for expanding the programme implementation mechanisms are emerging		√	√	√	The programme is creating a multiplier effect of youth engagement for climate change action e.g. some of the trained youth participated in establishing a climate change component of the 2015 Kampala city-wide festival
	Climate change awareness/trainings for MUCCRI/	Opportunistic and planned trainings for stakeholders such as the media, Uganda Law Society, and Climate Champions	Just over 1500 individuals (some participated in multiple outreach events) were reached this year with climate change		√	√	√	√	Training of MUCCRI stakeholders is unfolding to be one of the main ways of

	Activity stakeholders	among others have been carried out	information–awareness raising - including 45+ individuals learning to champion climate change actions in various districts of Uganda= +capability						building a climate change action network especially on info dissemination
Activities	Specific Actions Implemented	Description	Progress/Achievements	Remarks	Q 1	Q 2	Q 3	Q 4	Milestone(s)
<b>RESULT 3: MUCCRI is generating high quality climate change and climate change adaptation research</b>									
Support student research in cooperation with IITA/NARO	Technical support to graduate students	Worked with research partners to guide students in developing their research proposals and fulfilling MAK requirements for research training approvals. The Activity continued to pay tuition fees and stipends for the supported students	Two MSc. students are in the last stages of their research and are expected to submit their theses during the 2 <sup>nd</sup> quarter of Yr 3 of the Activity. One PhD student has embarked on fieldwork activities supported by IITA and NARO	Partners made a decision to drop one of the earlier selected PhD candidates because of her delayed MAK admission and start	√	√	√	√	A model for research partnership on climate change adaptation for MUCCRI has been established
	Coordination of the research efforts with partners	The Activity continued to fulfil the research partnership coordination responsibility with NARO, MUCCRI, and IITA. Students' monthly progress reports were received and reviewed by the Activity. Overall research progress review meetings for partnership management were undertaken	Seven partnership research meetings were held in which decisions for managing research activities during Yr 2 were made and implemented	Delays in the MAK graduate study approval process have been a major time constraint for research progress	√	√	√	√	The specific research direction and partnership actions and responsibilities have been identified and agreed upon by all partners
	Identify and recruit MSc. students for research scholarships	Together with partners, the Activity advertised and received applications for new MSc students for research scholarships	One additional MSc. student was recruited and has embarked on research proposal writing	Most of the applicants did not meet the expectations of the partners		√	√		Experiences from the recruitment processes have helped in developing options and proposals for a variety of recruitment

					√	√	√	√	methods for additional MSc students
	Undergraduate multidisciplinary research support	The Activity initiated and undertook a pilot climate change research effort for undergraduates. The first 3 students were supported to develop research proposals and tools in collaboration with professors from the 3 disciplines represented by the students	The 3 students have completed their individual dissertations to be submitted to their respective departments and will now be supported to produce an integrated multidisciplinary report for dissemination by MUCCRI/Activity. Five new students have been recruited for a 2 <sup>nd</sup> round of undergraduate student research efforts	The applicants for the forthcoming research effort were high compared to the required number, but also it was clear that the students lacked understanding of climate change					The pilot research effort has already generated a lot of interest from students and to some extent the faculty, hence an entry point for further climate related research training at MAK
<b>Activity</b>	<b>Specific Actions Implemented</b>	<b>Description</b>	<b>Progress/Achievements</b>	<b>Remarks</b>	<b>Q 1</b>	<b>Q 2</b>	<b>Q 3</b>	<b>Q 4</b>	<b>Milestone(s)</b>
<b>RESULT 4: MUCCRI is communicating with external stakeholders and disseminating climate change adaptation information</b>									
Disseminating research results – developing a dissemination pathway	Identified partners and critical steps (e.g. “translation” template – step 2) for developing and implementing dissemination pathway for research results	Identifying partners for two of the steps of the dissemination pathway (research generators and “boots on the ground”) continued early in the year. Through collaboration with identified partners, a “translation template” was developed and tested.	In the later half of the year, starting with MAK faculty, the templates were beginning to be filled and reviewed so to be ready for uploading and sharing as soon as the website is ready	To be sustainable, the researchers need to be those who write the research results into the template. The Activity has begun meeting with researchers to explain the dissemination process and the template to generate willingness to participate	√	√	√	√	Some number of templates have been generated to pilot the dissemination effort as soon as testing of the website is possible

## II. ACTIVITY REPORT

### *A. Result 1: Institutional Structure of MUCCRI is Established and Supports MUCCRI Objectives*

Description of activities to support Result #1 for Year Two:

#### ***Support official recognition of MUCCRI by the University***

- Follow-up with CAES/MUCCRI for support on the approval process by MAK senate

Through consultations and meetings, the Activity kept track of the progress on consideration of the MUCCRI proposal for approval as a university-wide center by MAK senate. During the year, MUCCRI proposal was enlisted for discussion by senate. The interim MUCCRI coordinator presented and received comments from senate. One of the comments from the senate meeting was the need to hold a meeting/workshop to solicit comments and views on the proposed center from stakeholders within and outside the university. During the second quarter, the Activity team worked with CAES/MUCCRI to organize the recommended stakeholders meeting. The Activity provided financial and technical support to organize the stakeholders' consultative workshop. The technical support provided by the Activity for the event included planning and facilitating the meeting. The objectives of the meeting were to: raise awareness of the participants/stakeholders about MUCCRI; disseminate the activities of MUCCRI; and gather the views from stakeholders on the proposed objectives, structure and functions of MUCCRI, taking into account the needs of CAES, Makerere University, national and global. The workshop generated outputs for improving the proposed functions and governance of MUCCRI. From the workshop, it was apparent that the various stakeholders are very supportive of an institution of MUCCRI. MUCCRI stakeholders unanimously recommended approval of MUCCRI by MAK as a University-wide Centre. This vote was required by the Senate to re-consider approval. During the fourth quarter, the MUCCRI proposal was resubmitted with the requested stakeholder meeting information to the Senate Sub-Committee for consideration. There is yet no specific date when the committee plans to sit next nor when the proposal will again be considered. The Activity will continue to follow-up with CAES/MUCCRI on the subsequent senate considerations and decisions.

#### ***MUCCRI/Activity informational campaign***

- Prepared and distributed climate change, Activity and MUCCRI information packages

Information packages were prepared and disseminated during formal and informal meetings. These included MUCCRI/USAID branded flash drives with climate change information and Activity and MUCCRI I-pagers. Nearly 1,000 I-pagers and 200 flash drives with a great deal of climate information were distributed during the year. In addition to the distribution of the information packages noted above, the Activity staff made presentations about MUCCRI and the Activity with intentions of raising awareness about the existence and the contributions that are being made around climate change issues by the Activity/MUCCRI. The information campaigns have continued to attract a wide range of people to MUCCRI and the Activity for more information and consultations including inquiries on how to partner with

Activity/MUCCRI. An example of some of the feedback arising from the information campaigns is provided below:

*“Good afternoon Mr. Mfitumukiza, I got your name and address from a presentation posted on the internet on MUCCRI. I am a consultant currently working for the Icelandic International Development Agency and we are working on a project proposal on gender and climate change in Uganda. One of the things currently being looked at is cooperation with local universities in terms of research and possibly a knowledge hub on gender and climate change. I see that FHI is assisting Muk in developing MUCCRI. I cannot find any indication that they are up and running? When do you think that will be, and what is their capacity in the start-up phase? Your swift response will be highly appreciated”*

From the information campaigns, it is apparent that there is need for more diversified climate change information packaging. The website and the information management hub being developed with the support of the Activity are envisaged to provide a basis for more awareness raising and visibility about MUCCRI and the Activity.

### **Networking with partner organizations**

- Participated in partnership and network building actions

During the year, the Activity continued to build social capital for MUCCRI through partnership and network building with a wide range of stakeholders. The actions to this cause included inviting individuals and organizations to participate in the Activity/MUCCRI planned events. For example, in the ongoing climate champions training designed and coordinated by the Activity, both MAK faculty (e.g. from CAES, Women and Gender Studies, and Development Studies) and other important climate change stakeholders such as ECOTRUST, CCD, and ACCRA, among others were invited to participate and make presentations and lead discussions. In such invitations and participation, the Activity has a deliberate intention of initiating and supporting collaborative efforts for MUCCRI that will remain even after the Activity concludes.



Development Studies faculty leading a session with the climate champions on development and climate change

The Activity also continued to respond to invitations to collaborate and increase partnership-building opportunities from stakeholders. The responses involved liaising with and encouraging MUCCRI affiliated faculty to participate in events including stakeholder meetings likely to create linkages that might be important to opening opportunities for MUCCRI to

fulfill its objectives. Such events included information sharing meetings with the World Bank during which important climate change information, like the Uganda strategic climate diagnostic, was disseminated to an audience representing a wide range of climate change actors. During the fourth quarter, the Activity also attended a seasonal forecasts dissemination meeting organized by UNMA. From the meeting, a partnership between MUCCRI/Activity and UNMA to disseminate such information was launched. For example, the forecasts have been distributed to and through the climate champions. A number of the champions have also registered (volunteered) to participate in translating forecasts into local languages across the regions represented by the champions. The contributions and significance of MUCCRI are increasingly becoming known to a wide range of partners. From such engagements, the number of visitors and inquiries to MUCCRI/Activity seeking technical guidance and partnerships on climate change issues have continued to increase. It is now apparent that the Activity/MUCCRI are considered to be key partners in national climate related engagements.

A small but promising start is a cooperative proposal developed after introductions between one of the MUCCRI-interested faculty and the KCCA by the Activity. Together the three developed a small proposal to respond to an RFP from the French Embassy. This small proposal, if funded, will act as a training effort on cooperation and joint planning between MUCCRI and KCCA. It will also act as a learning environment for involving students with KCCA and community members. If the proposal is funded it will be handled through MUCCRI and will again be a learning environment for handling money and reporting requirements for overseeing funding opportunities.

### ***Review and update CAES strategic plan***

- Follow-up with CAES/MUCCRI on the needs and preparations to have MUCCRI integrated into CAES strategic plan

From the inception of the Activity, we have advocated for explicit documentation of strategic linkages of MUCCRI functions with CAES via the strategic plan of the college. This is envisaged to be one of the ways of strengthening the position of MUCCRI for institutional support and functioning including financial/budget considerations, hence opportunities for internal sustainability. Through meetings, the Activity continued to offer technical support and engaged in technical discussions with CAES/MUCCRI on the need and how to explicitly integrate MUCCRI in the CAES strategic plan. The integration of MUCCRI into the CAES strategic plan has been welcomed and agreed to be implemented with technical support from the Activity. However, the College has asked that this take place as soon as MUCCRI is approved by MAK senate - not prior. The Activity has already reviewed the current CAES strategic plan and identified the entry points for MUCCRI integration. The Activity is now awaiting permission to move forward with this inclusion effort.

### ***Set-up MUCCRI website with an information sharing hub***

- Testing and advancing the website and information sharing hub to be fully functional To foster collaboration and support long-term sustainability, the Activity initiated linkages with CCD to jointly work with MUCCRI to develop an information management hub. The hub is based on the initial Activity proposal of the Adapt2CC web site that was intended for

facilitating data and information sharing. The intention has always been to provide easy access to relevant publications and information to keep climate change stakeholders informed of the latest trends and advances, and spur policy and scientific discourse. During the year, the Activity provided technical support, including coordination for developing the hub to be co-hosted and managed by MUCCRI and CCD. Prototypes for the information hub have been selected and agreed upon by both CAES/MUCCRI and CCD. Software and hardware for the hub have also been procured and installed and are currently being used in the development process. The Activity also hired a consultant to develop a website for MUCCRI. The prototype for the website has been approved by MUCCRI. The website content creation and uploading are ongoing. The website is expected to be ready for launching as soon as CAES/MUCCRI can provide the required information to complete essential content upload. Through the information management hub platforms (e-learning, digital repository, and web-based seminars and meetings) and the MUCCRI website, it is believed that linkages between MUCCRI and various other institutions (i.e., GOU ministries, other universities, individuals, international centers, etc.) will be enhanced. Once the hub and website development are completed and functional, they are expected to raise visibility of MUCCRI as a center for information exchange and sharing, academic and thought leadership, and an example of climate adaptation research and information dissemination.

### **B. Result 2: MUCCRI Provides Cutting Edge Short- and Long-term Training to Students, Staff and External Stakeholders**

#### **Result 2a): Undergraduate and Graduate course work on climate change improved**

Description of activities to support Result #2a for Year Two:

##### **Support MUCCRI/CAES cross-college climate change course approval process**

- Technical support toward the development and approval of a cross-college course on climate change

The Activity provided technical support for the development and approval process of a cross-college course entitled *Atmospheric Processes, Weather and Climate* submitted to CAES by the School of Forestry, Environmental and Geographical Sciences (SFEGS). The support included proposing the course outline and participating in the school meetings to consider the proposed course. The Activity technical team responded to the comments arising from meetings before the course could be approved. The course has been approved at departmental and school (SFEGS) levels. It has been submitted to the college (CAES) for approval consideration by the college academic board as a college-wide course. The Activity, together with MUCCRI, are tracking the progress on consideration of the course for cross-CAES teaching approval. In the course of the approval consideration process at college level, the Activity will continue to work with the MUCCRI interim coordinator and the host course department (Department of Geography, Geoinformatics and Climatic Sciences (DGGCS) to track for needed technical responses required by the board. The course can now be officially taught across the three departments of SFEGS following the approval at that level. As of the fourth quarter, this course is under consideration by the CAES Academic Board to determine cross-college teaching approval.

### ***Support the approval process for the MSc in climate sciences***

- Follow-up with MUCCRI/CAES for technical support to respond to inputs from MAK Senate

SFEGS proposed a Master of Science degree in Climate Change and Sustainable Development that has been submitted to MAK senate through the college (CAES). The Activity made technical contributions to the programme prior to its submission to MAK senate during Year One of the Activity. During the year, regular follow-ups for approval updates were done with MUCCRI/CAES and the proposed host department (DGGCS) so as to offer further technical support for approval and development of teaching materials where possible. The programme is still under consideration and the senate has sent this programme for technical input to the Board of Research and Graduate Training and the programme is not yet re-submitted to Senate. The University Council has halted action on new programmes until the review of existing programmes is completed. The development process of the programme is consultative in nature, which allowed an opportunity to raise awareness about it. It is likely to be one of the most popular programmes once approved as evidenced by the various inquiries from individual and organizational stakeholders of MUCCRI. Many people are very eager to have the programme started so they can enroll.

### ***Support the development of climate change content for input into MAK courses***

- Provide identified MAK departments with information on the importance of all members of society having understanding of climate change

One of the Activity's strategies to promote climate change information integration in courses and programmes at Makerere University is to reach out to targeted departments with information campaigns on the importance of entrenching knowledge and skills in climate change research and education. To that effect, during Year Two, the Activity invested time to offer technical support and awareness raising training on the need to integrate climate change teaching in courses and programmes through meetings and presentations with various departments. The Activity team held both formal and informal discussions/meetings and presentations with CEES, Departments of Geomatics and Land Management; Environmental Management; Development Studies; Religious & Peace Studies among others. Through the awareness of the availability of technical support from the Activity, there is growing demand and interest in climate change content within MAK. The Department of Development Studies has already started teaching and examining climate change information as a result of the Activity technical support. Seven additional courses are under consideration for adding climate content in the Department. The students (nearly 350 per term) from the Department of Development Studies who have participated in the course in which climate change content has already been included, are involved in a holiday programme where they are expected to identify action areas for climate change adaptation and mitigation responses in their home districts (BHAP – Back Home Action Plans). Through a mentorship relationship, the faculty from the department of Development Studies who is leading the curriculum efforts is now one of the major speakers on climate change and development at most of our training events. This is one of the sustainability opportunities for MAK/MUCCRI to offer technical support to such climate change education demands from stakeholders that are already growing. In the fourth quarter an introductory presentation was delivered to an estimated 200+ College of Education and External Studies (CEES) newly entering students and numerous faculty with the hope that some faculty may be responsive to climate information mentoring and curricula additions. Other specific follow-up meetings are also planned with the Religious and Peace Studies Department.

- Support and conduct curriculum review with the SFEGS

During Year Two, the Activity/MUCCRI continued to work with SFEGS to introduce/improve climate change content in existing courses and programmes. The actions undertaken included reviewing climate change relevant programmes and courses for identification of areas that required climate change content integration and/or improvement. The Activity staff attended school curriculum review meetings and provided written technical inputs for course and programme review. The Activity also participated in and supported a school curriculum review retreat in Budongo forest in Masindi District, Western Uganda. The Activity was involved in both the retreat planning and the actual review retreat engagements. The key action points for the Activity that came out of the retreat were to: Participate in development of a new course on proofing and retro-proofing climate change for a postgraduate diploma in environmental impact assessment; and contribute to the development of a course on REDD+ in the context of climate change. The Activity proposed the course on proofing and retro-proofing climate and made written contributions for the REDD+ course development, all of which were submitted to the Department of Environmental Management. During the SFEGS curriculum review process, overall, the Activity made contributions toward reviewing 12 programmes (many courses in each programme). About 90% of the suggested climate change information was accepted for inclusion in the school curriculum. The review process has led to an increase in climate change information coverage in the teaching programmes offered in SFEGS.

### ***Identify and access online course offerings***

- Identifying and reviewing online course options and other research and educational climate change materials

In an effort to establish climate change online learning and information dissemination, the Activity continued to collate climate change information materials for online sharing. Some of the materials accumulated during Yrs One and Two of the Activity, have been prepared for uploading on the MUCCRI website and the information management hub through a partnership with EEA. Over 150 online materials and resources have been identified, some of which are ready for upload on the MUCCRI website and the information hub shared with CCD. There is a growing partnership for distribution and use of the online materials due to the increasing awareness about this initiative.

### ***Plan and offer a monthly climate change seminar***

- Organised and held monthly climate change seminars for students and the general public

The Activity worked with partners especially researchers/scientists from within and outside MAK to organize a seminar series on climate change topical issues. The seminars covered topics such as: climate change policy; climate change adaptation and vulnerability; climate change and forestry; role of agriculture in climate change mitigation, among others. Seven seminars were organized and held during the year on a school semester schedule. The seminars have continued to attract attendance from MAK students, faculty and staff as well as from the general public. The number of participants is gradually increasing which is an indication of growing interest. There has been improvement/sophistication in the level of discussions during the seminars, hence offering more opportunities for information exchange among the participants including information for MUCCRI/Activity to help in identifying the

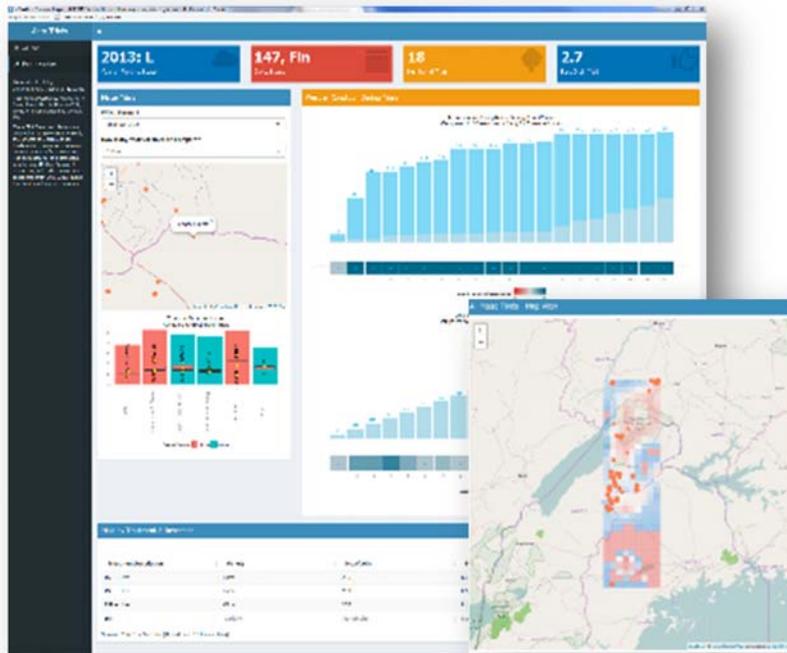
topics likely to be more interesting for future seminars. The seminars are becoming an important and predictable platform for climate change related networking and information sharing. One hundred and one distinct individuals (many participated in numerous lectures) participated in the seven lectures this year.



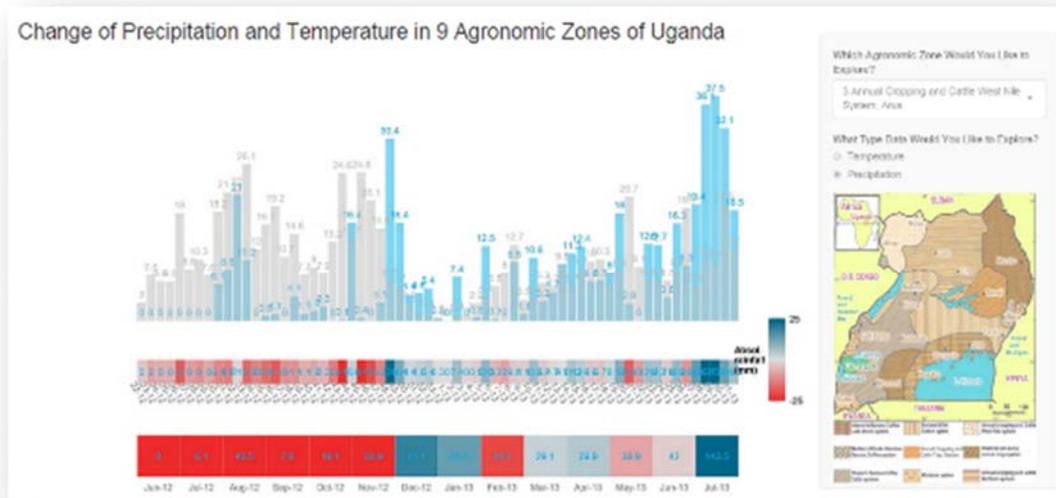
**Follow-up training and use of the aWhere Location Intelligence Platform (LIP) as an instructional and research tool**

- o Follow-up on the use of aWhere knowledge and skills in studies/research

Throughout the year, the Activity worked with aWhere to develop research and instructional information packages and tools for MUCCRI and stakeholders to support them in data management and sourcing of high-quality primary and secondary data. The goal is to leverage and integrate multiple high resolution datasets from the aWhere location intelligence platform while also streamlining data processes and analytics provided by the platform. aWhere continued to offer technical support to groups and individual Activity-funded students, faculty and partners such as NARO and IITA through trainings on the applications of the aWhere platform in research. The process actions included development of training materials for over 10 trainings (both face to face and online) that were conducted during Year Two. Trainees especially students have started applying data, skills and knowledge from the aWhere platform and trainings. aWhere has also developed case studies, models and dashboards for guiding students and faculty in research and teaching. The developed case studies include: Weather data & analytics for agriculture; Rainy season change in single location; Rainfall and herbage biomass production; Data management; Climate change and commodity markets etc. Dashboards developed include one on climate agile agriculture trials among others. The dashboard allows researchers to identify high-performing trial sites and treatment types, examine the weather conditions that prevailed in each site during the growing season, and compare with the historical norm weather patterns in those sites to gain insight into how conditions might be expected to change in future. Furthermore, the dashboard is updateable, allowing future uploading of iterations of the same data and real-time monitoring of the status of ongoing trials.



Example farmer trial overview in the aWhere dashboard, and a map of all trial sites (inset).



○ Identification and assessment of the Activity training needs from aWhere

In an effort to be *needs responsive* in the aWhere training efforts, the aWhere technical team continuously assessed the needs of platform users to serve as a basis for planning and developing trainings and other information packages. User assessment reports, and user specific feedback information have been compiled. The regular assessments including post training evaluations have continued to be the basis for in-person and group training with MUCCRI students on the aWhere platform Data Library, Data Analysis Viewer, Data Import Tool, and Weather Data. The needs-based training has served as a great step in getting students more comfortable when interacting with aWhere, using platform features and

thinking critically about how these tools should be used in their individual projects. Follow-up, and additional support, training and resources will be provided as more needs continue to emerge. There is slow, but steady improvement in interest, feedback and awareness on the importance of the aWhere platform as a research and educational tool especially among the students.

## **Result 2b): Short term training to external stakeholders provided**

Description of activities to support Result #2b for Year Two:

### ***Design and develop short term training effort(s)***

- Training for University students

An informal training programme (Climate Change Boot Camp) to equip Ugandan youth in universities with knowledge and skills on climate change was designed and is being implemented. This training effort began in the second quarter of Year Two with a three-day training event in which over 70 youths from various universities in Uganda participated and were equipped with basic knowledge and skills in climate change. Through the various thematic working groups for climate change action that were formed during the training, the Activity has continued to nurture the university students who have consistently exhibited interest in the training programme. The youthful students are being supported to develop climate change awareness raising materials to reach other youth in the country as a way of generating a multiplier effect through outreach with the climate change information. With the energy and numbers associated with the Ugandan youth, this effort is envisaged to be an opportunity for a sustainable way of awareness and capacity raising for informed climate change response actions in the country. The Activity is establishing partnerships for expanding the programme implementation with interested stakeholders. Contacts and discussions to that effect have taken place with OXFARM, KCCA and Peace Corps, among other emerging opportunities to work with the students to realize more outcomes associated with this training and mentorship programme. The students are already involved in championing a number of climate change actions e.g. some of the trained youth provided leadership for establishing a youth climate change component of the 2015 Kampala city-wide festival.

- Climate change awareness/trainings for MUCCRI/Activity stakeholders

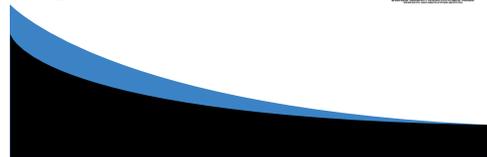
One of the aims of the training efforts supported by the Activity is to establish a network of Ugandan individuals and institutions around MUCCRI that are interested and well informed in climate change response actions. To realize this aim, the Activity has continued to work with MUCCRI and Makerere University faculty to undertake both opportunistic and planned trainings for expected and current MAK/MUCCRI stakeholders such as the media, Uganda Law Society, among others. Through these training/outreach efforts, just over 1500 (some individuals have participated in multiple outreach efforts) people have been reached with new knowledge around climate change and response options. One of the in-depth training efforts has included over 45 individuals interested in championing climate change actions in different districts of Uganda. The climate champions program is one of our major training efforts with

an in-depth 2-day introduction to climate issues followed by 1-day per month for four months focused trainings on response options and funding opportunities. The Activity's concept of a climate champion envisions the establishment of local/regional "go-to" people for accurate and useful climate change advice.

## Climate Champions

### Creating a network for a more climate resilient Uganda

Sharing practical responses and opportunities in climate mitigation and adaptation at national, district and local levels



The champions are also expected to be people who are passionate about understanding the climate science basics, the likely impacts in their regions and the ways to respond. Once established, they are expected to provide helpful advice and guidance as district local governments begin/carry out the planning processes of adaptation and mitigation around a changing climate. The Activity is partnering with three other USAID funded Feed-the-Future Activities (EEA, AgInputs and CPM) and with the NARO agricultural climate champions that cover issues of the involved districts around the country. This partnership of district individuals, NARO expertise, new knowledge and training on how to assess and respond to climate changes, is already leading to activities and information sharing in the various districts. Some of the champions are

radio personalities and they began new radio programmes to share their growing knowledge about climate change and the possible responses from the first training days in July and they are adding to those programmes from each training day. There are many other examples of how the new information is being applied in the districts. A network of knowledgeable individuals who are committed to working on these climate issues is developing and they are being assisted in keeping in touch with one another and with new information by becoming parties to the NARO google group where information and questions can be sent to all the participants to encourage sharing and helping each other. This effort is unfolding to be one of the main ways of building a climate change action network that can disseminate and apply accurate climate knowledge and thus help Uganda to become more resilient to climate changes in the future.



*Jo Lesser-Oltheten, Director, Office of Economic Growth, USAID/Uganda officially opened the first training session of the Climate Champions in Entebbe in July*

### C. Result 3: MUCCRI is Generating High Quality Climate Change and Climate Adaptation Research

Description of activities to support Result #3 for Year Two:

#### **Support student research in cooperation with IITA/NARO**

- Technical support to graduate students

The Activity/MUCCRI worked with research partners (IITA and NARO) to guide Activity-funded students in developing their research proposals and fulfilling MAK requirements for research training approvals. During the last quarter of the Year, one PhD student's research proposal was approved and she has now been fully allowed by MAK to undertake fieldwork and other research activities toward meeting her PhD award requirements. The student's PhD research is entitled "*Pest dynamics in Robusta coffee: Influence of canopy closure and climate variability*". The other PhD research entitled "*Climate Change Adaptation Practices in Agriculture and Farm Productivity in the Low- and High-land Areas of Uganda*" is expected to obtain a proposal implementation approval by the end of the next quarter. At the end of the year, one PhD scholarship candidate was considered way behind the expected partners' research schedule. The delay was attributed to failure to obtain admission from MAK on time and consequently loss of interest in PhD studies by the candidate. As a result, partners agreed to drop the student from research funding. Two MSc students funded by the Activity are expected to submit their theses and manuscripts for publication during the second quarter of Year Three. The two MSc students are undertaking research on: *Analysis of policy and institutional framework for climate change adaptation among smallholder farmers in Mt. Elgon and Luwero regions*; and *Projection of maize yield based on future temperature variations in Uganda*. The Activity continued to pay tuition fees and stipends for the supported students through the year. From the experiences of the ongoing Activity supported research engagements, a model for MUCCRI research partnership is steadily being established.

- Coordination of research efforts with partners

According to the research partnership agreement among FHI 360, CAES, NARO and IITA under this Activity, FHI 360 is expected to coordinate the management of all research activities. For the same reason, the Activity continued to devote time and other resources to fulfill the research partnership coordination responsibility among the partners. Coordination engagements included organizing and hosting meetings for making decisions to guide research actions such as results on students' recruitment and progress assessments for the supported students. Decisions regarding students' progress monitoring and evaluation continued to be informed by monthly reports submitted by the students to the Activity for review and decisions on financial support especially payment of monthly stipends. The Activity provided feedback from the students' progress tracking to partnership management meetings for overall research progress review meetings from which recommendations were made together with other research management decisions/recommendations. A total of seven research partnership management meetings were held in which decisions for managing research actions during Yr 2 were made and implemented. Delays in the MAK graduate study approval process have been a major time constraint for students' research progress. Another observation is that some faculty have financial expectations for supervising/mentoring project funded students. The Activity team has continued to clarify and manage expectations to the faculty by indicating the financial contributions to the graduate students whose research is funded by the Activity. Overall, the specific research direction, partnership actions and responsibilities have been identified and agreed upon by all partners at institutional level.

- Identify and recruit MSc. students for research scholarships

During the third and fourth quarters of Year Two, the Activity, in partnership with International Institute of Tropical Agriculture in Uganda (IITA-Uganda), the National Agricultural Research Organization (NARO) and MUCCRI advertised for interested students to apply for two MSc research scholarships to run through Year Three of the Activity. The target research themes were: “*Modeling current and future crop (coffee, banana, maize and beans) suitability patterns in a changing climate to provide information packages for climate variability/change adaptation*” and “*Household and farming system level vulnerability assessment with focus on analyzing the factors and processes determining the impact of selected climate hazards*”.” From the recruitment process, it was realized that the applicants for the vulnerability assessment research theme were generally weak and a recommendation for headhunting of other candidates through MAK faculty was made and supported as a realistic approach. The student who was selected for the crop-modeling theme is in the final stages of research proposal writing and expected to implement the research proposal during the next quarter. Experiences from the recruitment processes have helped in developing options and proposals for a variety of recruitment methods for additional MSc students in future for purposes of recruiting the best students.

- Undergraduate multidisciplinary research support

The aim of the undergraduate research effort is to introduce climate change response research (e.g., adaptation) to students as early as possible. This early introduction would allow those interested to consider climate change education and research for graduate studies and professional development especially to support climate change response actions. The Activity initiated and undertook a pilot climate change research effort for undergraduates during Year Two. The first three students were supported to develop research proposals and tools in collaboration with professors from the three disciplines represented by the students (Forestry, Communication, and Gender). The Activity worked with MAK faculty to offer technical support to the students to undertake research activities (proposal writing, development of data collection tools, fieldwork, data analysis and report writing). The Activity also supported the financial aspects of the research. The three students have completed their individual dissertations to be submitted to their respective departments and the Activity will start supporting the students to produce an integrated multidisciplinary report for dissemination by MUCCRI/Activity. Another group of five students have been recruited for a second round of undergraduate student research efforts. The engagement of the students for their research training will begin in the next quarter. The number of applicants for the forthcoming research effort were higher than the required number, but it was also very clear that the students lacked understanding of climate change basics. Part of the research training will include equipping them with foundation knowledge on climate change basics. The pilot undergraduate multidisciplinary research effort has already generated a lot of interest from students and to some extent the faculty and thus could become an entry point for further undergraduate climate related research training at MAK.

#### ***D. Result 4: MUCCRI is communicating with External Stakeholders and Disseminating Climate Change Adaptation Information***

##### ***Disseminating research results-developing a dissemination pathway***

- Identified partners and critical steps (e.g. “translation” template – step 2) for developing and implementing dissemination pathway for research results

Identifying partners for two of the steps of the dissemination pathway (1. research generators and 3. boots-on-the-ground – those who will take the shared information the last mile) and critical steps (e.g. info contained in any “translation” template-step 2) continued early in the year. The boots-on-the-ground were particularly concerned and influential in the format and content of any information that would be distributed through this dissemination pathway. They were consulted on their information needs as well as on the language level needs of the shared information. A trial template (a critical part of step 2 in the pathway) was developed that would be used by the research generators to summarize their research findings/outputs into small pieces of useful and useable information. That template was reviewed by a number of partners interested in being a part of step 3 in the dissemination process and they offered specific revisions and additions to the template. As many of those suggested changes as possible were included in the next draft of the template. The Grameen Foundation representatives were particularly helpful in identifying specifics to be included in the template and they also mentioned that they tend to synthesize a number of report findings into one message that they then share with their outreach agents - knowledge workers, village agents, among others. They agreed that if/when they generated such synthesized outputs of information, they would also be willing to put that information back onto the MUCCRI website so the synthesized information could also be widely shared. Through collaboration with potential users of the information the “translation template” was revised and tested.

The Activity hired a part-time assistant to begin to generate completed templates for populating the dissemination pathway portion of the MUCCRI website. While this is not a sustainable model – that is the researchers need to develop their own summaries of their work using the template – it was deemed necessary to try to “jump-start” the process. The Makerere University climate researchers were the target audience to begin to generate templates. There seemed to be great resistance by the researchers to summarize their work. We do, however, have a few templates with information to share that we can begin to disseminate as soon as the website is available. We are hoping that the initial resistance by the researchers will lessen over time as the researchers see their work being utilized. A different approach is now being tried. A presentation on the dissemination pathway and the template was provided to the IITA researchers at a recent team meeting at the IITA offices. There was time for discussion to explain the purpose of the template and the dissemination effort. Part of the presentation was around using lay language rather than “scientific speak” and that is critical for effective information dissemination. A table on scientific words that mean something different to the public was described and shared and the researchers were encouraged to think of the audience and use “newspaper” level language in the summary and try to avoid any potentially confusing words. We are also asking that if an SMS is possible from their work to please add that to the template in the appropriate location – that may be an important information sharing option.



Sharing the template, dissemination pathway reasoning, and the table of words to be avoided with the IITA researchers.

Terms that have different meanings for scientists and the public		
Scientific term	Public meaning	Better choice
enhance	improve	intensity, increase
aerosol	spray can	tiny atmospheric particle
positive trend	good trend	upward trend
positive feedback	good response, praise	vicious cycle, self-reinforcing cycle
theory	hunch, speculation	scientific understanding
uncertainty	ignorance	range
error	mistake, wrong, incorrect	difference from exact true number
bias	distortion, political motive	offset from an observation
sign	indication, astrological sign	plus or minus sign
values	ethics, monetary value	numbers, quantity
manipulation	illicit tampering	scientific data processing
scheme	devious plot	systematic plan
anomaly	abnormal occurrence	change from long-term average

—Richard C.J. Somerville and Susan Joy Hassol, *Physics Today*, 2011:

### E. Monitoring and Evaluation Indicators

The Annex to this document is the original M&E table for Year 2. Any activities that were assessed under these indicators will be noted there. It is important to know that this Activity has revised many of its indicators because they have been revealed to actually need process indicators rather than done/not done or numerical indicators.

For example, the establishment of MUCCRI as a university-wide and approved center is something that takes many steps and some back and forth. The proposal for MUCCRI-wide acceptance was submitted, however the University has asked for a stakeholder meeting, a specific vote, a report on the meeting and the vote, and then a resubmission of the proposal. Thus, while there is movement – some forward some back – it is all progress toward the final goal of University-wide acceptance of the MUCCRI center. Accordingly, progress can be demonstrated but not in the way the indicators are currently presented, i.e., completed or not completed. This approach under-reports the extensive effort and time that has been dedicated to moving the goal forward.

There are many such indicators in this Activity as there are many more steps to accomplish in a long process for many of the goals of this effort. An example: for inclusion of climate information in courses it might take a presentation on *climate and that discipline* to the department, a meeting with the department chair and any interested faculty. This would then be followed with mentoring time and effort with the interested faculty, consideration of what climate information could be added to which courses and where would be most appropriate locations/times for additional information. Model teaching the new information, acceptance of the information into the course and continued inclusion when offering that course, to final acceptance that that course will be permanently changed would be the last steps. In general, courses can only be revised when they are up for review and reviews are not generally scheduled more frequently than 3 (or more) years apart. So, while there may be interest in updating a course, it may not be possible for a number of years to finalize that update. Accordingly, the process indicators at least demonstrate that there is progress being made but the ultimate outcome could be achieved years later than the initial and supporting work by the Activity staff. However, once a course is changed, it is changed for a long period of time and the new climate information will thus be learned by class after class. One of the Development Studies courses that we have been able to support with mentoring and new climate information reaches on average 350 students per term. Those students will go on to contribute to Ugandan development efforts for many years.

As a result of this new understanding of how progress actually works in this education effort, we have revised many of the indicators, added two, and have revised the M&E plan and are awaiting its approval.

#### **F. Additional Observations/Issues**

This second year has seen the development of a greater level of understanding between the Activity/MUCCRI and its various partners. We have been involved in many of the important climate discussions and actions in and for Uganda – e.g. working with CCD on the e-portion of their Climate Resource Center and representing MUCCRI in an important Ugandan Climate Change Adaptation documentation effort by the World Bank, among others. From participation in an international conference in Nairobi, MUCCRI was invited to submit a proposal for a side-event at the African Development Bank Pavilion at COP-21 in Paris whose aim is to support African climate related networking and linkages. As a result of that same meeting MUCCRI is also being considered, through the official GoU, as a co-host of another international conference on Community-Based Adaptation (CBA) to be held in Kampala in spring of 2017. These all show a recognition of the expertise and opportunities that a University-wide MUCCRI can bring to the climate issues both here in Uganda and in the region. This recognition does not come from nowhere. It comes from working with individuals and groups from many sectors and representing many levels and responding to their needs for climate information. The steps that are being supported by this Activity with and for MUCCRI and our other partners are being recognized and that will lead to the ability of MUCCRI to become sustainable over the long term.

## G. Collaborating, Learning, Adapting (CLA)

CLA is a constant approach in this Activity. There are so many partners and so many specific aspects that are not under the direct control of the Activity that the willingness and ability to be flexible and accommodating to allow successes to be achieved make CLA an underpinning and necessary aspect of this effort. While there are always many aspects that we are learning from and adapting to we have identified a few really critical learning experiences listed by result area.

Result 1: Shared development and roll-out (CCD and MUCCRI/Activity) of the e-portal: Working directly with a GoU department – CCD – has shown us that sometimes it takes a bit longer to move to results with large organizations. Progress on the e-learning portal was experiencing a number of procedural delays. We needed to move to a plan B – set-up of a temporary website for MUCCRI while awaiting the final shared site success. This plan B was critical to continuing to support the needs of MUCCRI and those included the development and availability of a website sooner rather than later.

No direct control of process and progress: Working toward university-wide approval/establishment/institutionalization of MUCCRI is subject to many, sometimes counterproductive, influences. The Activity needs to remain flexible to respond in whatever way and timeframe is needed (e.g. plan and support a stakeholder workshop) even if it seems like the progress is one step back then two forward. It is moving in the forward direction.

Result 2: Successes can still result in adaptations and reallocations: The Activity is partnering with three FtF Activities on a Climate Champions training program. The program is so well received by the Champions (the participants) that re-allocation of funds and attention is appropriate for Year Three to help to insure a sustainable network even when this next round of interactions may not have been originally planned.

Working with faculty and courses can be a much longer/slower process than originally envisioned: Staying on the course, taking the needed time and effort will have a long term significant multiplier effect – with all the follow-on students for any course learning the “inserted” climate material even if it took a few years for approval and institutionalization – thousands of students will now learn what was hoped and over a long period of time.

Result 3: Finding the right students: It is not always possible to find the exact students sought within your pre-established time frame, conditions, and procedures. Rather sometimes one needs to innovate a new approach or revise the requirements to reach the appropriate students with the appropriate talents and interests to bring into the program and cultivate their capabilities.

Result 4: Sometimes need help from senior leadership: Even when researchers think they want their research results shared, often it is not actually a priority for their time and efforts. Sometimes it is important to have expressed support from the leaders so the researchers will make the time needed to share their results. That might take a different approach to reaching the researchers – not just directly but through a meeting called by their boss.

### III. UPCOMING ACTIVITIES

1. October 11, 2015 – one-day follow-on meeting with the Climate Champions addressing: Adapting to Heavy Rainfall – Fairway Hotel, Kampala
2. November 13, 2015 – final planned Climate Champions meeting: Funding Opportunities and How to Write a Proposal – location TBD
3. November 19, 2015 – MUCCRI Lecture Series – Climate Change and Gender Issues – 3:00 pm Forestry conference room
4. December 2015 – specific dates TBD - MUCCRI side-event at COP21 at the African Development Bank Pavilion
5. January 2016 – specific dates TBD but at end of the month – 2<sup>nd</sup> Annual Boot Camp with Peace Corps Volunteers and maybe KCCA school program

### IV. CONCLUSION

This is a capacity-building activity and it is important to recognize that capacity is not built overnight nor from one interaction with new information. In fact there are recognized steps to building capacity that results in behavior change and information alone will not move people to action. Humans are creatures of habit and in order to change a habit it takes movement along the following stages AND reasons and determination to continue with the changed behavior. The stages of change are often referred to as: pre-contemplation (not even thinking about the issue), contemplation (thinking about “it”), preparation (planning to act), action, and maintenance of the changed behavior. In all of these is the issue of “relapse” – forgetting why you were trying to make this change in your behavior in the first place and recognizing that anything new is harder than the “old way” that we “always” responded.

So while there are numerous introductions and awareness building efforts both within and outside MAK to reach and inform the public about climate change and how our actions can help or hurt climate as well as our selves, only a small percentage of participants will continue any new behavior. It takes many interactions and reinforcements of the new behaviors that are being requested – even in planning for risk reduction – before the actual implementation of any new knowledge. So the fact that there are a number of courses adding climate change information will begin the process even more widely of moving folks from the pre-contemplation stage further along the “stages of change” and will thus result in behavior changes long after this Activity is completed. In recognition of this normal ladder of change, the individual climate champions were identified because they were already in the contemplation stage around climate issues but needed help to move forward. They are now well beyond even the preparation stage because of the information shared with them and the hands-on activities and the many structured interactions. These individuals are supporting each other and that will help them to avoid too much relapse. This support will continue to help them to make progress themselves and share information and help others to continue to move along the stages of change so they are better prepared for present and future climate change impacts. This too is a process.

The overarching goal of this Activity is to assist in the university-wide institutionalization of MUCCRI. One of the definitions in Webster for institutionalized is: *to become accepted and used by many people*. This second year of the Activity has seen an increased level of acceptance of MUCCRI locally and the beginning of a level of regional acceptance. Many partners are

using MUCCRI's linkages, connections, and knowledge in a variety of ways and through all of the result areas. For example: MUCCRI/Activity is recognized as a desirable long-term partner by the CCD – thus the sharing of the knowledge management system; MUCCRI/Activity is being recognized by more than science departments across the campus as a source of reputable and regularly offered climate change information and training opportunities; MUCCRI is recognized as a source of quality students for critical research efforts and as a partner with GoU and other international research institutions. Soon, it is hoped it will be seen also as a source of new and useful information to assist the country in increasing its coping ability even under changing climate conditions. The third year of this Activity should see more major leaps in the institutionalization of MUCCRI within the University and across the country and the region.

## ANNEX: MONITORING AND EVALUATION INDICATOR TABLE FOR YEAR TWO

Indicator Name & Number	Target YR 2	Quarter One	Quarter Two	Quarter Three	Quarter Four	Year 2 Total	Notes
<b>Result 1: Institutional structure of MUCCRI is established and supports MUCCRI objectives.</b>							
<p>Support Recognition of MUCCRI w/in and outside University</p> <p>MUCCRI approved and established by University Senate</p> <hr/> <p>(2) MUCCRI Steering and Science committees (cmts) established (estbl'd) and functioning</p>	Phase 2: MUCCRI Approved and Instituted	Decision still with University Senate	Decision still with University Senate	University Senate requested a stakeholder mtg and it was held and other questions responded to	Stakeholder meeting report and vote recorded and MUCCRI proposal resubmitted to Senate for decision	MUCCRI proposal has been reviewed by Senate MUCCRI responded to comments, resubmitted now up for review again	
	Phase 1: 2 committees estbl'd one mtg held Baseline functionality estb'd	Cannot happen until MUCCRI is officially instituted	Cannot happen until MUCCRI is officially instituted	Cannot happen until MUCCRI is officially instituted	Cannot happen until MUCCRI is officially instituted	Cannot happen until MUCCRI is officially instituted	Cannot happen until MUCCRI is officially instituted
(3) Website: planned, established, usage (hits per month)	Phase 2: Website online and active	Collaborative development work still on going	Collaborative development work still on-going – working on a temporary website to use faster	New web designer hired and I server received and in place	Web plan approved by MUCCRI Developing content for site	Web in test mode, collecting content	

Indicator Name & Number	Target YR 2	Quarter One	Quarter Two	Quarter Three	Quarter Four	Year 2 Total	Notes
<i>Result 2: MUCCRI provides cutting edge short and long term training to students, staff, and external stakeholders</i>							
<i>Result 2a: Undergraduate and graduate coursework on climate change improved</i>							
(4) Number of courses that newly include climate change information because of MUCCRI/Activity assistance /interactions	4	Reviewed and commented on 12 programs No decisions yet released	1	1	4	6	
<i>Result 2b: Short term training to external stakeholders provided</i>							
(5) Number of short-courses in climate change and/or adaptation developed by or with Activity support and delivered under the auspices of MUCCRI	4	2	8	1	11	22	
(6) Number of individuals with increased capacity to adapt to the impacts of climate change as a result of USG assistance.	% of respondents with increased capacity to adapt	62	124	16	356	558	These individuals represent about 1/3 of those reached this year. We have pre/post evals, etc. and actual course exams as support for this number.
Indicator Name & Number	Target YR 2	Quarter One	Quarter Two	Quarter Three	Quarter Four	Year 2 Total	Notes
<i>Result 3: MUCCRI is generating high quality climate change and climate adaptation research</i>							

(7) Number of graduate and undergraduate student research efforts on climate change and climate change adaptation supported yearly by the Activity	11	5	3	6	-1	13	One student from Quarter one count was released in Q 4 for lack of admission progress – so total is (-1) of what it would have been
(8) Number of publications in peer-reviewed journals from Activity supported student research efforts (peer review/accepted indicates quality)	0	0	0	0	0	0	
<b>Result 4: MUCCRI is communicating with external stakeholders and disseminating climate change adaptation information</b>							
(9) Number of farmers reached with research results and new climate information by dissemination pathway participants	Phase 2: Pilot test the pathway and note numbers of farmers reached	Starting Phase 2: Pilot testing the “translation” template	Collecting new information to test the dissemination pathway via a website	Collecting filled templates with information to share for website dissemination	Collecting filled templates – both with assistance and via researchers directly	Website still not ready for use	