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Higher Education Solutions Network Annual Report

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Photo Credit: MSU Student Kirk Mason - Malawi.

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Acronyms & Abbreviations

AFRE	(Department of) Agricultural, Food, and Resources Economics at MSU
AgMIP	Global Gridded Crop Model
AHRD	Academy of Human Resource Development
ArcGIS	Geographic Information System
BFS	USAID Bureau for Food Security
CGIAR	Consultative Group on International Agricultural Research
DFID	Department for International Development (United Kingdom)
DSI	Decision Support and Informatics
FACET	The Fostering Agriculture Competitiveness Employing Information Communication Technologies
FAO	Food and Agriculture Organization
FSHN	(Department of) Food Science and Human Nutrition at MSU
FSP	Food Security Policy Innovation Lab
FTF	Feed the Future
GCFSI	Global Center for Food Systems Innovation
GIN	Goal Indicator
GIS	Geographic Information System
HESN	Higher Education Solutions Network
iAGRI	Innovative Agricultural Research Initiative
ICT	Information and Communication Technologies
ICTD	Information and Communication Technologies for Development
IFAMA	International Food and Agribusiness Management Association
IFPRI	International Food Policy Research Institute
IR	Intermediate Result
LU	Lincoln University
MIT	Massachusetts Institute of Technology
M&E	Monitoring and Evaluation
MOOC	Massive Open Online Course
MSU	Michigan State University
MT1	Megatrend 1: Population Growth, Climate Change and Pressure on the Land
MT2	Megatrend 2: Rapid Urbanization and Transformation of Food Systems
MT3	Megatrend 3: Evolution in Skills Required by Food Systems Transformation
NGO	Non-governmental organization
OI	Objective (1, 2, 3 or 4)
OST	USAID Office of Science and Technology
PIM	Policies, Institutions and Markets
RAID	Redundant Array of Independent Disks
RFA	Request for Application
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SA/SEA	South Asia and South East Asia
SIG	Student Innovation Grants
SUA	Sokoine University of Agriculture - Tanzania
TechCon	Technical Convening

TERI	The Energy and Resources Institute - India
TSC	Translational Scholar Corps
UC	University of California (at Berkeley)
US	United States
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WIDER	World Institute for Development Economics Research at United Nations University
WUR	Wageningen University - The Netherlands

Executive Summary

In project year two (2013-2014), GCFSI focused on developing a robust Decision Support and Informatics (DSI) service unit that worked closely with research teams to conceptualize problems and analyze data to improve decision-making in the various Megatrends, with 3,902 people accessing the DSI site (Objective 1). GCFSI also worked to complete the East Africa white papers and conducted East and Southeast Asia assessments. We awarded and managed six faculty innovation grants and nine student innovation grants. Guided by the East Africa white paper research, our teams implemented eight projects in Malawi in collaboration with the Regional Innovation Hub at the Lilongwe University of Agriculture and Natural Resources (LUANAR). Megatrend teams came together in an interdisciplinary manner to answer the question, “Where and how can multipurpose legumes be scaled for sustainable intensification of maize systems and what would the potential impacts be, in the medium term, across the food system in Malawi?” Through this activity, center research teams were able to 1) reach 774 beneficiaries this year with the technologies, approaches and innovations we tested and piloted (Objective 2); 2) engage 176 students via our Translational Scholars Corps (TSC), internship study abroad programs, and research teams; 3) connect with 1,430 people via workshops, trainings and major events. An additional 1,078 people accessed our knowledge management platform; more than 15,000 people visited our Facebook and Twitter pages; we built or maintained connections with 52 partners; signed three MOUs; and published 10 publications or reports and 25 articles about GCFSI and HESN (Objective 3).

Major Milestones/Achievements

DSI added more than 10 GB of datasets, deployed web applications for data visualization, and created five spatial data analysis tools, including an Agricultural Investment Analysis Tool prepared at the request of USAID/E3 and applied to Malawi. The DSI coordinator participated on the HESN Data Group and worked with the USAID Geo Center to plan new joint activities. GCFSI completed and published four East Africa white papers (and several journal articles based on the research). Using an integrated systematic approach, we used this data to pilot, test, and implement innovations in the food systems space via 23 multidisciplinary projects across Africa, with funding from grants and core budget. The GCFSI team established a new Regional Innovation Hub with LUANAR in Malawi, and signed three MOUs that we leveraged to test solutions in Africa. Finally, we developed a Drupal repository in our KM platform for the major outputs, blogging capabilities for public sharing of the work of the various GCFSI teams, and created content curation tools for use by TSC.

Key Activities

Objective 1

1. Deployed web applications for data visualization.
2. Created five tools for spatial data analysis in the “hypothesis verification system,” including an Agricultural Investment Analysis Tool for Malawi.
3. Added 11 databases in the mapping applications.
4. Included and optimized the FAO dataset into the indicator charts. This database contains world, regional, and state indicators from 1961 to 2012 and is over 10 gigabytes.
5. Designed instruction pages for each of the visualization tools.
6. Eighty-four heat maps for 12 FTF countries in Africa were created. For each country, seven maps with different themes were created that include health, agricultural, transportation, education, water, energy, and finance.

Objective 2

1. Grants: Four GCFSI teams completed East Africa white papers, with three published by the end of the project year. The GCFSI teams conducted research to produce four South and Southeast Asia white

papers. Using the problem statements of year one, we managed the award of six innovation grants that started implementation in year two to test, pilot, and scale solutions in the food systems space.

2. GCFSI-led Projects: GCFSI launched eight projects to pilot, test, and evaluate solutions in the area of food systems focusing on answering the question, “Where and how can multipurpose legumes be scaled for sustainable intensification of maize systems and what would the potential impacts be, in the medium term, across the food system in Malawi?”
 - The MT1 team led by Joe Messina completed the hydrological modeling setup for Malawi with the calibration and validation of eight watershed models. They worked to create easily accessible climate information for crop scientists, and a model for assessing uncertainty in crop yields and how climate data at different scales alters their accuracy. Six weather stations were shipped to Malawi and were put into operation in year two. The team developed multiple independent estimates of rainy season duration together with start-of-season and end-of-season estimates, and identified regional east African bias in terra versus aqua satellite data. They worked to identify agricultural land use at different scales using a variety of remote sensing and point data sources.
 - The team led by Jennifer Olson focused on assessing the impact of recent climate variability and projected future climate change on irrigated and rain-fed rice, legumes and maize using a spatial crop-modeling framework. Her team evaluated the potential utility of various agronomic practices to reduce the negative effect of climate change on crop productivity.
 - The team led by David Tschirley (Rapid Urbanization and Food System Transformation) investigated the market prospects for grain legumes in Malawi, while the team led by Mike Hamm and Stephanie White conducted research on urban markets for legumes in Malawi.
 - The MT3 team used their workforce development framework to conduct an assessment of the workforce systems of Malawi. They initially focused on the higher education sector, but also conducted interviews with representatives from the private sector.
 - The ICTD team conducted field research in Malawi that gathered baseline information on household access to and use of ICTs, and investigated the effectiveness of participatory videos to augment the work of agricultural extension in among rural smallholders
 - Finally, the gender team conducted a gender value chain analysis for pigeon peas in Malawi.

Objective 3

- I. The knowledge management team delivered on these major accomplishments during year two:
 - Launched the development of a repository for the major outputs (white papers, studies, reports) for the Megatrend teams and translational scholars.
 - Launched the development of blogging capabilities for public sharing of the work of the various GCFSI teams.
 - Created content curation tools for use by TSC for assembling and narrating knowledge collections.
 - Launched the development of taxonomies, controlled vocabularies, and content navigation schema for the GCFSI knowledge management system.
 - Created search mechanisms for content discovery within the knowledge management site.
 - Launched the development of content syndication mechanisms for sharing content created in the GCFSI knowledge management system with the primary GCFSI site as well as important content partners (i.e., USAID).
 - Designed personalized dashboards of relevant content within the knowledge management platform for people participating and contributing content to the site.

Engagement of Partners and other Actors

Interdisciplinary Collaboration

As in the past, GCFSI collaborated internally with seven colleges or units (communications arts and sciences; agriculture and natural resources; education; social sciences; engineering; international studies and programs; vice presidency for research) and various departments, including agriculture, food, and resource economics (AFRE); community sustainability; packaging; plant, soil and microbial sciences; MSU Global; and the sustainable intensification group. We also collaborated with the BHEARD and Master Card Foundation Fellows projects.

Partner Engagement (Consortium, MOUs)

1. MSU/GCFSI signed an MOU with Digital Green for potential collaboration in Malawi, to help MSU/GCFSI benefit from the digital training methodology of Digital Green, particularly for the benefit of the Participatory Video Training Program to be implemented by Charles Steinfield in Malawi.
2. MSU signed an MOU with Sustainable Development Technology Canada to establish parameters for collaboration in furthering development and commercialization of innovative technologies that address security of global food systems.
3. GCFSI faculty Snapp and Messina launched a Bill & Melinda Gates Foundation grant to complete a comprehensive mapping and modeling effort for Malawi, with the goal of focusing on marginal agricultural lands or those lands most likely to become marginal under a changing climate.
4. The Rockefeller Foundation conducted a workshop at MSU as part of its Global Engagement Network Innovation Labs initiative (January 19, 2014). The workshop explored key opportunities for and bottlenecks to reducing post-harvest loss in Africa. Specifically, this workshop sought to elicit feedback from a team of experts on high priority needs for which innovative solutions are warranted. The workshop was facilitated by Global Knowledge Initiative (GKI), a non-profit organization that focuses on building partnerships between people and institutions of higher education and research.
5. Of major importance this year was the selection and launch of the Regional Innovation Hub in LUANAR/Malawi.
6. GCFSI faculty collaborated with Wageningen University to conduct field work for the Malawi GCFSI-led projects, in particular as part of the MT3 research.

HESN Collaboration

1. Stephanie White connected with MIT to talk about frugal innovation practicum curriculum.
2. Susan Wyche engaged with members of UC Berkeley HESN lab to discuss possible research collaborations, including the use of Digital Green technology in Malawi during the participatory video project.
3. Wyche also had informal conversations with individuals affiliated with HESN lab at Duke University and MIT.
4. GCFSI awarded student innovation grants to students from UC Berkeley (Eat, Think...Zinc project), Makerere (Evaluation of Simple Biogas Technologies for Domestic Use in Urban and Peri-urban Areas of Kampala, Uganda) and Wageningen (Protix-Using Insects for Livestock Feed and ProClimate – creating a network of problem-solvers projects).
5. GCFSI awarded innovation grants to teams that include members from UC Berkeley and Texas A&M University.
6. GCFSI awarded study abroad scholarships to four Texas A&M students.

USAID Engagement

USAID Washington

We conducted regular weekly conference calls with USAID/Washington AOR and activity manager, and monthly conference calls with the USAID advisory team for GCFSI. GCFSI core faculty regularly consulted individual members of the advisory team. We hosted a delegation of eight USAID representatives from the Global Development Lab and BFS in June 2014, and members of the management team travelled to USAID to discuss the work plan in September. Greg Austic and Charles Steinfield participated in the USAID Frontiers in Development conference in September 2014, presenting the Photosynq and the participatory videos projects, respectively.

USAID Missions

GCFSI representatives met with the USAID Mission in Cambodia in January 2014, and held various follow-up conference calls with mission staff and with the AOR/BFS team. Charles McKeown visited the USAID mission in Malawi along with a delegation from the Global Development Lab in August 2014. Maria Rodriguez Murphy and Charles McKeown participated in cornerstone partner calls with the USAID missions in South Africa and Brazil, and Eric Crawford attended the June 17, 2014, cornerstone partners meeting in Washington, DC.

M&E

Summary

GCFSI reported on 38 indicators. Deviation of targets is explained below.

Explanation of Deviation from Targets

1. Gin1. Total dollar value of outside (non-USAID) resources utilized. Target for Y2 was \$3,000,000.00. Actual was \$2,412,000.00. MSU is committed to continuing to support the project with increased cost-share support. We are also working with partners to document contributions made to the project (such as LUANAR's in-kind contributions as part of the Malawi work). This effort should increase our leverage and cost-share amounts, as well as other projects MSU has been working on, which will bring leverage to GCFSI.
2. Gin2. # of transformative innovations, technologies, or approaches that were developed with human, financial, or institutional resources contributed by HESN Development Labs. Target was 10. Actual was 3. During 2013-2014, GCFSI launched the grants program and the first steps of the Malawi GCFSI-led projects, with much of this work in the evaluation/analysis stage. As projects are completed and findings compiled and documented through various documents, reports, and innovative education/communication products (per the Translational Scholar section of the year three work plan), we fully expect to show development of innovations, technologies and approaches.
3. Gin4. # of transformative innovations, technologies, or approaches that were adopted with human, financial, or institutional resources contributed by HESN Development Labs. Target was 5. Actual was 0. As mentioned above, we are in the early stages of the innovation pipeline in most of our investments but hope to show adoptions of innovations, technologies or approaches as time passes and solutions are tested, piloted and implemented.
4. Gin5. # of transformative innovations, technologies, or approaches that achieved wide-scale adoption with human, financial, or institutional resources contributed by HESN Development Labs. Target was 10. Actual was 0. As mentioned above, we are in the early stages of the innovation pipeline in most of our investments. We hope to have wide scale adoptions in the future.
5. IR2.2in2. # of citations of white papers, articles, assessments, analyses, and evaluations (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) on development challenges,

innovations, technologies, approaches, and contexts in targeted publications/projects. Target was 2. Actual was 0. Because GCFSI white papers were published towards the end of year two, there was inadequate time for them to be cited by other publications.

6. IR2.3in1. # of MOUs or other agreements signed with public sector, private sector, local community partners, and one HESN Development Lab. Target was 5. Actual was 3. GCFSI has been actively working towards developing partnerships with key stakeholders. While we are slightly below target, we will continue pressing on to increase the number of our documented connections.
7. O3in2. # of MOUs or other agreements signed with public sector, private sector, and local community partners and more than one HESN Development Lab. Target was 5. Actual was 0. While we have solid relationships with other HESN labs, we have not progressed to the point of signing MOUs with them and other partners. We will continue to work towards this goal.
8. O3in3. # new development related classes or disciplines created by university departments with human, financial, or institutional resources contributed by HESN Development Labs. Target was 1. Actual was 0. The process to create new classes or disciplines inside a university is quite complex and lengthy. We are working towards this goal.
9. IR3.3in1. # of classes supported by HESN Development Labs with human, financial, or institutional resources contributed by HESN Development Labs. Target was 1. Actual was 0. The process to create new classes or disciplines inside a university is quite complex and lengthy. We are working towards this goal.
10. IR2.2In2. # of applications reviewed in response to GCFSI RFA. Target was 100. Actual was 25. This target was based on forecasts before we had even opened the first RFA process and had no idea how many applications we would receive. Because the first round of grants was an internal process, we had to limit the number of applications. In the end, we received 119 concept notes but decided to ask only for the top 25 to submit applications.
11. IR2.2In3. # of proposals selected for funding in response to GCFSI RFA, but that did not receive funding. Target was 15. Actual was 2. As with the indicator above, we only asked for 25 proposals, selected six and decided not to proceed with two that could have been funded.
12. IR2.2In4. # of Innovation Grants awarded in response to GCFSI RFA. Target was 25. Actual was 15. This target was based on forecasts before we had even opened the first RFA process and had no idea how many applications we would receive. Our targets will be adjusted with new knowledge we have of the RFA process.

Indicators above target:

We exceeded targets in 22 indicators (marked in green below), and met 2 targets (marked in yellow below).

Lab Name:	<i>GCFSI</i>	Target	Total
HESN Ref.	Indicators (HESN Standard and Lab Custom)	FY14	FY14
Goal	Create a global interdisciplinary network of Development Labs to solve distinct development challenges		
	<i>HESN Standard Indicators</i>		
Gin3	# of transformative innovations, technologies, or approaches that were piloted with human, financial, or institutional resources contributed by HESN Development Labs	0	6
Gin6	# of transformative innovations, technologies, or approaches evaluated with human, financial, or institutional resources contributed by HESN Development Labs	5	12
Gin7	# of US students via HESN partners serving as fellows in developing countries (for more than one month)	20	22
Gin8	# innovations, technologies or approaches in the innovation pipeline	10	22
Gin9	# innovations, technologies or approaches that complete at least one of the five stages in the innovation pipeline	5	9
Gin10	# of beneficiaries reached	100	774
Oin1	# of new data-related technologies, tools, approaches, and best practices supported or applied with human, financial, or institutional resources contributed by HESN Development Labs	5	11
Oin2	# of data sets provided to or made accessible to USAID operating units and programs, HESN partners, and the broader development community with human, financial, or institutional resources contributed by HESN Development Labs	3	50
Oin3	# of data-related analyses, mapping activities, and expert consultations provided for USAID operating units and programs, HESN partners, and the broader development community with human, financial, or institutional resources contributed by HESN Development Labs	20	61

Lab Name:	GCFSI	Target	Total
HESN Ref.	Indicators (HESN Standard and Lab Custom)	FY14	FY14
IR1.2in1	# of users who access data and tools made available with support from human, financial, or institutional resources contributed by HESN Development Labs(custom indicator)	50	3902
IR2.2in1	# of white papers, articles, assessments, analyses, and evaluations on development challenges, innovations, technologies, approaches, and contexts (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) published in targeted fora and publications OR provided to USAID operating units, HESN partners, and the broader development community	5	10
IR2.3in2	# of stakeholders engaged in problem solving with one HESN Development Lab (disaggregated by partnership type)	3	11
IR3.2in1	# of visitors to Network knowledge-sharing platforms	1500	57,355
IR3.2in3	# of successes and failures circulated on Network knowledge-sharing platforms	20	57,355
IR3.4in1	# of students participating in short term practica or other field experiences through human, financial, or institutional resources contributed by HESN Development Labs	50	176
IR3.4in2	# of Hubs created with human, financial, or institutional resources contributed by HESN Development Labs	1	1
IR3.4in3	# of participants in Hubs, summits, and other problem-solving institutions created with human, financial, or institutional resources contributed by HESN Development Labs	20	1430
IR3.4in4	# of participants in crowd-sourcing or other open challenges created with human, financial, or institutional resources contributed by HESN Development Labs	100	110
Lab Custom Indicators			
IR1.1In1	# decision support and informatics requests for scholarly efforts	5	25
IR1.2In2	# discrete functionalities of the decision support and informatics platform	2	16
IR2.2In1	# of concept notes reviewed in response to GCFSI RFA	100	119
IR3.1In2	# of participants for virtual and in person presentations discussing white paper and problem definitions	100	150
IR3.4In5	# of MSU colleges collaborating internally	5	7
O3in1	Network member perceptions of GCFSI value and progress (including HESN Development Labs, USAID and GCFSI partners)	0	0

Lessons Learned/Best Practices

1. The opportunity to host at MSU the early June site visit by the USAID/GDL and BFS team was very valuable in providing an opportunity to clarify perspectives and priorities and to discuss strategic and operational issues faced by GCFSI.
2. Closer interaction between GCFSI personnel and USAID/Washington, and partners in the field (including LUANAR and USAID/Malawi), led to development of procedures for improved communication, including face-to-face discussion of the year three work plan.

Future Activities

Objective 1

1. Redesign the website for the DSI component to improve ease of use.
2. Market services available from DSI and explain how they can be accessed.

Objective 2

1. Support the first round of innovation grantees.
2. Implement the second round of innovation grants.
3. Prepare the RFA for the third round of grants.
4. Implement core-funded or center-led projects: climate resilient maize, commercial horticulture development in Cambodia and continuation of Malawi work through support to and collaboration with LUANAR research teams to successfully receive follow-on innovation grants.
5. Develop a comprehensive marketing plan for GCFSI services, such as climate/crop/watershed modeling and mapping, gender analysis approaches, and applications of ICTD.
6. Engage new personnel to support analysis of trends in employment and skills needs and identification of workforce development initiatives to address these needs.

Objective 3

1. Student Engagement: continue sponsoring students who are studying abroad via the scholarship program. Place interns in high-value practical experiences, support innovation via the Student Innovation Grants and Challenges and continue to work with a cadre of graduate assistants and other students.
2. TSC: Develop and publish a competency framework for translational scholars, deliver a series of communication and collaboration trainings that build those competencies, and embed translational scholars throughout GCFSI's projects to assist in the team-building, information synthesis and outreach functions of knowledge management.
3. Knowledge Management (KM) and Engagement with USAID and Other External Stakeholders: Focus will be on improving the user experience in the KM system and on developing the mechanisms and skills needed for GCFSI teams to capture, broadly disseminate, and curate for future reference the knowledge gained through the projects and the grantees.
4. Network Building: we will work with university development and the newly recruited GCFSI communications specialist to develop a private sector engagement strategy, a process for tracking networking contacts and outcomes (including cost-sharing and leverage of resources), an interactive networking map, and an overall communications plan. We will strengthen the relationships with our

consortium partners and work with Cornerstone Partners. We will develop a USAID engagement strategy to better market GCFSI expertise and potential service offerings.

APPENDIX

APPENDIX I. HESN Monitoring & Evaluation (M&E) Indicators - FY 14

Code	M&E Code Description	Target Value	Reached Value	%
HESN_0in01	\$ Total dollar value of outside (non-USAID) resources utilized	3,000,000	2,412,000	80.4%
HESN_0in02	# transformative innovations, technologies, or approaches that were developed with human, financial, or institutional resources contributed by HESN Development Labs	10	1	10.0%
HESN_0in03	# transformative innovations, technologies, or approaches that were initially piloted with human, financial, or institutional resources contributed by HESN Development Labs	0	5	---
HESN_0in04	# transformative innovations, technologies, or approaches that achieved early adoption with human, financial, or institutional resources contributed by HESN Development Labs	5		0.0%
HESN_0in05	# transformative innovations, technologies, or approaches that transitioned to scale with human, financial, or institutional resources contributed by HESN Development Labs	10		0.0%
HESN_0in06	# transformative innovations, technologies, or approaches evaluated with human, financial, or institutional resources contributed by HESN Development Labs	5		0.0%
HESN_0in07	# US students via HESN partners serving as fellows in developing countries (for more than one month)	20	63	315.0%
HESN_0in07_Masters_F	# US Female MASTERS students serving as fellows		5	---
HESN_0in07_Masters_M	# US Male MASTERS students serving as fellows		2	---
HESN_0in07_Other_F	# US Female students (other or unknown degree program) serving as fellows		0	---
HESN_0in07_Other_M	# US Male students (other or unknown degree program) serving as fellows		0	---
HESN_0in07_PhD_F	# US Female PhD students serving as fellows		4	---

Code	M&E Code Description	Target Value	Reached Value	%
HESN_0in07_PhD_M	# US Male PhD students serving as fellows		11	---
HESN_0in07_Undergrad_F	# US Female UNDERGRADUATE students serving as fellows		13	---
HESN_0in07_Undergrad_M	# US Male UNDERGRADUATE students serving as fellows		28	---
HESN_0in08	# innovations, technologies or approaches in the innovation pipeline	0	18	---
HESN_0in09	# innovations, technologies or approaches that completed at least one of the five stages in the innovation pipeline	0	6	---
HESN_0in10	# beneficiaries reached	0	470	---
HESN_0in11	# innovations, technologies, or approaches that have reached more than 1 million people	0		---
HESN_0in12	# innovations, technologies, or approaches that have reached more than 5 million people	0		---
HESN_1.0in1	# new data-related technologies, tools, approaches, and best practices supported or applied with human, financial, or institutional resources contributed by HESN Development Labs	5		0.0%
HESN_1.0in2	# data sets provided to or made accessible to USAID operating units and programs, HESN partners, and the broader development community with human, financial, or institutional resources contributed by HESN Development Labs	1	50	5000.0%
HESN_1.0in3	# data-related analyses, mapping activities, and expert consultations provided for USAID operating units and programs, HESN partners, and the broader development community with human, financial, or institutional resources contributed by HESN Development Labs	20	61	305.0%
HESN_1.1in1	# citations in targeted fora/publications/projects of data collected or made available through human, financial, or institutional resources contributed by HESN Development Labs		0	---
HESN_1.1in1_NPR	# citations in targeted non-peer reviewed fora/publications/projects of data collected or made available through human, financial, or institutional resources contributed by HESN Development Labs		0	---

Code	M&E Code Description	Target Value	Reached Value	%
HESN_1.1in1_PD	# citations in targeted project documents of data collected or made available through human, financial, or institutional resources contributed by HESN Development Labs		0	---
HESN_1.1in1_PR	# citations in targeted peer-reviewed fora/publications/projects of data collected or made available through human, financial, or institutional resources contributed by HESN Development Labs		0	---
HESN_1.2in1	# users who access data and tools made available with support from human, financial, or institutional resources contributed by HESN Development Labs	100	3,902	3902.0%
HESN_1.2zGC FSI-in1	# decision support and informatics requests for scholarly efforts		25	---
HESN_1.2zGC FSI-in2	# discrete functionalities of the decision support and informatics platform		16	---
HESN_2.0in1	# months required for developing, piloting, adopting, scaling, and evaluating transformative innovations, technologies, and approaches receiving human, financial, or institutional resources contributed by HESN Development Labs	8	5	62.5%
HESN_2.2in1	# white papers, articles, assessments, analyses, and evaluations on development challenges, innovations, technologies, approaches, and contexts (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) published in targeted fora and publications OR provided to USAID operating units, HESN partners, and the broader development community	5		0.0%
HESN_2.2in2	# citations of white papers, articles, assessments, analyses, and evaluations (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) on development challenges, innovations, technologies, approaches, and contexts in targeted fora/publications/projects	12		0.0%
HESN_2.2in2_NPR	# citations in targeted non-peer reviewed fora/publications of white papers, articles, assessments, analyses, and evaluations (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) on development challenges, innovations, technologies, approaches, and contexts		0	---
HESN_2.2in2_PD	# citations in targeted peer-reviewed project documents of white papers, articles, assessments, analyses, and evaluations (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) on development challenges, innovations, technologies, approaches, and contexts		0	---

Code	M&E Code Description	Target Value	Reached Value	%
HESN_2.2in2_PR	# citations in peer-reviewed fora/publications of white papers, articles, assessments, analyses, and evaluations (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) on development challenges, innovations, technologies, approaches, and contexts		0	---
HESN_2.3in1	# MOUs or other agreements signed with public sector, private sector, local community partners, and one HESN Development Lab	5	3	60.0%
HESN_2.3in2	# stakeholders engaged in problem solving with one HESN Development Lab	6	5	83.3%
HESN_3.0in2	# MOUs or other agreements signed with public sector, private sector, and local community partners and more than one HESN Development Lab	5		0.0%
HESN_3.0in3	# new development related classes or disciplines created by university departments with human, financial, or institutional resources contributed by HESN Development Labs	1		0.0%
HESN_3.1zGC FSI-in1	# participants for virtual and in person presentations discussing white paper and problem definitions		150	---
HESN_3.2in1	# visitors to Network knowledge-sharing platforms	1,500	16,356	1090.4%
HESN_3.2in3	# successes and failures circulated on Network knowledge-sharing platforms	20	0	0.0%
HESN_3.3in1	# classes supported by HESN Development Labs with human, financial, or institutional resources contributed by HESN Development Labs	1		0.0%
HESN_3.3in2	# collaborative platforms created by the HESN or with human, financial, or institutional resources contributed by HESN Development Labs	5	1	20.0%
HESN_3.4in1	# students participating in short term practica or other field experiences through human, financial, or institutional resources contributed by HESN Development Labs	60	9	15.0%
HESN_3.4in1_Masters_F	# Female MASTERS students participating in short term practica		2	---
HESN_3.4in1_Masters_M	# Male MASTERS students participating in short term practica		6	---

Code	M&E Code Description	Target Value	Reached Value	%
HESN_3.4in1_Other_F	# Female students (other or unknown degree program) participating in short term practica		0	---
HESN_3.4in1_Other_M	# Male students (other or unknown degree program) participating in short term practica		0	---
HESN_3.4in1_PhD_F	# Female PhD students participating in short term practica		1	---
HESN_3.4in1_PhD_M	# Male PhD students participating in short term practica		0	---
HESN_3.4in1_Undergrad_F	# Female UNDERGRAD students participating in short term practica		0	---
HESN_3.4in1_Undergrad_M	# Male UNDERGRAD students participating in short term practica		0	---
HESN_3.4in2	# Hubs created with human, financial, or institutional resources contributed by HESN Development Labs	1	1	100.0%
HESN_3.4in3	# participants in Hubs, summits, and other problem-solving institutions created with human, financial, or institutional resources contributed by HESN Development Labs	20	1,430	7150.0%
HESN_3.4in4	# participants in crowd-sourcing or other open challenges created with human, financial, or institutional resources contributed by HESN Development Labs	100	110	110.0%
HESN_3.4zGC FSI-in1	# Michigan State University colleges collaborating internally		7	---

APPENDIX II.A. Innovations: Technologies and Approaches - FY 2014

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Bridging Innovations Across Generations and Along the Food Chain	This "ProClimate Model" project aims to connect a new generation of innovators (Wageningen University students) with an innovative company (Proclimate; http://proclimate.org/en). Proclimate develops and manages "climate smart agriculture" programs in East Africa that connect smallholders to global customers through large corporations and in interaction with non-governmental organizations and local civil society organizations.	Netherlands	Stage 1: Development	0	Yes	No
Approach	E-Warehousing for Smallholder Farmers	Improve value chains through Information and Communication Technology enabled credit and extension interventions	Kenya	Stage 1: Development	0	No	No
Approach	Scaling Agricultural Innovations Under a Changing Climate	Develop a generalizable model for effective scaling of biophysically salient agricultural innovations	Malawi	Stage 2: Initial Piloting	0	No	No
Approach	Developing and Aquaponics System	During the spring of 2014 semester, the student team designed, built, and tested a hydroponics system choosing to focus on this aspect of an aquaponics system. The team worked closely with the Village of Hope personnel to insure design and implementation considered local conditions in Haiti. The	Haiti	Stage 2: Initial Piloting	300	Yes	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Multifunction Mobile Utility Project for Food Security in sub-Saharan Africa	Four main capstone projects were completed this past year with support from GBCFI. First, a Mechanical Engineering (ME) senior design team worked on a Practical Utility Platform (PUP) design that incorporates a transmission from a front wheel drive (FWD) car. A second team focused on improving the original PUP design for safety and simplicity. As an exploratory project, another team fitted a PUP with an electrical driveline, with the idea that the NGO in Cameroon could harness the hydro-power energy for transportation. Finally, one capstone team focused on designing a multi-grain threshing machine suitable for West Africa.	Cameroon	Stage 2: Initial Piloting	50	Yes	No
Approach	Design of Carbon Neutral Algae-Based Feed Culture	Design a Carbon Neutral Algae-Based Animal Feed Culture System: Using Nutrient-Enriched Scrubber Liquid Effluent, Exhausted CO2 and Energy from Animal Feeding Operations	United States	Stage 2: Initial Piloting	0	Yes	No
Approach	Building Hydroponic Gardens in Urban and Peri-Urban Areas	Undergraduate students at University of Florida have been designing, building, and testing working hydroponic systems that could be integrated into urban farming initiatives in Nairobi or Addis Ababa	Ethiopia	Stage 2: Initial Piloting	50	Yes	No
Approach	Designing Innovative Public Health Solutions Eat.Think...Zinc!	This team looked to food and food marketing as inspiration for a complex public health challenge: finding short-term wins for getting rural mothers in developing regions to correctly administer treatment for diarrhea in 6-24 month old children.	Uganda	Stage 2: Initial Piloting	70	Yes	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	Using Sensors to Enable Plant and Soil Measurements	Develop portable, web-based sensor to enable uploading and analysis of data	United States	Stage 1: Development	0	No	No
Approach	Marketing Food Safety	Assess willingness to pay for food safety by building the capacity of a maize mill to produce aflatoxin-safe maize and facilitating sale of certified maize	Kenya	Stage 1: Development	0	No	No
Approach	Evaluation of Biogas Technologies for Urban and Peri-Urban Areas	Evaluate the performance of different simple biogas plants for domestic use in peri-urban and urban areas of Kampala for recommendation to end-users ii. Impart skills and knowledge to students on the use of biogas technology as a means of addressing environmental degradation	Uganda	Stage 1: Development	0	No	No
Approach	Using Insects for Food and Feed	This project is focused on a Tanzania country quick scan to identify the viability of introducing insects as fish and poultry feed by Protix Biosystem.	Tanzania	Stage 1: Development	0	No	No
Approach	Identification and Production of Shelf-Stable Juice Products	Identification and Production of marketable Shelf-Stable Fruit Juice Products for Developing Regions	United States	Stage 1: Development	0	No	No
Approach	Scaling Agricultural Innovations Under a Changing Climate	Scaling Agricultural Innovations Under a Changing Climate	Malawi	Stage 1: Development	0	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Profiling Legume Use, Demand and Exchange in Urban Markets	Profiling Legume Use, Demand and Exchange in Urban Markets	Malawi	Stage 1: Development	0	No	No
Approach	Mapping the Market for Legumes	Mapping the Market for Legumes	Malawi	Stage 1: Development	0	No	No
Approach	Improving Productivity and Resilience to Climate Change	Improving Productivity and Resilience to Climate Change	Malawi	Stage 1: Development	0	No	No
Approach	Mapping Education and Skills Development along the Legume Value Chain	Mapping Education and Skills Development along the Legume Value Chain	Malawi	Stage 1: Development	0	No	No
Approach	Gender Analysis of the Pigeon Pea Value Chain	Gender Analysis of the Pigeon Pea Value Chain	Malawi	Stage 1: Development	0	No	No

APPENDIX II.B. Evaluations - FY 2014

Output Type	Name of Output	Description/Abstract	Country	Status
Evaluation	Marketing Food Safety	Assess willingness to pay for food safety by building the capacity of a maize mill to produce aflatoxin-safe maize and facilitating sale of certified maize	Kenya	Ongoing
Evaluation	Evaluation of Biogas Technologies for Urban and Peri-Urban Areas	Evaluate the performance of different simple biogas plants for domestic use in peri-urban and urban areas of Kampala for recommendation to end-users ii. Impart skills and knowledge to students on the use of biogas technology as a means of addressing environmental degradation	Uganda	Complete
Evaluation	Using Insects for Food and Feed	This project is focused on a Tanzania country quick scan to identify the viability of introducing insects as fish and poultry feed by Protix Biosystem.	Tanzania	Complete
Evaluation	Identification and Production of Shelf-Stable Juice Products	Identification and Production of marketable Shelf-Stable Fruit Juice Products for Developing Regions	United States	Complete
Evaluation	Scaling Agricultural Innovations Under a Changing Climate	Scaling Agricultural Innovations Under a Changing Climate	Malawi	Ongoing

Output Type	Name of Output	Description/Abstract	Country	Status
Evaluation	Profiling Legume Use, Demand and Exchange in Urban Markets	Profiling Legume Use, Demand and Exchange in Urban Markets	Malawi	Ongoing
Evaluation	Mapping the Market for Legumes	Mapping the Market for Legumes	Malawi	Ongoing
Evaluation	Improving Productivity and Resilience to Climate Change	Improving Productivity and Resilience to Climate Change	Malawi	Ongoing
Evaluation	Mapping Education and Skills Development along the Legume Value Chain	Mapping Education and Skills Development along the Legume Value Chain	Malawi	Ongoing
Evaluation	Gender Analysis of the Pigeon Pea Value Chain	Gender Analysis of the Pigeon Pea Value Chain	Malawi	Ongoing

Output Type	Name of Output	Description/Abstract	Country	Status
Evaluation	Request for Applications (RFA) Analysis and Data Gathering	Ground-truthing visit to Cambodia January 12-22.	Cambodia	Ongoing
Evaluation	Request for Applications (RFA) Analysis and Data Gathering	Collaboration in ground-truthing in Cambodia visit with InnovATE, Jan 12-22	Cambodia	Ongoing

APPENDIX II.C. Data-Related Approaches, Tools, Best Practices - FY 2014

Output Type	Name of Output	Description/Abstract	Country	Status
Data-Related Tool	Visualization tool called the “Global Market Travel Time Calculator”.	With Dr. David Tschirley, the lead for the Rapid Urbanization and Transformation of Food Systems working group of the GCFSI, we developed a visualization tool called the “Global Market Travel Time Calculator”. This tool was incorporated into the hypothesis verification system.	United States	Complete
Data-Related Tool	“Map Algebra” tool, which is capable of performing areal calculations on multiple layers of interest.	With Dr. Joseph Messina, the lead for the Climate Change working group, we developed the “Map Algebra” tool, which is capable of performing areal calculations on multiple layers of interest.	United States	Complete
Data-Related Tool	Hydrological modeling setup for Malawi.	Completed hydrological modeling setup for Malawi with the calibration and validation of the eight watershed models. Working to create easily accessible climate information for crop scientists. Working on a model for assessing uncertainty in crop yields and how climate data at different scales alters their accuracy. Six weather stations shipped to Malawi and in operation. Developed multiple independent estimates of rainy season duration together with start-of-season and end-of-season estimates. Identified regional east African bias in Terra vs Aqua satellite data. Identifying agricultural land use at different scales using a variety of remote sensing and point data sources. Developed Cambodia white paper. Completed East Africa white paper.	Malawi	Ongoing
Data-Related Tool	Deployed the web applications for data visualization	Updated the map databases to display country shape files.	United States	Complete
Data-Related Tool	Created hypothesis verification system	Deployed the “Global Market Travel Time Calculator” as a visualization tool capable of computing travel time to cities of defined size. This tool will also allow users to perform overlay and buffer analysis.	United States	Complete

Output Type	Name of Output	Description/Abstract	Country	Status
Data-Related Tool	Tool: Instruction pages for visualization tools	Designed instruction pages for each of the visualization tools	United States	Complete
Data-Related Tool	84 Heat Maps for twelve FtF countries in Africa were created.	For each country, seven maps with different themes were created that include health, agricultural, transportation, education, water, energy, and finance.	United States	Complete

APPENDIX II.D. Publications or Reports - FY 2014

Name	Description/Abstract	Country	Status
<p>Publication: "Why Aren't Farmers Using Cell Phones to Access Market Prices?: Uncovering Barriers to M-Agriculture Service Adoption in Rural Africa."</p>	<p>Wyche, S.P. and Steinfield, C., "Why Aren't Farmers Using Cell Phones to Access Market Prices?: Uncovering Barriers to M-Agriculture Service Adoption in Rural Africa." Under review at Information Technologies & International Development (http://www.itidjournal.org/index.php/itid).</p>	<p>United States</p>	<p>Ongoing</p>
<p>Publication: "The Mobile Divide Revisited: Mobile Phone Use by Smallholder Farmers in Malawi."</p>	<p>Steinfield, C, Wyche, S., Chiwasa, H., and Cai, T., "The Mobile Divide Revisited: Mobile Phone Use by Smallholder Farmers in Malawi." Under review at the International Conference on Information and Communication Technologies and Development, Singapore, May 15-18, 2015.</p>	<p>United States</p>	<p>Ongoing</p>
<p>Publication: "Participatory Videos for Smallholder Farmer Training in Malawi: an Analysis of Knowledge Gain and Uptake."</p>	<p>Cai, T., Chiwasa, H., Steinfield, C., and Wyche, S., "Participatory Videos for Smallholder Farmer Training in Malawi: an Analysis of Knowledge Gain and Uptake." Under review at the International Conference on Information and Communication Technologies and Development, Singapore, May 15-18, 2015.</p>	<p>United States</p>	<p>Ongoing</p>
<p>Publication: Multi-sector collaboration for capacity building in developing countries: A context for theorizing transformative learning at a systems level.</p>	<p>Hill, L., Bonnell, J., Dirx, J. M., Smith, T. (2014). Multi-sector collaboration for capacity building in developing countries: A context for theorizing transformative learning at a systems level. Presented at the 55th Adult Education Research Conference. Harrisburg, PA: Penn State. At http://www.adulterc.org/applications/ClassifiedListingsManager/inc_classifiedlistingsmanager.asp?ItemID=3544&CategoryID=183</p>	<p>United States</p>	<p>Complete</p>

Name	Description/Abstract	Country	Status
Publication: Reconceptualizing the role of higher education n systems transformation: The case of agricultural education and training in East Africa.	Bonnell, J. R., Hill, L., Dirkx, J., Smith, T., & Roy, P. (2014). Reconceptualizing the role of higher education n systems transformation: The case of agricultural education and training in East Africa. Presented at 58th Annual Conference of the Comparative and International Education Society, Toronto, CA: March 10 – 15. At http://convention2.allacademic.com/one/cies/cies14/index.php?click_key=1&cmd=Multi+Search+Search+Load+Publication&publication_id=717062&PHPSESSID=cjnkoumdg7k6qqnqnd2c179g2	United States	Complete
Publication: Multi-sector Collaboration: An Innovative Approach to Capacity Building and Workforce Development in Countries with Emerging Economies.	Hill, L. Bonnell, J. M., Dirkx, J. M., & Smith. T. (2014) Multi-sector Collaboration: An Innovative Approach to Capacity Building and Workforce Development in Countries with Emerging Economies. Presented at the 2014 International AHRD Conference in the Americas, Houston, TX: Academy of Human Resource Development. At http://ahrd2014.conferencespot.org/ (password protected)	United States	Complete
Publication: Translational scholar corps: An innovative curricular model for professional preparation and continuing professional development.	Hussain, A., Doyle, E., Flanders, M., Dirkx, J.,M., Razzaque, A., & Smith, T. (2014). Translational scholar corps: An innovative curricular model for professional preparation and continuing professional development. Presented at the 2014 International AHRD Conference in the Americas, Houston, TX: Academy of Human Resource Development. http://ahrd2014.conferencespot.org/ (password protected)	United States	Complete
Megatrend One East Africa White Paper Publication	Messina J, Adhikari U, Carroll J, Chikowo R, DeVisser M, Dodge L, Fan P, Langley S, Lin S, Mensope N, Moore N, Murray S, Nawyn S, Nejadhashemi A, Olson J, Smith A, Snapp S, 2013. Population Growth, Climate Change and Pressure on the Land. Global Center for Food Systems Innovation – Whitepaper Series. 95 pp. ISBN # 978-0-9903005-0-2.	United States	Complete

Name	Description/Abstract	Country	Status
Megatrend Two East Africa White Paper Publication	Tschirley and others, Africa's Emerging Food System Transformation	United States	Complete
Publication name "Climate Change and Eastern Africa: A Review of Impact on Major Crops"	Adhikari, U., A.P. Nejadhashemi, S.A. Woznicki, 2014. Climate Change and Eastern Africa: A Review of Impact on Major Crops, Food and Energy Security, in review.		Ongoing

APPENDIX II.E. Hubs - FY 2014

Name	Description	Country	Status
Regional Innovation Hub East Africa	Set-up and funded the first regional innovation hub of GCFSI in collaboration with the Lilongwe University of Agriculture and Natural Resources (LUANAR)	Malawi	Ongoing

APPENDIX II.F. Knowledge Sharing/Collaborative Platforms - FY 2014

Name	Description	Country	Status
GCFSI Knowledge Management Platform Developed	Developed the GCFSI Knowledge Management Platform	United States	Ongoing

APPENDIX II.G. Major Events - FY 2014

Name	Description	Country	Status
Talk at the University of North Carolina: "Facebook is a Luxury: Discussing High Costs and other Barriers to Social Media Adoption in Rural Kenya."	Susan Wyche gave a talk at the University of North Carolina highlighting the work in the ICT area within the GCFSI: "Facebook is a Luxury: Discussing High Costs and other Barriers to Social Media Adoption in Rural Kenya," University of North Carolina, School of Information and Library Science, Chapel Hill, NC, September 27, 2013.	United States	Complete
Talk at University of Michigan: "Facebook is a Luxury: No Electricity, High Costs and other Barriers to Social Media Adoption in Rural Kenya."	Susan Wyche gave a talk at the University of Michigan highlighting the work in the ICT area within the GCFSI: "Facebook is a Luxury: No Electricity, High Costs and other Barriers to Social Media Adoption in Rural Kenya," University of Michigan, School of Information, Ann Arbor, MI, October 8, 2013.	United States	Complete
Rajesh Veeraraghavan visited Michigan State University to discuss Digital Green.	We invited Rajesh Veeraraghavan, at the time a PhD student at UC Berkeley, to speak to the GCFSI on his work with Digital Green. He also gave a talk on October 8, 2013 to the MSU community on "Controlling "last-mile" corruption: The Use and Subversion of ICT in a South Indian Bureaucracy."	United States	Complete

Name	Description	Country	Status
<p>Participation in the International Food Policy Research Institute Research Program on Policies, Institutions and Markets (PIM) Workshop: Research on Agricultural Extension Systems: What Have We Learned, and Where Do We Go From Here? http://www.pim.cgiar.org/2013/11/14/summary-of-pims-extension-workshop-now-available/</p>	<p>Charles Steinfield attended the October 15-16 International Food Policy Research Institute (IFPRI) / Consultative Group for International Agricultural Research (CGIAR) Research Program on Policies, Institutions and Markets (PIM) Workshop: Research on Agricultural Extension Systems: What Have We Learned, and Where Do We Go From Here? October 15-16, 2013, Washington DC, USA. He gave a presentation on Extension and the Application of ICTs. A summary of the workshop, including pdfs of the presentations, is available at the following URL: http://www.pim.cgiar.org/2013/11/14/summary-of-pims-extension-workshop-now-available/</p>	<p>United States</p>	<p>Complete</p>
<p>Workshop, "Information and Communication Technology: Opportunities and Challenges for Using Technology to Reach Rural Farmers in the Developing World" at the 2013 Information and Communication Technologies and Development (ICTD)</p>	<p>Susan Wyche, Charles Steinfield, and Tian Cai gave a workshop, "ICT4Ag: Opportunities and Challenges for Using Technology to Reach Rural Farmers in the Developing World" at the 2013 Information and Communication Technologies and Development (ICTD) conference, held December 7-10, 2013 in Cape Town, South Africa.</p>	<p>South Africa</p>	<p>Complete</p>

Name	Description	Country	Status
Attended the Energy Resources Institute (TERI) symposium, Food Systems Innovation in the Southeast Asia Region	Charles Steinfield and Tian Cai each attended The Energy Resources Institute (TERI) symposium, Food Systems Innovation in the Southeast Asia Region, held December 17-18, 2013, in Delhi, India. Charles Steinfield presented "Use of Information and Communication Technology to Support Food Systems Innovation" at the Symposium.	India	Complete
Presentation "Human Centered Technology Design,"	Susan Wyche presented "Human Centered Technology Design," at the State of the Science Conference presented by the Development Impact Lab, "Revealing Demand for Pro-Poor Innovations," Georgetown University, Washington, DC, March 7, 2014.	United States	Complete
Field work for a Development Innovation Ventures (DIV) grant with Shamba Shape Up, conducting 9 focus groups with women farmers.	Susan Wyche traveled to Kenya in mid-September, 2014 for 10 days to conduct field work for our Development Innovation Ventures (DIV) grant with Shamba Shape Up, conducting 9 focus groups with women farmers.	Kenya	Ongoing
Presentation on "Creative Use of Technology for Informal Learning" to the Economic Opportunities for Youth Strategy Workshop	Charles Steinfield delivered a presentation on "Creative Use of Technology for Informal Learning" to the Economic Opportunities for Youth Strategy Workshop, June 27-28, 2014, Michigan State University, co-hosted by MSU and the Mastercard Foundation.	United States	Complete
Presentation of preliminary findings from the participatory video project.	Tian Cai and Hastings Chiwasa presented preliminary findings from our participatory video project at the Africa Rising workshop in Mangochi, Malawi, July 28, 2014.	Malawi	Complete

Name	Description	Country	Status
Presentation, "Facebook is a Luxury: No Electricity, High Costs and other Barriers to Social Media Adoption in Rural Kenya".	Susan Wyche presented "Facebook is a Luxury: No Electricity, High Costs and other Barriers to Social Media Adoption in Rural Kenya," at the Symposium on Internet Adoption in the Developing World: Expert Forum; Facebook Inc., Menlo Park, CA, September 8, 2014.	United States	Complete
Presentation "Mobiles for Agriculture: Why More Farmers Don't Take Advantage," at the Frontiers in Development Innovation Marketplace.	Charles Steinfield presented "Mobiles for Agriculture: Why More Farmers Don't Take Advantage," at the Frontiers in Development Innovation Marketplace, Washington D.C., September 18-19, 2014.	United States	Complete

APPENDIX II.H. Workshops/Trainings/Capacity Building - FY 2014

Name	Description	Country	Status
Building Capacity for Assessing Irrigation Innovations	Develop an assessment framework for evaluating irrigation innovations through a participatory extension methodology	Uganda	Ongoing
Enhancing Vitamin-Nutrition through Orange Sweet Potatoes	Build capacity of women-based enterprises to develop orange sweet potatoes, in part through social networking and mobile phone messaging	Tanzania	Ongoing
Agro-ecology for climate change resilience in Malawi	Agro-ecology for climate change resilience in Malawi	Malawi	Ongoing
Training Smallholders Through Participatory Videos	Training Smallholders Through Participatory Videos	Malawi	Ongoing
Networking	Presentations of our work to annual conferences of the Academy of Human Resource Development, Comparative and International Education Society, and Adult Education Research Conference.	United States	Complete
Focus Groups for features and design of the Knowledge Management platform	Conducted focus group activities with the Translational Scholars and other MSU faculty in determining key features and the design of the GCFSI knowledge management system.	United States	Ongoing

APPENDIX II.I. Other Outputs - FY 2014

Name	Description	Country	Status
Added 11 databases in the mapping applications	Environmental Vulnerability Index 2013. Index of Economic Freedom 2013. Human Development Report 2013. Global Health Observatory Data Repository 2013. The Norte Dame Global Adaption Index 2012. USAID Dollars to Results Measures 2012. USAID Dollars to Results Measures 2011. World Population Prospects 2010. Climate Vulnerability Index 2011. UNICEF Country Index. Atmospheric Trace gases.	United States	Complete
Included and optimized the Food and Agriculture Organization (FAO) dataset into the indicator charts.	This database contains World, Regional, and State indicators from 1961 to 2012 and is over ten gigabytes when processed into our databases system	United States	Complete
Networking	Collaborated on development of two concept notes for NSF-PIRE grant application, August	United States	Complete
Networking	Collaborating on development of concept note for MasterCard Foundation, August to Present.	United States	Complete
Information and Communication Technology East Africa White Paper Publication	Steinfeld, Wyche and others, Information and Communication Tools for Development	United States	Complete

APPENDIX III. Partners - FY 2014

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Bunda College of Agriculture	Low	Commercial Enterprise	Malawi	Michigan State University Memorandum of Understanding	
Cisco	To be determined	Commercial Enterprise	United States	Cornerstone	
Coca-Cola Company	Low	Commercial Enterprise	United States	Cornerstone	
CRDF Global	High	Commercial Enterprise	United States	Subcontract	
Dow Chemical	To be determined	Commercial Enterprise	United States	Ongoing discussions for joint projects	
FHI 360	Low	Commercial Enterprise	United States	Resource	
Novus International	Low	Commercial Enterprise	United States	Cornerstone	
QED Group, LLC	Low	Commercial Enterprise	United States	Partner	
Syngenta Corporation	To be determined	Commercial Enterprise	Switzerland	Ongoing discussions for joint projects	
The Mediae Company	Low	Commercial Enterprise	Kenya	Supporting Shamba Shape-up work	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Borlaug Higher Education Agricultural Research and Development (BHEARD)	Low	Higher Education Institution/ Research Organization	United States	Michigan State University Project	
Center for Regional Food Systems	High	Higher Education Institution/ Research Organization	United States	Other	
Centro Internacional de Agricultural Tropical	High	Higher Education Institution/ Research Organization	Colombia	Memorandum of Understanding	
Lilongwe University Of Agriculture And Natural Resources	High	Higher Education Institution/ Research Organization	Malawi	Partner / Hub	Cost-share.
Lincoln University (LU)	Low	Higher Education Institution/ Research Organization	United States	Subcontract	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Makerere University	Low	Higher Education Institution/ Research Organization	Uganda	Grant recipient	
MIT (Frugal Innovation)	To be determined	Higher Education Institution/ Research Organization	United States	Higher Education Solutions Network Lab	
Purdue University	Low	Higher Education Institution/ Research Organization	United States	Grant recipient	
Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)	Low	Higher Education Institution/ Research Organization	Uganda	Ongoing discussions for joint projects	
Sokoine University of Agriculture (SUA)	Low	Higher Education Institution/ Research Organization	Tanzania	Resource Partner	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Texas A&M	Medium	Higher Education Institution/ Research Organization	United States	Grant recipient	
The Energy Resources Institute (TERI)	High	Higher Education Institution/ Research Organization	India	Subcontract	Cost-share.
Tuskegee University	Medium	Higher Education Institution/ Research Organization	United States	Grant recipient	
UC Davis	Medium	Higher Education Institution/ Research Organization	United States	Grant recipient	
University of California - Berkeley	Medium	Higher Education Institution/ Research Organization	United States	Grant recipient	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
University of Florida	Medium	Higher Education Institution/ Research Organization	United States	Grant recipient	
University of Maryland	Low	Higher Education Institution/ Research Organization	United States	Grant recipient	
University of Pretoria	Low	Higher Education Institution/ Research Organization	South Africa	Resource	
University of Rwanda	To be determined	Higher Education Institution/ Research Organization	Rwanda	Resource	
Virginia Tech	High	Higher Education Institution/ Research Organization	United States	Grant recipient	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Wageningen University (WUR)	High	Higher Education Institution/ Research Organization	Netherlands	Subcontract	Cost-share.
Western Michigan University	Medium	Higher Education Institution/ Research Organization	United States	Grant recipient	
African Food Security Urban Network	To be determined	NGO	South Africa	Research Collaboration	
Digital Green	High	NGO	India	Memorandum of Understanding	
Grameen Foundation	Low	NGO	United States	Grant recipient	
International Horticulture Innovation and Training Center	Low	NGO	India	Michigan State University Partner	
Poverty in Action	Low	NGO	United States	Grant recipient	
EcoDym Africa	Medium	Non-US government	Kenya	Resource	
Ministry of Agriculture Tanzania	To be determined	Non-US government	Tanzania	Michigan State University Partner	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Modernizing African Food Systems	Low	Non-US government	Uganda		
Prime Minister's office - Regional and Local Government (PMO-RALG)	To be determined	Non-US government	Tanzania	Michigan State University already has strong relationships with PMO-RALG through GISAIA (Gates funding) and FSPIL	
Canada Foundation for Sustainable Development Technology	Medium	Private Philanthropy/Foundation	Canada	Memorandum of Understanding	
Gates Foundation	Medium	Private Philanthropy/Foundation	United States	Funding	Leverage (other than cost-share)
Global Knowledge Initiative (GKI)	Low	Private Philanthropy/Foundation	United States	Resource	
MasterCard Foundation	Medium	Private Philanthropy/Foundation	Canada	Michigan State University Partner	Leverage (other than cost-share)
Syngenta Foundation	Low	Private Philanthropy/Foundation	Switzerland	Ongoing discussions for joint projects	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
USAID BFS	High	USAID operating unit or program	United States	USAID Lead	
USAID Cambodia	Medium	USAID operating unit or program	Cambodia	Ongoing discussions for horticulture work	
USAID Development Innovations Ventures program	Medium	USAID operating unit or program	United States	Supporting Shamba Shape-up work	
USAID Malawi	Low	USAID operating unit or program	Malawi	Discussions have been held with this mission concerning the Malawi Hub	
USAID Tanzania	Low	USAID operating unit or program	Tanzania	Conversations had in the past regarding the Global Center for Food Systems Innovation projects	
USAID The Lab	High	USAID operating unit or program	United States	USAID Lead	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Michigan State University	High	Higher Education Institution/ Research Organization	United States	Cost-Share	Cost-share.

APPENDIX IV. Classes & Disciplines - FY 2014

Name	Description	Institution	Location
----- No Entries -----			

APPENDIX V. Fellowships & Practica - FY 2014

Name	Short Description	Host Organization	Total # Students	Status
GCFSI Internship	Coffee Bean project	University of Florida	1	Complete
GCFSI Internship	Expanding community dimension of the Africa rising Project (Legumes for Resilient Food Systems)	Michigan State University	1	Complete
GCFSI Internship	Documentary video making for sustainable farming practices	Michigan State University	1	Complete
GCFSI Internship	Value-addition and social innovation in & around the pigeon pea sector	Wageningen	1	Complete
GCFSI Study Abroad Program	Photography as a medium for sharing information and the importance of communication in intercultural instances.	Texas A&M	1	Complete
GCFSI Study Abroad Program	Independent research during internship: How to better connect agriculture and nutrition for improved food security outcomes.	Texas A&M	1	Complete
GCFSI Study Abroad Program	Namibia Photojournalism and Cultural Pluralism in Agriculture	Texas A&M	1	Complete
GCFSI Study Abroad Program	The focus of this study abroad program is to experience horticulture production in China. Learn way to extend the growing season a grow crops in a protected environment.	Texas A&M	1	Complete
GCFSI Study Abroad Program	Food production, international trade and transportation, policy, marketing, and economic development.	Texas A&M	1	Complete

Name	Short Description	Host Organization	Total # Students	Status
GCFSI Study Abroad Program	Research public health issues in Ghana with specific research in nutrition and nutrition-related issues, Water and sanitation, Malaria, and Mental Health	Michigan State University	1	Complete
GCFSI Study Abroad Program	To promote further education among the current students in Rwanda while actively working on the coffee industry to improve it to bring Rwanda to a point where they no longer need foreign aid and are economically self-sufficient.	Michigan State University	1	Complete
GCFSI Study Abroad Program	Community Nutrition	Michigan State University	1	Complete
GCFSI Center Led Projects	GCFSI Malawi Center-Led Projects	Lilongwe University of Agriculture and Natural Resources	40	Complete
GCFSI Faculty Innovation Grants	Using Sensors to Enable Plant and Soil Measurements	Michigan State University	0	Ongoing
GCFSI Faculty Innovation Grants	E-Warehousing for Smallholder Farmers	University of California Berkeley	1	Ongoing
GCFSI Faculty Innovation Grants	Marketing Food Safety	University of Maryland	1	Ongoing
GCFSI Faculty Innovation Grants	Building Capacity for Assessing Irrigation Innovations	University of California Davis	1	Ongoing
GCFSI Faculty Innovation Grants	Enhancing Vitamin-Nutrition through Orange Sweet Potatoes	Tuskegee University, Sokoine University	0	Ongoing

Name	Short Description	Host Organization	Total # Students	Status
GCFSI Faculty Innovation Grants	Scaling Agricultural Innovations Under a Changing Climate	Virginia Tech/Michigan State University	2	Ongoing
GCFSI Student Innovation Grants	Developing and Aquaponics System	Purdue University	7	Complete
GCFSI Student Innovation Grants	Multifunction Mobile Utility Project for Food Security in sub-Saharan Africa	Purdue University	21	Complete
GCFSI Student Innovation Grants	Evaluation of Biogas Technologies for Urban and Peri-Urban Areas	Makerere University	0	Complete
GCFSI Student Innovation Grants	Design of Carbon Neutral Algae-Based Feed Culture	Michigan State University	4	Complete
GCFSI Student Innovation Grants	Building Hydroponic Gardens in Urban and Peri-Urban Areas	University of Florida	32	Complete
GCFSI Student Innovation Grants	Using Insects for Food and Feed	Wageningen University	6	Complete
GCFSI Student Innovation Grants	Designing Innovative Public Health Solutions Eat.Think...Zinc!	University of California Berkeley	8	Complete
GCFSI Student Innovation Grants	Identification and Production of Shelf-Stable Juice Products	Michigan State University	3	Complete

Name	Short Description	Host Organization	Total # Students	Status
GCFSI Student Innovation Grants	Bridging Innovations Across Generations and Along the Food Chain	Wageningen University	7	Complete
GCFSI Core Students	GCFSI Graduate Assistants	Michigan State University	14	Ongoing

APPENDIX VI. Communications - FY 2014

Communication Title	Description	Location
United States Agency for International Development (USAID) and Big Ideas@Berkeley Launch Essay Competition on Blind Spots in International Development	Promotion of UC Berkeley's Big Ideas	United States
Students' Innovation Marketplace at TechCon 2014	Promotion TechCon Marketplace	United States
Study Abroad student, Linlin Liang, shares her experience from Tanzania	Student experiences	United States
Helping to end Extreme Poverty by 2030	Higher Education Solutions Network	United States
Spartans Feed the World	Michigan State University (MSU) working to Feed the Future	United States
Presentations by Department of Bio Systems and Ag Engineering students funded by the Innovation Grant	Presentation of Capstone Design Projects by MSU students supported by the innovation grants	United States
Advance Notice for Request for Applications (RFA) Food Systems Innovation Grants	Announcing upcoming Request for Application	United States
Peace Corps experience aids returned volunteer researching food security at Michigan State	Campus Food Security Tour coming to Michigan State University	United States
Food Systems Innovation in the South Asia and South East Asia Region	News about the two-day workshop "Food Systems Innovation in the South and South East Asia Region" in New Delhi, India December 17 and 18, 2013	United States
The Rockefeller Foundation workshop at Michigan State University	About a workshop at Michigan State University on January 9, 2014 to explore key opportunities for and bottlenecks to reducing post-harvest loss in Africa.	United States
Workshop at the Information and Communication Technology conference 2013 in Cape Town, South Africa	Recap of the "Opportunities and Challenges for using Technology to Reach Rural Farmers in the Developing World" at ICT4D conference in Cape Town, South Africa (December 7, 2013).	United States

Communication Title	Description	Location
Global Center for Food Systems Innovation GCFSI funded student presents at 94th American Geophysical Union	Recap of presentation	United States
Michigan State University student receives award to document food insecurity in Mali, Africa.	Article on Ryan Vroegindewey's grant to use photography and semi-structured interviews to document the factors and manifestations of food insecurity in central Mali.	United States
Global Center student attends The Energy Resources Institute (TERI) conference in India	Recaps the experience of an Michigan State University student in India	United States
Africa: Harvesting Gender Equality Among Africa's Rice Farmers	Nathalie Me-Nsope, an agricultural economist and gender specialist at GCFSI was featured in an article on 'Harvesting gender equality among Africa's rice farmers.	United States
Opportunities and Challenges for using Technology to Reach Rural Farmers in Developing World	Notes on the Conference	United States
Food Systems Innovation Symposium at Michigan State University	News about the first Food Systems Innovation Symposium held on August 22-23 at Michigan State University	United States
Cascading Complexity: Models, Tsetse, Climate Change and Agriculture	News about a talk delivered by Joe Messina at Yale Climate and Energy Institute about 'Cascading complexity: models, tsetse, climate change and agriculture' on 24 September 2103.	United States
Information and Communications Team Visits Africa	Recaps visit by Charles Steinfield and Susan Wyche to Africa	United States
Ajit Srivastava visits the Indian Society of Agricultural Engineering (ISAE)	Recaps visit by Dr. Srivastava who gave a presentation on June 21st 2013 at ISAE about the role of agricultural/biological engineers in feeding the future.	United States
International Symposium on Medical and Health Geography at Michigan State University	Mark DeVisser, PhD student working with Prof. Joseph Messina in the climate change group of GCFSI delivered a presentation on "National Control of Tsetse: Is Eradication in Kenya Feasible?" at 15th International Symposium on the Medical/Health Geography.	United States

Communication Title	Description	Location
HANSON APPOINTED DEAN OF Michigan State University INTERNATIONAL STUDIES AND PROGRAMS	Appointment of Dean Hanson to oversee the International Studies and Programs at Michigan State University and lead the Global Center for Food Systems Innovation	United States
Michigan State University GRANT TO HELP CREATE DEVELOPING WORLD FOOD SYSTEMS	Announcement of the winners of the first round of GCFSI Grants	United States
'CAMPUS FOOD SECURITY TOUR' MAKES STOP AT Michigan State University	Announced the event "Campus Food Security Tour," which is connecting students interested in greater food security and sustainability to the Feed the Future initiative and Feed the Future Innovation Labs across the country.	United States
Understanding Barriers to Mobile Phone Use in Rural Africa	Online video of public talk given by Susan Wyche at Cornell University International Institute for Food, Agriculture, and Development	United States
ICT for Development in Agricultural Sectors	Online video of an interview prior to a public lecture on ICT for Agriculture given by Charles Steinfield at the Quello Center for Telecommunications Management and Law at Michigan State University	United States
Participatory Videos for Smallholder Farmer Training in Malawi: an Analysis of Knowledge Gain and Short-term Adoption	Online video of a talk by Tian Cai to the Eye on Africa series in the African Studies Center at Michigan State University	United States
Decision Support & Informatics with GCFSI	Developed a brochure for DSI capability and services.	United States
Participated in GCFSI Translational Scholars activities, including seminars, filming of a short interview about my research, and the recording of a podcast.	Discussed strategies for estimate changes in Malawi's growing season climate and the need for better instrumentation	United States
Gender in Agricultural Research and Development	Nathalie talked about the importance of integrating gender in agricultural curricula, and in particular in AgShare Methodology and tools	Ethiopia

Communication Title	Description	Location
Gender Perspectives in Food Systems - Webinar	Webinar explored how adopting a gender perspective can enrich our work in food systems research and innovation. Nathalie Me-Nsope, Gender Lead of Michigan State University's Global Center for Food Systems Innovation (GCFSI), using a recent case study on the pigeon pea value chain in Malawi talked about how she incorporated a gender perspective in a much broader food systems research question, what she found, and the implications of the findings for the design of food systems innovation.	United States
Cascading Complexity: Models, Tsetse, Climate Change and Agriculture	News about a talk delivered by Joe Messina at Yale Climate and Energy Institute about 'Cascading complexity: models, tsetse, climate change and agriculture' on 24 September 2103.	United States
Ruth's Legumes: Small-scale urban food trade in Lilongwe	following Ruth, a small-scale legume trader in Lilongwe as she shows the viewer/recounts her experiences	Malawi
Stephanie's Blog	A series of blogs tracking food systems issues that engage with nutrition, health, urbanization, climate change. A particular focus on food system development in the global south	United States
City Food systems in the urbanizing global south	invited talk to MasterCard foundation students	United States
Integrated Agricultural System, Migration, and Social Protection Strategies to Reduce Vulnerability to Climate Change in East Africa	Seminar presentation International Livestock Research Institute - Nairobi Kenya, January 27, 2015.	Kenya
Integrated Agricultural System, Migration, and Social Protection Strategies to Reduce Vulnerability to Climate Change in East Africa	Seminar presentation AGRA - Nairobi Kenya, January 28, 2015.	Kenya
Measuring the Demand for Aflatoxin Tested Maize in Kenya	A brief summary of the Demand for Aflatoxin Tested Maize project and its policy implications.	Kenya
Understanding Barriers to Mobile Phone Use in Rural Africa	Online video of public talk given by Susan Wyche at Cornell University International Institute for Food, Agriculture, and Development	United States
ICT for Development in Agricultural Sectors	Online video of an interview prior to a public lecture on ICT for Agriculture given by Charles Steinfield at the Quello Center for Telecommunications Management and Law at Michigan State University	United States

Communication Title	Description	Location
Participatory Videos for Smallholder Farmer Training in Malawi: an Analysis of Knowledge Gain and Short-term Adoption	Online video of a talk by Tian Cai to the Eye on Africa series in the African Studies Center at Michigan State University	United States
Decision Support & Informatics with GCFSI	Developed a brochure for DSI capability and services.	United States
Participated in GCFSI Translational Scholars activities, including seminars, filming of a short interview about my research, and the recording of a podcast.	Discussed strategies for estimate changes in Malawi's growing season climate and the need for better instrumentation	United States
Gender Perspectives in Food Systems - Webinar	Webinar explored how adopting a gender perspective can enrich our work in food systems research and innovation. Nathalie Me-Nsope, Gender Lead of Michigan State University's Global Center for Food Systems Innovation (GCFSI), using a recent case study on the pigeon pea value chain in Malawi talked about how she incorporated a gender perspective in a much broader food systems research question, what she found, and the implications of the findings for the design of food systems innovation.	United States
Cascading Complexity: Models, Tsetse, Climate Change and Agriculture	News about a talk delivered by Joe Messina at Yale Climate and Energy Institute about 'Cascading complexity: models, tsetse, climate change and agriculture' on 24 September 2103.	United States
Ruth's Legumes: Small-scale urban food trade in Lilongwe	following Ruth, a small-scale legume trader in Lilongwe as she shows the viewer/recounts her experiences	Malawi

APPENDIX VII. Travel - FY 2014

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Netherlands	8	Wageningen	Participate in the Global Food Security Conference	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building
United States	6	None	Attend the World Food Prize on behalf of Global Center for Food Systems Innovation	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building
United States	1	University of California Berkeley	MegaTrend 3 Team meeting for Global Center for Food Systems Innovation.	Training for students, data sharing about Digital Green methodology	Develop MOU with Digital Green
Cambodia	1	United States Agency for International Development Cambodia, United States Agency for International Development DC	Conference, meet with INNOVATE and Mission engagement	Planning for possible Cambodia Horticulture project	Possible proposal for Horticulture work
United States	1	None	Attending Association of Public Land Grant Universities annual meeting as part of Global Center for Food Systems Innovation.	Increase awareness of Global Center for Food Systems Innovation's work in student engagement and food systems	Continued network building with student engagement related focus
United States	1	Association of Public Land Grant Universities	Attend and present at the 126th Annual Association of Public Land Grant Universities meeting on behalf of Global Center for Food Systems Innovation.	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
United States	2	None	Participate in the Gender Summit	Increase awareness of Global Center for Food Systems Innovation's work in gender and food systems	Continued network building with gender related focus
United States	1	Regional Universities Forum for Capacity Building in Agriculture	Global Center for Food Systems Innovation directors made a connection with Ms. Chindime during their visit to Uganda and Regional Universities Forum for Capacity Building in Agriculture. We invited Ms. Chindime to come to Michigan State University to support the planning of the proposed Megatrend Three Conference planned for 2014. Regional Universities Forum for Capacity Building in Agriculture has suggested they can host the event and help build the connections to their 32 member universities.	Help organize the Megatrend Three international conference. Create strong stakeholder connections in Africa.	Continued network building and stakeholder engagement
Mexico	1	None	Present at the World Education Research Association Focal Meeting	"Fostering social justice, global citizenship, and cultural competence through study abroad experiences", World Education Research Association Focal Meetings	Student engagement report
South Africa	3	Various Information and Communication Technology network	Participate and present at the Sixth International Conference on Information and Communication Technologies and Development (Information and Communication TechnologyD2013)	Increase awareness of Global Center for Food Systems Innovation's work in Information and Communication Technology and food systems	Continued network building with Information and Communication Technology related focus
United States	1	None	Attend the American Geophysical Union (AGU) Fall Meeting as part of Global Center for Food Systems Innovation.	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
India	16	The Energy Resources Institute of India	Reviewed The Energy Resources Institute of India deliverables, presented work from year 1	planned for continuing collaboration with The Energy Resources Institute of India, particularly for implementation work in the coming year White papers, implementation for SA/SEA	Continued partner engagement
United States	3	None	Present as guests of Global Center for Food Systems Innovation and attended the Rockefeller Foundation Waste and Spoilage Initiative Workshop that took place at Michigan State University	Increase awareness of Global Center for Food Systems Innovation and its work	None
Cambodia	2	1. Royal University of Agriculture; 2. Ministries of Ag and Education; 3. United States Agency for International Development Mission; 4. Reps from Innovate; 5. Meeting with the United States Agency for International Development Regional Mission in Thailand		Determination of the level of fit of Cambodia as a location for a Global Center for Food Systems Innovation Hub	Determine a beneficial location for a Global Center for Food Systems Innovation Hub

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
United States	1	None	Attend the Academy of Human Resource Development, present a paper on Translational Scholars	Increase awareness of Global Center for Food Systems Innovation's work in student engagement and food systems	Continued network building with student engagement related focus
Malawi	1	Lilongwe University of Agriculture and Natural Resources	Start solidifying the Malawi hub, connect with Lilongwe University of Agriculture and Natural Resources faculty, socialize the types of projects Global Center for Food Systems Innovation is planning to implement, define local collaborators and identify best travel schedules	Collaborative efforts between Lilongwe University of Agriculture and Natural Resources and Michigan State University/Global Center for Food Systems Innovation	Continue building the Innovation Hub and work between Lilongwe University of Agriculture and Natural Resources and Global Center for Food Systems Innovation
Canada	1	58th Annual Conference of the Comparative and International Education Society	Conference participation and paper presentation for the Global Center for Food Systems Innovation at the 58th Annual Conference of the Comparative and International Education Society, Toronto, March 10-14, 2014. J. Bonnell, L. Hill, J. Dirks, T. Smith, and P Roy. (Re) conceptualizing the role of higher education in systems transformation: The case of Agricultural Education and Training in East Africa.	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building
Colombia	1	International Center for Tropical Agriculture	Participate with a Michigan State University delegation on behalf of Global Center for Food Systems Innovation in stakeholder engagement with International Center for Tropical Agriculture and present Global Center for Food Systems Innovation at a seminar with International Center for Tropical Agriculture and also at the Universidad de Colombia.	Move toward partnership with International Center for Tropical Agriculture	Continue to work with International Center for Tropical Agriculture in effort to have collaborative efforts

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Canada	1	GLOBE	Charles McKeown has been invited by the organizers of GLOBE 2014 conference on Food, Water and Energy – The Next Green Revolution, to be held in Vancouver, Canada. Chuck will introduce the megatrends and the challenges that they present out to 2050. He will discuss the relationship between water, food and energy from a NA and Global perspective. Introduce the scale of the challenge and where key barriers exist. He will also talk about “How do we Transfer Innovation on a Global”	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building
United States	1	Women in Agriculture Educators	Attending the 2014 Women in Agriculture Educators National Conference and Pre-Conference	Increase awareness of Global Center for Food Systems Innovation's work in gender and food systems	Continued network building with gender related focus
United States	1	Global Development Lab	Participate in the launch of the new US Global Development Lab with former Senator Hilary Clinton and Dr. Rajiv Shah	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building
United States	4	Higher Education Solutions Network	Participate in the Higher Education Solutions Network Lab Directors Meeting	Increase awareness of Global Center for Food Systems Innovation and its work, determine points of collaboration with other Higher Education Solutions Network labs	Continued network building and international with other Higher Education Solutions Network labs

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Malawi	3	Lilongwe University of Agriculture and Natural Resources	Continue to conversations to set-up Malawi hub. Charles McKeown will focus on identifying the skill set of the faculty, students and staff we need to support the 8 projects we are going to implementing Malawi. Maria Murphy will focus on completing the administrative tasks necessary to set up a subcontract, define cost structures and the financial and admin support needed to implement the 8 Malawi projects, and to set-up the Launch Event. Stephanie White will work with Charles McKeown to identify the skill set of the faculty, students and staff we need to support the 8 projects we are going to implement in Malawi.	Set up Malawi Innovation Hub, finalize administrative tasks, determine appropriate faculty to partner with Global Center for Food Systems Innovation funded projects	continue developing the innovation hub in Malawi and assist in any administrative or technical questions that arise
Malawi	1	Lilongwe University of Agriculture and Natural Resources, Africa Rising	This work will be in collaboration with the Malawi researchers and participating farmers who are part of the on-farm research to increase soil health, human health and production of nutritious crops such as pigeon pea. The goal of this trip is to have an outline for the technical areas to be covered in a Farmer Field School, perspective instructors to facilitate the sessions and possible sites to hold the Farmer Field Schools.	Have the infrastructure and team in place to launch the Farmer Field School in Malawi	prepare for implementation of Farmer Field School in Malawi
France	1	None	Present a paper at the conference, Third International Science and Policy Conference on the Resilience of Social & Ecological systems.	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
United States	1	None	DSSAT program training as part of GCSFI.	provide better, more detailed crop simulation models for Global Center for Food Systems Innovation research	utilize skills and processes learned in DSSAT training with work at DSI
Malawi	2	Lilongwe University of Agriculture and Natural Resources	Meet with Malawi implementation partners, help train enumerators to conduct baseline data collection, evaluate field sites the pilot, conduct interviews with farmers and agricultural information providers, and prepare research team for video productions, screening, and posttest evaluation	Successful pilot participatory video approach in Malawi	analyze results of participatory video project to determine level of benefit for the people of Malawi and the Global Center for Food Systems Innovation

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Malawi	2	Lilongwe University of Agriculture and Natural Resources	Tian Cai is a PhD student at Michigan State University. During this time, she meet with our Malawi partners, assisted with enumerator training, and assisted with initial interviews with farmers and agricultural information providers, and helped with baseline survey management. She will supervise the production and screening of the videos, as well as the collection of post-test survey data. Kirk Mason is an undergraduate student intern with Global Center for Food Systems Innovation who will work this summer on this project. He is a skilled videographer who has prior experience producing video documentaries in Malawi. He will work with Malawian farmers to produce a series of videos to be used in the pilot, and will ensure proper screening of the videos. He will also capture video and still images of the broader Global Center for Food Systems Innovation effort in Malawi for documentation purposes, assist with development of additional training materials, and assist Tian Cai in working with local enumerators for data collection.	Successful pilot participatory video approach in Malawi	analyze results of participatory video project to determine level of benefit for the people of Malawi and the Global Center for Food Systems Innovation
Malawi	2	Lilongwe University of Agriculture and Natural Resources	Conduct research and data gathering for the project Gender Analysis of Pigeon Pea value chain in Malawi.	provide better, more detailed understanding of Gender's roll in the Pigeon Pea Value Chain in Malawi	analyze data from research in country to determine available space Gender analysis and the Pigeon Pea Value Chain for innovations

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Malawi	2	Lilongwe University of Agriculture and Natural Resources	launch and conduct research concerning the Megatrend Two project	provide better, more detailed understanding of rapid urbanization and food security	analyze data from research in country to determine available space in rapid urbanization and food security for innovations
Colombia	2	International Center for Tropical Agriculture	Participate with an Michigan State University delegation on behalf of Global Center for Food Systems Innovation in the Sustainable Food Systems, Urbanizing Populations, Expert Meeting	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building
South Africa	3	International Food and Agribusiness Management Association	Attend the International Food and Agribusiness Management Association conference	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Malawi	2	Lilongwe University of Agriculture and Natural Resources	While in Malawi, Tian Cai will go to New Delhi, India to visit Digital Green to learn the details of the participatory video approach so that it can be correctly piloted in Malawi. She will be accompanied by Hastings Chiwesa, an extension faculty member from Malawi. They will also visit a Digital Green field site to observe the method in action. Hastings Chiwesa is one of our Malawi hub research partners who teaches in the Agricultural Extension department at Lilongwe University of Agriculture and Natural Resources. He will visit Digital Green with Tian Cai to learn the details of the participatory video approach so that it can be correctly piloted in Malawi, and so that he can educate future extension officers in the approach. He will also meet with Digital Green personnel to lay the foundation for a larger scale collaboration in Malawi with them. Will also visit a Digital Green field site to observe the method in action.	Successful pilot participatory video approach in Malawi	analyze results of participatory video project to determine level of benefit for the people of Malawi and the Global Center for Food Systems Innovation
United States	1	Global Development Lab	Meeting with Global Development Lab and United States Agency for International Development contacts regarding Global Center for Food Systems Innovation	Clearer understanding of what United States Agency for International Development and Global Development Lab are looking for from Global Center for Food Systems Innovation	Work to define Global Center for Food Systems Innovation policies and procedures

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
United States	3	Rector Royal University of Agriculture, Director Department of Agricultural Engineering, Min Agriculture, Forestry and Fisheries in Cambodia, Director Department of Personnel and HR Min Agriculture, Forestry and Fisheries in Cambodia	implementation our “Development of a Sustainable Commercial Horticulture Industry in Cambodia” project	increased Global Center for Food Systems Innovation network	continue to work with network partners to determine innovation spaces in Cambodia
Malawi	1	Lilongwe University of Agriculture and Natural Resources	launch and conduct research concerning the Megatrend Two project	provide better, more detailed understanding of rapid urbanization and food security	analyze data from research in country to determine available space in rapid urbanization and food security for innovations
Malawi	1	Lilongwe University of Agriculture and Natural Resources	Travel to Malawi to launch and conduct research concerning the Creating a Profile of legume use, demand, and exchange in informal urban markets Malawi project.	provide better, more detailed understanding of legume use and informal urban markets in Lilongwe and neighboring areas	analyze data from research in country to determine available space in legume use and informal urban markets for innovations

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Malawi	1	Lilongwe University of Agriculture and Natural Resources	Travel to Malawi to launch and conduct research concerning the Creating a Profile of legume use, demand, and exchange in informal urban markets Malawi project.	provide better, more detailed understanding of legume use and informal urban markets in Lilongwe and neighboring areas	analyze data from research in country to determine available space in legume use and informal urban markets for innovations
India	2	Digital Green	Observe video production, video screening, and data collection methods of Digital Green in active field locations, and discuss ways to adapt the approach and partner with Digital Green in Malawi.	Successful pilot participatory video approach in Malawi	analyze results of participatory video project to determine level of benefit for the people of Malawi and the Global Center for Food Systems Innovation
Malawi	1	Lilongwe University of Agriculture and Natural Resources	Conduct research for Tom Smith and John Dirkx focusing on the implementation of the workforce and skills project in Malawi.	provide better, more detailed understanding of workforce and skills development and food security in Lilongwe	analyze data from research in country to determine available space in workforce and skills development and food security for innovations
Malawi	1	Lilongwe University of Agriculture and Natural Resources, Africa Rising	Dr. Morrone will be in Malawi to attend the synthesis workshop that Sieg Snapp is hosting with Africa rising, to develop educational materials for farmer field school and Information and Communication Technology and draft a journal article	Increase awareness of Global Center for Food Systems Innovation, the farmer field school, and its work	Continued network building and promoting the farmer field school approach

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Malawi	2	Lilongwe University of Agriculture and Natural Resources	<p>While in Malawi, Tian Cai will go to New Delhi, India to visit Digital Green to learn the details of the participatory video approach so that it can be correctly piloted in Malawi. She will be accompanied by Hastings Chiwesa, an extension faculty member from Malawi. They will also visit a Digital Green field site to observe the method in action. Hastings Chiwesa is one of our Malawi hub research partners who teaches in the Agricultural Extension department at Lilongwe University of Agriculture and Natural Resources. He will visit Digital Green with Tian Cai to learn the details of the participatory video approach so that it can be correctly piloted in Malawi, and so that he can educate future extension officers in the approach. He will also meet with Digital Green personnel to lay the foundation for a larger scale collaboration in Malawi with them. Will also visit a Digital Green field site to observe the method in action.</p>	Successful pilot participatory video approach in Malawi	analyze results of participatory video project to determine level of benefit for the people of Malawi and the Global Center for Food Systems Innovation

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Rwanda	1	Women's Leadership Program-Rwanda	<p>Support the Women's Leadership Program-Rwanda project in two main priority areas during her internship:</p> <p>1. Assist the core program team in data collection for the gender and community development program. She will refine the protocol, work with Regis Nisengwe, WLP project coordinator, to conduct interviews/focus groups; additionally she will consult with the WLP advisory committee as they prepare to facilitate the faculty development workshops in the fall of 2014. Point of contact for this work will be John Medendorp and Gretchen Neisler.</p>	Rwanda engagement report and project outcomes	None
Malawi	1	Lilongwe University of Agriculture and Natural Resources	Conduct research for Dr. Sieg Snapp and Dr. Leo Zulu focusing on the presence and dynamics of community elements of social learning and adoption of legume technologies, beyond household and farm-level dynamics	provide better, more detailed understanding of the presence and dynamics of community elements of social learning and adoption of legume technologies	analyze data from research in country to determine available space in the presence and dynamics of community elements of social learning and adoption of legume technologies for innovations
Malawi	2	Lilongwe University of Agriculture and Natural Resources	Discuss with research collaborators and collect information for the sub-project, "Improving Food Security and Resilience to Climate Change"	Find research collaborators for their work on "Improving Food Security and Resilience to Climate Change"	analyze results from research to determine ways in which to improve food security and resilience with relation to climate change

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Malawi	2	Lilongwe University of Agriculture and Natural Resources	Focused data collection from private sector and higher education sector stakeholder groups that are specific to MT 3 objectives.	provide better, more detailed understanding of private sector and higher education engagement and food security in Lilongwe	analyze data from research in country to determine available space in high education and private sector and food security for innovations
Malawi	2	Lilongwe University of Agriculture and Natural Resources	Focused data collection from private sector and higher education sector stakeholder groups that are specific to MT 3 objectives.	provide better, more detailed understanding of private sector and higher education engagement and food security in Lilongwe	analyze data from research in country to determine available space in high education and private sector and food security for innovations
Malawi	1	Lilongwe University of Agriculture and Natural Resources	Work with Michigan State University colleagues from Global Center for Food Systems Innovation who will be in the country at the same time, and colleagues at Lilongwe University of Agriculture and Natural Resources/Malawi to (a) review all data collected in the market mapping exercise, and (b) conduct private firm interviews under Global Center for Food Systems Innovation's year two research plan in Malawi, focused on mapping current and future market prospects for grain legumes in the country and region.	understanding of market locations presently, and possible future locations of markets for grain legumes in the country and region	analyze data from research and interviews

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Malawi	2	Lilongwe University of Agriculture and Natural Resources	Participate in the Launch Event for the Global Center for Food Systems Innovation Regional Innovation Hub in Lilongwe University of Agriculture and Natural Resources, and various meetings with Lilongwe University of Agriculture and Natural Resources research teams and leadership.	Strong collaborative efforts between Michigan State University and Lilongwe University of Agriculture and Natural Resources	Continued efforts to work with Lilongwe University of Agriculture and Natural Resources and researchers in Malawi
Mozambique	2	InnovATE, Regional Universities Forum for Capacity Building in Agriculture	Present and participate at the Regional Universities Forum for Capacity Building in Agriculture conference. Dirkx and Smith have collaborated with InnovATE from Virginia Tech to plan and facilitate a “side event” at this conference. The title of the proposed event is: “Listening to the Regional Universities Forum for Capacity Building in Agriculture membership on AET challenges and local solutions.”	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building
Mozambique	1	Regional Universities Forum for Capacity Building in Agriculture	Attending Regional Universities Forum for Capacity Building in Agriculture conference	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building
Malawi	1	Lilongwe University of Agriculture and Natural Resources	Traveling to Malawi for a Feed the Future meeting, field work and data collection, and to set up and monitor the weather stations	provide better, more detailed understanding of climate patterns and food security in Lilongwe	analyze data from weather stations

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Malawi	1	Lilongwe University of Agriculture and Natural Resources	Traveling to Malawi for a Feed the Future meeting, field work and data collection, and to set up and monitor the weather stations	provide better, more detailed understanding of climate patterns and food security in Lilongwe	analyze data from weather stations
Malawi	1	Lilongwe University of Agriculture and Natural Resources	Represent Global Center for Food Systems Innovation during the Higher Education Solutions Network Lab Director and AOR meetings in Malawi with the United States Agency for International Development Mission, Lilongwe University of Agriculture and Natural Resources and other partners.	Engaged Mission, project showcase for United States Agency for International Development Lab	Redesign the Malawi engagement, issue clear rules about engaging the Mission and the Embassy
Kenya	1	Syngenta	Participate in the Syngenta-Enactus 2014 "Agribusiness 4 Africa" business plan competitions ON BEHALF OF gaffs, MEET WITH VARIOUS REPRESENTATIVES OF Syngenta Corp to discuss project ideas and support of Global Center for Food Systems Innovation work.	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building
United States	3	None	Traveling to DC with the other members of the Management Team for Global Center for Food Systems Innovation to work with United States Agency for International Development representatives on the year three work plan, innovation pipeline, and present on Global Center for Food Systems Innovation's work to-date	Year three workplan	Develop a revised work plan and continue discussions with United States Agency for International Development

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
United States	2	None	Traveling to DC to present work at a conference, Dev Talk, regarding work that is funded by Global Center for Food Systems Innovation	Increase awareness of Global Center for Food Systems Innovation and its work	Continued network building
Malawi	1	Lilongwe University of Agriculture and Natural Resources	Embedded with Research Project 4 (Agro-ecology for climate change resilience), and with Research Project 7 (Skills and Workforce Development). Looking at questions of whether related farmer education efforts are Information and Communication Technology or extension functions (or both). Participating in the meetings and as a member of the writing teams. In addition, for both research projects, will be exploring specific means that the Global Center for Food Systems Innovation knowledge system can be of direct application to addressing the needs of the research team members in both the U.S. and Malawi. Will be documenting the work done on the visitation using the knowledge system. Will also attend and participate in activities around the formal launch of the Malawi Global Center for Food Systems Innovation hub.	Understanding of how to improve Global Center for Food Systems Innovation knowledge system to be of better use to the research teams and Lilongwe University of Agriculture and Natural Resources	Begin knowledge system improvement in accordance with Michigan State University branding and built off of results from discussion with research teams

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Malawi	1	Lilongwe University of Agriculture and Natural Resources	<p>Embedded with Research Project 4 (Agro-ecology for climate change resilience), and with Research Project 7 (Skills and Workforce Development). Looking at questions of whether related farmer education efforts are Information and Communication Technology or extension functions (or both). Participating in the meetings and as a member of the writing teams. In addition, for both research projects, will be exploring specifics means that the Global Center for Food Systems Innovation knowledge system can be of direct application to addressing the needs of the research team members in both the U.S. and Malawi. Will be documenting the work done on the visitation using the knowledge system. Will also attend and participate in activities around the formal launch of the Malawi Global Center for Food Systems Innovation hub.</p>	<p>Understanding of how to improve Global Center for Food Systems Innovation knowledge system to be of better use to the research teams and Lilongwe University of Agriculture and Natural Resources</p>	<p>Begin knowledge system improvement in accordance with Michigan State University branding and built off of results from discussion with research teams</p>