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HIGHER EDUCATION SOLUTIONS NETWORK - QUARTERLY REPORT

MICHIGAN STATE UNIVERSITY
GLOBAL CENTER FOR FOOD SYSTEMS INNOVATION (GCFSI)
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Acronyms

| | |
|----------------|--|
| AFRE | (Department of) Agricultural, Food, and Resources Economics at MSU |
| ArcGIS | Geographic Information System |
| BFS | USAID Bureau for Food Security |
| DFID | Department for International Development (United Kingdom) |
| DSI | Decision Support and Informatics The Fostering Agriculture Competitiveness Employing Information Communication Technologies |
| FACET | Technologies |
| FSHN | (Department of) Food Science and Human Nutrition at MSU |
| GCFSI | Global Center for Food Systems Innovation |
| HESN | Higher Education Solutions Network |
| iAGRI | Innovative Agricultural Research Initiative |
| ICT | Information and Communication Technologies |
| ICT4D | Information and Communication Technologies for Development |
| IR | Intermediate Result |
| LU | Lincoln University |
| MIT | Massachusetts Institute of Technology |
| M&E | Monitoring and Evaluation |
| 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 |
| OI | Objective (1, 2, 3 or 4) |
| OST | USAID Office of Science and Technology |
| RAID | Redundant Array of Independent Disks |
| SUA | Sokoine University of Agriculture- Tanzania |
| TERI | The Energy 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 |
| WUR | Wageningen University - The Netherlands |

Executive Summary

Michigan State University launched the implementation of Agreement AID-OAA-A-13-00006 with activities aimed at establishing and solidifying the basic structures of the Global Center for Food Systems Innovation. On November 8, 2012, after notice of award, our first step was to assemble the core multi-disciplinary team.¹ We engaged MSU faculty and staff, reached out to our partners, WUR, SUA, LU and TERI, and established connections with other Labs in the HESN network. November 10 and 11, 2012, we participated in the Launch Event of the HESN held in Washington, D.C. We used this opportunity to broaden our team by building linkages to fellow labs as well as USAID experts in the areas of focus of the GCFSI.

During the months of November and December we began to formulate our work plan and to identify additional key members of our team. On January 2-3, 2013 a team of USAID staff members visited MSU to engage in an in-depth conversation of critical elements of the annual work plan and to agree on the general direction of the Center. We leveraged the opportunity to engage with USAID OST and BFS staff to further seek clarification on matters related to our developing a mutually acceptable work plan and to identify key M&E metrics. From January to March, 2013 we focused on developing our Annual Work Plan and the M&E Plan. During February 12 and 13, 2013 a team from GCFSI visited our partner Lincoln University with the purpose of engaging faculty and administrators to clarify their contributions to our work. We engaged with faculty and department chairs from Sociology, Anthropology, Mathematics, and Biology. We explored potential opportunities to engage students in the activities proposed for the TSC.

From March 2 to 9, GCFSI team members traveled to Tanzania to introduce GCFSI to SUA. We engaged with faculty and department chairs from Food Sciences & Technology, Agricultural Engineering, Agricultural Economics, Agricultural Education Extension, and Crop and Soil Sciences. We had productive meetings with iAGRI staff members to explore potential opportunities for collaboration. We met with Kevin McCown at the USAID/ BFS Tanzania Mission. We concluded our trip with a visit to the Institute for Resources Assessment, the staff of the Tanzania Partnership Program office at the University of Dar es Salaam.²

March 21 and 22, we organized a GCFSI Launch Event with the presence of USAID representatives from OST and BFS, as well as top leadership from MSU, faculty, core partners, and members from the private sector and the community. We focused on presenting the GCFSI, its goals and purpose during a series of presentations and workshops centered on the themes of the three Megatrends. With a participation of 277 people including faculty, students and community members, we continued the process of defining the problems that will be the focus of our white paper development.

Two days prior to this event —March 19 and 20— we held working sessions with all GCFSI partners, including representatives from WUR, TERI, LU and SUA, to help: (1) develop linkages in the larger team and give everybody a chance to better know our GCFSI colleagues; (2) identify the best talent and contributions from our partners to the Megatrend work; and (3) define the methodology and focus of the Megatrends concerning the geographic and content scope of the future white papers.³

¹ As planned in **O1**: Identify, define, and assess responses to critical food system challenges. **IR 1.1**: Identify key trends and frame issues within the critical food system challenges. **Activity 1.1.1**: Core Multi-Disciplinary Team Assembly.

² Part of **O1**: **IR 1.4** Create multidisciplinary teams through cross-regional engagement. **Activity 1.4.1** Partner and Prospective Regional Innovation Hub Visits.

³ These events contributed to achieving Objective 1, IR 1.1, **Activity 1.1.2**. Broadening of Multi-Disciplinary Teams through Stakeholder Engagement; **Activity 1.1.3**. Launch Event and **Activity 1.1.4**. Problem Definition.

Between January and March 2013, our workstreams⁴ continued the process of literature review to frame the white paper problems. The report below follows the provided structured internally organized by workstream when necessary. In March 2013 we submitted our final work plan for approval.

Part I: Major Milestones and Events Completed

I.1. Milestones

There were achievements and milestones reached across the various workstreams of the GCFSI project. In general, the work focused on assembling the core multi-disciplinary teams, expanding these teams to other stakeholders, participating in the Launch Event and starting the process of problem definition, literature review, data review, analysis and issue framing.

In particular, **we completed** the following tasks outlined in our approved work plan (see Appendix I for chart):

Objective 1. Identify, define and assess responses to critical food systems challenges:

IR 1.1 – Activities:

- I.1.1 Assemble core multi-disciplinary team
- I.1.2 Broaden team and engage stakeholders
- I.1.3 GCFSI Launch Event

Objective 2. Leverage data and analytics to promote and support evidence-based food systems, policy and investments:

IR 2.1 – Activities

- 2.1.1 Establish DSI Unit

We also **started the implementation** of the following activities, which are ongoing through the second quarter:

Objective 1. Identify, define and assess responses to critical food systems challenges:

IR 1.1 – Activities:

- I.1.4 Problem definition
- I.1.5 Data assembly and literature review
- I.1.6 Trend analysis and issue framing
- I.1.9 Role of ICT in agriculture and food systems

IR 1.4 – Activities

- I.4.1 Partners and prospective regional innovation hub visits - SUA

Objective 2. Leverage data and analytics to promote and support evidence-based food systems, policy and investments:

IR 2.1 – Activities

- 2.1.2 Collect, store and synthesize data from sources like the World Bank, FAO, etc.

⁴ Workstreams: MT1, MT2, MT3, DSI, ICT4D, TSC.

Objective 4. Create a multi-disciplinary and multi-generational network of food system problem solvers

IR 4.2 – Activities

- 4.2.1 Collaboration with ongoing MSU International Programs
- 4.2.2 Regional Innovation Hub Assessment Visits

I.2. Events

- November 10-11, 2012: HESN Launch Event in Washington, D.C.
- January 2-3, 2013: USAID visit to MSU.
- February 12-13, 2013: Visit from GCFSI directors and team to Lincoln University.
- March 2-9, 2013: Visit from GCFSI Director Prof. Mabokela and Prof. McKeown to SUA.
- March 18-19, 2013: Internal workshops for MSU and its consortium partners.
- March 20-21, 2013: GCFSI Launch Event.

I.3. Publications

There have been no publications to date.

I.4. Communications

- Launched the temporary GCFSI Website: gcfsi.isp.msu.edu
- Created GCFSI Facebook Page:
<https://www.facebook.com/GlobalCenterforFoodSystemsInnovationsGCFSI>
- Created GCFSI Twitter Account: <https://twitter.com/GCFSI>
- Created GCFSI Program Manager Twitter Account: https://twitter.com/GCFSI_PM
- Developed 9 slicks for the GCFSI Launch Event:
 - Network-of-Networks
 - HESN
 - GCFSI
 - GCFSI Core Team Bios
 - WUR Team Bios
 - TERI Team Bios
 - LU Team Bios
 - SUA Team Bios
 - USAID Team Bios

Part 2: Description of Key Activities

2.1. Quarter Objectives

Across the GCFSI, we reached various objectives stated in the year one work plan for the launch and first stages of operation of GCFSI. We solidified our core team, we engaged stakeholders, officially launched GCFSI to the broader community, and more importantly, kicked-off literature review and data gathering for each of the white papers. Below is a detail of the achievements across our main workstreams.

MTI focused on the main objective of assembling their team to quickly kick-off the problem definition as part of the white paper development. They gave structure to their research focusing on key activities moving forward such as identifying current data, methods and knowledge gaps and determining critical research needs that specifically address food production/supplies in priority developing countries. In MTI, the white paper will be a guiding document for future research and solution innovations development to address emerging issues related to food productions under increasing pressures of

climate change and population growth. Work in this MT is being undertaken along the three submegatrends of climate change, population growth and pressures on land/water.

The objectives of MT2 for this initial part of the project were to develop the work plan, put together the analytical team, and launch the work that will result in completion of the white paper during year 1. MT2 designed a team of experts that correlates to the core areas of food systems, packaging, rapid urbanization, etc. MT2 also heavily engaged GCFSI partner WUR, working closely with Prof. Domenico Dentoni to start defining a mapping of stakeholders relevant to the core area of MT2 in the East Africa geography.

During the first part of the project, **MT3** and **TSC** are being led by Profs. Tom Smith and John Dirkx in a joint manner. While the core focus of each MT3 and TSC differs, for this incipient part of the project they were being addressed jointly. Accordingly, reporting here is done for both work streams. Moving forward, these are being separated into distinct teams and will be reported separately. MT3 started conducting literature review on the current status of education and workforce development concerning agriculture and food security in the East Africa geography. For TSC, the team focused on creating a multi-disciplinary team and engaging MSU and partner students

ICT4D: The ICT4D team achieved four key objectives in the first quarter of the project. They:

- Assembled their core team and developed their first year work plan as part of the overall project work plan;
- began reviewing data sources and relevant literature for the planned white paper;
- investigated alternative information sharing and communication tools for use by the GCFSI to support collaboration with partners; and
- assisted with the development of a preliminary GCFSI web site that will support outreach and dissemination of information related to center activities.

DSI: The DSI team focused on the following objectives:

- Developing the system schema and architecture, functional design, and future objectives of DSI. The end result will be the design and schema of an informatics management structure that is saleable and flexible, allowing for expansion and rapid addition of analysis functionality;
- procuring operational hardware; and
- determining, procuring, installing and configuring necessary software platforms.

2.2. Summary of Key Activities

The key activities in the first quarter were directed at operationalizing the GCFSI. This included hiring of a Program Manager and Monitoring and Evaluation lead, as well as an Assistant Director. Beyond key staff the megatrend research teams were augmented with additional faculty and graduate students in response to the skills assessment referenced in the work plan. These teams are positioned well to examine the multiple facets that the megatrend challenges pose. Initial literature review, data specification and integration along with the development of focus area frameworks are well underway across the research teams. This formation of the work streams and the commencement in earnest of their research and student engagement is the principle accomplishment of the GCFSI in its inaugural quarter.

Prior to March 1, Dr. Jiaguo Qi managed all activities related to **MT1**. These activities included initial contacts to faculty and international partners, participation in the Launch Event, and development of the first year work plan. Given the complexities around Dr. Qi's international research leave, Dr. Joseph

Messina was asked to assume the leadership responsibilities around MT1, with still ongoing support and participation from Dr. Qi. Between March 1 and March 30, Dr. Messina defined the scope of work for the MT as well for each of the members of his team, produced a tentative outline of the white paper, identified and secured the commitments and proposed the resourcing of MSU faculty, students (post-doc, graduate, and undergraduate), and international collaborators. One faculty was assigned as coordinator between MT1 and MT2 thereby helping to link work along the MT teams.

During this quarter the **MT2** team developed an initial work plan, then shared it with USAID and revised it on the basis of their feedback. The MT team also put together their analytical team, drawing from faculty across the campus and from MSU's partners. Initial individual meetings were held with team members to refine their scopes of work. Work then began on at least one of the literature reviews that will feed into the white paper, and on the forecasting exercise that forms part of the analytical core of the white paper. Finally, work on private sector stakeholder engagement began with posting on our Yammer site of initial inventories of Multi-Stakeholder Initiatives focused on developing country food systems, and of the companies among Sub-Saharan Africa's largest 200 companies, that operate within food systems in production, processing, or trade.

Along with partner megatrends, **MT3** and **TSC** developed their core teams, starting with travel to Washington, DC to present the overview and concept of MT3 issues to USAID. The team connected with Clara Cohen and Eric Johnson, identified key experts at MSU and partner institutions in late January and launched weekly MT3 core team meetings as of February 11, including a robust team of faculty, graduate and undergraduate students. During these ongoing meeting, the MT3 has developed an evolving framework of the key MT3 issues, created a visual model of the interactions between the educational sector and the workforce development system and identified a variety of stakeholders to engage with. To hold their mounting data, the MT3 created a file sharing system in DropBox, which will be moved to Share Point during the second quarter of the project. For TSC in particular, the team mapped all MSU study abroad programs against FtF countries and aligned to MT issues. This data will be used to launch the Student Study Abroad Scholarships in the first part of the second quarter of the project.

ICT4D assembled the core team that will investigate how ICT can support food system innovations in developing regions. The ICT4D team, composed of Profs. Charles Steinfield and Susan Wyche, both faculty members in the Department of Telecommunication, Information Studies, and Media at Michigan State University, supported by three students: master's student Muhammad Ali, and undergraduate students Joseph Lajavic and Ryan Miceli, developed their first year work plan, and began the process of connecting their work to other areas within the GCFSI. In particular, they integrated the ICT4D area into the planned MT2 white paper. During this time, ICT4D also established contact with researchers in MSU's Department of Agricultural, Food, and Resource Economics and at SUA. Efforts to connect with researchers working on ICT4D projects at UC Berkeley and MIT, other HESN labs, were also made.

The team reached out to potential stakeholders in the regions where GCFSI is concentrating its first year work, including technology developers in Kenya and an ICT4D researcher in Tanzania. They engaged in conversations with ICT researchers at USAID and FHI 360 to learn about *FACET* or the Fostering Agriculture Competitiveness Employing Information Communication Technologies project, USAID's mobile payments focus, and USAID's knowledge management systems. Through these efforts, ICT4D identified a promising mobile market information system that is attracting the interest of farmers and agribusiness companies in Kenya. ICT4D will conduct fieldwork investigating this system in summer 2013.

ICT4D also began assembling literature for their contribution to the MT2 white paper and developing an inventory of agricultural related ICT4D projects. Susan Wyche generated a collection of early design concepts that capture how key themes emerging in the literature can relate to innovative technology

solutions. These concepts were shared with USAID when they visited MSU campus during the Launch Event.

Finally, the team investigated a series of ICT tools that the GCFSI might use to connect with our partners, with a focus on tools that could be used by partners and stakeholders in developing regions where broadband Internet access is not always as available as we would like it to be. ICT4D students helped to develop a preliminary web site for the GCFSI which is now live at gcfsi.isp.msu.edu.

The **DSI** team centered around the leadership of Dr. Pouyan Nejadhashemi, supported by Dr. Abdol Esfahanian and Prof. McKeown. They solidified their team with support from three graduate students from Computer Science and Biosystems Engineering. They focused on achieving work under Objective 2⁵, particularly Intermediate Result 2.1 “Disseminate Reliable Information to Academics, USAID, and Policymakers”. In this context, they achieved the goal of Establishing the DSI Unit, and launching the efforts to “Collect, Store and Synthesize Data”.

Specifically, the DSI team researched and purchased various equipment⁶, chose server architecture, decided on processors, memory, redundant power supply, and RAID storage arrays based on the research into the optimal requirements of an ArcGIS server configuration. They also researched and decided on server-side configuration with separate web server and database/ArcGIS servers behind a firewall. To support hardware operations, GCFSI invested in the purchase of Microsoft SQL 2012 Enterprise Edition for the development laptops and chose the geodatabase owners in the SQL Server. We acquired ArcGIS 10.1 licenses for the development laptops, configured the SQL server and ArcGIS on the development laptops, acquired Microsoft Server 2012 Data Center for the server, and planned the purchase of ArcGIS server editions and licenses. Finally, the DSI team started collecting geospatial datasets of Africa and identified USAID indicators relevant to the mission of the project.

Part 3: Intra-Development Lab/ University Engagement

3.1. Interdisciplinary Collaboration

With a strong commitment to collaboration and building our internal and external networks, all work streams reached out to colleagues and other faculty. In collaboration with faculty from the Eli Broad College of Business, the College of Agriculture and Natural Resources and the College of Social Science, the GCFSI has helped to assemble teams, some in partnership with the private sector, for additional projects with funders that include DFID, USAID, and USDA. In total 38 different faculty members have been brought together on over \$50 million in proposals for complimentary or integrated projects. The first of these is set to launch in mid-May and provides funding and collaboration space for 111 MSU faculty members in addition to leveraging DSI resources. These teams are leveraging the GCFSI DSI infrastructure, connectivity to other faculty and connectivity to other institutions.

MT1 focused on engaging many faculty and students who had not worked together before. Various colleges including Social Science, Engineering, Agriculture and Natural Resources, Communications, and nine distinct units including, among others, Geography, the Center for Global Change and Earth Observations, Sociology, Urban Planning, AgBioResearch, Agricultural Engineering, are represented in the MT1 team.

MT2 has drawn from four departments across the MSU campus, including: Food Science and Human Nutrition; Packaging; Telecommunications; and Agricultural, Food, and Resource Economics. MT2 also

⁵ Objective 2: Leverage Data and Analytics

⁶ 2 ThinkPad T430 development laptops

reached out to Agricultural and Biosystems Engineering. Beyond campus, MT2 defined topics of work for individuals from Food Science and Agricultural Economics at SUA and for technology specialists at TERI. MT2 involved the Management Studies team at WUR for stakeholder engagement and student engagement activities.

The **MT3 and TSC** teams participated in the following events during this quarter:

1. Annual meeting of the Academy of Human Resource Development informal conversations with colleagues working in similar areas of international development and workforce development.
2. Association of International Education Administrators, annual meeting in New Orleans, Feb 16-20. This was an especially important meeting because the team engaged with USAID/HESN about future work, as well as a couple groups doing similar work.
3. Presentation to graduate students at Penn State - Harrisburg, March 29. Talk focused on the tensions in international development work associated with cross-cultural issues. Focused extensively on the work with GCFSI to exemplify some of these concerns.
4. Forum on Education Abroad, in Chicago April 3-4. Briefly described the project at the presentation/roundtable session facilitated by John Dirkx.
5. Disseminated information about the project with graduate students in Higher Adult Learning and Education and k-12 Educational Administration, with undergrads in the college, and with faculty in the College of Education. These contacts have focused specifically on developing awareness among grad students and faculty of the opportunities in the project for students.
6. Discussion with faculty involved in Modernizing African Food Systems to explore common educational and workforce development themes and activities with a commitment to collaborate.
7. Discussion with faculty involved in the Legume Innovation Lab/Pulse CRSP to explore common educational and workforce development themes and activities with a commitment to collaborate.
8. Met with the African Studies Center on campus.

DSI identified key personnel at MSU by presenting DSI goals and approaches to the broader community in multiple events, including presentations to GCFSI partners in November 2012 (Washington, D.C.) and in March 2013 at MSU (pre-Launch Event).

ICT4D worked with other teams to gain insights into how their work can best connect with the broad themes of the GCFSI. Discussions with MTI researchers, including climate change researcher, Jennifer Olson, encouraged the team to investigate ICT tools that can help farmers adapt to climate change, including weather information systems, "precision agriculture" tools that help conserve water and fertilizer, and tools to connect farmers to information on best farming practices. Interactions with agricultural economists, David Tschirley and Cynthia Donovan, motivated the ICT4D team to explore mobile phone applications that supply market information to farmers and enhance the function of the food system value chain. Finally through interactions with education researchers and specialists, including John Dirkx, Tom Smith, and Karen Vignare, the team decided to also explore the role of ICT in the provision of more flexible approaches to learning among people working in various aspects of the food system. Additional contacts were initiated at the MSU Launch Event.

3.2. Partner Engagement

MTI coordinated with Dr. Joseph Maitima from EcoDym Africa, environmental consultants located in Kenya, to become a partner in the white paper development and review process. MTI also leveraged

the team meetings held the days before the Launch Event to solidify operating structures with SUA and TERI in particular.

In the same manner, **MT2** used the Launch Event to define specific topics of work for SUA and for colleagues at TERI and WUR. These topics were defined based on extensive interactions during the Launch Event.

MT3 and **TSC** team worked with WUR to identify key stakeholders relevant to the skills development and education areas.

Since **DSI** was in the incipient stages of developing the basic structure of the DSI unit and the hardware and software need to operate, they did not have significant partner interaction during this reporting period.

The **ICT4D** team initiated contact with Camilius Sanga, a senior lecturer in the Informatics Department at SUA. He has two ongoing ICT4D projects and the team is arranging to visit him in Tanzania this summer. They also discussed ICT applications for stakeholder engagement with Domenico Dentoni and Dimitrios Mitsopoulos of WUR. Finally, they talked about ICT4D activities in India with our partners from TERI, Suruchi Bhadwal and Chuba Jamir.

3.3. Student Engagement

MT1 has engaged two post-doctoral researchers, four doctoral students, and one undergraduate. All have active roles in the production of the white paper and variously through literature reviews, data collection, and analysis.

MT2 is supporting two graduate students in AFRE, one in Telecommunications, and one in Packaging. Currently no students are supported in FSHN. In addition, two members of MT2 participated in a panel organized by the MSU Honors College on "Food and the City." Several students from across campus attended the panel, which provided an opportunity to inform more people about the goals and activities of GCFSI.

MT3 and **TSC** embedded students in their operations from early on. These students have a very active and empowering role, to the point where they are setting up their own meetings to develop solutions related to the organization of literature reviews and bibliographical citation management. MT leads expect them to be active members of the 'solutions teams' and contribute to the white paper. Moving forward, MT3 and TSC will work with the study abroad scholarship recipients as part of our selection criteria to make a small but important contribution to their knowledge base and expect that the summer interns will make an even larger contribution to the team's work.

DSI's lead Prof. Nejadhashemi coordinated the scientific student presentations at the Washington, D.C. HESN Launch Event in November 2012. Three students from the Biosystems and Agricultural Engineering Department presented three posters at the MSU Launch Event in March 2013. One MSU student, Sean Woznicki, was selected for the USAID HESN Student Spotlight, and he presented his research to the USAID delegates.

Three students have worked directly with **ICT4D**. Muhammad Ali, a master's student in Telecommunication who comes from Pakistan, has worked on investigating Internet-based collaboration tools that might be applied by the GCFSI research team, and helped develop the preliminary web site. He also has been investigating mobile phone applications for agriculture. Joseph Lajavic and Ryan Miceli have been testing and comparing alternative web-based presentation tools for stakeholder engagement, explicitly focusing on tools that work in constrained bandwidth environments. They also helped

implement the preliminary GCFSI web site and are assisting in the creation of an inventory of mobile applications aimed at agricultural contexts.

3.4. Lessons Learned/ Good Practices

Due to the incipient nature of this quarter, we are still developing lessons learned.

Part 4: USAID Engagement

4.1. Interactions

As part of the operationalization of the center, GCFSI leadership has met with USAID staff in various gatherings. GCFSI staff met with representatives from BFS and OST to discuss an effective monitoring and evaluation plan for GCFSI.

During the March 20-21 Launch Event, a subset of **MTI** participants met USAID staff. USAID officer Ken Scheffler was particularly engaged with the MTI working group and was able to clarify many issues and present the USAID position on a variety of topics. MTI discussed the nature of the deliverables for their team, the process of proposal production, and general expectations. There were no direct follow-up items, but the GCFSI leads discussed these issues later in Washington D.C.

MT2 leveraged the broad interaction of the GCFSI team with a wide range of individuals in Washington DC during the HESN launch. Following-on from these meetings, MT2 has had sustained interactions with Helen Santiago Fink, Urban Climate Change Adviser in the E3/E&I/Engineering and Urban Division of USAID. Ms. Fink has, in turn, promoted interaction between the MT2 team and analysts from World Resources Institute that are working on long-term sustainability issues, including some attention to issues of urban agriculture. Discussions continue on how to collaborate across these two institutions.

MT3 and **TSC** had general interactions with USAID during the Washington, DC visit, but more specific engagement during the Launch Event with USAID's Clara Cohen. Dr. Cohen provided links to some key studies; other USAID funded projects, and identified some other USAID connections. Dr. Cohen has been invited to be part of the MT3 team along with Eric Johnson, and the team is currently exploring how best to facilitate their engagement.

The **DSI** team visited USAID staff at Washington DC for the three day HESN Launch Event. They discussed data availability within USAID and identified points of contact for further communications. DSI followed up with Mr. Ken Scheffler and Dr. Clara Cohen to help with access to USAID data.

The **ICT4D** team had extended conversations with at least three USAID staff working in the ICT area. Zachary Bacquet has helped acquaint the team with USAID efforts in the area of ICT tools for knowledge management. Dustin Andres has shared USAID efforts related to social media tools in development. Finally, Jonathan Dolan discussed USAID's IDEAS/ICT programs with the ICT4D team.

4.2. Lessons Learned/ Good Practices

Due to the incipient nature of this quarter, we are still developing lessons learned.

Part 5: Collaboration with Other Development Labs

5.1. Interactions

MTI, **MT2**, **MT3** and **TSC** had no collaborations with other development labs during the first quarter outside of the HESN Launch Event activities. MT2, however plans to interact with College of William &

Mary to take advantage of their data on investments by USAID and other donors in agricultural supply chains. MT2 also agreed, during this quarter, that a representative would sit on a panel at the Conflict & Development Workshop to be held in Washington, DC, on April 25, 2013. This workshop was organized by the Center on Conflict and Development at Texas A&M University.

DSI leveraged the meetings with other HESN labs during the November 2012 Launch Event to hold collaboration discussions with The College of William & Mary and MIT. The GCFSI has engaged partners on data sharing, cooperation regarding data standards and on programmatic co-location of regional facilities. These discussions are in the early stages but the potential for partnership is high and quarter two should document significant progress.

Finally, during this quarter the **ICT4D** team made preliminary contact with Jenna Burrell and Tapin Parikh, ICT4D researchers at UC Berkeley's School of Information who are affiliated with the development lab there.

5.2. Lessons Learned/ Good Practices

Due to the incipient nature of this quarter, we are still developing lessons learned.

Part 6: Monitoring & Evaluation

6.1. Preparation Activities

GCFSI hired in early March our current Program Manager, Maria Murphy, who comes with a background in M&E. She worked during this quarter with Prof. McKeown to transition M&E activities to her, understand the M&E plans developed before her hiring and start creating an M&E system.

6.2. Ongoing Monitoring & Evaluation

The GCFSI team has been in close contact with USAID to define the final M&E plan for year one. We presented our plan and are hoping to align it closely to USAID's HESN M&E plan to be discussed during the upcoming Lab Director's meeting in April 2013. Until we have the final M&E plan approved, we are tracking against our proposed indicators. Because of the fluidity of the M&E plan during this reporting period, we have tracked against number of students on board, number of presentations and others. We will be ready to present detailed results once we have the final M&E plan approved by USAID.

Part 7: Looking Ahead

7.1. Calendar of Events

| MAY 2013 | | | | |
|--------------------------------------|--|---|---|----------------------------------|
| DATES | EVENT | DESCRIPTION | USAID Leadership/ Involvement | Development Lab Collaboration |
| May 6, 2013 – May 17, 2013 | MT3 and TSC team (John Dirkx and Tom Smith) travel to Tanzania | Travel to Tanzania – John Dirkx and Tom Smith for initial assessment. | Discussing with Ken Scheffler to set-up meetings with USAID Mission in Tanzania | N/A |
| May 21, 2013 & May 22-24, 2013 | Global Food Security Symposium & Gender Global Learning and Evidence Exchange | Explore attending these events | Referred by USAID | N/A |
| JUNE 2013 | | | | |
| DATES | EVENT | DESCRIPTION | USAID Leadership/ Involvement | Development Lab Collaboration |
| June 5, 2013 – June 21, 2013 | ICT4D team (Charles Steinfield and Susan Wyche) travel to Kenya and Tanzania | Charles Steinfield and Susan Wyche will visit Kenya and Tanzania to 1) meet with developers and users of a promising mobile phone market information system, 2) meet with mobile and Internet infrastructure providers, 3) meet with an ICTD researcher from Sokoine, our partner institution. | The GCFSI project manager will reach out to USAID missions in Kenya and Tanzania to alert them to our visit and seek their advice on relevant contacts that would benefit the project. | N/A |
| June 16-20, 2013 | IFAMA | Student competitions & focus on workforce | N/A | N/A |
| AUGUST 2013 | | | | |
| DATES | EVENT | DESCRIPTION | USAID Leadership/ Involvement | Development Lab Collaboration |
| 1-12 August | White paper review & | Travel to Malawi, Tanzania, Uganda Tentatively 5 people, mix of faculty and | Yes, local program offices | Tanzania |

| | | | | |
|-------------------------|---|---|--|--|
| | Engagement | students | | |
| SEPTEMBER 2013 | | | | |
| DATES | EVENT | DESCRIPTION | USAID Leadership/ Involvement | Development Lab Collaboration |
| 9/29/2013- 10/2/2013 | First International Conference on Global Food Security | Two abstracts were submitted regarding the impact of climate change on food security and irrigation demand. | N/A | N/A |

7.2. Description of Future Activities

The most significant activities during the second quarter will be:

1. The production of the white papers via continued research and literature review, field work in Kenya, Tanzania and other East Africa countries and ongoing engagement with HESN colleagues and others.
2. Conduct visits to MIT and William and Mary to discuss synergies and collaborations, particularly in DSI.
3. Full engagement of students via the Student Innovation Grants, the Summer Internships and the Study Abroad Scholarships.
4. Participation in various events such as the IFAMA conference in June, where WUR and MSU students will present case studies for the student competitions.
5. Develop the design and schema of the DSI, and start developing the online access.
6. Develop the RFA for the Technology Innovation and Evaluation Grants. We hope to have funds committed and disbursed by late September.

7.2.1. Milestones

The GCFSI teams will focus on achieving the following milestones for the May-July 2013 quarter:

1. Production of the final white paper problem definition by May 30, 2013.
2. Delivery of the white paper outline with bulleted commentary to USAID in June 2013.
3. RFA developed for Technology Innovation and Evaluation Grants by July 2013.
4. Production of a complete draft of the white paper to USAID for review by July 31, 2013.
5. Field testing of the white paper in East Africa, between May and August 2013.
6. Student Innovation Grants awarded by September 2013.
7. Technology Innovation and Evaluation Grants awarded by September 2013.

7.2.2. Events

The GCFSI team is looking forward to coordinating various symposia that will be used to test and vet the white paper problem definitions with the larger scientific community. We hope to have a one or two day symposia on or about August 2013. In addition, we plan to have various ongoing visits to SUA and East Africa by the work streams to conduct analysis and testing of the MT white papers.

7.2.3. Publications

We plan to have in place the following publications:

1. Scientific publications based on the white paper problem definitions.
2. At least 2 project newsletters.

7.2.4. Communications

We will have a core communications team in place by May 2013, who will focus on vamping up the GCFSI exposure in the various social media outlets, will develop stories and report on them in the GCFSI website and various printed media.

Part 8: Appendix I. GCFSI Year One Work Plan Tracker – With Traffic Light as of March 30, 2013

| Intermediate Result | Activity | Lead | Specif. Indiv | Stat | Nov-12 | Dec-12 | Jan-13 | Feb-13 | Mar-13 | Apr-13 | May-13 | Jun-13 | Jul-13 | Aug-13 | Sep-13 | End Goal Y1 | |
|---|---|-------------|-------------------------------|------|--------|--------|--------|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|---|--------------|
| O1. Identify, Define and Assess Responses to Critical Food Systems Challenges | | | | | | | | | | | | | | | | | |
| IR 1.1 Identify key trends and frame issues within the critical food system challenges | 1.1.1.1. Core Multi-disciplinary Team Assembly | AS, RM | AS, RM | | | | | | | | | | | | | Core team in place | |
| | 1.1.1.2 Broaden team / engage stakeholders | AS, RM | AS, RM | | | | | | | | | | | | | Fully operational network connected to HESN, others | |
| | 1.1.1.3 GCFSI Launch Event | MAR | SL/MAR | | | | | | C | | | | | | | GCFSI Launched and operational | |
| | 1.1.4 Problem Definition | MT1 | Qi/Messina | | | | | | | | | C | | | | | White papers |
| | | MT2 | Tschirley | | | | | | | | | C | | | | | |
| | | MT3 | Smith/Dirkx | | | | | | | | | C | | | | | |
| | 1.1.5 Data Assembly / Lit. Review | MT1 | Qi/Messina | | | | | | | | | | | | | | White papers |
| | | MT2 | Tschirley | | | | | | | | | | | | | | |
| | | MT3 | Smith/Dirkx | | | | | | | | | | | | | | |
| | 1.1.6 Trend Analysis/ Issue Framing | MT1 | Qi/Messina | | | | | | | | | | | | | | White papers |
| | | MT2 | Tschirley | | | | | | | | | | | | | | |
| MT3 | | Smith/Dirkx | | | | | | | | | | | | | | | |
| 1.1.7 Virtual Interactive sessions w/ Global Stakeholders | MT1 | Qi/Messina | | | | | | | | | | | | | | White papers | |
| | MT2 | Tschirley | | | | | | | | | | | | | | | |
| | MT3 | Smith/Dirkx | | | | | | | | | | | | | | | |
| 1.1.8 Regional stakeholder assessment and Problem Validation | MT1 | Qi/Messina | | | | | | | | | | | | | C | Validated white papers with wider community / 100 participants in conferences | |
| | MT2 | Tschirley | | | | | | | | | | | | | C | | |
| | MT3 | Smith/Dirkx | | | | | | | | | | | | | C | | |
| 1.1.9 Role of ICT in Ag and Food Systems | Charles Steinfield and Susan Wyche | | | | | | | | | | | | | | | ICT applications developed and in place supporting country food systems | |
| IR 1.2 Engage Relevant Stakeholders and Academic Partners in Assessing & Prioritizing Food Systems Challenges | 1.2.1. HESN Consortium Partners Site Visits | Core Team | AS, RM | | | | | | | | | | | | | Visits to Berkeley, MIT, W&M | |
| | 1.2.2 Establish Communications Strategy for GCFSI | Maria | Stephanie, Charles Steinfield | | | | | | | | C | | | | | Communication strategy in place. 3 newsletters produced, 1 success story | |
| | 1.2.3 Global Food Security Conference and Y2 Planning Meeting | Core Team | AS, RM | | | | | | | | | K | | | | Conference conducted and Y2 workplan in place. Papers by May 31 | |
| IR 1.3 Select the Most Promising Food System Issues Addressed Through High Impact Tech & App | 1.3.1 Identify Areas of Focus | Core Team | AS, RM | | | | | | | | | | | | | RFA Areas of focus identified | |
| IR 1.4 Create Multidisciplinary Teams Cross-Reg. Engagement | 1.4.1 Partner and Prospective Regional Innovation Hub Visits | Core Team | AS, RM | | | | | | | East Africa | MT teams visits to partners completed and potential regional innovation hub defined | |

| Intermediate Result | Activity | Team Lead | Indiv | Stat | Start | End | Nov-12 | Dec-12 | Jan-13 | Feb-13 | Mar-13 | Apr-13 | May-13 | Jun-13 | Jul-13 | Aug-13 | Sep-13 | End Goal Y1 |
|--|--|--------------------------|----------------|------|-------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
| O2. Leverage Data and Analytics to Promote and Support Evidence-Based Food Systems Policy and Investments | | | | | | | | | | | | | | | | | | |
| IR 2.1 Disseminate Reliable Information to Academics, USAID, and Policymakers | 2.1.1 Establish DSI Unit | Pouyan Nejadhashemi (PN) | DSI Team | | 11/8 | 2/28 | | | | | | | | | | | | DSI Unit established and fully operational |
| | 2.1.2 Collect, store and synt. Data from WB, FAO, etc. | PN | DSI Team | | 3/1 | 9/30 | | | | | | | | | | | | DSI populated with datasets |
| IR 2.2 Conduct Advanced Analytics on Existing and Future Problems and Develop Patterns | 2.2.1 Develop the design and schema of an informatics management structure | PN | Abdol Esfahani | | 4/1 | 5/31 | | | | | | | | | | | | Operational Informatics Management Structure with initial data mining, search function and client interface operational |
| IR 2.3 Provide a decision Support Analytics and Data Resource Support to GCFSI, HESN and USAID | 2.3.1 Develop online tool to access information processed by DSI analytics | CM | | | 6/1 | 30 sept, 2013 | | | | | | | | | | | | Complete action plan in place to enable the online tool to be operational for a launch in early Y2 |

| Intermediate Result | Activity | Team Lead | Specif. Indiv | Stat | Start | End | Nov-12 | Dec-12 | Jan-13 | Feb-13 | Mar-13 | Apr-13 | May-13 | Jun-13 | Jul-13 | Aug-13 | Sep-13 | End Goal Y1 |
|--|---|-----------|---------------|------|-------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
| O3. Accelerate the Sourcing & Development of Scalable High-Impact Innovations in Food Systems | | | | | | | | | | | | | | | | | | |
| IR 3.1 Expand the sourcing, development & prototyping of innovations | 3.1.1 Pre-RFA Announcement | AS, RM | MAR | | 5/1 | 5/30 | | | | | | | C | | | | | RFA announced using network and community |
| | 3.1.2 Development of RFA for Technology Innovation Grants | AS, RM | MAR | | 5/1 | 5/30 | | | | | | | | | | | | RFA developed |
| IR 3.2 Increase Assmt. Analisis & Eval. Of technologies and approaches in context | 3.2.1. Development of RFA for Technology Evaluation Grants | AS, RM | MAR | | 5/1 | 5/30 | | | | | | | | | | | | RFA developed |
| | 3.2.2 Creation of Development Innovation Expertise Database | AS, RM | MAR | | 6/1 | 9/30 | | | | | | | | | | | | Expertise database complete |
| IR 3.3 Support engagement of private and public sectors and local community for scaling up technology and approaches | 3.3.1 Develop RFA for Technology Scalability Grants | AS, RM | MAR | | 7/1 | 8/31 | | | | | | | | | | | | RFA Draft in Discussion |

| Intermediate Result | Activity | Team Lead | Indiv | Stat | Start | End | Nov-12 | Dec-12 | Jan-13 | Feb-13 | Mar-13 | Apr-13 | May-13 | Jun-13 | Jul-13 | Aug-13 | Sep-13 | End Goal Y1 |
|---|---|-----------------|---------------|------|-------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
| O4. Create a Multi-Disciplinary and Multi-Generational Network of Food System Problem Solvers | | | | | | | | | | | | | | | | | | |
| IR 4.1 Engage students globally through multi-disciplinary learning around critical food systems challenges | 4.1.1 Develop internships | Smith / Dirkx | Razzaque | | 4/1 | 4/30 | | | | | | | | | | | | 5 development internships in place |
| | 4.1.2 Student innovation competitions | Smith / Dirkx | Razzaque | | 4/1 | 5/30 | | | | | | | | | | | | 20 Student Innovation Grants disbursed |
| | 4.1.3 Conference and Symposia Presentations | Smith / Dirkx | Razzaque | | 5/1 | 9/30 | | | | | | | | | | | | 5 proposals submitted to the Global Conference on Climate Change |
| | 4.1.4 Develop research seminar series | Smith / Dirkx | Razzaque | | 5/1 | 9/30 | | | | | | | | | | | | Seminars completed |
| | 4.1.5 Engage multinational companies in student placement | Smith / Dirkx | Rolf Dietrich | | 5/1 | 9/30 | | | | | | | | | | | | Multinationals engaged and with MOU signed to support student placement |
| | 4.1.6 Placement and career guidance | Smith / Dirkx | Razzaque | | 6/1 | 8/30 | | | | | | | | | | | | MSU present at career fairs, events (IFAMA) |
| | 4.1.7 Develop international development specialization at MSU | Smith / Dirkx | Razzaque | | 7/1 | 9/30 | | | | | | | | | | | | Roadmap in place to launch International Development Specialization at MSU in Y2 |
| IR 4.2 Expand engagement with new solvers to collaborate and overcome food systems challenges | 4.2.1 Collaboration with ongoing MSU International Programs | All Workstreams | MAR | | 3/1 | 9/30 | | | | | | | | | | | | At least 20 graduate and undergraduate students engaged in development innovation |
| | 4.2.2 Regional Innovation Hub Assessment Visits | AS, RM | AS, RM | | 5/1 | 8/31 | | | | | | | | | | | | Africa site assessments completed |
| | 4.2.3 Knowledge Sharing | AS, RM | Steinfeld | | 8/1 | 9/30 | | | | | | | | | | | | Concept developed for student knowledge sharing platform |