

Michigan State University Global Center for Food Systems Innovation



Presentation to the Collaborative Research and Education Initiative Workshop

By Eric Crawford, Director, GCFSI

March 25, 2019

Background

- GCFSI was established in 2012/2013 as one of eight university innovation labs funded through USAID's Higher Education Solutions Network (HESN) in the new Global Development Lab.
- USAID's award for GCFSI provided \$15 million over five years (FY 2013 through FY 2017).
- Housed in Int'l Studies and Programs, GCFSI mobilized faculty and students in 5 colleges (Ag and Nat Resources, Comm Arts & Sciences, Education, Engineering, and Social Science)
- GCFSI's agreement with USAID has been extended to 2022, and new funding received (details below)

GCFSI Goal

To create, test and enable the scaling of innovations in the food system, using an approach that is:

- Multidisciplinary
- Focused on the entire food system
- Forward-looking, considering major trends that will impact future food system performance:
 - Population growth, climate change, and pressure on land
 - Rapid urbanization and income growth
 - Workforce development implications of changing food systems

GCFSI Objectives

Objective 1 – Mobilize data and analytical tools to support development decision-making

Objective 2 – Source, test, and scale up food systems innovations through \$3+ million in grants, and GCFSI faculty-led projects

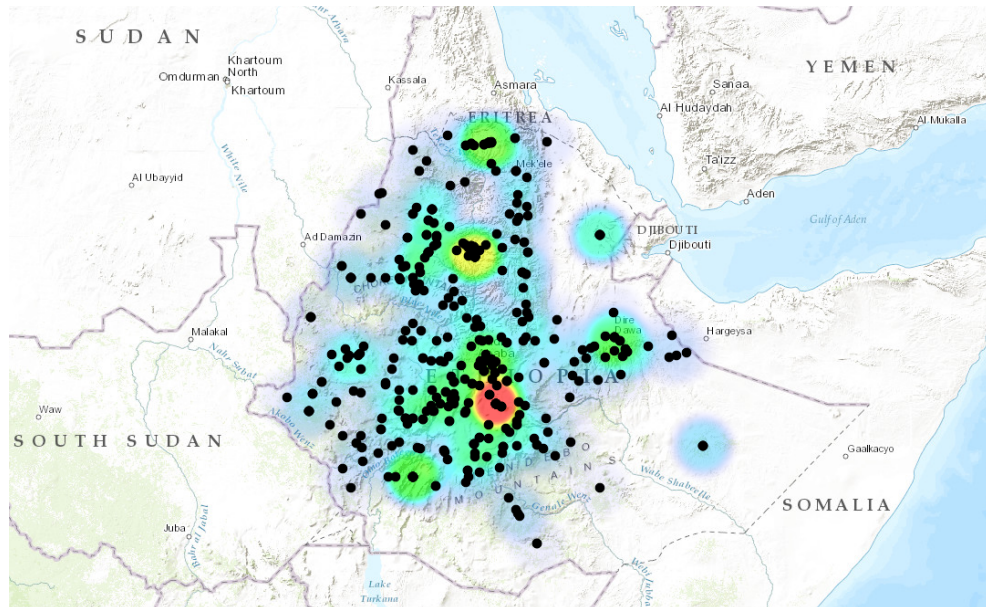
Objective 3 – Student engagement and partnerships to build a new generation of development innovators and practitioners



Turning data into decisions (Objective 1)

Decision Support and Informatics (DSI)

- Can take hundreds of gigabytes of data and convert it into useful maps and visuals to aid in decision-making. Example: “heat map” of aid project spending in Ethiopia.
- One-site access to dozens of public databases (FAOSTAT, WorldBank, AidData)
- Drag-and-drop mapping function
- Numerous layers of data displayed in overlay



Innovation grants (Objective 2)

Major grants to faculty in U.S., Africa, Asia

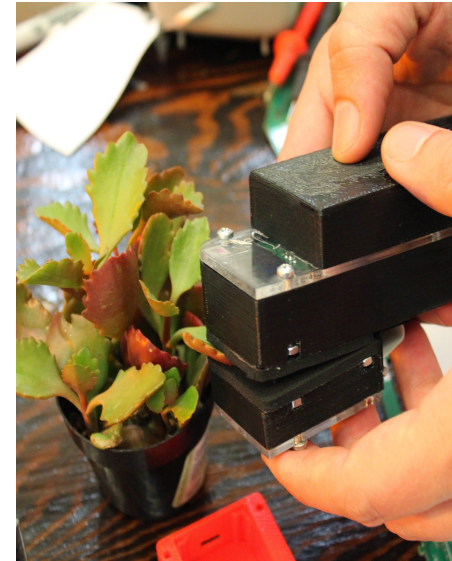
- Round 1: 6 grants of \$100,000 each
- Round 2: 10 grants totaling \$1.6 million

Student innovation grants

- Directly & through a food systems category of U.C. Berkeley's "Big Ideas" program

Innovation hub established in Malawi at the Lilongwe University of Ag and Nat Resources

- Innovation Scholars Program for LUANAR research/teaching faculty & administrators
- Innovation grants to 3 faculty members



GCFSI Faculty-led Research Projects

- Multi-purpose legume and maize systems, Malawi
- Impacts of climate change on agriculture, Malawi
- [Gender dimensions](#) and policy constraints for legume production, processing and marketing, Malawi
- Climate-resilient maize (CRM) in Africa
 - Integrated land use, climate, soils, water and crop models
 - Economics of improved CRM technology
 - ICT innovations for speeding adoption of CRM technology

GCFSI Capacity-development Activities (Malawi)

- Legume & maize seed systems development
- Identifying work force development needs related to maize/legume seed systems and food safety (oilseeds industry)
- [Innovation Scholars Program](#) (ISP)— LUANAR faculty and administrators
- [Frugal Innovation Practicum](#) — MSU and LUANAR students and faculty
- [Research translation](#) for students, faculty, journalists

Recent and Current GCFSI Activities

- Capacity Development for Ag Innovation Systems (CDAIS)
 - Contributions to \$700K buy-in to AFRE's USAID-funded Food Security Policy Innovation Lab
- Grain Research and Innovation (GRAIN) project
 - Five-year \$19.5 million buy-in from USAID/Afghanistan
 - Goal: build the capacity of Afghanistan's wheat research system
- MUST ISP project in Malawi
 - \$1 million grant from USAID to replicate the LUANAR ISP program at the new Malawi University of Science and Technology, Blantyre
 - Currently implemented by GCFSI with graduates from LUANAR's ISP
- Contributions to design and management of other research and capacity development programs

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Main GCFSI site: www.gcfsi.msu.edu

Decision Support Informatics: <http://dsiweb.cse.msu.edu/>

FoodFix site: <https://msufoodfix.wordpress.com/>

FoodFix Podcast site: <http://foodfixpodcast.podomatic.com/>



Supplementary Slides



Empowering women to lead in their communities

- Developed a prototype “Gender Value Chain Analysis Learning Tool.”
 - Research plan and survey instruments for conducting gender-sensitive analysis of food system value chains.
 - Tested in Malawi in 2014.
- Using gender-related knowledge as a catalyst for innovations in the food system.
- Gender analysis tool will be used in training current and future GCFSI innovation grant awardees focused on food value chains.



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Innovation Scholars Program at LUANAR

- An experiential approach to learning the tools of design thinking for innovation in research, teaching, and administration
- Two target groups—researchers and academic leaders—participated in joint workshops but with different work assignments
- Led by MSU faculty and LUANAR's innovation hub coordinator
- Successful approach now being replicated in other projects

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Frugal Innovation Practicum

- Experiential, multidisciplinary program—held three times—focused on action research to improve urban food markets in Lilongwe, Malawi’s capital.
- Included students and faculty from MSU and the Lilongwe University of Agriculture & Natural Resources (LUANAR).
- Students from diverse fields: nursing, social science, political theory, agribusiness management.
- Example of education abroad program with a solid hands-on research experience.

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Video Documentary:

<http://bit.ly/1NG0erR>

Full Story: <http://bit.ly/1OIFsVx>

Student Blogs:

<http://bit.ly/1IXeggP>

Audio interviews with US students before they visited Malawi:

<http://bit.ly/1O5CUxT>

Audio interviews with the same students upon their return:

<http://bit.ly/1HIdcmr>

Research Translation

Translational Scholar Corps (TSC)

- Equips students and post-degree researchers with the skills to communicate their findings.
- Workshops and field visits to give journalists background in agriculture and food system science and policy issues, to increase the accuracy and clarity of their writing.
- [Food Fix](#) portal with podcasts, videos, blogs and written stories that feature innovators working to feed the world.

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