Advancing human and institutional capacity at LUANAR

THE PROBLEM

POPULATION

The world population is projected to reach 8.5 billion by 2030 and 9.7 billion in 2050. With a current population of 7.3 billion, that is a 1.2 billion increase in 13 years.

FOOD DEMAND

Driven by population, income growth and rapid urbanization, the global food demand in 2050 is expected to increase by at least 60%.

ARABLE LAND

Worldwide arable land is projected to shrink to 608 million hectares by 2030, and then shrink. further to 586 million.

THE OPPORTUNITY

PEOPLE

In Africa, the number of youth is growing rapidly. In 2015, 226 million youth aged 15-24 years lived in Africa, accounting for 19% of the global youth population. By 2030, it is projected that the number of youth in Africa will have increased by 42%. Africa's youth population is expected to continue to grow throughout the remainder of the twenty-first century, more than doubling from current levels by 2055.

VISION

Increase food security in the complex ecosystem of Malawi by training individuals, without creating dependency.

MISSION

Invest in 10 agricultural innovation projects and 20 Innovation Scholar Program fellows while working to simultaneously develop individual faculty training and institutional leaders in a problem-solving approach.

PARTNERS

- Global Center for Food Systems Innovation (GCSFI)
- Hub for Innovation in Learning and Technology
- Wageningen University and Research
- Lilongwe University of Agriculture and Natural Resources (LUANAR)
- Local Malawian Stakeholders

Using design thinking to reduce food insecurity in Malawi

DEC 2015

- INITIAL PLANNING & CO-DESIGN
- DESIGN THINKING WORKSHOP 1
- COMMUNITY ENGAGEMENT WORKSHOP 2
- TEACHING & LEARNING WORKSHOP 3
- LEARNING EXCURSION TO KENYA 4
- LEADERSHIP DEVELOPMENT WORKSHOP 5
- COMMUNICATING FOR IMPACT WORKSHOP 6
- CELEBRATE INNOVATION SYMPOSIUM

OCT 2017

SYSTEMS THINKING

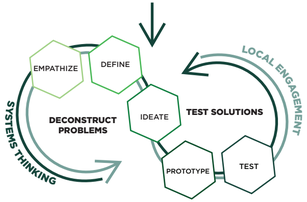
Deconstructing systems trends and structures to better understand problems

LOCAL ENGAGEMENT

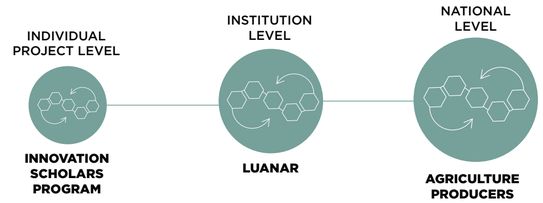
Engaging the local community and regional partners to meet goals and improve solutions

DESIGN THINKING

A human centered approach to systemic problems



LEVELS OF ASSESSMENT AND IMPACT



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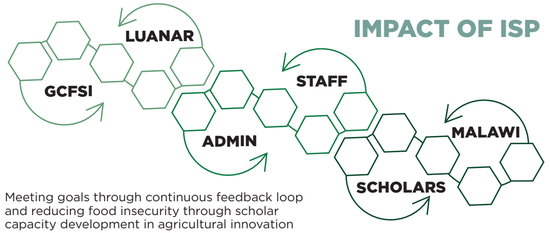
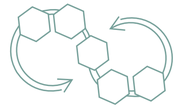


Meeting goals through continuous feedback loop and reducing food insecurity through scholar capacity development in agricultural innovation

Impacting faculty, students and farmers

DR. SERA GONDWE

Agribusiness Management, LUANAR



DR. ABEL SEFASI

Molecular Biology and Biotechnology, LUANAR

PROBLEM

Many Malawian farmers lack access to information on the factors driving food prices and profit margins. Those who do have access, often find it difficult to apply when faced with other economic constraints.

At the same time, thousands of college graduates with training in economic and agribusiness principles lack real-world experience and struggle to find employment.

There are few farmers who cultivate vegetables that are indigenous to Malawi, yet they are rich in nutrients, tolerant to many pests and diseases and require less farm inputs than non-native crops.

Still, indigenous solutions are often viewed by youth as obsolete.

SOLUTION

Dr. Sera Gondwe organized an internship program for LUANAR undergraduates and recent graduates.

Gondwe paired them with a 300-member agribuisiness cooperative, which gives farmers more power in the marketplace.

The students helped prepare the harvest for market, and taught workshops at the coopeative's business centers.

Dr. Abel Sefasi set out to test the potential of Malawi's indigenous vegetables to increase food security without degrading the land. Not surprisngly, he figured he'd work in a lab.

But, after consulting his public and private sector design team, Sefasi partnered with community farmers.

"The project was designed that we develop everything together with the local communities," said Sefasi. "It's an experiment, we are in it together."

HOW IT WORKED

At each center's initial workshop, LUANAR students led a design-based needs assessment, used to tailor content for the following workshops.

Topics included marketing, cooperative managment, innovative agronomic practices and more.

While developing entrepreneurial skills, students applied what they learned in college and witnessed the critical role they play in improving the lives of undereducated farmers.

Farmers collected half the seeds for each vegetable from the wild, and LUANAR provided the rest.

Both types of seeds for each vegetable were planted in test beds on land donated by the village headman.

As the crops grew, a portion was reserved for Sefasi's study, while women in the community fed the remaining leafy vegetables to their families.

IMPACT

"Mostly the knowledge I had from school, I was fiailing to connect how (it) can impact those people at the local level, the primary producers," said Ezekiel Kashamba, intern and graduate of LUANAR. "But with this experience, I've seen a lot of courses that can be applied to improve the efficiency of the agriculture sector in Malawi."

The sustained, independent and coached learning experiences provided training and practice for students, while offering a knowledge-sharing service to farmers.

LUANAR faculty also had the opportunity to witness how they can bridge the gap between classroom and community.

By combining farmers' indigenous knowledge with scientific techniques, Sefasi validated the "old ways" and introduced a small solution to the big challenge of food security.

LUANAR researchers and students learned about applying their research to solve real problems in local communities. Farmers and youth learned agronomic practices that diversfy their diets, and became more familiar with government extension services.

"We will repeat this," said lead farmer Masaka Kaselera. "We would like to grow in a bigger area. We like this food because it's more nutritious. (The native crops) don't demand a lot of inputs."

Innovation is a process, not a product.

Innovation happens when people see opportunity where they once saw a problem.

Launched at Michigan State University in 2012, the Global Center for Food Systems Innovation (GCFSI) is one of eight development labs established through the Higher Education Solutions Network of the United States Agency for International Development.

Through research and capacity-building activities, we create, test and enable the scaling of food security solutions.

The Innovation Scholars Program is hosted in collaboration with Malawi's Lilongwe University of Agriculture and Natural Resources.

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