FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

Program for Human and Institutional Capacity Development

The Feed the Future Food Security Innovation Center leads USAID's implementation of the Feed the Future Research Strategy through seven interlinked research, policy and capacity development programs aimed at sustainably transforming agricultural production systems. Visit www.feedthefuture.gov/research to learn more.

The ***Program on Human and Institutional Capacity Development*** invests in human and institutional capital—essential building blocks for improved growth and innovation in the agriculture sector.

The agriculture sector is undergoing a rapid, worldwide transformation that will have dramatic implications for capacity development. New challenges—such as droughts, climate change and increasing resource scarcity—are on the horizon, but also emerging opportunities—increasing market access, breakthrough technologies and globalization—that make it possible for smallholders to capture value in new ways.

Developing capacity across the food and agriculture system is critical for countries to take advantage of new opportunities and meet new challenges; an assertive approach to capacity development is urgently needed.

DID YOU KNOW?

- **Many scientists in agricultural research institutes are approaching retirement age, but there is no plan for their replacement.**
- **One in four agricultural researchers in Sub-Saharan Africa is female, yet women in this region hold only 14 percent of the management positions at agricultural research and higher education institutions.**
- **Teaching approaches and curriculum in developing countries are often not conducive to practical application.**
- **Public agricultural research institutes offer poor conditions of service and incentives.**
- **Fewer than 20 percent of Sub-Saharan African agricultural research institutes have competitive funding mechanisms, and therefore lack flexibility to fund new and emerging research areas.**

CAPACITY DEVELOPMENT IN ACTION

Recognizing that a well-educated and skilled work force underpins a nation's development, the Innovation in Agricultural Training and Education Program (InnovATE) responds to requests from USAID Missions to strengthen the full range of institutions responsible for educating the next generation of agricultural professionals – universities, technical schools, vocational schools, secondary schools, and primary schools – in such areas as curriculum reform, pedagogy, infrastructure, financing, and administration.

In Nicaragua, Honduras, and the Democratic Republic of the Congo, InnovATE assessments of technical and vocational education training systems will inform the design of future investments to improve youth employability in local agro-industries and reduce conflict. In Tajikistan, InnovATE is providing specialized and strategic thinking on how to make formal agricultural education and training more relevant to current and future needs. InnovATE is managed by a consortium of U.S. universities including Virginia Tech, Penn State, Tuskegee, and University of Florida.

FOCAL AREAS

By reaching a range of players across the agricultural innovation system—entrepreneurs, inventors, educators and investigators—this program targets high-impact "change agents," leading to global improvements in food and agriculture.

Programs focus on strengthening five strategic elements of the agricultural innovation system*:* 1) Education and Training; 2) Extension and Advisory Services; 3) Research Institutions; 4) Private Firms; and 5) Policy and Data Collection Systems.

Strengthening the capacity of institutions and organizations*,* in addition to individuals, is essential to realizing and sustaining the impacts of our development investments over time.

Promoting gender balance, access and equity*,* as well as a strong focus on community priorities, gender issues, and impact for the poor, are explicitly integrated across all programs.

Our efforts and investment priorities are guided by analysis to identify good practices and effective models for building individual and organizational capacity. Evidence-based program design is coupled with objective monitoring and evaluation to better assess and understand the impact of our investments and to ensure that the lessons from current investments inform future program design.

By increasing direct relationships with local organizations and developing local capacity*,* this program contributes to USAID's overarching goal of maximizing the impacts of foreign assistance across all sectors by building local partnerships and sustainability into agency programming.

CAPACITY DEVELOPMENT IN ACTION

Feed the Future supports African Women in Agricultural Research and Development (AWARD), a professional development program that strengthens the research and leadership skills of African women in agricultural science, empowering them to contribute more effectively to poverty alleviation and food security in Sub-Saharan Africa. More than 390 AWARD fellows have been supported from 11 African countries. Nearly 50 percent of AWARD's mentors are African men in senior positions, who play a key role in influencing organizational culture about the important role of African women scientists.

AWARD fellows are having a real impact in their home countries. Dr. Charity Mutegi, a former AWARD fellow from Kenya and a researcher at the Kenyan Agricultural Research Institute, is leading efforts for the development of a biocontrol product in Kenya that can be used to substantially reduce aflatoxin levels in maize. She was the 2013 recipient of the prestigious Norman Borlaug Award for Field Research and Application. In an evaluation of the first 180 fellows supported by the program, 57 percent were found to have refocused their research to be more gender-responsive, 50 percent increased their publication rate in peer-reviewed journals, and 52 percent were promoted. The fellows have contributed to the development of over 137 new technologies to improve agriculture in Africa.

PARTNERS

Universities – U.S. educational institutions host graduate students for training and research, provide mentorship and engage in capacity development activities with local universities, research centers and other institutions in developing countries. The Feed the Future Innovation Labs are also important partners in this area.

International Institutions – Members of the CGIAR bring vital agricultural research expertise, mentorship and infrastructure to the program and also facilitate graduate student research at CGIAR centers.

Private Sector –Private companies give fellows and students a chance to directly solve problems, focus their research on relevant issues, and develop real world expertise.

U.S. Government – USAID partners with other USG agencies to support fellowship programs, such as the U.S. Department of Agriculture's Norman E. Borlaug Science and Technology Fellowship Program.

CAPACITY DEVELOPMENT IN ACTION

Traditional public sector extension systems must change to effectively serve resource-poor men and women farmers in the modern world. New extension approaches feature vibrant partnerships among an array of public, private and civil society organizations, and utilize advanced information and communications technologies (ICT). Modernizing Extension and Advisory Services (MEAS), a USAID-funded consortium led by the University of Illinois, works with field partners to analyze how these new approaches are working and their impact on smallholder incomes and nutrition. Based on this applied field research, MEAS is developing good practice recommendations to help selected countries establish modern, financially sustainable public-private rural extension and advisory service systems.

In Uganda, MEAS is conducting a cluster-randomized impact evaluation of a promising new extension approach, the Grameen Foundation's Community Knowledge Worker program, which equips large numbers of lightly trained, respected community members with smartphones that can access a database of agricultural information. The study is assessing the impact that ICT-enabled knowledge workers are having on milk production by local dairy farmer cooperatives, as well as more general impacts on poverty levels, food security, overall health, agricultural production, household finance, attitudes about farming, and the diffusion and adoption rate of artificial insemination technology.

Current HICD Projects	Lead Institutions	Countries
Borlaug Higher Education for Agricultural Research and Development (BHEARD)	Michigan State University	Kenya, Uganda, Mozambique, South Sudan, Malawi, Mali, Ghana, Liberia, Cambodia, Bangladesh
Modernizing Extension and Advisory Services (MEAS)	University of Illinois, Urbana-Champaign	Global
Innovation for Agricultural Training and Education (InnovATE)	Virginia Polytechnic Institute and State University	Global
Borlaug Leadership Enhancement in Agriculture Program	University of California, Davis	Sub-Saharan Africa
U.S. Global Food Security Fellows Program	Purdue University	Global
African Women in Agricultural Research and Development (AWARD)	CGIAR	Ethiopia, Ghana, Kenya, Liberia, Malawi, Mozambique, Nigeria, Rwanda, Tanzania, Uganda and Zambia
Feed the Future CGIAR-U.S. University Linkages Program	CGIAR	Global

Feed the Future Food Security Innovation Center

The Program for Human and Institutional Capacity Development strengthens individuals —scientists, entrepreneurs, educators —and institutions, ensuring that food and agriculture systems in developing countries are capable of meeting the food security challenge and that women in particular are poised to take advantage of new opportunities and provide critical leadership in agricultural research, private sector growth, policy development, higher education and extension services.

The Feed the Future Food Security Innovation Center leads USAID's implementation of the Feed the Future Research Strategy through seven interlinked research and capacity programs aimed at sustainably transforming agricultural production systems. It is housed within the Bureau for Food Security and is a strategically aligned and integral component of USAID's science and technology programs.

- **Research on Climate Resilient Cereals** – This program helps smallholder farmers adapt to climate change and build resilience by developing new cereal varieties with enhanced yield and tolerance to drought, heat, salinity and low soil fertility, and delivering these varieties in diversified, sustainable farming systems.

- **Research on Legume Productivity** – This program increases the production and consumption of critical, protein-rich legumes by developing disease- and stress-tolerant, high-yielding varieties, improving market linkages and post-harvest processing, and integrating legumes into major farming systems to improve household nutrition and incomes, especially for women.

- **Advanced Approaches to Combat Pests and Diseases** – This program harnesses U.S. scientific expertise and emerging molecular tools to develop new animal vaccines and crops and animals resistant to pests and diseases that cause significant production losses in tropical systems.

- **Research on Nutritious and Safe Foods** – This program links research on the production and processing of safe, nutritious agricultural products to a learning agenda on household nutrition, including the utilization of and access to fruits, vegetables, meat, fish, dairy and legumes with the goals of preventing undernutrition (especially in women and children), improving child survival and securing family investments in agriculture.

- **Markets and Policy Research and Support** – This program works to achieve inclusive agricultural growth and improved nutrition through research on enabling policies, socioeconomics and technology targeting, and by building the capacity of partner governments to effect sustainable change in areas such as land tenure, financial instruments, input policies and regulatory regimes.

- **Sustainable Intensification** – This program works with smallholder farmers to incorporate sustainable, productivity-enhancing technologies and farming practices into major production systems where the poor and undernourished are concentrated and, through intensification and diversification of these systems, to enhance resilience, nutrition and agricultural growth.

Questions? Contact FTFinnovation@usaid.gov