A WORLD OF GOOD
Steve Hanson, interim dean for International Studies & Programs, says embracing connectedness helps to harness unrealized potential.

THE UNTOLD STORY OF INTERCULTURAL COMMUNICATION
MSU and Crossing Borders Education (CBE) have partnered on a project to enhance cross-cultural understating.

BUILDING CITIZENSHIP THROUGH SOCCER
MSU Fulbright Scholar studies the influence of soccer on the political, social and economic environment in global cities.

BREAKING DENGUE FEVER
Entomologist investigates sustainable solution to block the transmission of the virus that causes Dengue Fever.

SHARING POWER AND RESOURCES
Geographer uses experience and expertise to improve success of Community-based Natural Resource Management.

THE NEXT BIG FOOD SYSTEM
The C.S. Mott Professor of Sustainable Agriculture at MSU studies link between natural resources and local food systems.

GIVING BACK
MasterCard Foundation Scholar goes home to Uganda to give back during an internship with the United Nations Development Program.

MSU STUDY ABROAD + TANZANIA PARTNERSHIP PROGRAM
Community engagement is a big part of the high impact experience built into MSU’s study abroad programming.

TRANSFORMING THE GLOBAL FOOD SYSTEMS WORKFORCE
The Global Center for Food Systems Innovation aims to drive change by transforming educational programs in targeted world regions.

AN INNOVATION LAB THAT’S FULL OF BEANS
MSU earns award from the U.S. Agency for International Development to help developing nation’s find sustainable and secure food sources.

NETWORKS OF NETWORKS
MSU works with international partners who share our value of connectivity and interest in multi-continent problem-solving consortiums.

GLOBAL FOCUS
Congratulations to the 2012 winners of MSU’s annual international photography competition.
When we think about the future—10 or 50 years from now—we can imagine how different the world will be. We are free to look past great challenges and see a world where well-being and education are available to all. Yet the present quickly reminds us that to be successful we need bold efforts and each other.

Throughout its 50-plus year history, International Studies and Programs (ISP) has provided leadership to facilitate cross-college and cross-continent research and project collaborations. We believe when you reach across disciplines, institutions and boundaries you can harness talent and bright ideas from around the world—in a network of networks—to address the world’s most pressing problems and most promising opportunities.

By helping to form cross-college, cross-continental consortiums, ISP is fostering resilient communities from Michigan to Malawi and from Saginaw to Sao Paulo. We do this by working with the “whole of the university” to mobilize Michigan State University’s (MSU) research capacity, enhance educational programs, strengthen international experiences, support foreign language instruction and build international partnerships.

These efforts help expand and deepen MSU’s global research and create a robust resource of in-the-world knowledge, which is essential for advancing well-being and assuring that the marginalized and disadvantage benefit from our efforts.

We have had great success in the past year. We have formed new partnerships to respond to research opportunities in food, education, health and the environment. We have been hard at work to improve cross-cultural communication with our partner crossing Borders Education and we are working with a global network of institutions to help address the educational needs of African youth as part of The MasterCard Foundation’s Scholars Program. We are also proud to be part of the U.S. government’s fight against hunger and poverty around the world through the Global Center for Food Systems Innovation.

We have ambitious goals — building a world of good. We cannot hope to address the challenges or realize the opportunities alone. Therefore, we invite you to read our annual publication to learn more about our programs and some ways you can connect to MSU and efforts to tackle global challenges.

Steve Hanson, Interim Dean
International Studies & Programs
Our complex world is continually shaped and reshaped by global issues and challenges. For documentary film makers this global context makes for a fascinating backdrop to produce compelling stories about real-life and global issues. Michigan State University (MSU) had an additional reason to get involved in an international film project—a university-wide objective to prepare globally competent graduates. MSU sees an opportunity to broaden the view and education of a new generation of individuals and future leaders so they better understand cross-national challenges and have the capabilities, commitment and grit to address them.

A national leader in study abroad, MSU saw the medium of film as a powerful way for students to gain exposure and understanding of people from other cultures without studying abroad. In 2010, MSU and Crossing Borders Education (CBE) partnered on an intercultural film project set in China and Chinese culture. The project includes The Dialogue, a documentary film created by CBE and an online educator tool kit coordinated by MSU. Together the film and toolkit aim to explore the complexities of global and cultural diversity and increase intercultural understanding.

Dawn Pysarchik, professor of advertising in the College of Communications Arts and Sciences and MSU project coordinator, said MSU wants to walk people through an intercultural process—a process that begins with gaining cultural perspective and understanding, and optimally leads to an ability to communicate effectively with people from other cultures.

CREATING LEARNING TOOLS

“To extend the learning from the film, we are creating an educational toolkit,” said Pysarchik. “We wanted to be involved in the CBE film project because it offers intercultural exposure on a broad plane. Viewers can experience the journey along with the film’s characters who are from a very different background.”
Pysarchik explained that the film and associated online tools are designed to reach people and students where they live—on their computers, the Internet and cell phones. “A documentary film is another strategy we can put forward to increase cultural competency in our graduates,” she said. “We have a variety of different objectives—education is one, cross-cultural competency is another—and we provide opportunities for people to practice through exercises and activities that further explore key points raised in the film,” she said. “To support this learning our tool offers resources appropriate for high school and college students, and the community.”

**FILMMAKER AND CREW**

A documentary is a video or film that informs viewers about a topic or issue, generally in a factual way. For Troy Hale, an MSU filmmaker and instructor in the Department of Telecommunications, Information Studies and Media, it’s also about the storytelling.

“With any documentary you are trying to tell a story and you are trying to educate the audience,” he said. In the filming of The Dialogue, Hale was invited to join CBE’s crew of nine who followed four American and four Chinese university students as they traveled together throughout Hong Kong and Southwest China.

The film’s director, Arnd Wächter, aims to give a personal face to the “other side” through his films. “We had to build trust between the cast and crew so that when the students would look up they could look past the gear and see that we created this nice, safe environment for them to talk to each other,” said Hale.

The great story starts to unfold when the filmmakers catch special and natural moments when the cast members forget about the cameras, the lights and microphones.

“It’s always those cultural misunderstandings, and that’s a little bit about what this film is about,” said Hale. “It’s about when you say something as an American and then how it’s perceived differently by somebody from another culture.”

Throughout the film, the students share travel adventures, emotions of culture shock, honest confrontations and discoveries about each other that become doorways to deepen their understanding of the “other” and themselves.

“One of the interesting points that surfaced in this film is that the only reason there is a dialogue is because the Chinese students have learned English,” said Hale.

“There is an ‘Aha!’ moment where the Americans tell the Chinese students that sometimes they are difficult to understand,” he said.

The Chinese students go on to tell the Americans, “but you’re in our country and we are speaking English; you’re the ones who are hard to understand in this country.”

“It was amazing to see the realization among the American students, who then said, ‘oh my goodness, you’re right’.”

**THE DIRECTOR’S GOAL**

Wächter’s previous film, Crossing Borders, earned numerous accolades and awards, including winner of the Best International Feature Documentary at the Illinois International Film Festival in 2009 and Best Documentary at the Los Angeles Global Film Festival in 2010.

Like The Dialogue, Crossing Borders targets young adults in an effort to deepen intercultural empathy and initiate student conversation about global and cultural diversity.

“We encourage movie screenings with a trained facilitator, who can guide direct conversations among students,” said Wächter. “This then becomes the teachable moments where we can increase the understanding of complex issues that are often pervasive in the current world situation,” he said.

MSU and CBE are committed to creating intercultural tools that have the potential to empower students, faculty and the general public to see the world from a different perspective and to realize their opportunities and responsibilities for global concerns.

“I know we have a great story in The Dialogue; we had great people working on it, we had a great cast and the subject matter is absolutely compelling,” said Hale.

“People will want to talk about this movie and that makes me proud as both a filmmaker and educator,” said Hale.

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**THE DIALOGUE PREMIERS DURING 2013 INTERNATIONAL EDUCATION WEEK**

**NOVEMBER 11-15 2013.**

With a goal of engaging 500 schools, MSU and CBE are offering high schools, community colleges and universities the opportunity to have facilitated screenings of The Dialogue in celebration of 2013 International Education Week.

For a complete list of show dates visit: [www.isp.msu.edu/cbe](http://www.isp.msu.edu/cbe)

Watch the film trailer at: [www.nationalgeographic.com](http://www.nationalgeographic.com)

The Dialogue is a Crossing Border Education film, co-produced by MSU.
Fourteen MSU faculty, staff, alumni and students, as well as two local physicians, were honored at the International Studies and Programs (ISP) 23rd annual International Awards Ceremony. The ceremony also included a special tribute in recognition of the late Ralph H. Smuckler, who served as ISP dean from 1969 to 1991.

“We are proud to recognize the achievements of the greater MSU team who have helped to make MSU a university of distinction and whose involvements have enriched the campus, the state of Michigan and the world,” said Jeffrey Riedinger, dean of International Studies and Programs at MSU.

RALPH SMUCKLER AWARD

Brenda Sternquist, professor in the Department of Marketing at the Eli Broad College of Business, is the winner of the 2013 Ralph Smuckler Award. The award is bestowed upon a senior faculty member who has had a lasting impact on international scholarship, teaching and public service.

Sternquist is receiving the award in recognition of her exceptional work to advance international research on retail marketing with her colleagues in China, India, Japan, Korea, Taiwan, Western Europe, Central Europe and Mexico for more than 30 years.

She has been a prolific writer, authoring 30 book chapters and 70 journal articles in her field. Her book International Retailing, now in its third edition, remains the only text in the field and is used to educate students around the world.

EMERGING LEADER AWARD

Rebecca A. Malouin won the John K. Hudzik Emerging Leader Award for Advancing International Studies and Programs at MSU.

Malouin’s dedication to international outreach and learning was demonstrated early in her career as a Peace Corps volunteer. Following her service with the Peace Corps in Niger, she completed both a master’s degree in public health and a doctorate in the department of International Health at Johns Hopkins University.

Today, Malouin is helping to advance international programming in MSU’s College of Human Medicine as an assistant professor in the Departments of Family Medicine and Pediatrics and Human Development. She is known for building partnerships with other health professionals in Asia and Africa and has developed new ways to address the research needs of Malouin’s health system.

Her research often takes a focus on comparative health policy and health systems. Her enthusiasm and energy helped the Canadian Studies Center build cross-border faculty engagements with research partners in Ontario. This project advanced research agendas in health and Malouin’s leadership has enabled students to participate in the project.

OTHER INDIVIDUAL AWARD RECIPIENTS

Gill-Chin Lim Award for Outstanding Doctoral Dissertation in Global Studies
Mohammad V. Ali, Ph.D., School of Criminal Justice, College of Social Science

Joan S. Moon Distinguished International Alumni Award
Marie-Christine Koop, Ph.D., French, College of Arts and Letters

MSU Award for Outstanding Service to Study Abroad
Folke B. Lindahl, professor of political science in James Madison College; and Phil Gardner and Linda Gross, directors with MSU’s Career Services Network

Glen L. Taggart Award for Community Contribution to International Understanding
Dr. Mohamed H. Elahaby and Dr. Abdalmajid M. Katranji, physicians in the greater Lansing community

Charles A. Gliozzo International Award for Public Diplomacy
Frank A. Fear, senior associate dean emeritus, College of Agriculture and Natural Resources

Special Recognition for Promoting International Understanding
Colleen A. Hammond, chief MRI technologist at MSU; and John Schwille, professor and assistant dean for International Studies, College of Education
What makes for a great city? We know the best and brightest can be crowded, difficult and noisy places. Yet, they can be places of magnificent happenings. The same is true for the global city of Buenos Aires, Argentina—the second largest metropolitan area in South America.

Alex Galarza, a Fulbright Fellow from Michigan State University, will explore what defines Buenos Aires’ greatness, starting with a look at what might come as a surprise to some—the city’s soccer clubs!

Those who identify with Boca Juniors, the most successful football team in Argentina and one of the most successful in the world, will completely understand why Galarza needs to study soccer to understand the city.

WHY SOCCER

“My project is a cultural history of the city’s soccer clubs from 1950 to 1976,” said Galarza. “One of the things I look at in my research is a stadium construction project that ultimately failed,” he said.

At that time, Argentina’s soccer clubs were a privileged site of associative life and political activity. The clubs were also coping with economic challenges while maintaining considerable political influence and public funding.

“As a historian, I see this particular stadium project and this point in Argentina’s history as a way to get at the tensions between people trying to form a civic association that also operates as a business,” he said.

Through his research, Galarza aims to better understand the different facets of urban life. He explains that the quality of our urban environments and landscapes has a direct influence on the quality of our lives as citizens, as well as the identity of the people who live and work there.

“The project in Buenos Aires affected the actual space of the city, changed consumption patterns and anchored the city master plan for redevelopment—which influenced the city as we know it today,” he said. “What I am really trying to do is explain the relationship between sports, everyday life and the urban environment.”

Understanding the elements of everyday life in a city can help guide a government’s infrastructure plan and investment in transportation, housing and schools, and space for cultural and recreational events.

“By connecting the changing political structure, a citizen’s sense of collective belonging, and the physical geography of the city, Alex’s research will be translatable across many fields of study and across the globe,” said Roger Bresnahan, MSU’s Fulbright coordinator.

A FULBRIGHT PROJECT

Galarza’s research is funded by the U.S. Department of State Bureau of Educational and Cultural Affairs Fulbright Program.

Fulbright supports projects to deepen research knowledge and help the nation develop capacity in areas of the world not generally included in U.S. curricula. MSU has been recognized as one of the nation’s top producers of Fulbright Scholars, ranking with Harvard, Columbia and Cornell, among others. Over the past 20 years, some 140 MSU students and more than 200 faculty members have received Fulbright awards for research, study or teaching.

Galarza is among 84 U.S. doctoral candidates who were chosen for MSU’s Visiting International Professional Program (VIPP) because of its experience in short-term and development programs for professionals from around the globe, said Kari Kammel, VIPP’s Middle East program coordinator.

“By working with TVTC, an institution with more than 70,000 students and 10,000 instructors, MSU can play a role in helping those in the Middle East shape vocational and technical training programs and help find what works best in each country,” she said.

With worldwide advances in technology, vocational and technical education has become increasingly important to a country’s economic growth, said Kammel.

“By involving workforce development experts throughout Michigan, we also believe this program has potential to open doors for economic development between Michigan and Saudi Arabia as well.”

Learn more about VIPP at MSU at www.vipp.isp.msu.edu

MSU SCHOLAR DECODES THE FEMININE MYSTIQUE

The first annotated scholarly edition of Betty Friedan’s book The Feminine Mystique is now available thanks to a collaboration between two Michigan State University historians, Lisa M. Fine, and Kristen Fermaglich.

Hailed as the book that started second-wave feminism, The Feminine Mystique has rightfully claimed a spot in history with its 50th year in circulation. Now the annotated edition will ensure that future generations will have access to the insight that shaped the popular culture of the 1950s and Friedan’s theories.

The book is available on Amazon.

MSU STUDENT EARNS SCHOLARSHIP

Lindsay Murray, a graduate student in criminology research, was named a Gates Cambridge Scholar.

The Michigan State University School of Journalism has published a booklet to dispel myths, stereotypes and biases about Indian Americans. 100 Questions and Answers about Indian Americans has been designed as a cultural competence guide to help people understand differences of nationality, ethnicity, culture, race and religion.

Indians in the U.S., whether American citizens or immigrants from Asia, come from a complex culture. This new handbook is part of a series of cultural competence guides. Learn more at news.jrn.msu.edu/culturalcompetence/
FOR MORE THAN 50 YEARS OUR
RESEARCHERS HAVE BEEN CROSSING
COLLEGES AND CONTINENTS TO DEVELOP
A BROADER UNDERSTANDING OF THE
HEALTH NEEDS OF DIVERSE COMMUNITIES
AROUND THE WORLD. WE UNDERSTAND
THAT OUR DOCTORS AND NURSES
ARE WORKING IN AN INCREASINGLY
GLOBALIZED SOCIETY. TOGETHER WITH
ITS GLOBAL PARTNERS, MSU AIMS TO
ADVANCE MEDICAL EDUCATION AND
PROVIDE MORE AND BETTER HEALTH CARE
TO THE PEOPLE IN THE UNITED STATES AND
AROUND THE WORLD.
For most people in the United States, the mosquito is no more than an annoying summer pest that causes a few itchy bumps. But for a large portion of the world, mosquitoes carry dengue fever—a painful disease with no cure and no vaccine.

Though rare in the continental United States, Hawaii was the site of a dengue epidemic in 2001, and there have been cases in Florida. Overall, about one-third of the world’s population is at risk of contracting dengue fever and up to 100 million people are infected each year. While most people recover in about two weeks, the infection can turn into dengue hemorrhagic fever, which causes bleeding from the nose and gums and can be fatal.

Thanks to Zhiyong Xi’s work with mosquitoes and Wolbachia bacteria, researchers are closer than ever to eradicating this devastating disease.

“My long-term goal is to develop control strategies to block dengue virus transmission in mosquitoes,” says Xi, assistant professor of microbiology and molecular genetics and director of the Sun Yat-sen University–Michigan State University Joint Center of Vector Control for Tropical Diseases. “In nature, about 28 percent of mosquito species harbor Wolbachia bacteria, but the mosquitoes that are the primary transmitters of dengue have no Wolbachia in them. We found that Wolbachia is able to stop the dengue virus from replicating. If there is no virus in the mosquito, it can’t spread to people, so disease transmission can be blocked.”

Xi began his scientific career by earning a degree in pharmaceuticals, but changed his focus when he began a graduate degree.

“When I started my master’s, I changed my focus to this project as it is a very important problem to address,” he says.

He continued this focus during his postdoctoral work at Johns Hopkins.

“I have been working on this a long time,” he says. “In China, there is a long tradition of studying this disease.”

As the director of the Joint Center, Xi is encouraged about the future and solving this challenging problem. His work could have widespread effects around the world. Solving the problem at the transmission stage is a sustainable solution that would help all affected regions.

“For poor countries, even those who can’t afford drugs will be helped,” he says. “This will help all people. You do not have to be rich and get a vaccine or a drug. Everyone will benefit.”

When asked how he would feel if his research was responsible for wiping out dengue fever, a large smile breaks out on his face.

“That would be a dream,” he says. “It is a dream for me and for all scientists. It is not about talking with each other in the lab or an office. It is all about helping people all over the world.”

Learn more about Xi and his work in Guangzhou, China
http://report.president.msu.edu/360/dengue-fever/

By MSUToday
MALAWI’S BOUNTIFUL HARVESTS AND HEALTHIER CHILDREN

In Malawi, the fields are full—and so are the children. Through research led by Michigan State University, crop yields have increased dramatically. The children of Eluveli, Malawi, also have gained weight and are taller. These improvements bring smiles to Sieglinde Snapp, MSU ecologist, and other researchers who have worked in Malawi for many years.

One of the focal points of Snapp’s research has been improvements in crop diversity and soil health, which have increased yields. She has worked with local scientists, hospital staff and extension workers to rotate cereal grains with bushy legumes, which sparks soil improvement without relying solely on fertilizers.

Crop model simulations, long-term field trials and on-farm experimentation highlight which combinations of legumes, cereals and soil management are best at using resources efficiently. Rotating corn with pigeonpea mixtures (a shrubby legume) keeps the soil from being stripped of nutrients, such as nitrogen, while increasing nutrient-rich grain productivity.

“Participatory action research combined with access to new seeds of bushy food legumes has helped spread a mantle of green across the countryside and help achieve greater food security,” Snapp said. “There have been notable gains in dietary diversity and increased child health in hundreds of farm communities of Northern Malawi—a truly sustainable project.”

Malawi farmers, many of whom are women, also play a critical role in the program’s success. They have embraced the initiative and constantly look to improve their efforts through testing of crop rotations, nutrient-enriched legumes, drought-tolerant crops and staple cereals. Working together, the entire team will help cope with a changing world, Snapp added.

The results speak for themselves:
- Corn yields increased from 50 to 200 percent, when comparing rotating crops to monoculture.
- Soil improvement supported reduced fertilizer use and a 20 percent improvement in yield stability, supporting communities’ ability to cope with drought.
- Children’s weight and height have climbed and now meet international norms for healthy children. The biggest gains were found in villages where the program has been going on the longest.

Snapp’s work is funded in part by the McKnight Foundation, National Science Foundation, USAID and MSU’s AgBioResearch.

LAUNCH OF A GROUNDBREAKING DRUG TRIAL IN AFRICA

Gretchen Birbeck has spent nearly 20 years in sub-Saharan Africa researching epilepsy resulting from cerebral malaria.

An MSU research team has begun testing the very first antiseizure medication levetiracetam, or LVT, to control seizures caused by cerebral malaria through a groundbreaking clinical drug trial to help prevent a quarter-million Sub-Saharan African children from developing epilepsy every year.

“Since oral LVT is relatively affordable for short-term use and feasibly could be delivered in resource-limited settings, this therapy could potentially be scaled up for broad use throughout malaria-endemic African countries,” said Gretchen Birbeck, a professor of neurology and ophthalmology in the College of Osteopathic Medicine, MSU.

A wireless EEG monitoring device, developed by the New York-based biotechnology firm BioSignal Group, will tell the researchers if LVT is keeping the children seizure-free. This device can be worn on the child’s arm and it transfers data in realtime to a computer, where it can quickly be analyzed and shared with colleagues.

DANGER OF UNCHECKED ANTIBIOTIC USE IN ANIMALS

Increasing production and use of antibiotics in animal production play a major role in decreasing their ability to reduce the occurrence of diseases.

A number of studies and a current issue of the proceedings of the National Academy of Sciences show that the increasing production and use of antibiotics in animal production is enhancing the number of antibiotic resistance genes, or ARGs, which in turn is effectively reducing the antibiotics’ ability to prevent diseases in animals as well as humans.

“The World Organization for Animal Health and the U.S. Food and Drug Administration have been advocating for improved regulation of veterinary antibiotic use because those genes don’t stay local,” said James Tiedje, MSU’s Distinguished Professor of Microbiology and Molecular Genetics, and one of the co-authors.

GLOBAL HEALTH

The study also suggested that in some cases, these antibiotic resistant genes become highly mobile, meaning they can be transferred to other bacteria that can cause illness in humans and can reach the general population through food crops, drinking water and interactions with farm workers.

MSU HELPS U.S. OSTEOPATHIC DOCTORS PRACTICE IN THE YUCATÁN

American osteopathic physicians now can practice medicine in the state of Yucatán, Mexico, after Michigan State University representatives signed an agreement with government officials this past year.

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In the Yucatán, American osteopathic physicians can practice medicine in the state of Yucatán, Mexico, after Michigan State University representatives signed an agreement with government officials this past year.

William Strample, dean of the College of Osteopathic Medicine, signs a partnership agreement with Yucatán Secretary of Health Jorge Eduardo Mendoza Mezquita.

American osteopathic physicians now can practice medicine in the state of Yucatán, Mexico, after Michigan State University representatives signed an agreement with government officials this past year.

Enduring global health ties: MSU and the Yucatán State Department of Health also agreed to encourage: establishment of an osteopathic clinic at Hospital O’Horán in Mérida; exchange of faculty, scholars, research materials and publications; joint meetings for education and research; and telemedicine and teleeducation between MSU and the Yucatán health department.
IN ORDER TO ADDRESS TODAY’S PRESSING ENVIRONMENTAL CHALLENGES, MSU IS WORKING TO CONNECT PEOPLE AND IDEAS ACROSS THE GLOBE. WITH THE RIGHT TEAM ASKING THE RIGHT QUESTIONS WE ARE INTEGRATING SOCIAL SCIENCES WITH ENVIRONMENTAL SCIENCES. WE HOPE TO ADVANCE OUR IN-THE-WORLD KNOWLEDGE AND DEVELOP ADAPTATION STRATEGIES THAT RESPOND TO POPULATION GROWTH, CLIMATE CHANGE AND PRESSURES ON LAND.
One of the keys to protecting valuable natural resources is the involvement of communities that rely on them for their livelihoods. Despite agreement on the value of community-based natural resource management (CBNRM), gaps often persist between theory and reality.

A hot topic in both developed and developing countries, CBNRM has been categorized as one way to attain sustainable development. However, Leo Zulu, a Michigan State University (MSU) geographer and scholar from Malawi, warns there are no panaceas in the world—community resource management should not be considered one of them.

Having worked for the Department of Forestry in Malawi before joining MSU, Zulu came to understand the gaps between theory and reality of CBNRM. His research has demonstrated how the management of natural resources and economic development of resource-dependent communities is inevitably linked to social power structures and other social, economic and ecological factors.

**IMPORTANT ISSUES IN MALAWI**

Specifically in Malawi where the economy is based on agriculture, and more than one-third of GDP and 90 percent of export revenues come from agriculture, Zulu believes involvement of communities is critical to an effective natural resource management system.

“People live really close to the land in Malawi and they depend on it in a very direct way. So proper management of their natural resources is very important to them,” said Zulu.

Malawi is among the world’s least developed and most densely populated countries. Around 85 percent of the population lives in rural areas.

“There are a lot of things you need to deal with beyond the actual technical management of the resources,” he said.

“When you bring communities into the picture, it becomes much more about social issues and power,” Zulu said. “You need to consider ‘who has the power and what authority do they have’ with regard to these resources.”

To be involved, communities need to organize themselves. It is common practice to set up modern management structures such as associations and/or natural resource management committees. It is common to see committees formed at the village level and then village representatives elected to serve at higher levels.

For CBNRM to work, communities would not only need to know their natural resources, but they would need knowledge and skills about how to manage the different elements. The communities need to know how to regulate behavior of diverse resource users and avoid free-riding and having local elites dominate decision making.

“Communities would decide for themselves what is important, set their own priorities and identify where they fall short and need outside assistance from government or non-governmental agencies,” Zulu says this is where power shifts need to take place.

“Unfortunately, those shifts can often lead to conflict. It is not uncommon for there to be some clash between the modern institutions that are taking away power from the traditional leaders,” said Zulu. “These clashes can lead to overharvesting, or competitive harvesting of the resource, which is in effect mismanagement of the resources.”

In his research, Zulu also found that local actors selectively adopt, ignore or alter institutional choices imposed by governments and sometimes donors create institutional hybrids that are not purely modern, neoliberal or traditional—thereby shaping CBNRM outcomes in unpredictable ways.

Clearly, power issues are at the root of the challenge and if they go unresolved the natural resource can be depleted quickly, he said.

“Once trees are cleared all over the place, you have soil erosion. That leads to a decrease in soil fertility and then agricultural productivity will start to fade.”

Ultimately, measures that balance the power among CBNRM actors, minimize elite capture of resources, add value and enhance CBNRM incentives are necessary.

Interventions should pursue community-wide empowerment, leadership skill development among chiefs and CBNRM organizations and more transparency and downward accountability to community members.

CBNRM success is dependent on many conditions and complicated by constant change and uncertainty between social and ecological systems. The ultimate goal for CBNRM institutions is therefore not to sustain a management or its structure, but to sustain the adaptive capacity of communities to constantly align CBNRM to evolving circumstances.

For CBNRM to work, communities need to enjoy benefits from natural resources management while also having a sense of ownership and a relationship with key stakeholders that is built upon partnerships. “At the end of the day, it’s about making people work together.”

Watch a video at www.isp.msu.edu/multimedia
A local food system to most people means going to your community’s farmers market to buy fresh produce. But, when Mike Hamm talks about the local food system, he means all of the steps that bring food from the farm to our table: a complex supply chain involving growing, harvesting, processing, distribution, marketing, retailing, purchasing and preparation of what we eat. It even includes recycling, composting and waste.

Hamm is the C.S. Mott Professor of Sustainable Agriculture at Michigan State University and Director of the Center for Regional Food Systems.

Sitting in his office appropriately located off of Farm Lane in the Natural Resource Building, Hamm explains that local food systems are also an important strategy to confront global issues of climate change, population growth and rapid urbanization. Under these stresses, food systems and the people who work in the industry need innovative solutions to cope with reduced access to fresh water and land to grow food.

THE CARBON FOOTPRINT OF FOOD

“One of the things we think is important to look at is how local food systems might lower the carbon footprint of food,” he said. Hamm and his colleagues have studied the issue and found that the carbon footprint of food is a combination of how the food is transported to a marketplace and how consumers travel to buy their food.

“So part of this is also thinking about our future,” Hamm said.

The transportation issue alone makes it even more important to address the flow of people into urban areas.

“Population density is increasing, more and more people are living in those areas. And so, the question becomes: how do you ensure food security and a healthy food supply for people in an increasingly dense area?”

Additionally, the migration of people to urban centers means less of a farming base in rural areas. In this case the questions are: how are fewer farmers going to produce greater amounts of food, and how will food be transported to those urban areas, especially in parts of the world where there is a lack of infrastructure to safely and swiftly move it?

Ham is also concerned about improving access to healthier foods. This is a big part of his group’s focus.

“These are big challenges abroad and it is not all that different from some of the challenges we see in our Midwestern urban cities in the United States,” said Hamm.

In the large U.S. cities that have lost population there is often a breakdown in food systems, making it difficult to find fresh produce for a healthy diet.

“In Michigan, our projects range from offering incentives for purchasing healthier food benefits, to connecting farmers with untapped markets.”

URBAN AGRICULTURE

Although there is quite a bit of urban agriculture taking place in the United States and in the developing world, Hamm argues it, too, is in jeopardy.

“Much of the urban agriculture is under the radar because it is part of the informal economy—it doesn’t show up on food security or economic measures,” said Hamm.

Looking forward 30 or 40 years Hamm sees the population of our mega cities getting more dense and the spaces currently used for urban agriculture may in fact not be available in the future.

Hamm believes in local food systems because they link to natural resources like water and land, which make it a global security issue.

“If we don’t start to do something about the challenges now we may regret it down the road,” he said.

This all makes local farm systems an important strategy in the United States as well as Africa and the developing world.

“It is our job as scholars to work with policymakers and our public sector partners to consider the production, consumption and supply chain issues that will ensure healthy diets, a sustainable food system and its environmental impacts,” said Hamm.

Watch a video at www.isp.msu.edu/multimedia
SEEING THE FOREST FOR THE TREES

Brazil’s struggle to conserve its rainforests has become a global talking point. As more and more forests have been cleared in the name of economic growth, preserving them has become less attractive to landowners. But a new focus on integrating the social and natural sciences to address environmental problems is yielding promising results that may save the rainforests—and the planet.

For three decades, Emilio Moran, visiting Hannah Professor in MSU’s Department of Geography, has been on the front lines of this effort—piecing together the big picture of deforestation and conservation efforts in Brazil. In the southeast city of Campinas, Moran partners to use remote-sensing technology to collect data on deforestation, land use, agriculture and reforestation. In addition, he and his colleagues are on the ground, interviewing landowners to determine what motivates them to conserve forests because, in the end, the choices people make in their daily lives will determine the success of conservation efforts. As Moran notes: humans created the problem, and they must work together to solve it.

Moran’s multifaceted career, now the stuff of academic legend, back then was a struggle. Back in his day—as the stories of the family elders usually start—you were supposed to pick your discipline and stick to it. Moran’s multifaceted career, now the stuff of academic legend, back then was a struggle.

Over the years, Moran has advised some 28 students from Brazil, the United States and other countries. Now Fannaco and Beccu in Brazil have majors in human-environment interaction.

“People are watching to see how this plays out,” Moran said. “I think students today get it, more than the faculty in many cases. The interesting questions are at the intersections of the natural and social sciences. Now they can actually be taught by both biologists and sociologists and address issues in interactive ways.”

Moran says work is needed at universities to judiciously pare down requirements to allow room for students to study more than one discipline without compromising academic rigor.

A good start is a collaborative program between MSU, Universidade Federal da Bahia (UFBA) and Universidade Federal do Pará (UFPA) that was led by Cynthia Simmons, an associate professor in the Department of Geography. The program design helped faculty and students understand globalizations and the impacts on the environment and society.

Student cohorts were made up of Brazilian and American students, which further enhance cooperation and cross-cultural appreciation. The one-year program brought together foreign language training, undergraduate research opportunities and a common curriculum.

As Brazil’s importance on the international stage continues to grow, hosting visiting scholars like Moran at MSU becomes a critical strategy to forward-looking curriculum and academic programs.

By MSUToday

Scientists led by Jianguo “Jack” Liu, Michigan State University’s Rachel Carson Chair in Sustainability, have built an integrated way to study a world that has become more connected—with faster and more socioeconomic and environmental interactions over distances. They say “telecoupling” describes how distance is shrinking and connections are strengthening between nature and humans.

In the new issue of Ecology and Society, Liu, director of MSU’s Center for Systems Integration and Sustainability, and his colleagues lay the groundwork to understand how an action on one side of the world has enormous socioeconomic and environmental consequences thousands of miles away—and how it doesn’t stop there. Telecoupling shows how environmental and socioeconomic actions lead to reactions and feedbacks—and then to more repercussions that reverberate globally.

The article, “Framing Sustainability in a Telecoupled World,” lays out a comprehensive telecoupling framework—a map for the trip to sustainable development across the world. See more at: http://msutoday.msu.edu/news/2013/telecoupling-pulls-pieces-of-sustainability-puzzle-together/

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MSU joins NSF “Tree of Life” design team

MSU faculty member Karl Gude has received $300,000 to work on the National Science Foundation’s evolutionary tree of life, a project that will produce the first online, comprehensive visual representation of all 1.8 million species. Gude will work on the educational aspect of the project to ensure information is accessible to both the public and scientific communities. Currently, he and his team are working to write synopses of 200 representative species.

As it is a larger grant, valued at $6 million, there are 10 universities, including Michigan State, working on it. Together, they are building the evolutionary tree of life to display on an interactive website.

According to the grant team’s project summary, the tree of life will link all biodiversity through a shared evolutionary history.

In the United States, rivers and their floodplains are well documented and monitored. Ecuador’s largest river, however, remains largely mysterious. Research led by Michigan State University is helping the South American country unravel the Napo River’s mystique to better balance its economic and environmental treasures.

The Napo River is about 670 miles long. It winds through the western Amazon basin in Ecuador and Peru, one of the most remote and biodiverse regions in the world, and provides access to valuable oil reserves.

One of the research team’s goals is to document the river in its “wild” state before major engineering work is conducted, said Jorge Celi, a zoology doctoral student at MSU’s Kellogg Biological Station.

“We know much about the Amazon River, but we know very little about the Napo River, such as when it floods or the depth and reach of its floodwaters,” he said. “Our research will help guide economic development to the benefit of Ecuador and the local residents, while promoting conservation of the region.”

Celi’s research has been supported by NASA, the National Science Foundation, National Geographic Society and the World Wildlife Fund.
MSU IS COMMITTED TO HIGHER-QUALITY AND MORE ENGAGED INTERCULTURAL EXPERIENCES FOR OUR STUDENTS, FACULTY AND CAMPUS VISITORS. WITH MORE THAN 25 INTERNATIONAL INSTITUTES, CENTERS, OFFICES AND UNITS ACROSS CAMPUS, MSU IS ALIGNING THE UNIVERSITY’S LIBERAL LEARNING OUTCOMES, LIVING AND LEARNING COMMUNITIES AND GLOBAL COMPETENCIES TO PRODUCE GLOBAL-READY GRADUATES AND CITIZENS.
A lot can happen in one year. For Rebecca Nassimbwa, the past 12 months have been nothing short of transformational. Now self-assured thanks to Michigan State University (MSU) and leadership training as a MasterCard Foundation Scholar, Nassimbwa just returned from a summer internship with the United Nations Development Program (UNDP) in Uganda where she saw a small glimpse of her future.

“I can’t wait to go back,” she said.

“I have come so far. At one point in my life I had nothing. Now nothing can stop me and I see a very bright future back home.”

A DREAM INTO REALITY

“The most important thing for me so far has been to have a dream,” said Nassimbwa.

Prior to attending MSU Nassimbwa was a special needs teacher in Uganda. There she dreamt about a school that would help educate and provide vocational skills training to students with learning disabilities who cannot achieve academically, as well as provide counseling for students with various disabilities, including those with HIV/AIDS.

“In most developing countries physically and mentally disabled people are among the most rejected groups of people in society,” she said.

But, to Nassimbwa, disability does not mean inability if a person with a disability is provided with a suitable opportunity.

That special point of view made her a perfect fit for The MasterCard Foundation Scholars program.

“Prior to coming to MSU, I had little knowledge about helping students with learning disabilities,” she said. “I only knew I wanted to help rejuvenate their hope, find their unique abilities and encourage a sense of determination.”

Nassimbwa will complete her coursework in the master of arts program in rehabilitation counseling in MSU’s College of Education in the coming year.

Rehabilitation counseling is a profession devoted to enhancing the quality of life of individuals who have physical, mental or emotional disabilities. Rehabilitation counselors provide counseling and other coordinated services to such individuals in the public, nonprofit and private sectors. The program also emphasizes vocational assessment, vocational placement and career development for persons with disabilities.

“I am wanted to acquire skills in the practice of rehabilitation counseling so that I could contribute to the development of my country,” she said. “In Uganda such skills are needed, yet there are few institutions that offer the kind of training I am receiving at MSU.”

Although MSU has been life changing for Nassimbwa, she is also doing as much for the institution and her fellow students. “I am the only international student in my program,” she said. “My classmates count on me to bring a diverse perspective to classroom discussions. I find myself representing not only Uganda but other parts of the developing world.”

MSU + THE MASTERCARD FOUNDATION

Last year, MSU received more than $45 million to become a partner in The MasterCard Foundation Scholars Program. Throughout the nine-year program, MSU will welcome 100 four-year undergraduates and 85 master’s degree students from Africa.

The MasterCard Foundation investment in MSU was driven by the belief that education is a catalyst for social and economic betterment. The program aims to educate young Africans, like Nassimbwa, and develop a cohort empowered to lead, fuel economic growth and social transformation.

The MasterCard Foundation’s choice of Michigan State University was determined by the long-standing history and current engagement of the university in global programs and a special connection with Africa.

“The Scholars program is about training future leaders who will be able to shape their own destiny as well as the destiny of the continent,” said Adedayo Adekson, assistant dean for The MasterCard Foundation Scholars Program at MSU.

In the United States, the foundation formed a network of six universities including Arizona State, Berkeley, Duke, Stanford and Wellesley, in addition to MSU, to provide educational opportunities.

“We know that collaboration is the key to solving the world’s most challenging problems, so we look forward to working with an exceptional network of high-quality schools and universities with which we share a set of core values,” said Lou Anna K. Simon, MSU president. “We and our partners will collaborate in new ways to help ensure African youth have the competencies to contribute to economic growth and social development in their countries.”

Nassimbwa’s generation seems to be the torchbearer of social and economic betterment for the continent featuring the youngest and fastest growing labor force in the world. Indeed, MSU’s educational programs are well positioned to participate and contribute to this unique historical moment in Africa.
Making the world a better place is about as big a goal as you could possibly set for yourself. So where do you start? If you’re an ambitious student interested in development, you might begin with an application to the Kolschowsky Scholars study abroad program with Michigan State University (MSU).

“In order to truly improve the lives of others, you must understand the complexities of the issues they face and genuinely engage them in finding a solution,” said Justine Brunnett, international relations major in James Madison College at MSU.

Betty Okwako, an instructor at MSU, introduced Brunnett and six other MSU students to Tanzania and the development challenges often found in rural communities of developing countries during a study abroad program in 2013.

“We spent six weeks looking at how development projects and associated research contribute to community well-being,” said Okwako.

THE STUDY ABROAD PROGRAM

Through the course Sustainable Community Development in Tanzania, students learned different approaches to community engagement. They put theories to practice by working with a local Maasai community in the northern village of Naitolia.

Okwako said the program was designed to challenge students to think about practical ways to solve issues facing rural communities. “We wanted the program to push students and to challenge their assumptions and stereotypes about development.”

The study abroad program grew out of an existing project known as the Tanzania Partnership Program (TPP). Established by MSU’s International Studies and Programs, and generously funded by Gerald A. and Karen A. Kolschowsky, TPP works to improve the overall well-being of communities in Tanzania.

Students accepted into the study abroad program are considered Kolschowsky Scholars as they are part of the larger objectives of TPP.

The program engages marginalized communities in Tanzania that don’t have a lot of outside interaction with nongovernmental organizations or other groups that could help improve their lives. One part of the program involves working with the village of Milola to improve access to education for children. In Naitolia, program staff and partners are working with residents to improve access to clean water and to provide education and training so villagers can manage resources in the future.

“The overarching concept that we’re using is resiliency—fostering resilient communities,” said Diane Ruonavaara, program manager for TPP. “What that means is helping communities to bounce back from external stresses and shock. We are working toward helping to foster the ability of communities to envision a better future and helping them to move toward that. We are not doing that as outsiders, but the communities themselves develop the capacity and ability to move their development forward in their own vision.”

An additional goal for TPP is to create a model for community development. The program team is seeking to create a model that can be shaped for different communities where different local conditions exist. In Tanzania, it might be education and rural water systems that wind up being the initial focus of attention, but that won’t be the case everywhere.

WORKING IN COMMUNITIES

While in Tanzania, the MSU students were matched with students from the University of Dar es Salaam, one of TPP’s in-country partner institution. They also worked with Claude Mungongo, a professor at University of Dar es Salaam and country coordinator for TPP.

Mungongo has been involved with the TPP water program in Naitolia since it began in 2008.

“This project is very important to this region because water scarcity is the problem. This is a semi-arid area and rains are very, very erratic and very scarce,” he said. “So any project that improves the supply of water is a very important resource in this area.”

The partnership is making possible new water pumps and rainwater harvesting equipment to ensure safe sources for drinking, cooking and washing.

On a personal note, Okwako saw the program as a chance to go back and share an amazing experience in community engagement with undergraduate and graduate students.

“As an African scholar in the West you always have in the back of your mind to go back ‘home’ and make a difference,” she said. “I had a chance to do this while also sharing the experience with students. As a teacher it was inspiring to see my students learn about a world that is very different from what they know and to ultimately have a positive impact in Naitolia.”

Watch a video at www.isp.msu.edu/multimedia
On June 19, 15 educators from throughout the United States met with the president of Costa Rica, Mrs. Laura Chinchilla, as part of a Fulbright-Hays Group Projects Abroad program led by Michigan State University’s Center for Latin American and Caribbean Studies.

The program was designed to offer educators the opportunity to learn about Costa Rican culture, improve Spanish language skills and develop curriculum for the classroom focusing on Costa Rica’s progress toward the United Nations’ Millennium Development Goals (MDGs).

During the meeting with President Chinchilla, participants had the opportunity to raise questions related to the country’s educational policies and strategic actions to promote human development and sustainability.

Participants learned that Costa Rica has been very successful in achieving most of the MDGs. This has led to additional commitments with the United Nations to identify additional stretch goals with regard to the MDGs.

Michigan State University’s in-country partner on the program was the Earth Charter Center organized the group’s orientation, as a Thomas J. Alexander Fellows Operation and Development (OECD) currently has one of four researchers named by the U.K. Ministry of State for Employment, Labor and Social Affairs, who died in 2012, will lead the work of the national PERMAS - MSU, the Indonesian student organization on campus, the host of the national PERMAS meeting held on the last day of the IF event. The group is trusted to lead the effort for the meeting in 2013, which will be the impetus to re-establish the Indonesian Student Association in the United States at the national level.

In addition to meeting with President Chinchilla, the group met with the minister of women’s issues and president of the National Institute for Women, the viceminister of public education. In all these meetings, the group learned about specific projects and actions related to gender equality, access to education and environmental sustainability.

Another important activity was meetings with fellow Costa Rican teachers, where they had the opportunity to learn firsthand about what it means to be a teacher in Costa Rica. The teachers exchanged different methodologies and strategies to teach topics related to sustainability and the Millennium Development Goals. These meetings took place at the National University of Costa Rica in Heredia and were possible thanks to the support of the University’s Earth Charter group and the Costa Rican UNESCO Commission.

The six-week program also included training in a variety of locations across Costa Rica including Monteverde, Flamingo, Osa Peninsula, Turrialba, Manuel Antonio.

MSU Distinguished Professor and co-director of the Education Policy Center, William Schmidt, was one of four researchers named by the Organisation for Economic Co-operation and Development (OECD) as a Thomas J. Alexander Fellows for education quality and equity in emerging economies. Schmidt proposal was accepted along with João Galvão Baccetta, of Brazil; Przemysław Biecek of Poland; and Gabriela Miranda Mariconi of Brazil.

The fellowship program, named after the former head of the OECD Directorate for Education, Employment, Labor and Social Affairs, who died in 2012, will help advance research in the critical issue of improving education quality and equity.

As part of his fellowship, Schmidt will explore the notion of opportunity to learn and how it relates to performance of mathematical literacy.
TODAY’S UNIVERSITIES MUST WORK BEYOND TRADITIONAL DISCIPLINARY BOUNDARIES TO HELP COMMUNITIES UNLEASH POTENTIAL, RESPOND TO NEW OPPORTUNITIES AND FIND CREATIVE SOLUTIONS TO REAL-WORLD PROBLEMS. THE WORK OF OUR FACULTY, STAFF AND STUDENTS ARE HELPING MSU OVERCOME BARRIERS, BRIDGE CRITICAL GAPS AND LEVERAGE THE ABILITY OF THE WHOLE UNIVERSITY TO FIND SOLUTIONS TO GLOBAL FOOD SYSTEMS.
Last year, the office of International Studies and Programs added another feather to MSU’s cap with the launch of the Global Center for Food System Innovation, or GCFSI, at Michigan State University. Led by chairperson of MSU’s Department of Biosystems and Agricultural Engineering Ajit Srivastava and Assistant Dean for International Studies in the College of Education Retumetse Mabokela, GCFSI is a United States Agency for International Development, or USAID, funded center. The center aims to employ science and technology in the identified megatrends to bring about advancement in the global food systems. The center will help combat problems faced by countries worldwide in areas like rapid urbanization, population growth and skill gaps.

Collaborating with esteemed universities from different parts of the world, GCFSI aspires to accelerate the transformation of the food systems in order to make a positive impact on countries across the globe. John Dirkx, professor of higher, adult and lifelong education and Tom Smith, associate director of the Institute of Agricultural Technology, team up to address the megatrend three, which focuses on skill gaps.

"We are looking at the gaps and barriers today—how much interaction there is between the educational system and workforce development system and where the disconnections are. We need to make sure that we are preparing the workforce for the global changes of climate change, urbanization, population growth and the pressure on land," Smith said.

THE ROLE FOR EDUCATION

Dirkx said, "There is going to be development of innovative solutions and that will require training; the solutions are going to require new skills among the people who we are expecting to implement them."

"Education, I think, will play a critical role in helping the USAID move innovations to adoption—something that is more than a flash in the pan," he said.

Time and again, MSU has been approached by leading development organizations to help find solutions to pressing challenges. With food systems being a forte of the university, USAID has truly found the right partner to help battle the issues at hand.

"USAID has said, ‘Look, we are really good at generating an abundance of research on problems and knowledge to help solve those problems. But, we haven’t been good at bringing those two together’ Dirkx said.

With years of experience in educational research, Dirkx brings in the expertise of developing agendas that can be put to practice in this project.

"I have written about how we think about educational research—that we need to be more practice-based in our approach to research and scholarship. What really excites me about this project is the opportunity to bring education to the forefront and create a new way of conducting and leading scholarship on real-world problems," Dirkx said.

MAKING A DIFFERENCE

The opportunity to make potentially tremendous impacts in people’s lives makes Smith excited about working with this project. "I love the unknown, I like the idea of change. There is a sense of urgency here that is exciting. Another thing that makes me excited is the opportunity to engage students in this process because getting students involved gives them a completely different educational experience, one that they oftentimes don’t get to have. Here we have the opportunity to embed students in the whole process and to charge them with coming up with solutions," Smith said.

Not only is Smith confident about the success of this project but he believes they can find new ways to deal with problems and different ways to measure impact through this project.

"We need to have a process driven by the customer. Customers in this case are the farmers in those countries. We need to ask the farmers how they measure success; how their lives will get better. There has been a tremendous amount of work done and a tremendous amount of money spent on looking at educational systems, trying to change it. USAID is challenging us to not simply do business in the way we have always done it," he said.

Since the economic development component of the project is really important, measures are being taken to empower the subsistence farmers. The project aims to empower them to be in the value chain and improve their lives.

"The ability to impact the person at the lowest rung of the value chain is pretty exciting to me," Smith said.

Watch a video at [www.isp.msu.edu/multimedia](http://www.isp.msu.edu/multimedia)
For more than thirty years, researchers participating in a USAID-sponsored program managed by Michigan State University have been working to alleviate hunger and poverty through science and the study of the simple bean. Their successful efforts recently earned a $24.5 million award from the U.S. Agency for International Development (USAID), continuing MSU’s long-term commitment to helping developing nations find sustainable and secure food sources.

The Feed the Future Innovation Lab for Collaborative Research on Grain Legumes—commonly referred to as the Legume Innovation Lab—manages more than 10 projects at universities throughout the United States. These projects aim to increase the productivity of beans and other grain legumes (cowpea, pigeonpea, etc.) as well as help smallholder farmers market their beans to increase household income.

WHY BEANS?

Irvin Widders, MSU professor of horticulture and director of the Legume Innovation Lab, explained, “Beans and related legumes are critical crops in developing countries. They are nutrient-dense, staple foods that help ensure household food and nutritional security while providing needed household income, especially for women, who are the principle producers of grain legumes in many regions of the world.”

In a nutshell, the multifunctionality of grain legumes makes them almost a perfect crop nutritionally, economically and environmentally.

Grain legumes are high in protein, complex carbohydrates, vitamins and minerals, and dietary fiber—and are the primary and most affordable source of protein for the world’s poor, who lack the resources to purchase meat or keep livestock.

As a plant, legumes contribute to sustainable cropping systems, meaning that their impact on agrological ecosystems isn’t adverse. In fact, legumes often enhance the soil they grow in by biologically fixing nitrogen from the air and making it available in the soil to plants, which lessens the need for chemical fertilizers. Their water requirements are also low when measured on a per-unit of protein basis, especially when compared to animals and maize.

The advantages to growing, consuming and marketing grain legumes in the developing world are clear. But growing and marketing legumes is not without challenges, some very serious. Climate change, insect pests, plant diseases and poor soil quality are among the numerous difficulties that resource-poor farmers face, usually without adequate tools or knowledge to overcome these challenges.

THE LEGUME INNOVATION LAB

When the U.S. government pledged to address world hunger through the Feed the Future initiative in 2009, it recognized that any serious attempt to fight hunger and end poverty required a renewed focus on agriculture. Food aid could no longer just consist of sharing the abundance of first-world harvests; local farmers and local communities needed to be empowered to advance their own farms and, ultimately, their own economies.

Consequently, collaborations and partnerships with universities, agricultural research networks, local governments and NGOs were expanded. Collaborations with USAID Missions and the Consultative Group on International Agricultural Research (CGIAR) Consortium international agriculture research centers ensure that the lab’s work meets the greatest needs—and can make a practical difference in the lives of the poorest of the poor.

“Unless the research makes a difference on the ground, it’s of little value in this program,” said Widders. Incredible research work is not enough for the Legume Innovation Lab; it must have outputs that can be applied in developing countries.”

Key research areas include genetics, plant breeding, soil health, integrated pest management, human nutrition and marketing. Collaboration between lab and social scientists ensures that the research doesn’t get lost in the boundary between laboratory and bean fields.

Recent work includes the introduction of improved, high-yielding bean varieties with resistance to viruses along with the creation of community seed banks that have provided more than 100,000 farmers access to quality seed of these improved varieties in Central America. Work has also been conducted in Angola, Burkina Faso, Mozambique, Niger, Rwanda, Tanzania and Uganda.

Over the next four-plus years, the Legume Innovation Lab will continue to partner with scientists in developing countries. The goal is to increase the productivity of grain legumes, ensure greater and more widespread nutritional health especially of young children, and help smallholder farmers and local economies expand through the production of greater quantities of high-quality beans and other legumes.

Watch a video at www.isp.msu.edu/multimedia
Michigan State University is using a $9.3 million federal grant to cultivate the next generation of agricultural scientists in Africa and Asia, in hopes of improving food security and nutrition there.

The new Borlaug Higher Education Agricultural Research and Development program, named after Nobel Peace Prize laureate Norman Borlaug, is funded by the U.S. Agency for International Development’s (USAID) Bureau for Food Security. Part of Feed the Future, the U.S. government’s global hunger and food security initiative, the program will strengthen agricultural research institutions and promote institutional capacity through long-term training of agricultural researchers at the master’s and doctoral degree levels.

The first cohort of 30 trainees from Bangladesh, Cambodia, Ghana, Mozambique and Uganda will begin study at U.S. universities in the academic year beginning August 2013. Mali and Malawi will join the BHEARD for placement of trainees in August 2014.

“MSU has 50-plus years of engagement in Africa, and we’re currently managing several M.S. and Ph.D. training programs whose objectives and program design are similar to those of this initiative,” Crawford said. “MSU faculty are well versed in planning, designing and managing training and human capacity-building programs, especially in plant breeding, food science and food security, which are key areas of feed the Future.”

The 30 trainees (24 Ph.D. candidates and six master’s students) for the 2013-14 academic year have been placed in ten U.S. universities that focus on research, education and outreach in agriculture degree programs.

“Women remain underrepresented in agriculture research,” said Crawford. “The BHEARD program has made efforts to ensure participation of women candidates.”

The first cohort of 30 candidates includes 12 women. Women remain underrepresented in agricultural research, so the MSU-designed program will be gender inclusive.

“MSU has 50-plus years of engagement in Africa, and we’re currently managing several M.S. and Ph.D. training programs whose objectives and program design are similar to those of this initiative.”

Crawford said

“An important part of the project will be to help create a network of fellows that links them together across universities and disciplinary areas, as the basis for sharing experiences and developing long-term professional relationships,” Crawford said.

The program was developed by USAID along with the Association of Public and Land-Grant Universities and the International Center for Maize and Wheat Improvement in Mexico.

"MSU LEADING NEW FEDERAL FOOD SECURITY PROGRAM"

The government of Malawi has indicated that the country’s dairy farming is facing numerous challenges that are paralyzing its growth. One area needing improvement is the technical know-how of its farmers. A new Tri-Regional Academic Partnership in Dairy Value Chain between Lilingua University of Agriculture and National Resources (LUANAR), Michigan State University and India’s Tamil Nadu Veterinary and Animal Sciences University (TANVAS) aims to help with that know-how by building up the needed expertise within Malawi’s dairy industry. The team is introducing a certificate program in dairy value chain management at LUANAR and they will pilot test projects to evaluate new technologies in dairy production that have proven to be successful in India. The program was launched with funding from United States Agency for International Development (USAID) and the United States Department of Agriculture (USDA).

"MSU COLLABORATES TO SUPPORT DAIRY FARMING IN MALAWI"

Innoveristy was convened in Detroit from Detroit, Hyderabad, Nairobi, Johannesburg, Amsterdam, and Singapore. This initiative was based on exchanging ideas, identifying priorities and discussing funding options to develop a program of food system innovation to promote local economic development, land recovery and food security. Through the Global Innoveristy, each metropolitan region will develop their own program, with their own branding and identity, to operate consistently with operating principles of the initiative, and become the source of local innovation and feed into the global network to encourage further innovation.

"BUILDING STRONGER POLICIES TO FIGHT GLOBAL HUNGER"

As part of Feed the Future, the federal government’s global hunger and food security initiative, Michigan State University will use a $10 million grant from the U.S. Agency for International Development to strengthen developing countries’ abilities to fight hunger through improved food policy. The new Feed the Future Innovation Lab for Food Security Policy will be led by MSU’s Food Security Group, partnering with the International Food Policy Research Institute, in Washington, D.C., and the University of Pretoria, in South Africa. An additional $15 million of grant funding could be made available for more intensive country-level programs throughout the next five years. See more at: http://msutoday.msu.edu/news/2013/building-stronger-policies-to-fight-global-hunger/ #ishash.wdUSQISBdpzv.

"IMPROVING FOOD SAFETY IN SAUDI ARABIA"

A partnership of MSU with the Saudi Food and Drug Authority (SFDA), a Saudi Arabian government authority, is focused on increasing the capacity as the national food security regulator in Saudi Arabia as well as the whole Gulf Region.

The food security researchers and educators from MSU along with SFDA will be responsible for regulating the food, feed and pesticides in addition to drugs and medical devices.

“This is an exciting opportunity to apply MSU’s renowned international expertise in food safety to enhance Saudi Arabia’s knowledge base and regulatory infrastructure,” said Frederik Derksen, professor and chairperson of MSU’s food science and human nutrition department.

This initiative will coordinate several programs to educate Saudi Arabian food industry professionals, conduct training through internships and technical advising and guide the SFDA to establish a regional food safety academy. The MSU research scientists focus on pre-harvest food safety through food processing standards and policies.
THE MASTERCARD FOUNDATION SCHOLARS PROGRAM
MSU is a partner in the MasterCard Foundation’s global network of educational institutions and non-profit organizations who believe that education is a catalyst for social and economic betterment. In addition to MSU, The Scholars Program includes: American University of Beirut – Faculty of Health Sciences, Arizona State University; Ashesi University; BRAC Uganda, Camfed, Duke University; EARTH University; McGill University; MSU, Stanford University; University of California-Berkeley, The University of British Columbia, University of Toronto and Wellesley College. The program also includes a partnership with African Leadership Academy to develop an African-based careers network for scholars to access internships and jobs across the continent.

BORLAUG HIGHER EDUCATION AGRICULTURAL RESEARCH AND DEVELOPMENT PROGRAM
MSU was selected to implement the United States Agency for International Development’s (USAID) Borlaug Higher Education Agricultural Research and Development (HESN) Program. The program will support long-term training of agricultural researchers at the master’s and doctoral levels and will link scientific and higher education communities in Feed the Future countries and the United States. The program is working with USAID missions in Ghana, Uganda, Mali, Mozambique, and Bangladesh.

THE AFRICAN BIO-SAFETY NETWORK
MSU and the University of Groningen are the educational partners for the African Bio-safety Network (ABNE), an Africa-based, Africaned and Africa owned initiative established by the African Union’s New Partnership for Africa’s Development. ABNE’s goal is to build functional biosafety systems so that Africa can benefit from the safe deployment of new science and technologies for agricultural development. ABNE is currently working in Burkina Faso, Ghana, Kenya, Malawi, Mali, Mozambique, Nigeria, Tanzania, Togo and Uganda. The project is funded by the Bill and Melinda Gates Foundation.

PARTNERSHIP FOR SUSTAINABLE COMMUNITY DEVELOPMENT
This privately funded partnership is bringing together several colleges at MSU, Sokoine University, Dar es Salaam University College of Education, the Aga Khan Foundation and two villages in Tanzania (Miola and Natolai) to better understand and support community resilience. While the partners are addressing local challenges, their ultimate goal is to create a model for community development that can be shaped for different communities where different local conditions exist.

HIGHER EDUCATION SOLUTIONS NETWORK
In 2012, MSU was selected by USAID to become a member of the Higher Education Solutions Network (HESN). Through HESN, USAID hopes to harness the intellectual capacity of American and international research and educational institutions to help solve the most pressing global development problems. Through HESN, MSU is connected to the College of William and Mary, Duke University, Massachusetts Institute of Technology, MSU, Texas A&M, University of California Berkley and Makerere University in Uganda.

GLOBAL CENTER FOR FOOD SYSTEMS INNOVATION
As a USAID Higher Education Solutions Network lab, the Global Center for Food Systems at MSU focuses on generating solutions to the most critical problems facing the world’s food systems. The Center’s partners include: Sokoine University of Agriculture, Tanzania; Wageningen University and Research Centre, The Netherlands; and The Energy and Resources Institute, India. Resource partners include CRDF, Lincoln University, QED and the University of Pretoria.

INTERNATIONAL CENTERS OF EXCELLENCE FOR MALARIA RESEARCH
Through funding from the National Institutes of Health, MSU is part of a network of 10 International Centers of Excellence for Malaria Research, which are located in regions of the world where malaria is endemic. These research centers include: Malaria Transmission and the Impact of Control Efforts in Southern Africa, Center for the Study of Complex Malaria in India, Southeast Asia Malaria Research Center, Program for Resistance, Immunology, Surveillance & Modeling of Malaria in Uganda, Latin American Center for Malaria Research and Control, Research to Control and Eliminate Malaria in SE Asia and SW Pacific, Population-based Approach to Malaria Research and Control in West Africa, Malaria Evolution in South Asia, Determinants of Malaria Disease in Malawi and Peru, Vannian/Brazilian Amazon Center of Excellence in Malaria.

CENTER FOR GLOBAL CHANGE & EARTH OBSERVATIONS
Through a university-wide interdisciplinary research center, MSU has formed partnerships with several global institutes and labs to study and respond to global and regional scale environmental change issues. Collaborators in this work include: International Livestock Research Institute, Consultative Group on International Agricultural Research, Northern Eurasia Earth Science Partnership Initiative, Geographic Information Science Center of Excellence, South Dakota State University, Zhejiang University, National Remote Sensing Center of China, Institute of Geographic Sciences and Natural Resource Research – CAS, Landcare Research Maark Whenua and Applied Geosolutions, LLC.

At MSU we seek strategic partnerships to build global consortia of faculty, students, universities, government agencies, non-governmental organizations, foundations and private corporations. This network of networks is represented here with examples of our multi-continent, problem-solving consortiums.
Since 1999, International Studies and Programs, in cooperation with the MSU Alumni Association, has sponsored an annual international photography competition for MSU students, faculty and alumni. In October of each year hundreds of entries are received and evaluated by a panel of jurors who represent the ideals of MSU faculty, staff, students and professional photographers.

We are inspired by this year’s collection of winners. These photos, as well as 300 images from previous competitions, are displayed in our virtual gallery online.

www.isp.msu.edu/photocontest
STUDENTS

WINNERS
Student 01 1st place
“In the Maya”
Kenya, 2012
CAYLA JOHNSON

Student 02 2nd place
“Grimsel Canyon”
Switzerland, 2012
CHRISTY VAN ESLEY

Student 03 3rd place
“Himba Woman”
Nambia, 2012
SOLENE INCEOGLU

HONORABLE MENTIONS
Student 04
“Celebration of the Body”
Peru, 2012
ZACHARY TOMCZYK

Student 05
“Donkey Cart”
China, 2012
ZONGHENG PU

Student 06
“Myndre Beedi Factory”
India, 2012
ELISA THORP

PEOPLE’S CHOICE
Alumni 07
“Ka ‘bah”
Saudi Arabia, 2006
ASIM ALWUJRI
2012 GLOBAL FOCUS WINNERS

ALUMNI

WINNERS
Alumni 01 1st place
“Festival Dancers”
Bhutan, 2008
DONALD ROBERTS

Alumni 02 2nd place
“Man on the Street”
Bolivia, 2011
BETHANY ROBERTS

Alumni 03 3rd place
“Thatched Stone House”
Peru, 2008
BETHANY ROBERTS

HONORABLE MENTION
Alumni 04
“Hanami in Gion”
Japan, 2011
SARAH HODGE

Alumni 05
“Up to the Donkey Station”
Greece, 2012
GABRIEL FERRER

Alumni 06
“Child at the Construction Site”
Bhutan, 2008
DONALD ROBERTS

PEOPLE’S CHOICE
Alumni 07
“A Nun’s Stroll”
Greece, 2012
GABRIEL FERRER

FACULTY/STAFF

WINNERS
Faculty 01 1st Place
“Grocery Shopping”
Indonesia, 2012
SIDDHARTH CHANDRA

Faculty 02 2nd place
“Rajasthani Goatherd”
India, 2011
RAJESH KORDE

Faculty 03 3rd place
“Stone Mushroom”
Taiwan, 2002
NEIL LEIGHTON

HONORABLE MENTIONS
Faculty 04
“Street Singer”
India, 2012
RAJESH KORDE

Faculty 05
“Chica Ayudanta - Little Helper”
Mexico, 2009
JOHN FUNKHOUSER

Faculty 06
“Creative Mooring During Record Flood”
Brazil, 2012
ANDREA FUNKHOUSER

PEOPLE’S CHOICE
Faculty 07
“Masai Cowherd”
Kenya, 2012
RAJESH KORDE
DIRECTORY

Dean’s Office, International Studies and Programs
207 International Center
T: 517.353.2350 · F: 517.353.7254
infonew@isp.msu.edu
www.isp.msu.edu

Communications Office
T: 517.884.2135

Advancement Office
T: 517.432.7091
dietri48@msu.edu

Office of International Research Collaboration
T: 517.432.9184 · F: 517.353.7254

African Studies Center
100 International Center
T: 517.353.1700 · F: 517.432.1209
africa@msu.edu
www.africa.isp.msu.edu

Asian Studies Center
301 International Center
T: 517.353.1680 · F: 517.432.2659
asiansc@msu.edu
www.asia.isp.msu.edu

Office of China Programs
301 International Center
T: 517.432.4792 · F: 517.353.7254
china@msu.edu
www.china.isp.msu.edu

Canadian Studies Center
306 International Center
T: 517.353.9349 · F: 517.432.8249
csc@msu.edu
www.canadianstudies.isp.msu.edu

Center for Advanced Study of International Development
202 International Center
T: 517.353.5925 · F: 517.353.8765
casid@msu.edu
www.casid.isp.msu.edu

Center for European, Russian, Eurasian Studies
304 International Center
T: 517.355.3277 · F: 517.432.8249
cers@msu.edu
www.cers.isp.msu.edu

Muslim Studies Program
304 International Center
T: 517.355.3277 · F: 517.432.8249
muslimst@msu.edu
www.isp.msu.edu/muslimstudies

Center for Gender in Global Context
206 International Center
T: 517.353.5040 · F: 517.432.4845
gencon@msu.edu
www.gencon.isp.msu.edu

Global Center for Food Systems Innovation
207 International Center
T: 517.884.7389
gcfs@msu.edu

Center for International Business Education and Research
7 Eppley Center
T: 517.353.4336 · F: 517.432.1009
ciber@msu.edu
www.ciber.msu.edu

Center for Language Teaching Advancement (CeLTA)
A-631 Wells Hall
T: 517.432.6770 · F: 517.432.6772
info@celta.msu.edu
www.celta.msu.edu

Center for Language Education and Research
101 UPLA Building
T: 517.432.0473
clear@msu.edu
www.clear.msu.edu

Center for Latin American and Caribbean Studies
300 International Center
T: 517.353.1690 · F: 517.432.7471
clacs@msu.edu
www.latinamerica.isp.msu.edu

Community Volunteers for International Programs
300 F/G International Center
T: 517.353.1720 · F: 517.353.1735
cvip@msu.edu
www.cvip.isp.msu.edu

English Language Center
A-106 Wells Hall
T: 517.353.0800 · F: 517.432.1149
elc@msu.edu
www.elc.msu.edu

Institute of International Agriculture
319 Agriculture Hall
T: 517.355.0174 · F: 517.353.1888
iia@msu.edu
www.iia.msu.edu

Institute of International Health
B301 West Fee Hall
T: 517.353.1894 · F: 517.353.5040
iih@msu.edu
www.isp.msu.edu/unit/iih

Japan Center for Michigan Universities
110 International Center
T: 517.355.4654 · F: 517.353.8727
cmu@msu.edu
www.cmu.isp.msu.edu

MasterCard Foundation Scholars Program at MSU
xxx International Center
T: 517.355.2350
mscfs@msu.edu
mscfchs@msu.edu

Office for International Students and Scholars
103 International Center
T: 517.355.4657 · F: 517.353.1720
oiss@msu.edu
www.oiss.isp.msu.edu

Office of International Studies in Education
517 Erickson Hall
T: 517.353.6393 · F: 517.353.6393
www.ed-web3.educ.msu.edu/international

Office of Study Abroad
109 International Center
T: 517.353.2082 · F: 517.432.2082
studyabroad@msu.edu
www.studyabroad.isp.msu.edu

Peace Corps Office
202 International Center
T: 517.353.8765 · F: 517.353.8765
msumepeace@msu.edu
www.peacecorps.isp.msu.edu

Visiting International Professional Program
1 International Center
T: 517.432.3663 · F: 517.353.3010
vipp@msu.edu
www.vipp.isp.msu.edu

Volunteer English Tutoring Program
310A International Center
T: 517.353.7254 · F: 517.353.8243
vetp@msu.edu