

BOARD FOR INTERNATIONAL FOOD AND AGRICULTURAL DEVELOPMENT

Building an Evidence Base for Resilience under the Global Food Security Strategy

Meeting Minutes

Des Moines Downtown Marriott | Davenport and Dubuque Rooms
700 Grand Ave. | Des Moines, IA 50309
October 17, 2017

(video recording at <https://www.youtube.com/watch?v=9CYKMtTKnA&feature=youtu.be>)

BOARD MEMBERS PRESENT:

Brady Deaton, Board Chairman, Chancellor Emeritus, University of Missouri
Gebisa Ejeta, Distinguished Professor, Purdue University
Pamela K. Anderson, Director General Emeritus, International Potato Center
Harold Martin, Chancellor, North Carolina A&T State University (joined by phone)

SPEAKERS:

Beth Dunford
Greg Collins
Jon Kurtz
Tim Frankenburger
Nancy Mock

Welcome and Opening Remarks

Brady Deaton, Board Chairman, Chancellor Emeritus, University of Missouri

Dr. Brady Deaton welcomed attendees, both those in person and those attending online through Agrilinks on the livestream. Dr. Deaton reminded attendees to submit questions via Twitter, Agrilinks or email. He then introduced Board members Drs. Gebisa Ejeta and Pamela Anderson, who attended in person, and Dr. Harold Martin, who was joining the meeting by phone.

Dr. Deaton then shared the rationale for why BIFAD chose to focus on resilience as a topic. The board believes it is critical to look at systems that can address the problems of poverty and global food insecurity and to approach systems and problem solving from a trans-disciplinary perspective. Resilience has been embraced by USAID and will remain a critical area of focus for BIFAD moving into future. BIFAD was created in 1975 to link the higher education system to the work of USAID worldwide, and BIFAD wants to continue to strengthen this relationship.

Chairman Deaton then introduced Drs. Clara Cohen, Rob Bertram, and others from USAID in the room, and recognized APLU staff supporting the meeting.

Chairman Deaton then introduced Dr. Gebisa Ejeta to announce the winners of the BIFAD Award for Scientific Excellence.

BIFAD Award for Scientific Excellence

Gebisa Ejeta, Distinguished Professor, Purdue University

Dr. Ejeta shared that he was standing in for the chair of the BIFAD awards sub-committee, Dr. Waded Cruzado, President of Montana State University.

He shared that he has known Dr. Adesina since he was a graduate student at Purdue University. Dr. Adesina's Ph.D. and Master's were funded by USAID and by the Collaborative Research Support Program system.

Dr. Ejeta continued that the 2017 BIFAD Awards will be awarded publicly at a future BIFAD public meeting, but BIFAD wanted to recognize the award winners at today's event.

Dr. Ejeta then announced that the 2017 BIFAD Award for Scientific Excellence in a Feed the Future Innovation Lab was awarded to Drs. James Beaver and Juan Carlos Rosas. Dr. Beaver is a Professor at the University of Puerto Rico and Dr. Rosas is a Professor at the Pan American Agricultural University in Honduras. They worked in the Feed the Future Innovation Lab for Collaborative Research on Grain Legumes, led by Michigan State University, and will be working with the Feed the Future Innovation Lab for Climate-Resilient Beans, led by the Pennsylvania State University.

Dr. Ejeta then presented the BIFAD Award for Graduate Research to Mr. Laouali Amadou. Mr. Amadou is a Ph.D. candidate at the University of Maradi in Niger. He worked in both the Feed the Future Sorghum and Millet Innovation Lab led by Kansas State University as well as in a six month 'sandwich' research training program at Virginia Tech University.

Chairman Deaton returned the stage following the presentation of the awards and shared that he felt a sense of pride in seeing the accomplishment of colleagues and young scientists.

Update on US Government's Global Food Security Strategy

Dr. Beth Dunford, Assistant to the Administrator for the Bureau for Food Security

BIFAD Chairman Deaton introduced Dr. Beth Dunford, Assistant to the Administrator for the Bureau for Food Security and Deputy Coordinator for Development for Feed the Future to give an update on the Global Food Security Strategy.

Dr. Dunford thanked the BIFAD members for their ongoing efforts and congratulated the BIFAD Scientific Excellence award recipients.

The Global Food Security Act was passed in 2016, which codified into law efforts that Feed the Future has been undertaking since 2010. Feed the Future's approach has focused on country ownership, partnership, and investments in science and technology, and has delivered great results, including a 19 percent reduction in poverty in the areas where Feed the Future works. However, there are urgent issues that still need to be addressed today—such as the fact that 100 million people this year are in need of emergency food assistance, which is the most since

World War II. The passing of the Global Food Security Act was an important step towards continuing to address these issues with bi-partisan support.

Dr. Dunford stressed the importance of finding new and innovative ways to address food and nutrition security, especially knowing that the world population is continuing to grow rapidly. She noted that the higher education community is a critical partner to developing innovative solutions to food security issues, and she indicated that benefits from research abroad are now coming back to help farmers in the US, mainly through the 24 Feed the Future Innovation Labs.

The U.S. Government's Global Food Security Research Strategy, which was developed to support the goals of the Global Food Security Strategy (GFSS), was launched at the BIFAD meeting in September 2017 and focuses on advancing productivity, reducing and managing risk, and improving knowledge of how to achieve human outcomes in economic opportunity, nutrition, and resilience.

Homing in on goal to achieve resilience, Dr. Dunford noted that investments in resilience are already paying dividends in places like Kenya and Ethiopia, where they align and support country-led investments to strengthen resilience. Proactive responses, coupled with long-term investments, allow countries to maintain food security status through natural stresses and disasters. Dr. Dunford once again noted the importance of partnerships with the higher education community and expressed appreciation for their continued partnership on resilience research going forward.

Dr. Dunford then responded to questions from BIFAD Members and the audience.

- Dr. Pamela Anderson asked, "How do we make sure we are getting cross-linkages among the three pillars of productivity, health, and resilience, and not creating siloed efforts?" Dr. Dunford noted that the three objectives—inclusive agriculture-led economic growth, resilience, and nutrition—are very interlinked. She noted that it is incumbent on programs to be set up to address these issues in a cross-cutting way.
- Dr. Anderson replied, asking if there are any shared metrics within the measurement framework. Dr. Dunford noted that the indicators are still being set up, but as of now they do focus on each specific objective separately. However, each entity will report on all three objectives.
- An audience member asked how to link these three pillars to national security and stability issues in countries such as Somalia. Dr. Dunford noted that there is a complex relationship between food security and conflict. She said providing broader economic opportunities related to agriculture can have positive impacts on security. The audience member replied that it would be good if there were indicators that specifically measured that impact.
- Another audience member asked "How is food loss/waste addressed in the resilience strategy?" Dr. Dunford replied that the strategy does focus very heavily on post-harvest losses. One example she mentioned is the Purdue Improved Crop Storage (PICS) bag from Purdue University, which is a low-cost, innovative technology enabling farmers to store grain in a safe and protected way to minimize loss.
- An audience member from Texas Tech asked about the double burden of malnutrition and obesity. Dr. Dunford noted that the focus is more on undernutrition, specifically on the first 1,000 days of life. However, she noted that there is a linkage between undernutrition early in life and obesity later in life.
- An audience member asked whether USAID has been involved in the New Way of Working (NWOW) Initiative, which is looking at coordination between humanitarian, development, and peacebuilding sectors. Dr. Dunford noted that this would be addressed in a later session.

Dr. Deaton noted his excitement at the progress that has been made and thanked Dr. Dunford for her presentation.

Overview of USAID Resilience Programming under the GFSS

Dr. Greg Collins, Director of the Center for Resilience, USAID

Following a short break, BIFAD Chairman Brady Deaton introduced Dr. Greg Collins, Director of the Center for Resilience, USAID for the afternoon presentation and panel.

Dr. Collins noted that a lot of emphasis has been placed on resilience over the past few years, and that the evidence base is growing around resilience, ensuring that it will stay a top priority in years to come. Dr. Collins introduced the panelists for the afternoon session. He was joined onstage by Mr. Jon Kurtz, Director of Research and Learning at Mercy Corps; Mr. Tim Frankenberger, President and Co-Founder of TANGO International, with over 35 years of experience in international development, formerly at CARE; and Dr. Nancy Mock, Tulane University, an international development professional with 40 years of experience in over 30 countries, who has established many different areas of resources at Tulane University.

Dr. Collins started the session after introductions with a presentation entitled 'Building Resilience to Recurrent Crises (and Beyond)'. He defined resilience as "the ability of people, countries, and communities to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth."

He made three key points. First, he noted that there is a growing evidence base concerning resilience planning that shows that an ounce of prevention is worth a pound of cure. A 2013 DFID study estimated that every dollar invested in resilience over the long term will result in 2.9 dollars in reduced humanitarian assistance, avoided losses, and improved wellbeing. The Overseas Development Institute also has research that shows that the rate of poverty backsliding—the rate at which people escape poverty only to fall back into poverty—is high. Thus, resilience planning is key to making sustainable reductions in poverty.

The second key point Dr. Collins made is that donors play a key role in helping share and shift responsibility to governments, communities, and the private sector by making strong investments that build their capacity to take a lead role in responding to droughts and managing risk.

The final key point of Dr. Collins' presentation was that maintaining 'systems thinking' is both extremely challenging and extremely important, especially in an 'ear-marked' funding world. The way USAID is organized and the way Congress determines funding streams makes coordinating across sectors very difficult. However, the resilience agenda is helping to bridge some of these gaps. Sources of resilience, such as social capital, women's empowerment, and aspiration, transcend technical sectors.

In terms of measuring resilience, resilience is not an outcome and thus is not measured as an outcome, but rather is an ability that is enabled by a set of capacities that exist at different scales and that are realized in relationship to both large shocks and idiosyncratic stresses, such as health shocks in a household or loss of a wage earner. Large covariate shocks like drought are exposing moments for a much more complex array of shocks and stresses.

Not investing in resilience is measured not just in dollars, but also in the loss of lives, livelihoods and aspirations. Also, there are losses to national and regional economies. A study in Northern Kenya showed that unfettered drought caused 12.1 billion dollars in losses to the economy—these types of studies can motivate local governments to make a change. The cost of recurrent humanitarian assistance from the United States and other donors is also very high, and this is unsustainable over time. Dr. Collins noted that we cannot afford to not invest in resilience across the system.

Dr. Collins then showed geographic zones of recurrent crisis and pointed out how the GFSS approach to resilience differs from regular development and humanitarian assistance, which both contribute to resilience in their own ways. First, the GFSS resilience approach focuses on people/places subject to recurrent crises and recognizes the broader

relevance of resilience to poverty reduction. Second, shocks and stresses are recognized as perennial features, not anomalies, with investments to reduce and manage complex risk. Third, the GFSS resilience approach utilizes joint analysis, planning, and implementation across sectors, with a focus on systems thinking. Programmatic areas of investment include expanding economic opportunities, strengthening governance and local institutions, and improving health and human capital.

The GFSS recognizes many sustainable pathways out of poverty, which include both investing in agricultural production enhancements, as well as moving out of the agricultural sector altogether. Migration plays an important role during shock events. Dr. Collins shared examples regarding the appropriate role of donors in resilience efforts. First, he spoke about a country-led effort in Kenya for resilience for drought emergencies that is matched by other agencies, with about 300 million dollars from USAID. While USAID is an important player, it is not the scale agent, and this is important. The Kenyan government is scaling this effort together with the private sector. Devolution is an important accelerator in Kenya.

Another example is an Ethiopian government program called the Productive Safety Net Program, which has helped move people out of poverty and off safety net programs. USAID helped attract private sector investment into this project. The Ethiopian government also scaled the Feed the Future Graduation program to the whole country.

There is evidence that these types of resilience programs work. During the 2016 El Niño droughts in the Ethiopian Lowlands, evidence demonstrated that households in which there had been comprehensive resilience programming survived with rather small decline in food security status, where households in other areas experienced over 30 percent declines in food security status.

Dr. Collins then discussed the relationship between food security and fragility, conflict and violent extremism. Today, one half of the world's poor live in fragile states. There is a geographic coincidence of recurrent crisis and violent extremism in Africa. It is not happenstance that areas with recurrent crisis are areas where violent extremist groups can thrive, partly because extremist groups exploit these conditions for recruitment. There is a role for these types of resilience programs in addressing the push factors regarding conflict and violent extremism.

Dr. Collins took a few audience questions.

- An audience member from a Kenyan agricultural research organization asked what the priority crops are in Northern Kenya, considering the situation there. Dr. Collins noted that there are some opportunities for dryland farming, but that the primary driver of arid economies is livestock, and that is where investments should be made.
- Online question: A recent scientific review article looked at issues of validation for measures of resilience. What are the most important measures of resilience that university researchers should focus on first? Dr. Collins noted that he would let the panelists take this question.

Emerging Evidence Base on Resilience Panel Discussion

Dr. Greg Collins, Director of the Center for Resilience, USAID (moderator)

Mr. Jon Kurtz, Director of Research and Learning, Mercy Corps

Mr. Tim Frankenburger, President and Co-Founder, TANGO International

Dr. Nancy Mock, Associate Professor, Tulane University

First, Dr. Collins asked the panelists to speak about the basic tenets of resilience measurement and innovative tools being used in that space. Tim Frankenburger noted that improving resilience is not a substitute for good sector-specific interventions. The first important thing to understand in terms of measurement is the specific shocks and stresses to which people are exposed, both subjectively and objectively. It is important to recognize that people's

understanding of shocks can be subjective, as some shocks are not always recognized immediately. For example, drought shock might first be unrecognized or it may be thought that the weather is 'drier than it used to be.' It is also important to recognize that shocks are interconnected: drought may lead to livestock disease that leads to selling off livestock, which affects the local market. By collecting information on a regular basis, researchers can see impacts and how people are coping with the shock (recurrent monitoring systems).

Mr. Frankenburger also noted that people rely on a variety of assets to manage risk, including social capital, human capital, natural resources, physical capital, and political capital. These assets are not unlimited, which is why it is important to understand this range of capabilities and the role they each can play in time. Finally, Mr. Frankenburger indicated that building resilience takes time. It is important for a project to have a 15-year strategy, even if it only has funding for five years. Projects must invest in creating enabling conditions that have transformative capacity and help communities build resilience over a long period of time.

Next, Nancy Mock said that one of the issues with measurement is being able to separate 'signals from noise'. Researchers are getting better at being able to do that and are getting better at identifying how households are responding to shocks. Factors that need to be monitored over time are well-being outcomes.

Jon Kurtz described approaches that use secondary data to look at well-being over time, giving an example in Nepal of using cell-phone data records to help indicate socio-economic status. He also described lower tech, more subjective (qualitative) measures of resilience, such as asking people for their own perspectives on how they have been able to withstand shocks and stresses.

Greg Collins noted that social capital is an important indicator of resilience, i.e., whether families can rely on neighbors or other households in times of need. Is there a reciprocal obligation network that people can lean on? Dr. Collins asked Mr. Frankenburger to talk about the heterogeneity of pathways for developing resilience and how this appears in places like the Horn of Africa.

Mr. Frankenburger noted that his team is trying to build evidence across location and over time, collecting data from many countries and evaluating it to see whether patterns are similar in various locations. He described that greater livelihood diversification (i.e., having a greater variety of income-generating activities) does not necessarily indicate that people are more resilient to shocks and stresses. Rather, engaging in activities that have different risk profiles is key. Mr. Frankenburger also noted that thinking about resilience of urban areas as separate from resilience of rural areas is not helpful; instead, it is necessary to understand the urban-rural continuum and how people in urban areas support work in rural areas, and vice-versa.

Dr. Collins asked Tim Frankenberger about a randomized control trial on migration in Bangladesh. Mr. Frankenberger indicated that one of the factors that prevents poor people from migrating is the cost of transportation and food. A randomized control trial by Innovative Poverty Action and Yale University that gave funding and food to different groups, along with a control group, found that the groups that were given the resources saw migration as a more viable option and were more likely to migrate.

Dr. Collins asked Mr. Frankenberger to give some of the highlights that came out of the Resilience Evidence Forum and describe what areas of work need further investment. Mr. Frankenberger indicated that social capital was an important factor for managing shocks and stresses effectively. Three types of social capital were described: bonding social capital (relationships within a community that provide a social safety net), bridging social capital (a community member that has left the community sends back resources to the community, i.e., remittances), and linking social capital (connections to people in higher places that can help a person get resources more quickly). Mr.

Frankenberger also noted that access to financial services is also an important factor in enabling people to adapt to changing environments.

Dr. Collins asked Nancy Mock to discuss the sources of resilience that transcend sector, such as social capital and women's empowerment, and policy and program modifications coming out of that evidence.

Dr. Mock first discussed the importance of social capital in the recovery of New Orleans neighborhoods after the Hurricane Katrina damage, noting differences in social capital between different ethnic groups. The Vietnamese community in New Orleans in particular took a great deal of collective action to change policy and rebuild. Dr. Mock also noted that while 'traditional' forms of social capital such as community trust and local organizations are giving way to new forms, such as social networks, in developed countries, in most low-income countries traditional forms of social capital are still very important and powerful influences on behaviors. She then indicated that psychological factors such as 'risk perception', confidence to adapt, and self-efficacy have not been given close enough attention in terms of how much they influence resilience. She indicated that some standardization is needed for how to define and measure concepts such as self-efficacy, aspirations, and empowerment.

Dr. Mock also noted some important points that came out of the Resilience Evidence Forum. First, she noted that social capital can negatively influence resilience or create vulnerability at times. Social capital can be negative when 'bonding capital' leads to exclusionary policies, or when social collective action is used in unjust ways, such as in the Rwandan genocide. She also noted that the influence of bridging social capital and linking social capital is more contextualized than bonding social capital. Another finding was that women's empowerment, and particularly reducing gender equity gaps, is important to improving resilience. Aspirations and self-efficacy have also been shown in many studies to be important indicators of resilience.

Dr. Mock noted that there has been a large investment in social capital creation as a by-product of many other interventions (natural resource management, farmers' cooperatives, etc.). The question now is whether the impact of social capital has been maximized. Dr. Mock argued that it has not, but that important questions remain in terms of *how* to create social capital and *how* to influence aspirations and confidence.

Dr. Mock finished with three points about the direction of future investments in this area. First, she noted that researchers should continue to stress the need for panel studies and experiments (as opposed to heavy randomized control trials) in different social and ecological cultural contexts. Second, she recommends taking stock of the diversity of measures being used for psycho-social variables. Finally, she recommends mainstreaming psychological assessments and integrating them into the development of theories of change and implementation strategies.

Next, Mr. Frankenberger briefly spoke about the Bangladesh women's empowerment finding. He noted that women's empowerment made a huge difference with regard to people being able to manage floods in Northern Bangladesh. When women had the ability to make decisions in their own households, they could better manage the floods.

Dr. Collins then asked John Kurtz to describe Mercy Corps' Strategic Resilience Assessment (STRESS) tool, which tries to get at the complexity of measuring resilience. Mr. Kurtz noted that STRESS incorporates a strong focus on understanding risks and that it is an assessment process that looks at systemic issues on which people rely that are barriers in their ability to cope with risk. He gave an example of when the tool was implemented in Karamoja. In terms of understanding risks, some risks are obvious, such as drought, conflict, and livestock disease, whereas others—such as the risks associated with transitioning livelihoods from pastoralism to more settled agricultural livelihoods—are less obvious. This transition led to the risk of higher vulnerability to drought. Similarly, opening new lands to

cultivation has effects on soil quality and grazing availability, which leads to risks in the long term. The STRESS tool helped show that even a 'smart' development strategy has risk associated with it.

Dr. Collins gave another example from Western Nepal, where Mercy Corps has a major food security program. This program focused on alternative livelihoods through access to financial services, as well as strengthening risk management. The STRESS tool in this case helped spotlight structural issues around political systems that were barriers to achievement. The strict gender and caste norms, and inequitable governance in some areas made it so that some castes could not have access to markets and financial services, no matter how much Mercy Corps invested in those areas. Thus, Mercy Corps shifted focus to building the agency and voice of disenfranchised groups.

Dr. Mock then spoke about the efforts of U.S. universities to help build resilience in developing countries, mentioning specifically the effectiveness of higher education partnership programs to build resilient higher education institutes in low-income countries. Dr. Mock noted the importance of having an organizational development strategy when implementing these partnerships, especially given the low level of donor funding that is invested in higher education in low-income countries.

Mr. Frankenburger mentioned that systems thinking within universities is not always easy, and this often has to do with the fact that incentive structures in higher education do not necessarily reward cross-sectoral research and partnerships. Though 'systems-oriented' thinking is often touted as important, especially when addressing issues such as food security and resilience, Mr. Frankenburger noted that it will never truly be prioritized until it is properly incentivized in structures.

Dr. Collins noted that these same structural challenges exist in donor agencies and make it tough to work cross-sectorally. He noted cross-ministerial bodies that have been set up in such countries as Kenya and Niger to address complex challenges. While these bodies are not always effective at the national level due to power dynamics, Dr. Collins noted that they have much more success at the local level.

Dr. Collins then turned to the audience members for questions.

- Kwesi Atta-Krah from IITA asked, "how can we demystify what resilience actually stands for and ensure that the concept of resilience does not become a discipline of its own? How can we integrate resilience thinking across the spectrum?" He noted the importance of thinking about mechanisms to ensure that partnerships bring multi-sectoral entities to work together. He also mentioned the importance of linking resilience efforts to the priorities of various government bodies to ensure they percolate through the system. Dr. Collins noted that a powerful way to 'demystify' resilience is to support international exchanges, so that the government in Haiti, for instance, can see what the government of Kenya is doing in resilience. Mr. Frankenburger noted that his team is trying to help people think about resilience as a means, and not an end; in essence, applying a 'resilience lens' to many different sectors.
- Sulemana Alhassan from Ghana mentioned resilience projects that have been implemented successfully in Northern Ghana but noted that post-harvest loss reduction has not been enough of a priority in these projects. Dr. Collins noted that he is familiar with this program and agreed that post-harvest loss reduction is an important piece of the puzzle.
- Tobelah Nkukwana, a professor of nutrition from the University of Pretoria, South Africa, said that the problems faced by most developing countries result from a lack of adoption and use of technologies that are brought on as intervention strategies. She mentioned a lack of cohesion between what national governments are doing and what communities on the ground are doing. Information about improved technologies is available; however, it is often not brought down to the community level. Dr. Mock noted that higher education can help transfer that capacity and teach people on the ground about resilience strategies.

Next, the BIFAD members gave some comments and asked questions.

- Dr. Pamela Anderson asked a question about scale. She noted that there have been tensions with bringing things 'to scale' nationally, when many of these issues are highly contextualized. She asked whether we should be thinking of 'scaling out' an approach, instead of 'scaling up' a specific intervention. Dr. Collins noted that large donors can often get confused and think that they are the scale agent, when, really, partner governments should be the scale agent. Administrator Mark Green speaks to this when he talks about having a long-term vision of success, where eventually development assistance is no longer necessary, rather than a project-specific vision.
- Gebisa Ejeta commented that it is a lot easier to build cross-sectoral partnerships when focused on the 'how to', i.e., the solution, rather than the problem. He also commented that in a world with limited resources, the value addition that comes out of resilient research is extremely important. Mr. Frankenburger agreed that having a problem-solving partnership is very powerful. Dr. Mock added that programs can be set up to incentivize that kind of problem-solving partnership and that these programs can be very cost-efficient. Dr. Collins commented that Kenya effectively encouraged this type of partnership in 2012 with its Ending Drought Emergencies program; recurring drought was a problem that motivated people to come together across ministries and sectors to solve urgent problems.

Discussion Period

Brady Deaton, University of Missouri, BIFAD (moderator)

BIFAD Chair Brady Deaton thanked the panel and then offered some reflections. He shared that it is clear that there are important roles for NGOs, the private sector, universities, cooperative, and entrepreneurship sectors as we look at the behavioral and economic aspects of resilience. He emphasized BIFAD's interest in continuing to explore the expanded role that universities play on this critical issue. Renewed attention is needed to an approach that can more effectively fuel transdisciplinary work in our universities to break the various cycles of poverty and influence an increased stream of human capital. New research has come along and been presented at this panel which emphasize the importance of re-examining the behavioral aspects of economics, as well as the university-level "leadership machine." He noted that rethinking the issues and thinking about things more collaboratively will bring a higher rate of return than any one specific technological intervention. He also stressed the importance of working with partners around the world to undertake this work. Without partnerships, we would be shortchanging the local investments that are being made.

- Richard Klaber asked what is missing from the resilience model and who is missing from helping the university community with the model. He offered the intelligence and technology communities as two possible examples. Dr. Collins noted that this is a very important question, and USAID is beginning to work in extremely fragile areas such as Northeastern Nigeria to ensure that development intervention is occurring in places that have long been dismissed. Dr. Anderson noted that in some ways USAID is returning to its roots of serving countries and communities most in need, and this is an important point for USAID to stress.
- An unknown audience member asked, "When trying to engage the private sector, how do we bring people up to speed on the knowledge base needed to effectively engage development partners in order to get the best products?"
- Anthony Zwi, a professor of global health and development from the University of New South Wales in Sydney, noted that the Sustainable Development Goals were not mentioned, and he asked whether the SDG focus on 'leaving no one behind' is relevant to this discussion. Dr. Deaton noted that this meeting was focused on resilience but that a BIFAD meeting the prior year focused on the Sustainable Development Goals. Tim Frankenburger noted that all of the major donors are focused on resilience and that the SDGs are very loosely defined, so governments are figuring out how to operationalize them. The resilience

discussion is very important as governments do this work. Greg Collins clarified that resilience is not an outcome but a set of essential investments that the development community and others are coming to see as necessary to achieve the SDGs.

- Dr. Mock commented that the IT/Technology sector has a lot to offer to resilience, specifically regarding education and training platforms.
- Dr. Ejeta noted that the capacity for faculty and infrastructure for education and research in higher education institutions in developing countries is poor, and thus, these institutions are producing graduates with limited skills and capacities. These graduates are the ones that will be their country's leaders down the road, so it is critical that investments to strengthen higher education institutions are made now. Dr. Mock also noted that higher education investments are not very expensive compared to other investments and are sustainable. Dr. Deaton added that although funding is always a challenge, overcoming mindsets on issues is also a challenge. Steps should be formalized or at least highlighted so that data that we have are shared and used strategically across NGOs, government agencies and others.
- An online listener asked how to promote long-term, integrated models of resilience in the short term, fluctuating policy environment. Dr. Deaton noted that the discussion today can be one set of tools that can enable us to take a longer-term view of resilience. Dr. Collins noted that he has been heartened by Administrator Green's vision to help countries build capacity over time to deal with challenges themselves.
- Online listener Gretchen Noth from Crown Agents USA asked how resilience strategies vary based on whether shocks are systemic and widespread or localized at the household level? Dr. Mock answered that, yes, strategies are different depending on the scale of shock or stress. Bonding social capital is an important tool for idiosyncratic stresses. Dr. Collins noted that one of the problems in how the development community approaches shocks and stresses is that it tends to view them in a piecemeal way, i.e., a 'climate' risk, or a 'health' risk, but this is not how shocks are experienced. They are experienced holistically.
- Dr. Anderson noted that she would like to see a 'systems-thinking' course as a requirement at universities. The way we are educated in the U.S. is so disciplinary and compartmentalized, and it does a disservice to addressing these issues. Dr. Ejeta noted that Purdue University and Haramaya University created a partnership program in climate-smart agriculture, and one of the courses taught is "Principles and Methods of Understanding Resilience."
- Grace Burton from the Chicago Council noted that the numbers that came out a few months showing that Feed the Future farmers in Ethiopia were more resilient than other farmers were very encouraging. She asked, "When thinking about extension, how do we get data from farmers in order to reach areas that are not data rich?" Dr. Deaton asked panelists to share where they have gotten data from in their projects. Tim Frankenburger noted that in many countries, USAID has been collecting primary data using randomized control trials. He also noted the importance of reexamining existing data with a resilience lens. A lot of data have been underutilized, particularly data collected from the World Bank. The Living Standards Measurement Study (LSMS) from the World Bank is a very useful source. Mr. Frankenburger also noted the creation of a Technical Working Group on Resilience Measurement, funded by USAID and containing over 20 organizations. This group can actually influence what type of data are collected by various organizations.

Closing Remarks

Brady Deaton, University of Missouri, BIFAD (moderator)

Dr. Deaton thanked the panel again, noting that this discussion has been very relevant to BIFAD's work, and closed the meeting.