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To: Administrator Mark Green, U.S. Agency for International Development
From: Mark Keenum, BIFAD Chair and President, Mississippi State University
Re: Findings, Conclusions, and Recommendations from BIFAD 175th Public Meeting
Date: July 29, 2019

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**175th BIFAD Public Meeting: Building an Evidence Base
on Resilience Measurement and Analysis**

May 9, 2018 | Washington, D.C.

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BIFAD convened a meeting on May 9, 2018 in Washington, DC to share knowledge about theoretical and applied frameworks for resilience measurement and analysis and to identify opportunities to leverage U.S. university research capabilities to support resilience measurement and analysis.

Findings:

1. Resilience is the ability to manage adversity and change from an array of shocks and stresses that households and communities face without compromising future wellbeing. It is also the ability to maintain and advance wellbeing despite increasingly complex risk environments. Resilience is an important means to achieving outcomes of interest in wellbeing, poverty, hunger, and malnutrition. Resilience is measured over time by the stability of wellbeing outcomes in the face of shocks, or a quick recovery. Resilience measurement also examines the interrelationship among shocks and how they are experienced, strategies for managing shocks, and outcomes of wellbeing.
2. The ability to withstand shocks and stresses can be differentiated from the sources that enable that ability. Evidence leveraging multi-dimensional and multi-level measures of resilience capacities has revealed a growing number of important sources of resilience including financial services (insurance, credit, savings), access to markets, assets, livelihood risk diversification, seasonal migration, and such factors as aspirations, self efficacy, and social capital that transcend sectors.
3. There is strong interest in applying evidence-based learning to programming. Measurement methods that are efficient, consistent, and that use secondary data sets and existing data are more useful than methods that are difficult to implement, time burdensome for respondents, and involve extensive primary data collection of many variables.
4. The temporal aspects of measurement are critical. Poverty dynamics—the movement of households out of poverty and potential backsliding into poverty over time—are an important principle in resilience measurement and can be captured using high-frequency, mixed-methods panel data. High-frequency measurement captures in close to real time

the experience of and responses to shock and stress events and the outcomes of those responses on important wellbeing attributes (e.g., agriculture, food security, nutrition, poverty). Dynamic measurement approaches capture more information and are more precise for targeting than static measures, which may miss or underestimate seasonal fluctuations or fail to capture the numerous downstream shocks that may occur after an initial shock, as well as the evolving strategies to respond to those shocks as capital and assets are exhausted.

5. Certain index-based measures and analyses of resilience capture multiple, weighted dimensions—adaptive capacity, social safety nets, access to basic services, and assets— can be used to estimate household resilience. The findings from index-based methods are more accurate because of their reliance on psychological measurement, can be used to understand causal relationships related to resilience, and can be easily integrated into programmatic efforts. Index-based measures can be used to capture both covariate shocks (e.g., climatic shocks, conflict, and market shocks), as well as more frequent idiosyncratic shocks (e.g., death or illness of a breadwinner) measured at the household level.

6. Capturing both objective and subjective experiences is important in resilience measurement. Looking beyond physical assets, psychosocial factors—thoughts, feelings, behaviors, aspirations, and world view—are important subjective experiences in relation to the response to shocks and stresses and are associated with all capacities of resilience. While challenging to capture, psychosocial factors can be measured with reliability and validity and include both universal and culturally defined attributes. Integration of qualitative measures of resilience is critical for the interpretation of quantitative measures of resilience.

7. Sensitivity to contextual factors is an important consideration in resilience measurement. For example, there are important implications for resilience measurement in conflict-affected populations, and additional research is needed to fully elucidate these relationships. While some evidence suggests that interventions to increase security can have indirect effects on household resilience, other evidence suggests that, in conflict settings, resilience capacities (e.g., market access, social cohesion, women's empowerment) that have been found to be important in other contexts are not as strongly linked to well-being outcomes in the face of shocks as expected. Evidence from conflict contexts indicates that psychosocial effects of conflict have as great an influence on decision making as direct experiences of conflict; these effects are an important consideration in how exposure to conflict is measured.

8. Machine-learning algorithms applied to datasets can be an accurate tool for forecasting (e.g., predicting when and where a conflict or crop pathogen outbreak might occur), for understanding the attributes of households that make them resilient or vulnerable to certain shocks (e.g., droughts, illness), and for precisely targeting households that are most in need. Cost-benefit analytic tools can be used to understand the value for money of resilience programming. Randomized-control trial approaches have been challenging to use in multi-sectoral programming contexts, and quasi-experimental evaluation have been used effectively.

Conclusions:

1. Policy needs should drive resilience measurement. Studies of resilience should be responsive to the empirical demands of the specific policy or program to which

measurement findings are meant to be relevant. The particular context, needs, and goals should drive the selection of the most suitable resilience measurement method.

2. Highly analytic, academic approaches to resilience measurement should be translated for maximum usability, flexibility, and simplicity. Measurement approaches should be scalable, valid, and feasible. Results should be translated and packaged for use in policy and program decisions.
3. Resilience measurement approaches should incorporate high-frequency data-gathering approaches, consideration of contextual factors (including conflict), objective and subjective measures (including psychosocial measures), and qualitative and quantitative approaches. Resilience measurement should inform the design of resilience programming that is comprehensive, multi-sectoral, layered, and sequenced.
4. Cost per unit of resilience interventions and cost-benefit analysis should be made a standard part of resilience measurement. The potential for machine-learning-based algorithms and index-based resilience measurement approaches should be explored.
5. Results of resilience measurement data collection and analysis should be shared with affected populations and local authorities as a powerful advocacy tool and a critical element in ensuring the collaboration of communities to data collection.

Recommendations:

1. USAID should promote multidisciplinary resilience research in multi-sectoral, complex situations on array of shocks and stressors, and continue to develop capacity in resilience research.
2. USAID should catalyze partnerships in field settings to help drive the resilience measurement and analysis agenda and share existing institutional resources and resilience measurement and analytic practices.