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# RESILIENCE MEASUREMENT PRACTICAL GUIDANCE NOTE SERIES

6

## Recurrent Monitoring Surveys



### About the Resilience Evaluation, Analysis and Learning (REAL) Associate Award:

REAL is a consortium-led effort funded by the USAID Center for Resilience. It was established to respond to growing demand among USAID Missions, host governments, implementing organizations, and other key stakeholders for rigorous, yet practical, monitoring, evaluation, strategic analysis, and capacity building support. Led by Save the Children, REAL draws on the expertise of its partners: Food for the Hungry, Mercy Corps, and TANGO International.

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## 1. Introduction

Resilience has emerged as a way to understand and address the increasing complexity and magnitude of risk in humanitarian and development contexts. Yet, the ability to develop strategies and programs that increase resilience requires robust measurement and analysis methods. The USAID *Resilience Measurement Practical Guidance Note Series* intends to provide new insights based on recent efforts to assess, analyze, monitor, and evaluate resilience. The first guidance note in this series, [Guidance Note No.1 – Risk & Resilience Assessments](#), introduces resilience assessments and when, why and how to conduct them. The second, [Guidance Note No. 2 – Measuring Shocks and Stresses](#), describes how to measure and analyze shocks and stresses, while [Guidance Note No. 3 – Measuring Resilience Capacities](#) details how to think about and measure absorptive, adaptive and transformative capacities. [Guidance Note No. 4 – Resilience Analysis](#), describes the techniques used for conducting resilience analysis. [Guidance Note No. 5 – Design and Planning for Resilience Monitoring and Evaluation at the Activity Level](#) describes how to plan for and design resilience measurement at the activity level.

USAID defines resilience as “the ability of people, households, communities, countries and systems to mitigate, adapt to and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth.”<sup>1</sup> This definition describes the relationship between three distinct elements that in combination form the basis of a resilience measurement framework – resilience capacities, shocks and stresses, and well-being outcomes (see Figure 1).

**Figure 1: Simplified Resilience Measurement Framework<sup>2</sup>**



### 1.1. Learning Objectives

Measuring resilience requires tools that can capture how individuals, households and communities draw on resources and employ strategies to respond to shocks and stresses and how this affects their wellbeing trajectories in the short and long-term. A key resilience measurement tool for capturing these dynamics is the recurrent monitoring survey (RMS). Mercy Corps’ Pastoralist Areas

<sup>1</sup> USAID (2013).

<sup>2</sup> Adapted from Mercy Corps (2016): Resilience Framework

Resilience Improvement and Market Expansion (PRIME) project was one of, if not the first, USAID project to test out measuring resilience through real-time monitoring of capacities, responses, wellbeing outcomes and shocks and stresses. The findings from this RMS designed and implemented by TANGO International made a large impact on the international development community's understanding of resilience dynamics and how USAID's programming contributes to building resilience, sparking increased interest in implementing RMSs. In this context, this guidance note was developed to introduce development practitioners to many of the key considerations for setting up and deploying an RMS and provides practical guidance on:

- Determining whether to deploy an RMS
- Methodological considerations for designing an RMS
- Planning and budgeting for an RMS

The guidance note draws on examples from multiple country and project contexts of what worked well, what challenges emerged and what solutions were developed while implementing an RMS. As such, this guidance note primarily focuses on measuring resilience at the individual, household and community level where much of this work has been done to date.<sup>3</sup>

## 2. What is Recurrent Monitoring?

An RMS has several characteristics that distinguish it from a typical program monitoring system:

- I. It is focused on the relationship between commonly experienced shocks, responses, and changes in wellbeing in the project target area. Data collection is either triggered by a shock or is collected within specific intervals when shocks/stresses are likely to happen (e.g., during lean and monsoon seasons).
- II. It surveys the same individuals and/or households over time (i.e. panel data), typically relying on a relatively smaller sample size.
- III. It is focused on how individuals and households respond to the shock/stress and how this affects their wellbeing after the shock has occurred

### 2.1. Why Conduct an RMS?

There are several benefits to including an RMS in resilience-focused projects. Recurrent Monitoring Surveys have the ability to collect real-time (or near to real-time) data on resilience dynamics as they are unfolding. This allows teams to understand how individuals, households and communities are coping and responding in the face of these disturbances as they are happening. Collecting frequent data as shocks and stresses are happening or soon afterwards also reduces recall bias, and allows for more accurate data.<sup>4</sup> If utilized, RMS data gives program teams the necessary information to make adjustments in program implementation and facilitates internal learning. For example, teams can use RMS data to identify optimal points for launching early shock responsive actions and other crisis modifiers. Recurrent Monitoring Surveys can also be combined with impact evaluations

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<sup>3</sup> There is still insufficient experience to draw upon for recurrent monitoring surveys for community and systems level measurement, though exciting efforts are underway.

<sup>4</sup> Recall bias is a systematic error in survey data caused by survey participant's inaccurate recall of events in the past.

to shed light on short-term intervention effects to facilitate adaptive management and inform the overall impact evaluation to guide longer-term policy and programming change.

### 3. Primary Considerations for Setting up an RMS

While it is possible to retrofit an RMS into an existing project's Monitoring Evaluation and Learning (MEL) plan, it is strongly recommended that the planning, budgeting and design of an RMS occur during the proposal development phase in close coordination with key decision-makers to ensure sufficient time and resources are committed to the successful operationalization of the RMS. To determine whether an RMS is warranted for a given project (and thus should be included in the proposal) some key criteria are:

- I. The project is resilience-focused, i.e. there is a clear theory of change of how the project's activities are building resilience capacities to explicitly defined shock(s), ideally based on a resilience assessment (see Guidance Note I).
- II. There is a clear need for an RMS to achieve project management and/or research goals. For example, a project redesign is necessary after the inception phase and/or the proposal includes rigorous research objectives.
- III. There is sufficient support and internal capacity (see section 7.2.I on what MEL capacity is needed for an RMS) to conduct an RMS.
- IV. There is a sufficient budget (see section 7.3 for more details on budgeting).

If those criteria are satisfied, it is important to next consider the RMS objectives and information needs, shock context, and proposed intervention approach.

#### 3.1. Defining RMS Information Needs and Objectives

Information needs from an RMS range from providing rigorous evidence of a project's impact, to influencing external stakeholders, to producing quick and actionable results for internal project management. An RMS typically satisfies information needs through these objectives:

- I. Testing the statistical relationships between resilience capacities, responses, and wellbeing outcomes in the theory of change / resilience-focused results chains.
- II. Determining whether the project contributed to building resilience.
- III. Providing descriptive and narrative analysis on resilience mechanisms/barriers/pathways.

RMS results may be used to complement impact or performance evaluations by providing insights into underlying dynamics and relationships in shock exposure, response and wellbeing that may not be captured in impact or performance evaluations. In addition, an RMS can offer a unique opportunity for adaptive management by providing program managers near real-time data upon which to make management decisions. To capitalize on this opportunity, RMS designers need to take into account the type of information managers need, matched with the timing and scale of the RMS. Defining what these indicators are, what level of analysis is needed (e.g. basic descriptive statistics instead of more complex inferential analyses), and how quickly/frequently the data is needed should be developed working closely with program managers.

### 3.1.1. What Questions Can Recurrent Monitoring Surveys Help Answer?

The box below provides example research questions from multiple RMS measurement plans that help meet RMS information needs and objectives. Questions should always be tailored to reflect the unique project context. See [Guidance Note 4 \(Resilience Analysis\)](#) for more information on defining the research purpose and objectives.

#### **Example: Research Questions**

##### **Shock / stress exposure**

- *What co-occurring shocks/stresses did households experience and how did this change over the RMS period?*
- *How did the severity of exposure to the shock/stress affect households' ability to recover from it?*
- *Were treatment households able to reduce the exposure or severity of the shock/stress versus the comparison group?*

##### **Resilience capacities and responses**

- *What capacities or combination of capacities did households have access to prior to the shock/stress?*
- *Did treatment households have greater pre-shock capacities than comparison households?*
- *Does availability, access and use of resilience capacities change over time? What capacities did households draw on to respond to shocks/stresses?*
- *Were households with certain resilience capacities able to rely on positive coping and response strategies during the shock/stress?*
- *Were households with certain resilience capacities able to avoid negative coping and response strategies during the shock/stress?*
- *Were treatment households able to draw on capacities to respond to shocks/stresses versus comparison households?*
- *Does reliance on resilience capacities to cope with and respond to shocks and stresses change over time?*

##### **Intermediate and Wellbeing outcomes**

- *Which pre-shock capacities lead to greater intermediate/wellbeing outcomes during and/or after the shock period?*
- *Which resilience responses lead to greater intermediate/wellbeing outcomes during and/or after the shock period?*
- *Were treatment households able to achieve greater intermediate/wellbeing outcomes versus comparison households during and/or after the shock period?*
- *How did households' intermediate/wellbeing outcomes change over the shock/stress period?*

##### **Social determinants of resilience**

- *Do results differ by key demographic and social attributes (e.g., age, gender, wealth)?*

## 3.2. Shock/Stress Context

The set-up and implementation of an RMS will vary depending on what type of shock/stress scenario is predominant in the target area and/or what type of shock/stress the project is focused on. It is important to note that within a context, there are often multiple, sometimes interrelated, types of shocks and stresses. However, designing an RMS usually requires defining the main shock(s)

that are critical to focus on in order to best capture change in individual’s, household’s and communities’ resilience over time. For more information on how to measure shocks and stresses, refer to [Guidance Note 2 \(Measuring Shocks and Stresses\)](#).

In general, shocks/stresses are characterized along two dimensions: speed of onset and number of individuals/households affected. The figure below provides some examples of RMS in these varied contexts.

|                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Rapid Onset (Acute)</b><br><br><br><b>Slow Onset (Chronic)</b> | The Post-Earthquake Resilience Study was initiated after a 7.8 earthquake hit Nepal in April 2015. This shock killed over 9,000 people, destroyed or badly damaged more than 800,000 homes and displaced approximately 2.8 million people. The RMS was designed to understand how households were recovering from the earthquake and subsequent shocks and stresses. | The Building Resilience and Adaptation to Climate Extremes, and Disasters (BRACED) RMS was set up to capture how households were responding to multiple shocks and stresses in Eastern Myanmar. After the initial baseline survey, the target area was hit by severe flooding, affecting approximately 14% of their RMS population. |
|                                                                                                                                                                                                                                     | The Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) project’s RMS was set up around a protracted period of drought in Ethiopia affecting 90% of households in PRIME’s target area.                                                                                                                                                             | The Strengthening Household Ability to Respond to Development Opportunities (SHOUHARDO) III project’s RMS was set up to capture how households were responding to multiple shocks and stresses in Northern Bangladesh.                                                                                                              |
| <b>Large Covariate</b> ←————→ <b>Idiosyncratic</b>                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                     |

Rapid-onset disturbances that occur without warning can affect only specific households in an area (idiosyncratic; e.g. flash flooding, death/illness of household income earners, etc.) or large geographical areas (covariate; e.g. earthquakes, volcanoes, tsunamis, epidemics). These shocks usually do not last long, but can have downstream effects that affect communities over time.

In addition to unexpected rapid shocks, there can also be more predictable seasonal shocks. For example, shocks and stresses may occur most around lean seasons (characterized by limited food availability) and monsoons seasons (characterized by intense periods of rain). These shocks and stresses can also have differential effects on households depending on various factors including livelihood strategies, resilience capacities, geographic location, etc. Finally, large covariate shocks affecting broad geographies over a long timeframe can start out as shocks and transition into stresses as the duration of the disturbance increases and introduces more unpredictability in a system. These disturbances can also be characterized as stresses from the beginning. Households in this shock/stress context may also experience secondary and tertiary downstream shocks and

stresses stemming from the primary shock. For example, the PRIME RMS captured downstream shocks that derived from droughts such as livestock diseases, market shocks and conflict shocks.

### **3.3. Intervention Approach**

The resilience project intervention approach and theory of change should be well understood before setting up the RMS. This will help direct the development of the RMS data collection systems and tools, increase understanding of how the project is contributing to change in households' and communities' resilience, and inform how the results should be used to manage the project. Most resilience projects consist of multiple layered activities that span several technical sectors. These activities may be layered and sequenced during the design phase, driven by operational considerations in response to changing circumstances, or often some combination of the two. It is important to distinguish where intervention approaches occur at the individual, household, community, or system level and if interventions are designed to reach a specific portion of the population. This will influence the RMS sampling strategy and the analysis approach.

## **4. Recurrent Monitoring Models**

When setting up an RMS the project team should consider which RMS model would be most appropriate for the shock/stress context, intervention approach and RMS objectives. The decision on what RMS model to follow may also be driven by the project's resilience measurement needs and any logistical and/or budgetary considerations. Two general models of RMS are described below, with the primary difference being whether the RMS is triggered by a shock or stress.<sup>5</sup>

### **4.1. Model 1: Shock/Stress-Triggered Recurrent Monitoring**

This RMS model begins with a comprehensive survey of the target population that is meant to capture the circumstances of households prior to a shock/stress. The project's baseline survey, if designed to do so, can also serve as the preliminary round of an RMS in addition to other M&E reporting requirement needs. Once a prespecified shock or stress threshold is "triggered" (see Guidance Note 2 - Measuring Shocks and Stresses), a subset of the baseline sample is interviewed again at regular intervals over a defined period of time.

The RMS can either follow-up with all households from the baseline/round one or a smaller subset. This will depend on where the shock/stress occurs in the target population and the program budget. The follow-up RMS survey tool typically has a smaller number of indicators than the comprehensive baseline/first round survey.<sup>6</sup> If the first survey was acting as the project's baseline, an endline with the entire population is also usually conducted after the shock/stress period is over.

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<sup>5</sup> This is not to imply that there are only two models of the RMS; the exact specifications with regard to triggers, timing, frequency etc. will vary by context. The models described here are merely to give an overview of common applications to be adapted elsewhere.

<sup>6</sup> This is because the RMS is a panel where baseline data can be matched to the RMS sample to reduce additional data collection.

### **Illustrative Example: Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) (Ethiopia) - RMS Model 1**

The PRIME project was launched in October 2012 in one of the most shock-prone areas of the world, the drylands of Ethiopia. The quantitative portion of PRIME's RMS consisted of a comprehensive baseline, two periods of "lighter touch" data collection (triggered by the failure of rains in the project target areas) that consisted of six rounds of surveys over 6-12 months, and a comprehensive endline. The comprehensive baseline and endline included 22 modules whereas the lighter touch surveys included only eight modules. The qualitative portion of the RMS consisted of focus group discussions (FDGs) and key informant interviews (KIIs) with households in the target area. These interviews explored how communities were coping with the shocks, how social capital functioned in the face of shocks, the relationships between community responses and household responses and gender-differentiated impacts of shocks.

For more information on the PRIME RMS see Frankenberger, T. (2015), Smith, L., Frankenberger, T., Langworthy, B., Martin, S., Spangler, T., et. al. (2015), Smith, L., Frankenberger, T. (2017) and Smith, L., Frankenberger, T., Nelson, S. (2018).

## **4.2. Model 2: Recurrent Monitoring of Seasonal and/or Idiosyncratic Shocks**

This RMS model also begins with a comprehensive baseline/preliminary survey of the target population prior to a shock/stress. Subsequent rounds of the RMS are then deployed at regular intervals, which may be timed around seasonal shocks and stresses (rather than being triggered by a shock) and are meant to capture the various seasonal and/or idiosyncratic circumstances of households. For example, round two of the RMS might be given after the monsoon season where households would experience multiple shocks and stresses (flooding, landslides, illness/death of family member, etc.). In this model, the RMS can either follow-up with all households from the baseline/preliminary round or a smaller subset. However, since it might not be clear which households will experience different shocks and stresses during each round, caution should be exercised when reducing the sample size. If the first survey was acting as the project's baseline, an endline with the entire population is usually conducted after the shock/stress period is over. The final round of the RMS can also act as the endline, if the sample size and timing of data collection are the same as the baseline survey.

### **Illustrative Example: Promoting Agriculture, Health, and Alternative Livelihoods PAHAL (Nepal) – RMS Model 2**

PAHAL seeks to improve nutritional status by strengthening livelihoods and increasing the capacity of vulnerable households to prevent, mitigate, adapt to and recover from shocks and stresses in communities with deep poverty and high rates of malnutrition in critical zones of the Far-Western and Mid-Western Regions of Nepal. The PAHAL RMS consists of three rounds of quantitative data collection (timed around seasonal shocks/stresses), three rounds of qualitative data collection (FDGs and a panel of KIIs), and a cost-benefit analysis. Round one of the RMS was collected prior to the monsoon (June 2018), round two was collected after the monsoon (end of October 2018), and round three will be collected at the end of the lean season (end of February 2019). The PAHAL RMS

embedded an impact evaluation into its design and seeks to understand which combinations of interventions (i.e., “packages”) have the greatest effect on resilience outcomes. A key feature of the quantitative portion of the PAHAL RMS is that it is integrated into their annual monitoring surveys that report against their Food for Peace (FFP) indicators.

As of the publication of this guidance note, the PAHAL project has not made resources on its RMS available to external audiences yet. For more information on the PAHAL project see <https://www.usaid.gov/nepal/fact-sheets/promoting-agriculture-health-and-alternative-livelihoods-pahal>.

## 5. Methodological Considerations for Quantitative RMS Design

### 5.1. Sampling

The RMS sampling frame should be designed to collect data from a representative group of individuals, households or communities in your project or research target area. The ultimate goal is to find a sample that will allow you to generalize the RMS findings to these groups. RMS sampling frames can be based on geographic area, intervention groups and/or shock exposure.

#### 5.1.1. Geographic Area

Developing the sampling frame around the smallest administrative unit (usually community or village level) requires knowledge of where the program will be implementing prior to developing the RMS. Resilience and vulnerability assessments can help identify target areas for an RMS.

#### 5.1.2. Intervention Groups

One particularly powerful feature of an RMS is its ability, when combined with an impact evaluation, to detect the differential effects of various combinations or intensities of project interventions on household resilience in the context of a shock. This requires detailed knowledge of which interventions are being implemented where, when activities are starting and ending and who is participating in order for representative samples to be drawn.

If the intervention approach is well understood *ex ante* and unlikely to change significantly throughout the project, the sampling frame is much easier to define.

However, many resilience projects are designed to be flexible, shifting their approach to respond to changing operational and shock contexts. If intervention targeting is not clear at the onset of a project, the RMS sampling frame should be designed to be representative of the geographical areas where the project is being implemented and any relevant subgroup populations. Analysis by intervention group can then be included after the data is collected; however, each intervention group may not have enough households in the sample to be statistically representative.

### **Illustrative Example: Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) (Ethiopia)- low versus high intensity intervention sampling**

The impact evaluation (IE) of the PRIME project compared households who participated in several interventions (i.e., high intensity) versus households who participated in very few interventions (i.e., low intensity) to understand whether the amount of interaction with PRIME had an effect on their outcomes. TANGO International did this by stratifying the RMS sample<sup>7</sup> into high and low intensity areas for each of the two PRIME IE areas, resulting in four strata. Sampling weights were applied so that all statistics calculated would be representative of the PRIME IE population. In the second phase of the RMS, the program wanted to ensure a representative sample of at least 400 households from among the baseline sample throughout the monitoring period. However, conflict prevented the PRIME project from working in some areas initially designated as high intensity resulting in the need to adapt the sampling strategy by focusing random selection of the enumeration areas by regions without further stratification into high and low intensity groups. Sampling weights were then calculated round-by-round to ensure that the resulting statistics were representative of the population in each round. In cases where a statistic is calculated summarizing information across all of the rounds, the average of the sample weights across rounds was employed.

#### **5.1.3. Shock Exposure**

Developing the sampling frame around shock exposure requires prior knowledge of where the shock tends to occur and to what extent individuals, households and communities are affected by the shock in order to focus the sampling frame on getting a representative sample from communities that are more vulnerable to shocks and stresses.

## **5.2. What Indicators Should Be Collected?**

The indicators you collect via the RMS should help measure the program's theory of change and clarify the strategies that individuals, households and communities use to manage shocks and stresses. Ideally, a resilience assessment and resilience pathway/results chain exercise was done to identify these key indicators:

- I. Pre-shock capacities
- II. Other social and demographic characteristics
- III. Responses
- IV. Shock exposure/severity
- V. Intermediate and wellbeing outcomes

Other key considerations for selecting indicators include understanding: what you expect to change and when, what indicators are necessary to collect each round and what indicators you only need to collect at certain times, and what indicators are more sensitive to change versus those that show longer-term change. For example, food security indicators with a relatively shorter recall period (e.g. seven days, four weeks) are more likely to change on a daily, weekly or monthly basis, while

<sup>7</sup> The sampling frame for the RMS was comprised of all households sampled for the baseline impact evaluation data collection; 1,744 households in Borena and 1,398 households in Jigiga located in a total of 139 EAs were eligible to be sampled for the RMS.

other indicators, like asset-based wealth indices that include infrequently purchased durable goods, are more likely to change on longer time scales.

For more information on how to select and measure indicators, see Guidance Note 2 (Measuring Shocks and Stresses), Guidance Note 3 (Resilience Capacity Measurement) and Guidance Note 4 (Resilience Analysis) and the [Resilience and Resilience Capacities Measurement Options](#). For more information on conducting a resilience-focused results chain exercise, see Guidance Note 5 — Program-Level Resilience Measurement Design and Planning.

## 5.3. Triggers, Timing and Frequency of Data Collection

### 5.3.1. Data Collection Triggers

As mentioned above, the Model I RMS is triggered when a pre-specified threshold is reached, meaning that this model requires that a) the shock is clearly identified in advance, b) measures of shock/stress exposure and severity exist, and c) that someone, often the evaluation partner (or other consulting firm/consultant) tasked with deploying the RMS, is routinely monitoring the shock triggers and effectively communicating with implementing partners and USAID Mission staff.

RMS designers should ideally determine what shock to focus on to trigger an RMS through a resilience assessment process. The resilience assessment should identify the primary shocks/stresses that are relevant in a given context and that the project is specifically designed to build resilience to (see Guidance Note 1 – Risk and Resilience Assessments). In contexts vulnerable to major covariate shocks that occur on a regular basis (i.e. they are likely to occur during a three to five year period coinciding with typical project cycles) it is usually fairly straightforward to identify the one or two major shocks/stresses the RMS should focus on. In some cases designers may choose to focus on more than one shock/stress, meaning multiple potential triggers, which may have planning and budgeting implications.

Once shocks are identified, a trigger indicator and threshold for each shock/stress should be set to determine when RMS data collection is initiated. For some shocks/stresses (e.g. drought) there are standardized indicators that may be used (e.g. standardized precipitation index, normalized difference vegetation index), while for others there may not be an objectively verifiable metric with easily defined thresholds. Flooding and conflict, for example, can be extremely localized and vary considerably by context. In these cases RMS users may need to rely on expert opinion, government early warning systems, localized indicators or other means of triangulating and verifying that a severe shock has occurred.

Defining these thresholds can be just as much art as science; ideally they are sensitive enough to be triggered (i.e. they are not a once in a lifetime event) but not so sensitive that they are triggered for mundane events that frequently occur. Most important is to reach consensus with various stakeholders on a shared metric to routinely monitor; acknowledging any limitations and, if appropriate, periodically revisiting and adapting these definitions. For more details of shock measurement, users should refer to Guidance Note 2 of this series.

### 5.3.2. Timing and Frequency of Data Collection

Irrespective of which model one employs, determining the right timing and frequency of data collection is an important consideration to take into account. First and foremost, RMS designers must understand that frequent data collection can put a burden on community member's time, particularly in a post-shock context. RMS designers should be sensitive to the ethical implications of their work and never put data collection needs over the needs of the community. This may mean postponing data collection until after any humanitarian response needs are fulfilled and it is safe and appropriate to access communities. It also might mean keeping questionnaire instruments short (i.e., ideally less than 20 minutes), and collecting qualitative information at alternating survey rounds, rather than each round. When triggered (i.e. Model I RMS), ideally the survey teams collect data as soon as it is safe and appropriate to do so to minimize any recall bias and capture the immediate impacts and household responses.

Determining how frequently to collect data depends on the RMS objectives and budget. More frequent survey waves (approximately every two months) provides insight into short term dynamics like rapid changes in food security and coping strategies, while less frequent survey waves (e.g. every six months) capture slower moving changes like asset depletion, changes in social dynamics, seasonal changes, etc.<sup>8</sup>

In addition to the frequency, the number of survey waves must also be decided ex-ante. For higher frequency survey waves, at least three waves should be conducted, with more being preferred to capture downstream effects of shocks. Naturally, this is also contingent upon budget resources available. For less frequent surveys it is important to be able to capture longer term (e.g. seasonal) variation – so ensuring the survey captures at least one 12-month cycle might be more appropriate. Ultimately, defining how frequently an RMS is deployed may be determined by balancing RMS information needs with budget constraints on the number of survey rounds the project can afford.

## 5.4. Other Methodological Considerations and Challenges

While longitudinal data offers unique insights into resilience and other dynamics over time, it imposes methodological and logistical issues that must be considered during the design, fieldwork and post-fieldwork phases to assess the tradeoffs of potential RMS designs.

### 5.4.1. Crossover and Changes to Implementation Areas

Changes to the program implementation area or who receives the interventions may have implications for the RMS's ability to measure the impact of the program. For example, if communities are removed or added to the intervention target areas this may impact the sampling strategy. Similarly, if households from comparison groups or from certain treatment arms “crossover” to other intervention groups this may affect your ability to measure the relative impact of certain program approaches. These types of changes should be expected and planned for as the

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<sup>8</sup> Early versions of RMS collected data on a monthly basis, which resulted in respondent fatigue and created tension with respondents. This was adjusted to a bi-monthly basis which balanced the need to understand rapidly changing post-shock dynamics with what community members and respondents deemed feasible.

program adapts to changing operational environments. Strategies for overcoming these challenges include working with the program team to discuss the operational challenges and what compromises can be made, and keeping your sampling strategy broad if there is high uncertainty.

#### **5.4.2. Shock/Stress Isolated to Small Number of Households or Communities in RMS Sampling Frame**

If the shock is isolated to only a few households or communities in the implementation area or primarily in areas outside the program target area, you may not have enough statistical power to measure use of resilience capacities and changes in well-being outcomes over time. In contexts where idiosyncratic shocks (i.e. events that affect specific individuals or households within a community) are more common, it may be better to sample based on broad geography and try to capture the cumulative effect that shocks and stresses have on the target communities.

#### **5.4.3. Attrition and Tracking Households<sup>9</sup>**

One common issue with panel studies, including RMS, is attrition; or the fact that households will “fall out” of the sample for various reasons including but not limited to:

- Death / long term debilitating illness
- Migration / forced displacement
- Inability to re-locate respondent due to insufficient information collected at baseline
- Refusal to participate in multiple rounds of interviews

Attrition can introduce selection bias if households are not missing at random, i.e. households that should but cannot be surveyed in subsequent survey waves may be somehow substantively distinct from remaining households. If the attrition rate is high enough, the overall statistical power of the sample may be compromised as well if this was not taken into account when designing the sampling strategy. There are a number of measures RMS designs can take to minimize the attrition rate, though there are important tradeoffs with respect to time and cost associated with each that must be evaluated by RMS planners. Possible measures RMS designers may take are as follows:

- *Over-sample*, using response and/or attrition rates from similar areas within the country or neighboring countries as an inflation factor for the initial sample size calculated.
- *Determine primary unit of analysis that should be tracked*. Survey planners need to define the unit of analysis and discuss the impact of the likely changing composition of the household—i.e. household members may migrate, join through marriage, separate through divorce, etc. Depending on the research question(s), tracking criteria may be based on relationship to household head, demographic characteristic (e.g. productive adults, women aged 15-49, adolescents between 18-24 years old, etc.), or baseline household composition. Note that tracking more individuals in the household yields greater fieldwork costs; to date most RMS

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<sup>9</sup> This section is adapted from Witoelar (2011); for a full treatment of tracking households please refer to this paper and for a more comprehensive treatment of panel studies refer to Glewwe, P. and Jacoby H. (2000)

designs rely on tracking the household head or other main decision maker (e.g. spouse of household head).

- *Establish tracking rules.* If interviews must be conducted in-person, establishing rules about the time and distance the enumeration team must go should be determined in advance. For example, tracking criterion may specify that households that have moved within their baseline district (or similar administrative unit) should be followed up, but neighboring districts are out of range. Note that this also has implications for obtaining permission from various government levels to conduct fieldwork—i.e. permission should be obtained for baseline districts and any other districts enumerators will visit in subsequent rounds if the tracking criteria includes neighboring districts.
- *Collect as much location and contact data as possible.* Tracking respondents is a full time job that requires collecting as much location specific information (GPS coordinates, photo/s of location, detailed household rosters, phone numbers, neighbor or friends contact information, work location, etc.) as possible. This information needs to be closely managed to coordinate subsequent interviews.

Making these important design decisions requires obtaining as much information as possible about the survey area regarding migration flows and response/attrition rates of other surveys. Once the scale of the potential risk posed by attrition is sufficiently understood, then survey planners may discuss costs and tradeoffs of mitigating measures they may take. The baseline survey instrument may also collect historical and projected migration data to further refine some of the assumptions made during the design phase of the RMS.

#### 5.4.4. Digital Data Collection

Since RMS relies on data-intensive measurement approaches (i.e. high frequency panel data) RMS designers have explored cheaper and faster means of data collection, taking into account other tradeoffs in terms of validity and reliability. In every deployment of RMS to date, some form of digital data capture was used, i.e. mobile phones uploading completed interview data to remote servers, SMS-based surveys, call centers, or interactive voice recording. In some cases, RMS designers have further refined mobile-based data collection to make it even more rapid, principally through reducing or eliminating field travel time and costs (See TANGO International, 2019). Knippenberg (2017) leveraged ultra-local enumerators that lived near sampled households in order to minimize time spent traveling to households. Jones (2018) distributed cell phones to respondents and set up call centers (see example below). While not an RMS, Orange Door Research, in partnership with UNHCR and Viamo, leveraged UNHCR databases to conduct over 14,000 phone based interviews with IDP, returnee, and general population households in Afghanistan (UNHCR, Orange Door Research and Viamo, 2018). As connectivity, digital literacy, and ICT grows, better, faster and cheaper approaches to resilience measurement will become available.

While exciting, it is critical to take into account any limitations or tradeoffs with respect to validity and reliability of the data. For example, Survey Pulse recently found that SMS-based surveys should be extremely short (five questions or less) or provide incentives for participation, should randomize

questions and responses, and acknowledge any limitations of representativeness of the sample, i.e. people under 30 were more likely to participate (Leidich, et. al. 2019)

### **Illustrative Example: Building to Resilience and Adaptation to Climate Extremes, and Disasters\_(BRACED) Myanmar**

The BRACED RMS was initiated to understand how households in eastern Myanmar recovered from a series of extensive flooding events in July 2017. A comprehensive in-person baseline survey of 1,200 flood-prone households was conducted in June 2017. Mobile phones and solar chargers were distributed to households after the baseline survey. Five additional rounds of data were collected remotely via a call center in Yangon until May 2018. Interviews lasted 10 - 12 minutes and participants were given \$0.50 in phone credit as an incentive to participate.

**Lesson Learned:** It is important to have the initial face-to-face interview when setting up an RMS with remote mobile phone data collection to ensure you have a representative sample and to make a personal connection (which improves survey retention). The first remote mobile phone survey should happen soon after the initial baseline (no longer than three months later) to increase rapport and retention throughout the RMS. Phone numbers from family members and neighbors (when appropriate) should be collected at the baseline survey as alternatives to contacting the survey respondent. When giving assets (mobile phone and charger) and participation incentives, it is important to think through how this may affect the relationship the project has with the community and to adjust your distribution strategy accordingly.

For more information, see Jones, L., Ballon, P., & von Englehardt, J. (2018) and Jones, L. (2018).

## **6. Methodological Considerations for Qualitative RMS Design**

Qualitative research can be used in an RMS to help develop the quantitative survey before it is collected, as a way to further explain quantitative findings after it is collected, or as a stand-alone component of the RMS. Qualitative data can add value to the quantitative RMS analysis in the following ways:

- Broadens the analysis beyond the household level (which is often the primary unit of analysis in quantitative RMS) allowing for exploration of individual, community, regional and system-level resilience.
- Qualitative instruments can evolve over time and explore new topics as they arise from the quantitative data.
- Allows for exploration of sub-groups differences (i.e., marginalized groups) and multidimensional concepts (i.e., women's empowerment) when this is not practical or possible via the quantitative portion of the RMS. For more information on qualitative methods for resilience measurement see the Resilience Measurement Technical Working Group's Technical Note: Qualitative Data and Subjective Indicators for Resilience

Measurement and Guidance Note 5 - Program Level Resilience Measurement Design & Planning.<sup>10</sup>

## 6.1. Integrating Qualitative Approaches into RMS

The most common way to incorporate a qualitative component into the RMS is to use it as a method for unpacking and providing more context to the quantitative analysis. When planning to include a qualitative component in an RMS, the following should be considered:

### 6.1.1. Qualitative Data Collection

- *Consider trade-offs between the scope/length of the qualitative instrument and the frequency of data collection.* More targeted qualitative instruments are easier to implement more frequently (one round for each quantitative round).
- *Focus group discussions (FGDs) take time.* It is important to speak to different people in the FGDs so that community members are not overburdened. The RMS can also alternate between FGDs and key informant interviews each round (See TANGO PRIME RMS 2015).

### 6.1.2. Qualitative Analysis

- *Spend as much time analyzing the data as you take collecting it.* RMS designers shouldn't underestimate the amount of time it takes to analyze qualitative data and plan accordingly.
- *Consider hiring an external qualitative researcher to analyze the qualitative data.* This will reduce bias in the data interpretation and give more credibility to the RMS results.
- *Triangulate conclusions through qualitative and quantitative data.* Generating separate reports/conclusions for qualitative and quantitative can lead to missed opportunities to develop insights. Observing whether the qualitative data and quantitative data are matching up can also help validate the RMS results.

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<sup>10</sup> Available at [http://www.fsincop.net/fileadmin/user\\_upload/fsin/docs/resources/1\\_FSIN\\_TechnicalSeries\\_4.pdf](http://www.fsincop.net/fileadmin/user_upload/fsin/docs/resources/1_FSIN_TechnicalSeries_4.pdf) and <https://www.fsnnetwork.org/resilience-measurement-practical-guidance-series-guidance-note-5-%E2%80%93-design-and-planning-resilience>

### **Illustrative Example: Qualitative data from PRIME Phase 2 RMS Ethiopia**

The qualitative data from the Phase 2 RMS FGDs and KIIs were transferred into topically-structured matrices and analyzed to identify patterns in responses and contextual information to help explain the quantitative findings. Responses from participants were triangulated across the data sources to cross-check the reliability of information and to identify differences in perceptions between groups based on gender, social or economic status, and ethnic group. Specific research questions guiding the qualitative analysis were:

- What kind of shocks and stresses is the community experiencing?
- How are the shocks/stresses affecting the entire community? Household livelihoods?
- Who within the community is most affected by the shocks/stresses (e.g., women, children, elderly, etc.)? How?
- What actions are members of the community taking to support each other to respond to the shock?
- How is the shock affecting relationships within the community? Has that changed as a result of the shocks/stresses experienced? How? Why?
- How is the shock affecting relationships with other communities? Has that changed as a result of the shocks/stresses experienced? How? Why?
- Are community leaders effective at organizing support for all members of the community? Why or why not?
- What collection action is the community taking to protect or maintain resources important to the whole community? Which resources and why?

## **7. Planning and Budgeting for an RMS**

### **7.1. Integrating RMSs into MEL Plans**

Program teams are often interested in embedding recurrent monitoring surveys into their existing MEL plans to coordinate measurement efforts and reduce costs. The earlier an RMS is integrated into the overall MEL plan, the easier it is to find areas where the information needs and sampling frames overlap. Having open communication lines with the donor about the purpose of an RMS and where the information needs differ from the standard data collection and reporting requirements can lead to more flexibility in data collection and reporting. There are a few key considerations to keep in mind when integrating RMSs into standard MEL systems, however.

#### **7.1.1. Information needs and timelines**

Standard MEL data collection (baseline/midline/endline, project monitoring, performance evaluations, etc.) is typically used to monitor and report on the program implementation progress, make internal operational and/or strategic decisions, report impact to the donor and facilitate learning. These information needs can at times differ from the information needs of an RMS and have different data collection and reporting time frames.

For example, if the main purpose of the RMS is to test the theory of change and demonstrate the impact of the program, data collection will occur around shocks and stresses and may not overlap with regular donor reporting timelines. Similarly, the types of indicators used in an RMS may not sufficiently overlap with the indicators required by the donor and could lead to a large data collection burden for the program team. If the goal is to integrate the RMS into the MEL system, it is important to map out where data collection efforts do and do not overlap so that you can make strategic decisions on what information to collect.

### 7.1.2. Sampling Frames

As discussed in section 5.1 (sampling), RMS sampling frames are typically based on geographic areas, intervention groups and/or shock exposure. At times, these sampling frames are different than the sampling frames for the baseline/midline/endline or annual surveys that are a part of the standard MEL system.

#### **Illustrative Example: promoting Agriculture, Health, and Alternative Livelihoods PAHAL (Nepal) - Integrating RMS (with an impact evaluation component) into Annual Surveys**

An Annual Beneficiary Collection of Data (ABCD) survey is conducted once per year among all beneficiaries of the PAHAL project to collect data on indicators not included in regular monitoring. Agriculture information was not collected in the PAHAL baseline survey, so an additional survey (the Agriculture Collection of Data [AGCD] survey) is given separately to three beneficiary groups also on an annual basis: goat, cereal and vegetable farmers. PAHAL has registered all project beneficiaries and issued unique individual and household IDs to track the different populations (for sampling purposes) and to track what activities households and individual beneficiaries were participating in. Different sampling frames were used for both surveys. PAHAL introduced an RMS in the final two years of the project and wanted to integrate it into the existing ABCD and AGCD surveys. This required identifying the RMS sampling frame (based on which beneficiaries participated in high versus low levels of program activities across four different intervention packages) and determining where the ABCD and AGCD sampling frames overlapped. The RMS survey tool also had to be integrated into the existing ABCD and AGCD questionnaires.

**Lessons learned:** Unique individual and household IDs are essential when adding an impact evaluation component into an RMS. It is also important for program managers in complex programs to have a clear understanding of (and document) what each intervention is doing, where it is being implemented and what level it is being implemented at (individual, household, community). Program managers should also monitor these interventions for quality and not assume they are being conducted in the same way in each location. When merging annual survey and RMS survey tools, teams need to keep in mind that because they are being used for different purposes, questions will need to be re-tested and changed when necessary. Annual surveys also typically have longer recall periods (“past 12-months”) based on their reporting requirements whereas RMS recall periods are much shorter (depending on how frequently each survey is given per year). When merging these two data collection exercises you either need to agree on one recall period or ask about two different recall periods in the survey.

## 7.2. Hiring Consultants Versus Doing the RMS In-House

### 7.2.1. What MEL Capacity is Needed?

The core competencies that the MEL, program and leadership teams will require to successfully conduct an RMS will differ depending on how much of the RMS they will design and implement on their own versus how much they will contract out to a consultant(s) or research firms. Basic core competencies within the MEL and program team should be met before deciding to include an RMS in the MEL system (see Guidance Note 5 – Program-Level Resilience Measurement Design and Planning and TOPS Core Competencies series link in the Helpful Resources section). In addition to this, the following minimum set of core competencies are also helpful:

- Ability to interpret descriptive statistics, trend analysis and basic statistical relationships.
- Basic understanding of the difference between quantitative and qualitative methods.
- Basic understanding of the difference between correlational and causal relationships.
- Basic understanding of longitudinal survey designs and impact evaluation designs.

For teams who plan to take on more roles and responsibilities in the design of an RMS, these core competencies are crucial:

- Ability to specify the estimation models, determine the variables needed for the models, and design the survey instruments accordingly (see Guidance Note 4 for explanations of estimation models most often used in resilience analysis).
- Ability to construct sampling frames and calculate a sample size that takes into consideration number of survey rounds, attrition rate, confidence level, statistical power, sub groups and minimum level of change you would want to detect in your primary outcome.
- Ability to conduct and/or interpret output from regression models (see Guidance Note 4 for descriptions of regression analysis most often used in resilience analysis).
- Ability to explain quantitative analysis to audiences unfamiliar with these methods.
- Ability to train enumerators on qualitative data collection, supervise data collection and analyze findings using established qualitative and mixed-methods (including triangulation of quantitative and qualitative data).

Program teams should develop scopes of work for external consultants depending on the available budget, donor requirements, and what skill-levels already exist in the program team. In some cases this may mean completely outsourcing the RMS or working with external consultants only on certain parts (such as the survey design and analysis).

## 7.3. Budgeting for an RMS

All of the characteristics that make an RMS different from standard MEL data collection also require program teams to budget for these surveys differently. To date, RMS cost anywhere between \$200,000-\$500,000 USD. These costs will vary by country and will depend on several factors already mentioned in the guidance note. To budget accordingly, program teams should consider the

security situation on the ground (and associated needs/costs) and seasonality/mobility of enumerators:

- I. Integration with donor-required M&E activities; in the most expensive version, an RMS can stand completely independent and run parallel to project M&E activities (e.g. the USAID funded RISE in the Sahel). However, it is also possible to streamline by:
  - a. Using the RMS as either a substitute or replacement for a mid-term, e.g. the PRIME project in Ethiopia Or even in some (potentially rare) cases, using as a midterm and endline, e.g. the Somalia Enhancing Resilience and Economic Growth in Somalia (EREGS) program
- II. The number of rounds of data collection
- III. Geographic coverage; i.e. focused on the overall project catchment area (e.g. RISE, EREGS) or a subsection of the geography particularly vulnerable to shocks (e.g. PRIME)
- IV. Sensitivity of triggers
- V. Availability of enumerators for multiple versus one round refresher training for enumerators, etc.
- VI. What will be contracted out to a consulting firm versus done “in-house”
- VII. Any additional field costs associated with collecting panel data (see above)

## 8. Conclusions

Recurrent Monitoring Surveys capture how individuals, households and communities draw on resources and employ strategies to respond to shocks and stresses and how this affects their well-being trajectories in the short and long-term. Recurrent Monitoring Surveys can also inform whether project interventions are building resilience and promoting adaptive management through identifying optimal points for launching early shock responsive actions and other crisis modifiers. These systems go beyond what typical monitoring systems collect and require careful planning and execution. By drawing on examples of what worked well, what challenges emerged and what solutions were tested in multiple RMS country and project contexts, the hope is that this guidance note will serve as a useful resource for development practitioners that wish to implement an RMS in their project.

## Helpful Resources

Dabalen, A., Etang, A., Hoogeveen, J., Mushi, E., Schipper, Y., von Engelhardt, J. (2016). Mobile Phone Panel Surveys in Developing Countries: A Practical Guide for Microdata Collection. <https://openknowledge.worldbank.org/handle/10986/24595>

Jones, L. (2018). New Methods in Resilience Measurement: Early Insights from a Mobile Phone Panel Survey in Myanmar Using Subjective Tools. <https://www.odi.org/publications/11019-new-methods-resilience-measurement>

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## Annex 1: RMS Implemented to Date

| PROJECT                                                                           | COUNTRY / DATE                     | DONOR / ORGANIZATION                                                                                         | RMS DESIGN / IMPLEMENTER | SHOCK CONTEXT                      | MEASUREMENT APPROACH                                                                                                                                                                                                                                                                        | STATUS                                                                                                                   |
|-----------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| PASTORALIST AREAS RESILIENCE IMPROVEMENT AND MARKET EXPANSION (PRIME)             | Ethiopia<br>2013 – 2018            | USAID / Mercy Corps                                                                                          | TANGO International      | Drought, conflict                  | Impact Evaluation<br>Comprehensive Baseline/Endline<br>Phase 1: Six monthly (covering six months) recurrent monitoring panel surveys when triggered by drought<br>Phase 2: Six bi-monthly (covering 12 months) recurrent monitoring panel surveys when triggered by drought<br>Mixed-method | <a href="#">RMS-1 in depth report</a><br><a href="#">RMS-2 report</a><br>Full Impact Evaluation forthcoming in Fall 2019 |
| POST- EARTQUAKE RESILIENCE STUDY                                                  | Nepal<br>2015 – 2017               | Mercy Corps                                                                                                  | Mercy Corps              | Earthquake                         | Post-shock quantitative panel survey<br>10-weeks, one and two-years post-earthquake                                                                                                                                                                                                         | <a href="#">Report</a>                                                                                                   |
| RESILIENCE DYNAMICS IN SOMALIA                                                    | Somalia<br>2016 – 2018             | Resilience Evaluation, Analysis and Learning (REAL)                                                          | TANGO International      | Drought, health epidemic, conflict | Panel<br>Comprehensive Baseline/Endline<br>Two periods of monthly recurring monitoring surveys (three rounds each) when triggered                                                                                                                                                           | <a href="#">Report</a>                                                                                                   |
| RESILIENCE IN THE SAHEL ENHANCED RISE                                             | Niger, Burkina Faso<br>2016 – 2018 | USAID                                                                                                        | TANGO International      | Drought                            | Panel<br>Five bi-monthly rounds<br>Mixed-method                                                                                                                                                                                                                                             | Report forthcoming in Winter 2019                                                                                        |
| BUILDING TO RESILIENCE AND ADAPTATION TO CLIMATE EXTREMES, AND DISASTERS (BRACED) | Myanmar<br>2017 - 2018             | DFID / PLAN, Action Aid, World Vision, BBC Media Action, Myanmar Environment Institute (MEI) and UN Habitat. | ODI                      | Flooding                           | Panel<br>Six rounds of data collection; comprehensive baseline collected in-person, follow-up rounds collected remotely via mobile phones                                                                                                                                                   | In Progress<br><a href="#">Preliminary Results and Methods Note</a>                                                      |

|                                                                                         |                           |                                |                                                                                   |                                                  |                                                                                                                                                  |                        |
|-----------------------------------------------------------------------------------------|---------------------------|--------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| STRENGTHENING HOUSEHOLD ABILITY TO RESPOND TO DEVELOPMENT OPPORTUNITIES (SHOUHARDO) III | Bangladesh<br>2017 – 2020 | USAID / CARE                   | TANGO International                                                               | Flooding                                         | Panel<br>Bi-annual surveys throughout duration of project<br>Mixed-method                                                                        | In Progress            |
| RESILIENT COMMUNITIES PROGRAM (RCP)                                                     | Mongolia<br>2017 – 2020   | Mercy Corps                    | Mercy Corps                                                                       | Drought, harsh winter                            | Panel<br>Three to four rounds of data collection at regular intervals                                                                            | In Progress            |
| PROMOTING AGRICULTURE, HEALTH, AND ALTERNATIVE LIVELIHOODS (PAHAL)                      | Nepal<br>2018 – 2019      | USAID / Mercy Corps            | Causal Design                                                                     | Flooding, drought                                | Impact Evaluation<br>Panel<br>Three rounds of data collection at regular intervals<br>Mixed-method<br>Cost-benefit analysis                      | In Progress            |
| MEASURING INDICATORS FOR RESILIENCE ANALYSIS, PHASE II (MIRA II)                        | Malawi<br>2016 - 2017     | CRS                            | Charles H. Dyson School of Applied Economics and Management at Cornell University | Flooding, drought                                | Panel<br>Six monthly rounds of data collection                                                                                                   | <a href="#">Report</a> |
| ZIMVAC                                                                                  | Zimbabwe<br>2018-2019     | USAID & WFP                    | TANGO International                                                               | Drought, market shocks                           | Panel<br>Three bi-monthly rounds of data collection<br>Mixed-method                                                                              | In Progress            |
| LIVELIHOODS FOR RESILIENCE (L4R)                                                        | Ethiopia<br>2019 - 2020   | USAID / CARE, CRS              | TANGO International / Kimetrica                                                   | Drought, market shocks, delays in PSNP transfers | Panel<br>Quarterly surveys over a two-year period<br>Mixed-method                                                                                | In Progress            |
| PARTNERSHIP FOR RESILIENCE AND ECONOMIC GROWTH (PREG)                                   | Kenya<br>2019 - 2024      | USAID / Multiple PREG partners | TANGO International                                                               | Drought, conflict                                | Panel<br>Two RMS phases of six bi-monthly surveys (i.e. survey waves covering two one-year periods over the life of the project)<br>Mixed-method | In Progress            |



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