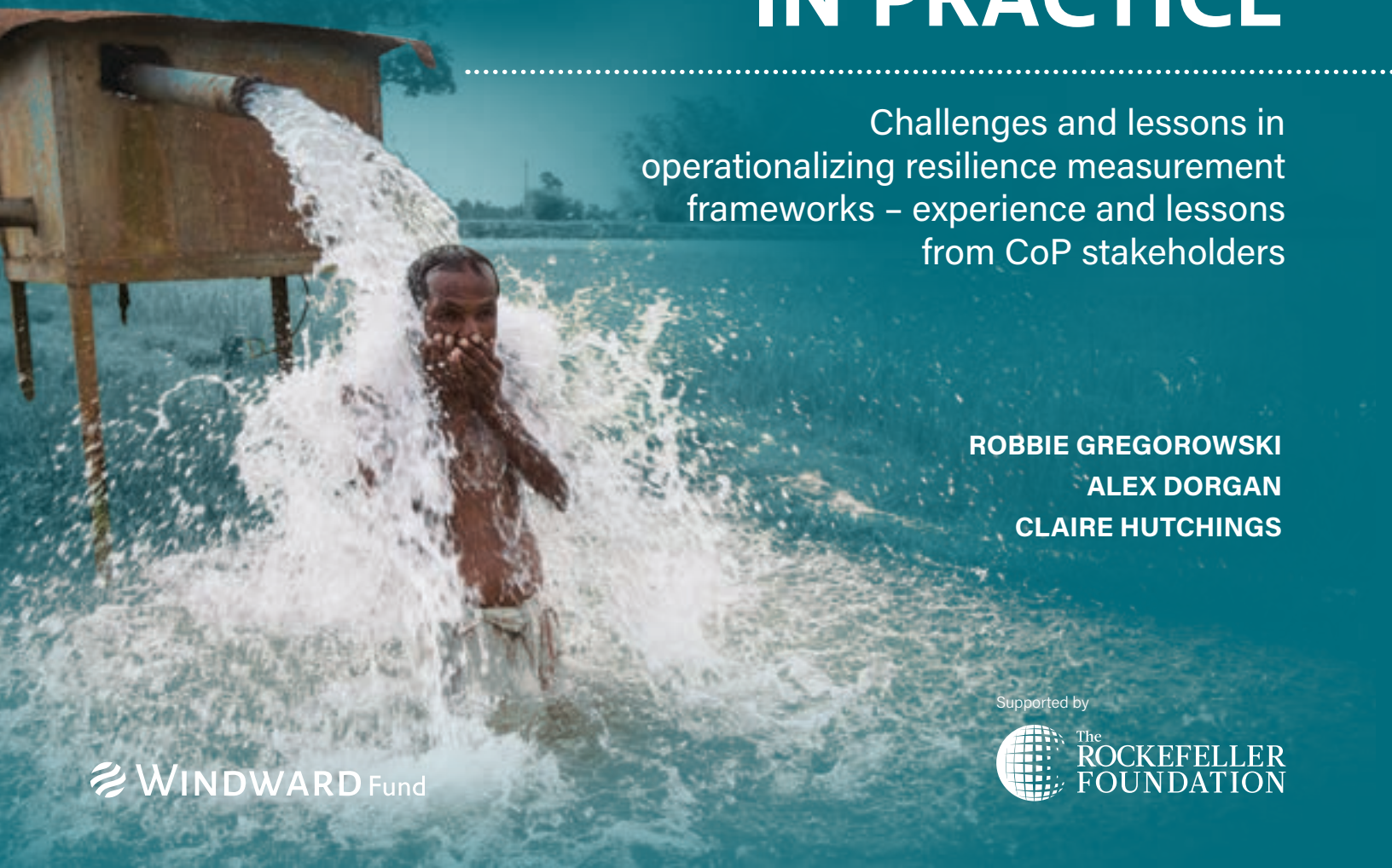
RESILIENCE MEASUREMENT EVIDENCE & LEARNING | Community of Practice

RESILIENCE MEASUREMENT-MEL APPROACHES IN PRACTICE



Challenges and lessons in operationalizing resilience measurement frameworks – experience and lessons from CoP stakeholders

ROBBIE GREGOROWSKI
ALEX DORGAN
CLAIRE HUTCHINGS

WINDWARD Fund

Supported by
The ROCKEFELLER FOUNDATION

About Itad

Itad works in partnership with public, private, and non-governmental organizations to achieve sustainable development and poverty alleviation. It provides high quality strategy, monitoring, evaluation, and learning consultancy services to clients from community to policy level, in the UK and worldwide. Itad wants the resources invested in international development to have the greatest possible impact on people's lives. For over 30 years, it has been providing the insight and ideas to ensure they do.

About the Resilience Measurement, Evidence and Learning Community of Practice

Launched in late 2016, the Resilience Measurement, Evidence and Learning Community of Practice (CoP) responds to a growing recognition that while investments in the concept and aspiration of resilient individuals, communities, and systems continue to grow, evidence of the effectiveness and impact of these investments lags behind. The CoP enables resilience measurement experts, and monitoring, evaluation, and learning practitioners across sectors, disciplines, and geographies to work together in analyzing the current state of resilience measurement, improving approaches to measurement, and learning what works, all aimed at building the knowledge, experience, and evidence needed to further advance this promising field.

About the Windward Fund

The Windward Fund advances public awareness about conservation, climate, and environmental issues, sustainable food systems, and the protection of land, wildlife, and other natural resources. It hosts public awareness campaigns and grant-making projects that address conservation from a range of angles. Windward Fund commissioned this report as the host of the Resilience Measurement, Evidence and Learning Community of Practice (CoP).

About The Rockefeller Foundation

For more than 100 years, The Rockefeller Foundation's mission has been to promote the well-being of humanity throughout the world. Today, The Rockefeller Foundation pursues this mission through dual goals: advancing inclusive economies that expand opportunities for more broadly shared prosperity, and building resilience by helping people, communities, and institutions prepare for, withstand, and emerge stronger from acute shocks and chronic stresses. Over the past decade, The Foundation has increasingly supported multi-year resilience initiatives including the 100 Resilient Cities (100RC), Asian Cities Climate Change Resilience Network (ACCCRN), Global Resilience Partnership (GRP), Rebuild by Design (RBD), the National Disaster Resilience Competition (NDRC), and resilience measurement projects such as the City Resilience Framework/Index and the Resilience Value Realization (RVR) process.

Contents

Acronyms

AGIR	*l'Alliance Global pour l'Initiative Résilience* – Global Alliance for Resilience
BRACED	Building Resilience and Adaptation to Climate-related Extremes and Disasters
CCA	Climate change agreement
CILSS	*Comité Permanent Inter-Etats de Lute contre la Sécheresse* – Permanent Inter-State Committee for Drought Control in the Sahel
CoP	Community of Practice
CRF	City Resilience Framework
CRO	Chief risk officers
DRRM	Disaster risk reduction and management
EWS	Early warning systems
FAO	Food and Agriculture Organization of the United Nations
FSIN	Food Security Information Network
ICCCAD	International Center for Climate Change and Development
IGAD	Intergovernmental Authority on Development
KPI	Key Performance Indicator
LGU	Local government unit
M&E	Monitoring and evaluation
MEL	Monitoring, evaluation and learning
NDVI	Normalized Difference Vegetation Index
NGO	Nongovernmental organization
ODI	Overseas Development Institute
PRIME	Pastoralist Areas Resilience Improvement and Market Expansion
RCF	Resilience Causal Framework
RMTWG	Resilience Measurement Technical Working Group
RMAP	Resilience Measurement Approach in Practice
RMS	Recurrent Monitoring Survey
SD	Sustainable development
STRESS	Strategic Resilience Assessment Process
ToC	Theory of change
USAID	United States Agency for International Development

Executive summary

This report offers a discussion of the key challenges and lessons in operationalizing resilience measurement-monitoring, evaluation and learning (MEL) frameworks, a headline synthesis of key messages from case study evidence, and suggested headline priorities for consideration by the Community of Practice (CoP).

The work draws on the combined experience and knowledge of a set of leading specialists and practitioners who design and operationalize the resilience measurement and resilience monitoring and evaluation (M&E) systems of the largest and most innovative and prominent resilience-strengthening programs globally.

The reflections of these experts on the challenges they face in operationalizing resilience measurement frameworks were captured in a set of case studies, which were then presented and discussed by the CoP. The evidence and ensuing discussion was synthesized and analyzed using a framework approach to thematic analysis.

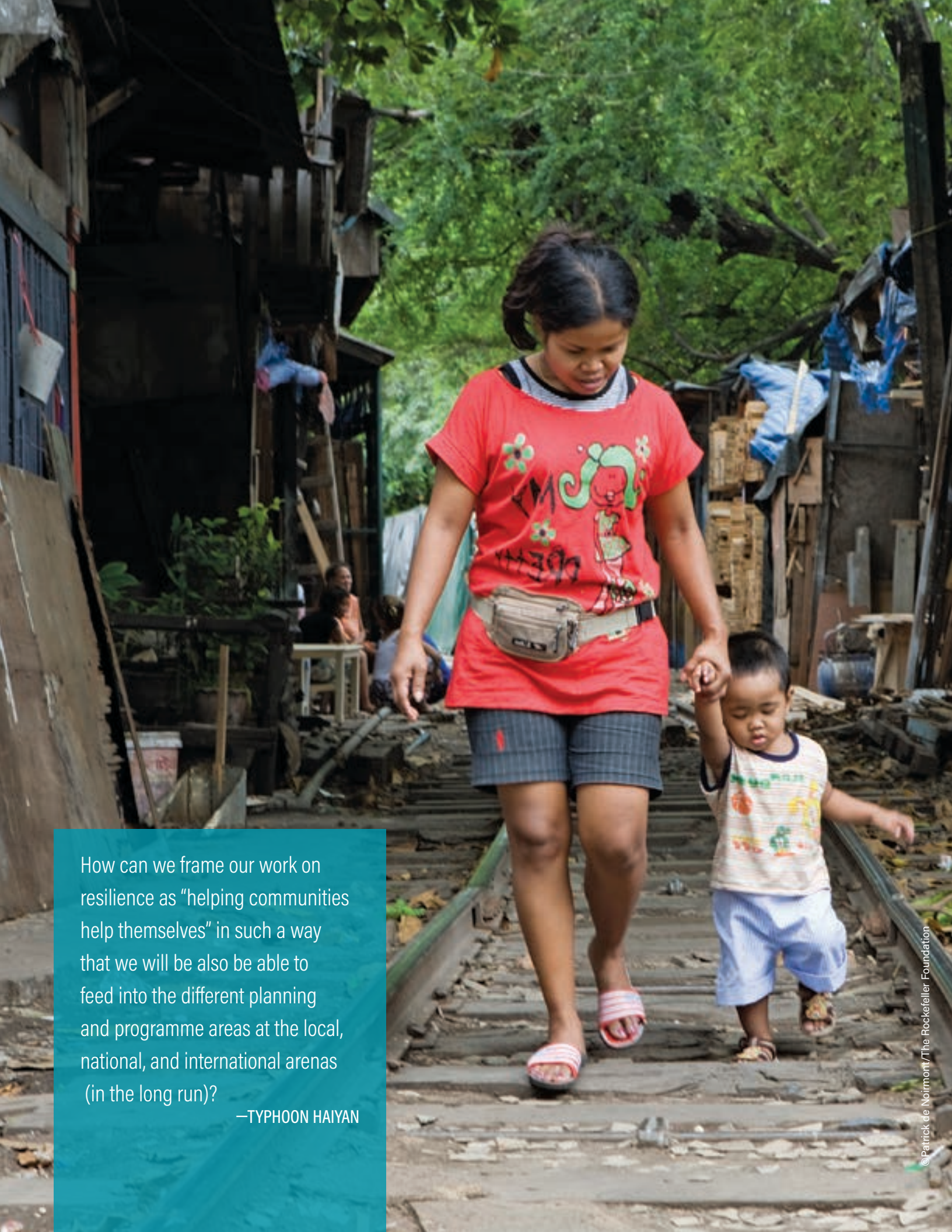
The analysis revealed a number of ongoing conceptual, technical, and practical challenges facing efforts to measure resilience, associated with how to:

- determine frequency of measurement required to capture the dynamic nature of resilience
- bring together data from household, community, and systems levels
- understand and measure transformative capacity and system changes
- support field-level practitioners in using data to adapt and strengthen interventions in real time
- share data with other actors in forms that allow them to understand the implications for their areas of interest.

The report concludes by presenting a set of priorities for consideration by the CoP:

- define the purpose of the CoP in facilitating collaboration and shared learning in order to progress thinking on resilience measurement (RM) technical challenges
- position the CoP to play the lead role in learning what is "unique" about resilience measurement and MEL
- support capacity building based on the new knowledge generated by the CoP, where appropriate
- contribute to change at the highest level by supporting the uptake of CoP resilience measurement evidence, new knowledge, and best practice.

Part II of the report contains selected case studies from leading resilience measurement-MEL practitioners. These were presented at the CoPs second convening and significantly informed the work program of the CoP for 2017–2018.



How can we frame our work on resilience as "helping communities help themselves" in such a way that we will be also be able to feed into the different planning and programme areas at the local, national, and international arenas (in the long run)?

—TYPHOON HAIYAN

Introduction

Supported by Windward Fund and the Rockefeller Foundation, the Resilience Measurement, Evidence, and Learning Community of Practice (CoP) brings together leading specialists and practitioners in conceptualizing, measuring, monitoring, and evaluating resilience – to learn from one another and to determine the priorities for growing the field and creating a compelling base of evidence. Itad contributed to the second convening of the CoP, held 21-22 July 2016 at the UN Food and Agriculture Organization headquarters in Rome, where a series of case studies proved an integral part of the activities.

In order to inform the CoP's work programme and strategy, CoP members undertook two critical pieces of analysis in the early stages of the CoP's formation:

- analysis of resilience measurement conceptual frameworks, led by the Overseas Development Institute (ODI), which built upon the first convening's "Resilience Measurement Frameworks and Approaches – A Bird's Eye View"
- analysis of the experience in terms of the challenges and lessons of MEL practitioners in operationalizing resilience measurement frameworks, and of the experience and lessons of CoP stakeholders.

The work presented here was conducted under an existing grant from The Rockefeller Foundation to Itad.[1] It was designed to "support strengthening the Foundation, grantees and partners to infuse and integrate resilience thinking into their work and to create an enabling environment for partners and grantees to better understand how to use resilience in planning programs." This particular component of the grant was designed to capture, present, discuss, and synthesize the experience of a set of resilience measurement stakeholders in order to highlight the challenges and lessons of operationalizing resilience measurement-MEL frameworks.

The report draws on the reflections of a set of leading specialists and practitioners in resilience measurement presented at the second convening of the CoP. It shares their combined experience and knowledge related to designing and operationalizing resilience measurement and resilience monitoring and evaluation (M&E) systems for the largest, most innovative and prominent resilience-strengthening programs globally.

In addition, the report presents a summary of the Resilience Measurement Approach in Practice (RMAP) process, and the headline findings and reflections from the second convening. The report concludes with some initial implications and headline recommendations to feed into the design and commissioning of the CoP.

[1] 2013 RLC 306 – Resilience Learning and Support Grant.

PART 1

Assessing MEL practitioners' experience in measuring resilience

A case-based synthesis method

In preparing this report, the authors endeavored to present a transparent and balanced interpretation and reflection of the evidence and experiences shared by case study contributors to the second convening, and of the views expressed by the CoP stakeholders and participants.

Purpose of analysis. The analysis contained in this report was undertaken to better understand the challenges practitioners encounter in operationalizing resilience measurement, and to learn from their experiences. This was done with a view to progress the thinking of the CoP from the theoretical and conceptual analysis explored in the first convening (held April 2016 in New York), towards grounding these reflections in practitioners' experience, in order to inform the work program and strategy of the CoP.

Method of analysis. The work draws on the combined experience and knowledge of a set of leading specialists and practitioners who design and operationalize the resilience measurement and resilience M&E systems of the largest, and most innovative and prominent resilience-strengthening programs globally. The reflections of these experts on the challenges they face in operationalizing resilience measurement frameworks were captured in a set of case studies, which were then presented and discussed by the CoP. The evidence and ensuing discussion was synthesized and analysed using a framework approach to thematic analysis (see Annex 2 for supplementary methodological detail).

Categories of challenges. Building on the work presented by ODI in the first convening,a standard case study template (shown in full in Annex 1)[2] was developed and structured around three broad categories of challenges – conceptual, technical and practical – with an additional "others" category. Table 1 provides a brief description of each category of challenges.

Case study contributors. A wide cross-section of practitioners and members of organizations with experience in applying resilience measurement frameworks and tools in the field were invited to submit case studies ahead of the second convening,

[2] The case study template (Annex 1) shows the questions that were used to prompt the case study authors when completing the template. These prompts, along with the categories of challenges, were consistent with the first convening ODI report "Resilience Measurement Frameworks and Approaches: A Bird's Eye View". However, the case study contributors were not restricted to these and were encouraged to identify all those they considered important and relevant.

TABLE 1:
Categorization of challenges in the case study template

CATEGORY	DESCRIPTION
CONCEPTUAL	Those challenges you have experienced in translating the complexity of resilience as a concept into practically measuring "it"
TECHNICAL	Those challenges you have experienced in selecting and applying methods, or in using specific measurement tools, such as data analysis
PRACTICAL/ LOGISTICAL	Those practical or logistical challenges you have experienced in operationalizing a resilience measurement framework
OTHER	Any other challenges you have experienced in measuring resilience which you feel do not fit into the categories above

and to share their reflections on the question: what are the challenges in operationalizing these resilience measurement frameworks? Table 2 provides an overview of the case studies, and details of selected case studies can be found in Part II of this report.

Case study presentations and participatory challenge ranking. At the second convening, the case study contributors gave succinct presentations, focusing on the various resilience measurement challenges that emerged from their written case studies. This session and the ensuing discussions sought to establish:

- What are our individual experiences of resilience measurement challenges and lessons?
- How can we reflect these as a collective set of resilience measurement challenges?
- Can we begin to prioritize these challenges to shape the work of the CoP going forward?

The case study template (Annex 1) shows the questions that were used to prompt the case study authors when completing the template. These prompts, along with the categories of challenges, were consistent with the first convening ODI report: Resilience Measurement Frameworks and Approaches: A Bird's Eye View. However, the case study contributors were not restricted to these and were encouraged to identify all those they considered important and relevant.

TABLE 2:
Summary of case studies presented at second convening of the CoP

	CASE STUDY	ORGANIZATION	CASE STUDY PRESENTER
1.	**STRESS, Mercy Corps**	Mercy Corps	Jon Kurtz
2.	**RCF TANGO**	TANGO, Resilience Measurement Technical Working Group	Tim Frankenberger
3.	**Oxfam Building Resilience**	Oxfam GB	Claire Hutchings
4.	**100 Resilient Cities CRF**	100 Resilient Cities and Urban Institute	Amy Armstrong & Carlos Martin
5.	**BRACED**	BRACED	Paula Silva Villanueva
6.	**Typhoon Haiyan**	Center for Climate Change Adaptation and Disaster Risk Management Foundation (Oscar M. Lopez)	Rafaela Jane Delfino
7.	**BRACED Myanmar**	BRACED Myanmar Alliance, Plan International	Jeremy Stone
8.	**CARE Synthesis**	CARE	Dorcas Robinson
9.	**ICCCAD Reflections**	IIED/ICCCAD	Saleemul Huq
10.	**IGAD/CILSS**	FAO	Luca Russo

TABLE 3:
Top challenges identified through participatory exercise as priorities for the CoP

	HEADLINE CHALLENGE	SPECIFIC CHALLENGE
1.	**Integration**	Integrating resilience measurement into standard workflows of ongoing programs, and not keeping them as separate M&E processes
2.	**Spatial levels**	Linking evidence and building processes from local to national levels that inform, advise, and guide resilience-building investments
3.	**Complexity**	Addressing the issue of complex systems in M&E through connecting people who are working on innovative evaluation approaches and methods with a focus on resilience
4.	**Common frameworks and tools**	Lacking commonly accepted frameworks, tools, and databases to systematically generate and store evidence on resilience
5.	**Power and gender**	Incorporating issues of vulnerability, power, and gender effectively into resilience measurements
6.	**Large-scale investments**	Establishing M&E for program-level, large-scale investments
7.	**National capacity**	Building capacity of M&E practitioners in the field, for building – and strengthening – the pipeline
8.	**Measurement of transformation**	Bringing in effective methods for measurement of transformative capacity at levels above community, making more of the data we're collecting, and supporting more cross-fertilization, maybe around common strategic goals
9.	**Systems-level measures**	Developing systems-level indicators that measure capacities (anticipatory, adaptive, and transformative) at scales greater than the household (e.g. cities)
10.	**Capacity to track large-scale changes**	Applying capacities to larger scales, and measuring capacities at levels higher than household scale to determine applicability and to track changes
11.	**Systems-level resilience**	Bringing in data and measurement techniques that can help capture systems-level resilience, rather than simple households (noting that "simple" is a misnomer)
12.	**Indicators of systems-level resilience**	Defining common indicators of resilience capacity and resilience outcomes at system, rather than individual, levels

In the final part of the session, participants completed a ranking exercise[3] to develop a "rough but rapid" sense of collective prioritization among the challenges that had been identified. The top 12 challenges that emerged from this process and were shared with the group are detailed in Table 3.

Synthesis and analysis of case study evidence. The evidence across the cases and the ranking exercise were synthesized, and a framework approach[4] was employed to undertake thematic analysis of the challenges identified. This framework thematic analysis was undertaken to help structure the discussion at the second convening, and to inform the writing of this report. Table 4 presents a summary synthesis of the headline challenges that emerged, and a more detailed thematic analysis can be found in the framework matrix included in Annex 2.

In summary, the case studies and their related session at the second convening highlighted resilience measurement challenges associated with how to:

- determine the frequency of measurement required to capture the dynamic nature of resilience
- bring together data from household, community, and systems levels
- understand and measure transformative capacity and system changes
- support field-level practitioners in using data to adapt and strengthen interventions in real time
- share data with other actors in forms that allow them to understand the implications for their areas of interest.

These challenges are further described and discussed in the next section of this report.

[3] More detailed instructions for the participatory ranking exercise used are available at vivmcwaters.com.au/wp-content/uploads/2010/02/35.pdf

[4] For more information on the framework approach to thematic analysis, see Jane Ritchie *et al.* (2013) Qualitative Research Practice, London: SAGE.

TABLE 4:
Headline challenges and lessons

CONCEPTUAL	TECHNICAL	PRACTICAL
Definitional challenges ▪ Resilience as an intermediate outcome ▪ Resilience as "capacities" ▪ Transformational capacity **Confounding conceptual and measurement frameworks** **Overarching/general frameworks seem abstract and risk meaningless**	**Resilience dynamic:** measurement in the face of shocks and stresses **Composite indicators:** weighting necessitates assumptions and value judgements **Appropriate scale:** balancing granularity and context, with the ability to generalize **Appropriate timescales:** time needed for maturation of effect	**Frequent, reactive, and timely data collection:** data hungry, expensive and time consuming, and risks survey fatigue **"Real-world" constraints:** project and program designs and sequence **Space:** space needed to iterate, innovate, and evolve frameworks and methods **Communication:** Ensuring voices from the field are heard and understood **Capacity:** issues across M&E practice

The aim to build resilience at multiple scales means "comparisons across districts, countries, or even higher-level systems is difficult."

—OXFAM

Challenges of resilience measurement-MEL

Across the case studies and the prioritization exercise, a number of important challenges emerged in the second convening which participants felt the CoP could usefully address. These are structured around the conceptual, technical, and practical categories of challenges used to frame the case studies. It should be noted, however, that this conceptualization is simply a way of framing a discussion on the challenges – few issues that were shared by participants fall neatly into only one category, and there are often clear overlaps between challenges, particularly between conceptual challenges and technical challenges.

Conceptual challenges

Conceptual challenges were framed in the case template as "challenges you have experienced in translating the complexity of resilience as a concept into practically measuring 'it.'" The key conceptual challenges that emerged from the cases recognize both an ongoing debate and need to work across multiple scales.

Ongoing debate. Despite some convergence in definition, there remains ongoing debate and differences in how resilience is understood, expressed, and measured.

Conceptualizing and measuring resilience across multiple scales. This challenge is compounded by the need to move beyond measuring only household resilience.

Issues remain around how resilience is understood, expressed, and measured

While there seems to be increasing convergence on the use of three capacities – absorptive, adaptive and transformative – in describing and defining resilience, conceptual issues remain around how resilience is understood, expressed, and measured.

Most case studies described a number of challenges related to how resilience is defined and understood, with the most common difference being: i) those who define resilience as an intermediate outcome, meaning as a means rather than an end itself, and ii) those who define resilience at the impact level – the highest order development result. This definitional issue, in turn, has far reaching implications for resilience M&E and measurement – from resilience "results" situated within a theory of change or results framework to the nature of appropriate indicators of resilience. Ultimately, for

resilience to be of use as a unifying concept, a shared definition and interpretation from the global community is useful as a solid foundation on which to base further M&E and measurement efforts.

Building Resilience and Adaptation to Climate-related Extremes and Disasters (BRACED), for example, noted the tensions and competing agendas concerning the definitions of resilience of different stakeholders, which hinders lesson learning from project-to-project comparisons and in terms of aggregating projects up to the BRACED program level. To address this, BRACED conceptualizes resilience at the intermediate-outcome level through Areas of Change, an indicator framework that defines four generic processes – knowledge, capacity, partnerships, inclusive decision-making – which a project tailors to its particular context, and through which project outputs are translated into resilience outcomes. Yet each project is able to interpret the indicator framework within its own project context, leading to considerable variance in the data reported. It remains unclear what level of program-level synthesis this "second-best" solution will support and, hence, what learning BRACED is able to generate at the program level.

> There are "tensions and competing agendas around [the] definitions of resilience of different stakeholders."
>
> — BRACED

Conceptualizing and measuring resilience across multiple scales

For others, conceptual challenges are related to the dynamic nature of resilience itself, and the challenge of conceptualizing and measuring interconnected changes at multiple scales. Mercy Corps and Resilience Causal Framework (RCF)-TANGO, among others, describe the need to move beyond measuring household resilience to include efforts to measure and understand community, national, and systems-level perspectives, and the associated challenges they have faced around how best to approach measurement of the "non-linear, nested relationship between levels, wherein effects observed at one level are linked to effects at another level, but not in a one-to-one relationship" (Mercy Corps).

Measurement challenges associated with a conceptual understanding of resilience as something that is built at multiple scales came through in 7 of the 10 case studies. In particular, case studies noted challenges relating to what is understood (and measured) when considering concepts such as transformational capacity or transformational change. Oxfam, for example, has "principally used household (and sometimes individual-level) data... [which] has proved somewhat challenging from the perspective of transformative capacity."

Doubts were expressed about the value of overly general frameworks which, ungrounded in context, risk devolving into meaningless abstractions. Case studies from Mercy Corps, Oxfam, BRACED and Typhoon Haiyan agreed on the importance of context and project-level contextualization for measurement, but noted that this limits the ability to draw generalizable lessons. The Typhoon Haiyan case study noted that ensuring "something will not be lost in the process of trying to ... capture the interaction between each factor is quite challenging," and the 100 Resilient Cities case study also noted that "specific changes in functions [of one indicator within a composite index] could easily be masked in the aggregate."

Technical challenges

Key technical challenges include contextual, timescale and measurement considerations.

Contextual considerations. Challenges related specifically to context include developing and using composite indices across contexts and balancing the level of granularity, in order to capture and aggregate sufficient context to be able to generalize.

Timescales. Understanding of what timescale is appropriate to see evidence of resilience results is generally framed at the intermediate outcome level.

Measurement. Measuring resilience at a systems level and in terms of complexity thinking calls for moving beyond a focus on primary beneficiaries as passive recipients toward viewing resilience strengthening as encompassing a range of stakeholders within a wider system.

> " Since shocks are largely unpredictable, our workaround to date has been to be opportunistic. We have taken advantage of unexpected shocks and stresses to undertake rigorous resilience measurement and analysis in multiple instances."
>
> — MERCY CORPS

Contextual considerations

There was a high degree of convergence on some of the more technical challenges facing efforts to measure resilience, with contextual considerations raised by all case studies.

Composite indices across contexts. With resilience generally understood as dynamic and multi-faceted, contributors shared technical challenges concerning the development and use of composite indices across contexts. Some, such as Mercy Corps and Oxfam, had grappled with how to agree on relevant indicators for inclusion and decide appropriate weighting and cut-offs within composite indices. Mercy Corps noted that it has been difficult to focus on specific variables for data collection, but shared that the "development of pre-analysis plans has... helped narrow the number of explanatory factors... and made the measurement efforts manageable to conduct, quicker to analyse, and easier to use by the programme team."

Measurement in the face of shocks and stresses. Counterfactual logic is particularly problematic in the context of shocks and stresses. BRACED and Mercy Corps noted that for operations associated with climate-related (or indeed other) shocks, we also need to consider ensuring the populations are subject to similar enough shocks to permit comparison. For example, two different communities in close proximity may be similar in socio-economic characteristics but suffer from very different shocks: one may be nearer to a river which floods and the other may suffer from landslides, both of which are associated with intense, unseasonal rain These shocks or events will affect different aspects of the community differently, making comparison more challenging.

Balance between granularity for context and aggregation for generalization. Several case studies also noted the difficulties of striking a balance between the use of contextually relevant indicators and levels of granularity versus the ability to generalize across composite indices. BRACED, for example, noted that it had been a challenge to "develop a coherent programme-level framework across intervention, project, programme and system scales ... flexible enough to be relevant across a number of different socio-political, geographical, and climatic contexts, while at the same time retaining robustness and coherence." It further added that a "critical challenge for the programme refers to the triangulation and comparison of the results emerging from different methodologies."

Timescales

Case study contributors raised questions about the appropriate timescales for maturation of effect in resilience-strengthening initiatives. BRACED and 100RC shared challenges concerning the frequency and timing of monitoring and measurement efforts. 100RC stressed that city-level resilience changes often do not happen for years, while BRACED Myanmar noted that, while more regular data collection and analysis would provide better data quality and a better indicator of change, it is also important not to overburden community members and implementing teams.

> " The challenge of the right timing for both programme and evaluation measurement has emerged since the first year of engagement. Interventions often don't yield minimum detectable effects for years."
>
> — 100 RESILIENT CITIES

Measurement of resilience at a systems level

BRACED questioned whether it was possible to detect statistically and qualitatively significant change in a relatively short program designed to tackle a complex, dynamic problem. Oxfam shared that "it has proved difficult to draw the line between outputs, intermediate outcomes, and final outcomes in many cases," and Mercy Corps noted similar challenges associated with analyzing the relationships between resilience capacities, shocks, stressors and well-being outcomes. Of the 10 case studies, six shared technical challenges around systems-level measurement and the measurement of resilience systems, and, as 100 Resilient Cities noted, the "lack of clear measurement tools for the capacity to adapt, evolve and change."

Six case studies also highlighted the technical challenges associated with efforts to measure resilience in the absence of a shock or stress. A BRACED case noted that it was trying to "simultaneously measure the occurrence of the shocks or stressors, the resilience responses adopted by projects and beneficiaries, and the ultimate impacts of such responses as measured by well-being indicators of the targeted population."

The importance of "complexity thinking"

Resilience-building operations are typically complicated, and delivering resilience results in challenging contexts is complex, with fundamental uncertainties about the causal relationship between inputs and outcomes. Resilience M&E-measurement efforts seek to demonstrate the extent to which changes can be attributed specifically to a particular endeavor. However, the causal linkages between an intervention and the change it contributes to can be very difficult to determine. This is particularly the case when projects and programs take an integrated approach to resilience building for improving policies, planning, and decision-making processes – approaches often based on "packages" of resilience-strengthening interventions. Furthermore, resilience outcomes depend on a variety of factors, which are not all under control of the operation. Several cases recognized recent advances in complexity thinking from experts in the field such as Ben Ramalingam[5] and Duncan Green,[6] and consequently highlighted the importance of integrating latest best practice in complexity thinking to frame resilience measurement-M&E.

> A key lesson is that"resilience can't be built in one go. Sustained activities and interventions need to be implemented within communities building on new knowledge and information."
>
> — BRACED MYANMAR

Combining qualitative and quantitative datasets

TANGO, BRACED and Oxfam cases all pointed to the challenge that resilience-building results should include at least an element which focuses on the ability of stakeholders, at different levels within a system, to make informed decisions and to deploy resources appropriately in the face of a shock or stress. The cases share a sense that there is potentially a more important and credible justification for qualitative data based on "perceptions." The subjective judgements of beneficiaries and wider key stakeholders of changes

[5] aidontheedge.info/
[6] oxfamblogs.org/fp2p/category/how-change-happens/

in resilience in the face of climate shocks and stresses are likely to be as important and accurate indicators of successful resilience building as more objective – and often quantitative – data collection tools and indicators. In essence, all participants agreed that what matters is whether or not stakeholders "feel" more resilient in the face of shocks and stresses, and therefore measuring this "perception" is important.

TANGO recognized this challenge and shared some work it has done using qualitative data to complement quantitative data and improve analysis through the identification of patterns, strengthening contextual information, and triangulating data. TANGO emphasized that "integrating [psychosocial measures] in data collection helps reveal resilience capacities through the ability to adapt to changing circumstances."

> Integrating psychosocial measures in data collection "helps reveal resilience capacities through the ability to adapt to changing circumstances."
>
> — TANGO

Practical challenges

Limited resilience measurement and M&E capacity was by far the most common practical challenge, one raised by nearly all the cases, albeit from different perspectives. A large number of other practical challenges were also raised, many of which were felt to be issues with M&E more broadly and generically (for example, insufficient project resources dedicated to M&E) rather than resilience measurement per se. However, they nevertheless represent practical challenges in the resilience measurement space.

The key practical challenges are related to capacity, resources, partners, and sequencing.

Limited resilience measurement-M&E capacity. There is limited capacity at the field level, and for generating and interpreting complex datasets.

Matching resources to requirements. Data collection in the context of frequent and unpredictable shocks and stresses is expensive and time consuming.

Engaging local partners. Engaging with and supporting relevant local communities, organizations, and key individuals in field-level MEL activities calls for sensitivity, inclusivity, and capacity building.

Sequencing. Real-world challenges are involved in moving from the conceptual design of M&E frameworks to operationalizing them in the field.

Limited resilience measurement/M&E capacity

The most pervasive practical challenge reflected across the majority of cases was "weak capacity to be able to interpret and use complex climate and weather projections and forecasts" (BRACED Myanmar]) Capacity concerns were a common challenge reported across the board, with widespread concerns about the limited field-level capacity to translate and interpret frameworks.

> There is a "need to train [local] junior researchers in new data collection techniques."
>
> — ICCCAD

Other challenges related to this area include the specific capacity that is required to use complex data sets, projections, and forecasts, especially the technical capacity needed for undertaking quantitative measurement of impact. These demonstrate the pressing need for more effective support for capacity building in these contexts in order to deliver better resilience measurement outcomes.

Matching resources to requirements

With agreement on the value of frequent, reactive, and timely data collection in what are often rapidly changing contexts, concerns were expressed that measuring resilience is expensive and time consuming, and may risk survey fatigue among respondents. For example, Mercy Corps noted "the consistent refrain is that resilience measurement requires high frequency data collection ... [but there are] ... resource constraints in many of our programmes."

BRACED Myanmar suggested that the use of existing weather, climatic, and other datasets may help, but they comes with their own practical challenges. These include generating weather and climate data to an appropriate level of scale when the risks associated with shocks and stresses are sometimes very locally defined and specific, such as recognizing that villages in very close proximity may have very different flood risk profiles.

> Is there "too much emphasis being placed on 'measurement'?"
>
> — CARE

Some case studies went even further, asking whether there are in fact just "too many frameworks?" (IGAD/ CILSS). CARE reflected that while "all robust research and M&E requires time, money and capacities, ...[could there be] too much emphasis being placed on 'measurement'?" This could potentially be perceived as a diversion of resources away from activities that directly strengthen resilience.

Engaging local partners

There were also questions on whether we are "hearing" the right voices in terms of priorities and capacities from, for example, people in the field or country governments. Oxfam, 100 Resilient Cities, and Typhoon Haiyan cases demonstrate that effective and sensitive communication with local partners is often critical to the success of operationalizing resilience measurement M&E tools. Linked to this, a number of participants raised questions about how to bring in a wider set of stakeholders to the CoP itself, specifically other actors on the ground, including beneficiaries as active agents, project field staff, and local and national government personnel.

Sequencing challenges

A number of "real-world" constraints were raised, including the challenge of moving from frameworks to action (Mercy Corps; Oxfam). This acknowledged that i) projects and programs are rarely designed and sequenced perfectly, ii) the need for data to enable flexible and adaptive programming, so that key stakeholders can quickly make informed decisions, and iii) the importance of protecting "space" to iterate, innovate, and evolve frameworks and methods as we learn.

> "Frameworks often delinked from the policy context and decision-making needs."
>
> — IGAD / CILSS

Core priorities emerging for the CoP

The conceptual, technical and practical challenges identified through the case studies and subsequent discussions represent areas where CoP members might work together to overcome impediments to the generation and use of evidence that informs better resilience-related investment, interventions, and results.

In addition to strategies to promote more collaboration among CoP members to address these challenges, several core strands of work emerged as areas that participants saw as priorities for the CoP at the second convening.[7]

1. **Define the purpose of the CoP to facilitate collaboration and shared learning in order to progress thinking on resilience measurement technical challenges**

   While there was consensus that we should not be aiming for a single overarching framework for measuring resilience, there was a clear appetite from participants, throughout discussions, to work together to move thinking forward on some of the shared technical challenges. In particular, the challenge of measuring transformative capacity and systems change was recognized across many of the case studies and in the ensuing discussions as a shared challenge where collaboration would be welcome.

   By enabling shared learning and cross-fertilization, providing leadership on content development, and also providing a small amount of funding to pilot resilience measurement-MEL approaches or leverage other sources of funding, it was felt that the CoP could catalyze progress in this space.

2. **Position the CoP to play the lead role in learning what is "unique" about resilience measurement and MEL**

   This is a relatively small and nuanced point that was raised in the second convening but was not fully resolved through the discussions. It refers to the title of the CoP, which covers both "resilience measurement" and "resilience MEL." Participants recognized that they are not the same, and unless they are clearly and respectively defined, they risk being conflated. Many participants were keen to highlight the importance of learning, the – L– in 'MEL' that we measure for a purpose, and make links to the communication and knowledge-sharing purposes of the CoP.

   A related point referred to the distinction between challenges that are "generic" to measurement-M&E-

[7] These have been identified based on an informal synthesis across the case study presentations, participatory ranking exercise, and the ensuing discussions, and can be seen to reflect the objectives for the CoP, which were revised by participants during the 2nd Convening.

The CoP has four objectives against which the priorities emerging from the RMAP process should be framed.

OBJECTIVE 1
Collaborative learning and capacity building
Create a more cohesive field of diverse actors and enable collaborative learning to improve concepts, approaches and methods. and increase capacity.

OBJECTIVE 2
Piloting for demonstration and innovation
Test and pilot resilience measurement, MEL tools, approaches and concepts in order to generate insights to inform program design, innovation and policy and investment influence.

OBJECTIVE 3
Influencing to catalyse change
Use evidence generated to include issues relevant to resilience in the national and global discourse (such as Sustainable Development Goals (SDGs), Sendai, Paris agreements, WEF, SoCAP), in order to improve resilience investment.

OBJECTIVE 4
Operationalizing the CoP
Create a neutral platform that allows effective facilitation, operational management, learning, and knowledge management of the CoP members to deliver on the objectives and goals.

MEL practice as opposed to unique challenges to the measurement and MEL of resilience. And here it is possible, and perhaps important, to start exploring some simple definitions and distinctions for each concept. These are offered by the authors as initial starting points but will require further development.

- **Resilience measurement**. This is primarily conceptual, relating abstractly to resilience and how the concept can be approached to support a deeper understand of resilience results. For further reading on this topic please refer to the ODI-led product which fed into the first convening: "Analysis of Resilience Measurement Frameworks and Approaches".
- **Resilience MEL.** This is primarily practical and applied, relating to the systems, processes, and frameworks developed and deployed to support effective and robust generation of data and evidence on resilience results. It also considers how this supports evidence-based evaluative judgements, which in turn support better knowledge and learning.

Looking ahead, further investigation and analysis is required to determine which of the key emerging challenges are specific to resilience measurement and MEL in particular, rather than to MEL more generally. In fact, the CoP will play a role in a learning journey to better define and understand what is "unique" about resilience measurement and MEL.

3. **Support capacity building based on the new knowledge generated by the CoP, where appropriate**
   Key aspects of capacity building were discussed during the second convening.

   - A relatively narrow and specific technical training-oriented capacity building – focuses primarily on the provision of training and other capacity development opportunities to M&E field-level practitioners charged specifically with monitoring, evaluating, and measuring resilience programming and investments, with at least some emphasis specifically on developing country experts at the field level – including those responsible for collecting the data on resilience measurement and MEL.
   - A broader capacity-building strand – focuses on building the overall capacity of the CoP stakeholders to translate resilience measurement/ MEL concepts into practice in the field.

Within this latter framing, it is important to highlight the clearly defined scope and focus of the CoP, and to lead and support capacity building that aims to

bridge the conceptual and the applied in resilience measurement and M&E. This should involve:

- translating resilience concepts into resilience measurement frameworks
- piloting and testing these frameworks with the development of practical tools, methods, and technical guidance materials
- translating and synthesizing the "learning" from bridging the conceptual and the applied through the production and dissemination of new knowledge to inform and influence others.

Capacity building is a significant issue for the CoP stakeholders, and seen as central to addressing the challenges of operationalizing resilience measurement-MEL frameworks, with some participants suggesting that the CoP should play a relatively "hands-on" role in designing and providing training courses. It is clear that the CoP will have an explicit focus on this going forward, with capacity building explicitly recognized under CoP Objective 2.

However, capacity building is a broad term – spanning one-off training events through to widespread and sustainable changes of behaviour of individuals, institutions, and even systems – and there is still a lot of work to do to flesh out its definition and function within the CoP. Work to develop the CoP's theory of change (ToC) will be needed to further define the scope and ambitions of the CoP in the capacity-building space.

4. **Contribute to change at the highest levels by supporting the uptake of CoP resilience measurement evidence, new knowledge, and best practice**

   There was a strong push that the CoP should not be simply about the generation of robust evidence and new knowledge. Rather, the CoP should go beyond this to inform resilience "practice" and contribute to positive change in a way that is evidence based. This wider ambition is articulated in the CoP's ToC, under the goal statement that "Evidence generation and use that informs better resilience-related investment, interventions, and results."

   A key role emerged for the CoP around enabling member organizations and networks to more effectively influence global development discourse and policy development in such a way that builds the salience of the issue. This role could include, for example, active debate and dialogue on key resilience issues at major platforms such as Davos, WEF, and SOCAP, as well as the development of a strong, evidence-based business case for increased and diversified investments in resilience. Work to inform member organizations and their networks, as well as engage external actors, such as governments and the private sector, will likely be a key piece going forward.

   The CoP has the right combination of players, ambition, and intent within its ToC to catalyze and contribute to "change" across and through the uptake of the evidence, new knowledge, and best practice that it generates. Defining this as a "contribution" to change is important as it situates the CoP in a wider global context in which there are multiple actors and agreements, and in which robust evidence and learning are only a component of wider change processes.

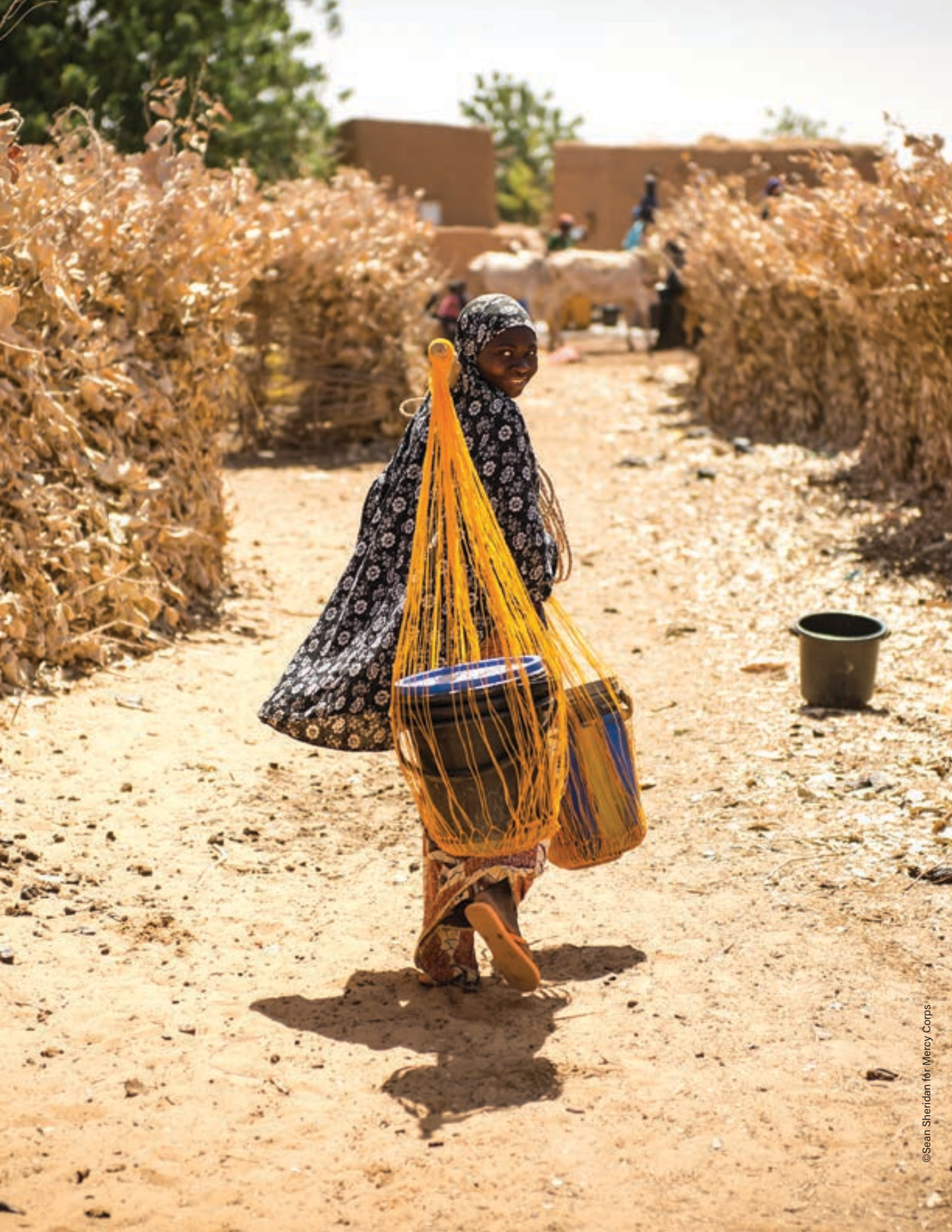
Conclusion

The case studies shared and discussed during the second convening of the Resilience Measurement-MEL CoP highlighted key conceptual, technical, and practical challenges facing efforts to measure resilience, and highlighted increasing proliferation of measurement approaches needed to help actors understand this dynamic and evolving, multi-scale concept.

In particular, the case studies flagged measurement challenges associated with how to:

- determine frequency of measurement required to capture the dynamic nature of resilience
- bring together data from household, community, and systems levels
- understand and measure transformative capacity and system changes
- support field-level practitioners in using data to adapt and strengthen interventions in real time
- share data with other actors in forms that allow them to understand the implications for their areas of interest.

Fundamentally, the proposition of the CoP is that measurement, and the data and evidence it generates, are essential to informing better resilience-related investment, interventions, and results. The challenges outlined by the case studies identified a number of areas where collaboration, joint research, and pilots led by the CoP members could generate resilience evidence that could be used to influence global development discourse, policy development, and decision making, thereby encouraging more effective program investments and practice.



PART 2

Case study reflections from leading practitioners of resilience measurement-MEL

Part 2 of this report presents a selection of case studies from leading specialists and practitioners who design and operationalize resilience measurement and resilience monitoring and evaluation (M&E) systems in the largest, most innovative and prominent resilience-strengthening programs globally. These cases and others were presented at the CoP second convening and have contributed significantly to informing the priorities of the CoP in 2017–2018.

Each case study was developed and structured around three broad categories of challenges – conceptual, technical and practical.[8] As explained in the introduction to this report, the case study contributors included a cross section of practitioners and members of organizations with experience in applying resilience measurement frameworks and tools in the field. By sharing the evidence gathered and highlighting challenges faced in the field, case study presenters introduced other convening participants to their individual and institutional experiences, which facilitated a collective reflection on the varied paths taken, and, in turn, contributed to shaping the work of the CoP going forward.

The following case studies with permission to publish have been included in this report. Others will be added by COP members as the COP continues its work:

1. Mercy Corps: Strategic Resilience Assessment (STRESS)
2. Technical Assistance to NGOs (TANGO) International Resilience Causal Framework (RCF)
3. Oxfam GB: Building Resilience
4. Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED): Myanmar Alliance

[8] The three challenges are detailed in Table 1, all of the case studies presented at the second convening are listed in Table 2, and the template used to guide the case study preparation is presented in its entirety in Annex 1.

CASE STUDY

1

Mercy Corps: Strategic Resilience Assessment (STRESS)

Jon Kurtz
kurtz@dc.mercycorps.org

Mercy Corps works in more than 40 countries to help people recover from disasters, triumph over adversity, and build stronger communities from within. Working on some of the world's toughest challenges, resilience has long been at the heart of Mercy Corps' work. Mercy Corps' approach to resilience measurement is grounded in its Strategic Resilience Assessment (STRESS) methodology, which applies a resilience lens to program design and development by building an understanding of the dynamic, social, ecological, and economic systems within which communities are embedded. Through these efforts, Mercy Corps has contributed to the evidence base on what capacities and interventions make the greatest contributions to the resilience of households, communities, and systems to given sets of shocks or stressors.

Context

Purpose

The primary aims of our framework for measuring resilience are diagnostic and evaluative.

- **Diagnostic:** to identify and test assumptions regarding what capacities and characteristics are most strongly linked to household and community resilience to a given set of shocks or stressors.
- **Evaluative:** to analyse the contributions of programmes to strengthening resilience capacities, and evaluate programme effects on the well-being of households and communities affected by shocks and stresses.

Background

Multiple teams in Mercy Corps have been closely involved in developing, applying and refining our approach to resilience assessment and measurement. Our climate, energy and environment technical team has spearheaded the development of our Strategic Resilience Assessment (STRESS) process. Our Research and Learning team has pioneered our approach to resilience measurement and analysis. As part of this, we have contributed to and adapted key parts of the measurement framework developed by the Resilience Measurement Technical Working Group (RMTWG). Our Regional Resilience Hubs have supported the application and adaptation of our resilience assessment and measurement approaches in Africa and Asia.

Audiences

Our framework is designed to help Mercy Corps' field programme teams incorporate resilience measurement into their programme M&E and research. The results/products of our major resilience measurement

efforts have typically had two major intended users: practitioners (both Mercy Corps and peer agencies) involved in the design and M&E of resilience-related programmes; and policy makers (including international donors and national governments) involved in decisions on investment priorities for strengthening resilience.

Applications

We have applied our framework as part of major resilience-related programmes in multiple countries in sub-Saharan Africa (Uganda, Ethiopia, Somalia, Mali, Niger, Zimbabwe) and Southeast Asia (Philippines, Nepal and Timor-Leste). This has included context experiencing both major acute shocks (e.g. the Gorkha earthquake in Nepal and Typhoon Yolanda in the Philippines), as well as slow onset shocks/stresses (e.g. the 2011 famine in Somalia and 2016 El Niño drought in Ethiopia).

Utility

The outputs of our resilience measurement efforts have been used in the following main ways.

Informed programme design: based on evidence of what matters most for resilience in a given context. For example, we have adapted our recovery programming strategies in Nepal and Philippines based on our findings: re the contributions of financial services to household disaster resilience.

Influenced investment priorities: based on evidence of what works to strengthen resilience. For example, our research on the impact of effective conflict management on drought resilience in Ethiopia helped make the case for greater attention to addressing conflict within USAID's policy and programme guidance on resilience.

Products

Our resilience measurement framework is fairly mature, with over four years of application and refinement. During this time, we have produced multiple papers and other reports summarizing the key findings and recommendations from our resilience measurement efforts. A complete list of publicly available reports is available at mercycorps.org/resilience.

Conceptual challenges and lessons learned

Our main conceptual challenges in applying our resilience measurement

1. **Transitioning from resilience theories of change to resilience measurement plans.** The main output of Mercy Corps' STRESS process is a theory of change that articulates how a set of interventions can contribute to building resilience in a given context. Our programme teams have struggled to build on these resilience-informed ToCs to develop M&E plans that fully reflect our approach to resilience measurement. A specific challenge has been trying to fit resilience capacities, shocks and stresses, and other resilience-related measures within typical donor M&E plan formats.

2. **Moving beyond measuring household resilience.** To date, the majority of our approaches to measuring resilience have taken individuals or households as the unit of analysis. Some of our studies have used results from household data to draw conclusions about resilience across larger administrative units (e.g. districts), or among certain livelihood groups (e.g. pastoralists). However treating resilience at the community and other "higher" levels simply as aggregates of lower units misses a key feature of the concept of resilience – namely, the non-linear, nested relationship between levels, wherein effects observed at one level are linked to effects at another level, but not in a "one-to-one" relationship.

3. **Evaluating programme contributions to resilience.** While our measurement framework is designed to serve both diagnostic and evaluative purposes, it has been more difficult to use it for the latter, mainly due to the lack of major shocks or stresses during the life of a programme being evaluated. Without these, we are unable to measure or model the effects of the programme on mitigating the impact of a shock on household or community well-being. For example, this was the case in the impact evaluation of one of our flagship resilience programmes in Nepal.

Technical challenges and lessons learned

Our main technical challenges and lessons in applying our resilience measurement

1. **Prioritizing resilience capacities to measure.** Given the multitude of indicators that could theoretically contribute to resilience measurement, we have found it difficult to narrow the variables for data collection. Mercy Corps' STRESS process has helped with this, by identifying and prioritizing resilience capacities for a given context. Our development of pre-analysis plans has also helped us narrow the number of explanatory factors we collect data on. For example, in the Philippines our analysis focused on testing a small number of hypotheses (i.e. presumed resilience capacities). These were selected based on the main types of programme interventions being planned (e.g. financial services). This focused approach made the measurement efforts manageable to conduct, quicker to analyse, and easier for the programme team to use.
2. **Accurately measuring shocks and stressors.** We have not standardized our techniques for collecting and analysing information on shocks. Our measurement of the severity of shocks and stressors, and household exposure to them, has varied between binary variables, scaled indices and interactions. We have mainly used self-reported data (i.e. having individuals estimate the severity of the shock(s) they have experiences) – which has limitations in terms of reliability and recall bias. We are beginning to make better use of secondary data, including remote sensing data such as the Normalized difference vegetation index (NDVI).
3. **Analysing the relationships between resilience capacities, shocks/stressors and well-being outcomes.** We relied largely on multiple regression models. However, these techniques are not easily used by our field teams without support. Further, our analysis approaches have been based on linear assumptions and techniques, which do not adequately capture the contributions of sets of interrelated factors that we believe influence resilience. We are exploring using qualitative comparative analysis to better understand such dynamics.

Practical/logistical challenges and lessons learned

Our main practical challenges and lessons in applying our resilience measurement

1. **Matching resources to requirements.** The consistent refrain is that resilience measurement requires high frequency data collection with an emphasis on recurrent panel data, with multiple rounds. However, due to resource constraints in many of our programmes, and the unanticipated nature of many shocks, the majority of Mercy Corps' resilience measurement efforts to date have been limited to correlation analysis using (pooled) cross-sectional data. We were able to overcome this in the Philippines by integrating our resilience measurement into the programme M&E. This enabled the approach to be relative low cost by "piggy backing" on the baseline and follow-up survey to establish a panel survey as part of a randomized impact evaluation. We are in the process of trying to develop "right-sized"/lighter touch approaches for resilience measurement that meet our minimum requirement but in ways that are more realistic for typical programmes.
2. **Measuring resilience in the absence of a major shock/stress.** Since shocks are largely unpredictable, our workaround to date has been to be opportunistic. We have taken advantage of unexpected shocks and stresses to undertake rigorous resilience measurement and analysis in multiple instances. Though in these cases, we often lacked pre-shock data, and had to rely on recall questions to model the effects of resilience capacities and/or programmes. We are looking at models for measuring resilience when there is no major shock – or where our programmes may have reduced the likelihood that a shock has occurred – by, for example, analysing how flood levels may have been reduced relative to similar flood-inducing levels of precipitation in previous years.

Additional information

MERCY CORPS RESILIENCE MEASUREMENT APPROACH

Goals

The aim of our resilience measurement is to empirically test assumptions regarding what capacities and interventions make the greatest contributions to households' or communities' resilience to a given set of shocks or stressors. The evidence produced is intended to inform programme design and influence policy and investment decisions aimed at strengthening resilience.

Questions answered

1. What capacities matter most for resilience in a given context?
2. To what extent did our programming increase key resilience capacities?
3. To what extent did our programming enable households or communities to maintain or regain key well-being outcomes when faced with a shock or stress?

Indicators

Mercy Corps' framework specifies three essential types of measurements needed when analysing resilience

1. Capacities that people, groups, or systems drawn on to manage or adapt to shock and stressors – such as livelihood opportunities, social networks, or access and use of essential services.
2. Shocks and stresses that individuals, households, communities or systems are exposed to – such as droughts, conflict, or food-price spikes.
3. Development (or well-being) outcomes such as food security, improved health or reduced poverty that people seek to maintain or quickly recover when faced with a shock or stress.

The specific measures and indictors for them will vary based the context.

Methods

Our approach involves four broad steps.

1. **Identify critical resilience capacities.** Designing interventions to support resilience requires sound programme design informed by a theory of change that correctly identifies appropriate leverage points. This is enabled through a multi-hazard, multi-sector assessment. Mercy Corps has developed an approach for conducting such an assessment to capture key contextual factors related to resilience in a systematic way through our STRESS process. This process involves answering four key resilience questions – Resilience of what? To what? For whom? Through what? The STRESS process helps identify and prioritize shocks and stresses in a given context, understand their impact on different sub-groups or geographies, and identify key resilience capacities among households, communities and systems. This knowledge informs the development of a theory of change that articulates how a set of interventions can contribute to building resilience.
2. **Monitor and evaluate programme contributions to resilience capacities.** Often during the course of a short-to-medium-length programme, no major shock or stress will occur, thus limiting our ability to analyse resilience dynamics. In these cases, the bulk of M&E efforts will typically go into tracking changes to the resilience capacities that the programme is working to strengthen. This will be similar to standard M&E practices, and can draw on a range of methods from outcome monitoring, to performance evaluation, to impact evaluation. Undertaking a rigorous impact evaluation to establish causal evidence of programme impact on resilience capacities is particularly recommended in cases where the effect of a specific resilience capacity or set of capacities on a given well-being outcome has been empirically established. For example, in the Philippines, we first researched and demonstrated a link between greater access to financial services and improved abilities of households to cope with and recover from the effects of Typhoon Yolanda. We then conducted a randomized controlled trial to determine the impact of our post-typhoon recovery

programme on improving target households' access to financial services.

3. **Test resilience capacities against well-being outcomes in the face of shocks/stresses.** In the event of a major natural disaster, political crisis (e.g. conflict), or market shock (e.g. food project inflation), there is often a unique opportunity to examine if/how certain resilience capacities – and our programmes' contributions to them – affect well-being outcomes among people and communities affected by the shock. Mercy Corps and its partners have gone about this type of measurement through one-off studies and through a shock-based M&E approach. The latter is modelled on the interim monitoring surveys used by TANGO in Mercy Corps' Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) programme.

4. **Track changes to resilience and recovery over time.** Arguably the best way to understand longer-term resilience is to conduct follow-up measurement with families or communities a year or more after our programmes are over, with the purpose of analysing if/how our interventions have helped them manage subsequent shocks or stresses they have faced. Mercy Corps has conducted such *ex post* evaluations in Niger and Mali, to provide insight into durability of programme impact as well as trends in resilience capacities over time. The study in Niger was able to generate some understanding of which programme activities were more likely to contribute to beneficiaries' resilience when faced with another food security crisis 18 months after the programme closed. Having the foresight, resources and ability to rapidly turn such crises into opportunities can greatly enhance the understanding of which resilience capacities, as a result of Mercy Corps support, have enabled households and communities to weather a given shock.

CASE STUDY

2

Technical Assistance to NGOs (TANGO) International: Resilience Causal Framework (RCF)

Tim Frankenberger, President, TANGO International
tim@tangointernational.com

TANGO is a global leader in food security, livelihoods and resilience, with recognized contributions in results-based management. Tango is taking a lead role in resilience work with a core team of 20 consultants around the world, specializing in providing expertise that links recognized research and best practices. TANGO developed its Resilience Causal Framework for moving beyond measuring household resilience to include community, national and systems-level contexts and their associated challenges.

Context

The Resilience Causal Framework (RCF) provides an organizational scheme that streamlines measurement activities through linking data collection, data analysis and logical interventions in order to conceptualize and implement resilience measurement. The objective of the RCF is to operationalize the collection and analysis of data in order to model well-being trajectories in relation to the capacity of target populations to respond and recover from shocks and stresses over time. The RCF is intended to be read as an event- and time-sensitive guide of sequenced conditions to test cause-and-effect relationships through multiple scales including household, community and system-level perspectives.

The RCF being implemented by TANGO was developed by the Resilience Measurement Technical Working Group (RMTWG), a group established by the Food Security Information Network. Through its membership with the RMTWG, TANGO actively contributed to the development of the RCF and continues to be a part of the ongoing dialogue on establishing the structure through which resilience interventions can succeed.

The primary audience includes both internal and external stakeholders interested in adopting a structure that implements rigorous resilience measurement that can be adapted to different contexts. TANGO has used the RCF for a number of impact evaluations, including through the baseline (November/December 2013) and first recurrent monitoring survey (RMS, October 2014-March 2015) of the Ethiopia PRIME Project impact evaluations prepared for the USAID Feed the Future Feedback Project. The RCF was applied in the PRIME baseline with the objective of enhancing resilience, increasing household income, and bolstering adaptive capacity in the face of climate change in response to the drought experienced in the PRIME intervention area. The adoption of the RCF for the subsequent RMS enabled the real time measurement of household and community responses to shocks through regular monitoring of exposure to shocks and stresses

to understand how households use resilience capacities to cope.

The RCF is currently being implemented through the second round of the PRIME RMS (October 2015-September 2016) through quantitative data collection (household and community surveys) as well as qualitative data collection (focus group discussions and key informant interviews) being collected every two months. Data and results being collected for the PRIME studies are available for the public domain and are intended to enhance resilience practice.

TANGO's use of the RCF for PRIME studies highlights the usefulness of this framework on determining the resilience of household and communities, and of designing surveys that are applicable to each environment. PRIME baseline and RMS data aid in understanding which measures are needed to strengthen resilience for the management of current and future challenges towards meaningful change.

Conceptual challenges and lessons learned

TANGO understands that resilience must be measured and subsequently enhanced through multiple scales which include understanding household, community, national, and systems-level perspectives. The RCF considers various functions and qualities of resilience through understanding the set of skills, abilities, relationships, and resources at each level. These multi-dimensional aspects may include social capital, agricultural practices, access to resources and markets, infrastructure, conflict mitigation, and institutional resources which augment resilience capacities.

Capturing the effects of climate shocks and stresses is a cornerstone of the resilience approach that TANGO embraces. TANGO is poised to respond to the ever-changing dynamics of climate change as seen through the data collection for the PRIME RMS, launched in response to trigger indicators during a protracted period of drought in PRIME impact evaluation areas. This first round of RMS included a mixed-methods data collection approach that relied on panel data to grasp how target populations were coping with the drought, how the drought had affected their food security, and whether those with stronger resilience capacities prior to the drought's onset were more resilient to its effects.

While TANGO's resilience work tends to focus on an evaluative approach through ongoing impact evaluations, the adoption of the Strategic Resilience Assessment (STRESS) approach[9] provides a complementary diagnostic assessment of resilience. This approach poses four key questions: resilience of what? (outcome and well-being measures), resilience for whom? (disaggregated population), resilience to what? (identification of shocks/stresses), and resilience through what? (households, communities, and systems-level resilience capacities). Combining the evaluative and diagnostic approaches allows for a holistic perspective on resilience measurement.

Technical challenges and lessons learned

TANGO's experience has led to an appreciation of capturing psychosocial measures including personal aspirations, confidence, motivations to adapt in the face of challenges, a sense of power and agency, exposure to alternatives to the status quo, power dynamics, political willingness, and perceived risk and opportunity costs. Integrating these in data collection helps reveal resilience capacities through the ability to adapt to changing circumstances.

Data collection that captures livelihood diversity is also integrated into resilience measurement. The option to diversify into employment that is not climate-sensitive, such as commerce and other non-agricultural work improves household flexibility. Collecting data on how agricultural households respond to shocks, such as

[9] The STRESS approach was developed by Mercy Corps. It has been implemented by TANGO along with Mercy Corps in the Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) Programme in Kenya and Uganda, and in Zimbabwe through the Building Resilience in Zimbabwe: Towards a Resilience Strategic Framework.

through the use of off-season and irrigated cropping, also highlights resilience practices.

TANGO's methods include multivariate regression analysis to investigate the structural relationship between wellbeing outcomes, shock exposure, and resilience capacities. Analysis from the PRIME baseline indicates a statistically significant relationship between food security and shock exposure. It was found that households which exhibit higher absorptive, adaptive, and transformative capacities are better suited to withstand shocks. Qualitative data complemented quantitative data and improved analysis through identifying patterns, strengthening contextual information, and triangulating data. The qualitative analysis assured women's voices were heard and confirmed the importance of women in contributing to resilient household and communities.

Along with trigger indicators, TANGO uses climate data from objective and reliable sources including the African Flood and Drought Monitor and the Famine Early Warning Systems Network, as well as interagency seasonal assessment reports, and national meteorological data. The PRIME RMS data also compared current data to historical records through the Standardized precipitation index (SPI) and Soil moisture index (percent of norm), and through the Normalized difference vegetation index (NDVI) percentile. Along with these tools and resources, TANGO included community-level climate adaptation data through survey instruments (PRIME baseline).

Practical/logistical challenges and lessons learned

The logistical challenges TANGO has faced in the operationalization of the RCF include data collection delays, security concerns, and issues with local government staff. During the implementation of the PRIME baseline, the tablets used to conduct the surveys were retained by Ethiopian customs, delaying the training-of-trainers. TANGO, along with a local implementing partner, worked closely with the national statistical government office and customs officers to ensure the tablets were released in time to do the survey.

Despite the partnership with the national statistical government office for the same survey, the interference of a regional government agency in enumerator training as well as the interference of local security forces that routinely stopped and questioned enumerators prompted TANGO to assign additional local enumerators and extend the length of the survey. In another survey area, TANGO arranged for wifi with the local telecommunications company and a business owner to ensure Internet services for the duration of the project. TANGO also provided additional training to supervisors and team leaders on manually backing up surveys from tablets to laptops to prevent the lack of Internet access from compromising data quality.

TANGO continually provides capacity training with local partners including through training-of-trainers and training of enumerators in qualitative and quantitative data collection. For the PRIME baseline, TANGO partnered with registered nurses to ensure anthropomorphic data was being collected adequately, while a partnership with the statistical government office ensured that enumerators received training on household listings using the techniques employed for national censuses. TANGO also supported the translation of questionnaires into local languages to maintain cultural accuracy and sensitivity. Through such trainings, TANGO strives to maintain consistent quality data collection in resilience measurement techniques, field-testing, anticipating, and correcting any issues as they arise, while establishing a common understanding of objectives and responsibilities across all partners.

Additional information

The RCF includes four primary components.

***Ex ante* component** is used to generate data describing the initial state of an intervention area before a shock (time 1) and includes measures of initial well-being and vulnerability to assess resilience capacities.

Disturbance component generates data describing the intensity and effects of shocks and stresses. Indicators revolve around natural disasters, outbreaks that affect

households (e.g. pest or agricultural diseases), political strife, and economic crises.

***Ex post* component** generates data at the end state at time one (time 2, time 3, etc.) about subsequent states and trajectories following exposure to disturbance(s).

Contextual factors component includes the political, cultural, and agro-ecological features in which the RCF operates. These are determined by local settings and by programmatic theories of change and will vary, allowing the RCF to be sensitive to local realities and flexible to each environment.

The RCF is applied at multiple levels, including household, community, regional, national and systems levels, depending on the nature of the intervention. It is understood that resilience at one level may enhance resilience at another level through the acknowledgement of systems that are interconnected. The methods used to gather indicators for each component may include quantitative, qualitative, objective, and subjective data with the option of combining methods to strengthen the design. The RCF, therefore, acts as a framework that systematizes and operationalizes resilience measurement.

CASE STUDY

3

Oxfam GB: Building Resilience

Claire Hutchings
chutchings@oxfam.org.uk

Oxfam, a globally renowned aid and development charity with 70 years experience, takes a rights-based approach to its development, humanitarian and campaign work in over 90 countries. It defines resilience as the ability of women and men to realize their rights and improve their wellbeing without shocks, stresses and uncertainty. The Oxfam approach to enhancing resilient development addresses the impacts of shocks, stresses and uncertainty on people living in poverty as well as the causes of vulnerability and risks.

Context

What is the purpose of the framework? Who designed it? Who is responsible for rolling it out?

- The measurement framework was originally developed in 2011 by Karl Hughes and Helen Bushell, conceptualizing resilience as a multi-dimensional composite index. Indicators for resilience were structured under five dimensions based on what may affect adaptive capacity at the household level, and then aggregated using techniques similar to the methods used to create multi-dimensional poverty indices (policy-practice.oxfam.org.uk/publications/a-multidimensional-approach-to-measuring-resilience-302641).
- Under this framework, drivers of resilience are established – these are factors that are thought to build future resilience in target communities and determine whether wellbeing will improve or rights will be realized in spite of shocks, stresses, and uncertainties. Therefore, the measurement framework does not rely on shocks and stresses having occurred, in order to be employed.
- Vitally, the framework participatory methodology generates indicators that are context specific.
- The framework was developed for deployment in quantitative impact evaluations (effectiveness reviews) of resilience-building projects, therefore the main responsibility for its application has been with the evaluation team. However, a new framework for resilience programming has recently been produced (Jeans, Thomas and Castillo, 2016) which frames resilience in terms of three capacities – absorptive, adaptive, and transformative. This framework applies to the entire Oxfam confederation: policy-practice.oxfam.org.uk/publications/the-future-is-a-choice-the-oxfam-framework-and-guidance-for-resilient-developme-604990.
- The resilience measurement framework is being adapted to structure the resilience indicators identified under these three capacities, rather than the five dimensions.
- To support this process, Oxfam has conducted a quantitative meta-analysis of the 18 Effectiveness Reviews conducted to date in order to map existing indicators into the new framework and provide a

summary of what has been achieved in the past five years with the original measurement framework.

Who is the primary audience? Internal or external?

- The primary audience is people undertaking MEL within the organization. It is hoped that Oxfam will have a consistent and coherent framework for measuring resilience in its projects.
- However, by applying this measurement framework and synthesizing the results that emerge, we have generated learning that also may be useful externally (see, e.g. discussion paper on practical application of the framework: policy-practice.oxfam.org.uk/publications/measuring-resilience-lessons-learned-from-measuring-resilience-in-oxfams-large-583601.

What context is the framework being used in?

- The framework is applied across Oxfam humanitarian and development projects with an objective to "build resilience" – contexts vary substantially, but many aim to address climate change impacts.

What is the implementation status of the framework? Has it generated data and evidence yet?

- Is the evidence in the public domain? What does the framework enable in terms of practice and wider learning?
- The framework has been deployed in 18 *ex post* impact evaluations over the past five years, providing strong evidence of the projects' overall positive impact in changing the ability of supported households to minimize risk from shocks and adapt to emerging trends and uncertainty.
- The framework allows the results to be clearly decomposed according to different dimensions and different capacities – this gives a sense of how "balanced projects" resilience-building activities have been – and is enabling Oxfam to start identifying interim outcomes, such as the adoption of innovative practices,[10] participation in community-level or district-level decision making, and the adoption of improved production practices that seem necessary (though not sufficient) to resilient development.[11]
- There is a long history of conducting Effectiveness Reviews. Not only are all reports made public, Oxfam is also making all of its raw data public (after anonymising) through the UK Data Service.
- Qualitative follow-up work undertaken in some contexts to better understand how impact has been achieved are also published (see Information Flows Faster than Water, follow-up study of the 2011 ER of Resilience programming in Pakistan).
- The meta-analysis shows the main lessons learned using a quantitative methodology (more detail below).

Conceptual challenges and lessons learned

Challenges experienced in translating the complexity of resilience as a concept into practically measuring "it".

At what level are you building and measuring resilience, i.e. household, community, or whole system?

- Oxfam explicitly aims to build resilience at multiple scales – individual women and men, household, village, district, national and above. Historically, individual programmes have often chosen to focus primarily on a single level, integrating influencing to address national level policy change. Oxfam is developing a landscape-based approach to work more effectively across nested levels (see Finding Ways Together to Build Resilience)
- This has proved a significant challenge for the measurement framework. The Effectiveness Reviews that Oxfam undertakes rely on deploying a

[10] Whether households have demonstrated willingness to innovate by experimenting with some new practice.

[11] Resilient development is defined as development that does not cause or increase risks, stresses and volatility for people living in poverty, and which makes progress towards a just world despite shocks, stress and uncertainty.

quasi-experimental design, whereby the evaluation team collects data on outcomes among the project beneficiaries as well as comparable, non-project beneficiaries. However, making comparisons across districts, countries, or even higher-level systems is difficult.

Does your framework consider assets, functions, qualities or different dimensions of resilience?

- The original measurement framework considers dimensions of resilience, but the new measurement framework sets out three capacities of resilience – absorptive, adaptive, and transformative (these are outlined in The Oxfam Framework and Guidance for Resilience Development, as well as in the ODI synthesis report).
- These capacities are built through a series of six social change processes and, in essence, describe and categorize the various inputs that Oxfam feeds into its projects.

Do you consider the framework you use to be diagnostic (i.e. gauging the level of resilience of a system or household) or evaluative (i.e. testing whether resilience programmes have worked and to what extent), both or other?

- The main body of evidence is evaluative – applying Oxfam's resilience measurement framework to the Effectiveness Reviews.
- However, this does not rule out using it in a diagnostic way. Indeed, when we conduct Effectiveness Reviews, we collect data on indicators that are both related and unrelated to the project logic, giving a broader picture of resilience in Oxfam's target communities, even if focused only at household level indicators

Technical challenges and lessons learned

Technical challenges experienced, including challenges with selecting and applying methods, using measurement tools or with data analysis.

What data collection methods have or haven't worked in your experience?

- The measurement framework, as applied in the Effectiveness Reviews has principally used household – and sometimes individual-level – data.
- This has proved somewhat challenging from the perspective of transformative capacity – the long-term systemic changes associated with transformation require data to be collected at multiple levels. For example, transformation may relate to influencing the government to change policies that affect risk. Transformation also applies at the individual level in, for example, enhancing women's transformative leadership.

What means of analysis have you used and how successful has this been in producing results?

- The Effectiveness Reviews themselves have been able to produce plausible estimates of the effects of resilience on particular projects.
- However, more excitingly, having conducted Effectiveness Reviews since 2012, there is a sufficient number of evaluations to conduct a quantitative meta-analysis (main method: random effects with standardized mean difference).

Key messages emerging from this meta-analysis include the following.

- Oxfam's approach to building resilience has been fairly balanced using both the old and the new measurement framework. Decomposing the overall effects that Oxfam's resilience-building projects appear to have had, there were positive effects for each of the five dimensions and each of the three capacities.
- There were clear regional differences. As measured, projects in resilience-building projects in Nepal and Pakistan appeared to have the most positive results.
- There were striking differences in terms of the gender of the household head. Male-headed households seemed to have significantly higher resilience than female-headed households,

controlling for a number of observable characteristics, such as wealth, and household structure. However, there were no clear differences in the effects of Oxfam projects, according to the gender of the household head.

- The meta-analysis also focused on the relationships between certain indicators, in particular allowing Oxfam to map indicators from the previous five dimensions framework onto the three capacities.

How have you managed to integrate climate or weather data into the measurement framework?

- The original measurement in *ex post* impact evaluations such as the Effectiveness Reviews does not make specific allowances for this, as they are normally taken as a "snapshots" after a project's completion.
- However, it is a requirement of the new measurement framework to include ongoing, updated context analysis.

Practical/logistical challenges and lessons learned

Practical or logistical challenges experienced in operationalizing the resilience measurement framework.

What barriers to data gathering have you experienced?

- Moving from measurement framework to practical indicators is not straightforward. In the Effectiveness Reviews, this has hinged on having conversations with project and partner staff (who have a good understanding of the context) as well as conducting focus groups in local communities. Oxfam has developed particular tools for helping to conduct these focus groups.
- The resilience indicators that Oxfam uses in the Effectiveness Reviews are supposed to capture the intermediate step between project outputs and better resilient development outcomes. It has proved difficult to draw the line between outputs, intermediate outcomes and final outcomes in many cases.
- Identifying suitable characteristics of resilience requires assumptions about what will allow households to absorb, adapt, and transform; testing these assumptions requires follow-up/panel data. There is also risk that the same assumptions that are used for programme design are then simply maintained for evaluation purposes, giving resilience a "circular definition."

What challenges with data quality or analysis have you experienced?

- The *ex post* evaluation design used for the Effectiveness Reviews is imperfect – and a number of unobservable factors may bias the estimated effects. This would be drastically improved by building similar evaluation designs into the inception phase of projects. Oxfam is exploring this possibility with suitable programmes.
- Ideally, the new measurement framework would utilise system-level qualitative data to accompany the quantitative data that has typically been the focus of the Effectiveness Reviews to date. However, finding a suitable way to combine quantitative and qualitative results has proved challenging (how can data of different types have a "common currency" to construct a single metric of resilience?)

Have you experienced any skills or capacity issues internally or with partners?

- Finding consultants/survey teams with sufficient capacity to collect high quality quantitative data in certain contexts is challenging.

Other challenges and lessons learned

One particular challenge associated with constructing multi-dimensional indices – as required by Oxfam's approach for measuring resilience in the Effectiveness Reviews – is working out how to weight particular indicators against one another. In the 2015/16 Effectiveness Reviews, the evaluation team experimented with using a "budget allocation game" with respondents, to try to extract their subjective weightings of particular dimensions of resilience.

Additional information

- Oxfam's measurement framework for resilience was designed mainly for undertaking *ex post* impact evaluations of Oxfam projects – the Effectiveness Reviews.
- Since then, the framework has been adjusted to conceptualize resilience in the same terms as Oxfam's programme guidelines, conceptualizing resilience in terms of three capacities – absorptive, adaptive and transformative.
- The central tenet of this framework involves identifying characteristics or drivers of resilience – factors that are believed to determine whether wellbeing will be improved or rights will be realized in the future (in spite of shocks stresses or uncertainty).
- As a result, there is no generic set of indicators – indicators are instead context specific, depending on the project being evaluated.
- Establishing indicators relies on discussion with project and partner staff as well as local communities.
- Oxfam has been able to conduct a meta-analysis of its existing Effectiveness Reviews, which has helped to:
  - map indicators from the original five dimensions onto the three capacities
  - explore regional differences between resilience-building projects
  - decompose the results around the overall resilience index into its constituent dimensions and/or capacities
  - determine the main indicators driving the resilience index (these tended to be those indicators further down the results chain)
  - explore gender differences in levels of resilience, focusing on women-headed households vs mixed-headed households.

CASE STUDY

4

Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED): Myanmar Alliance

Jeremy Stone, BRACED Myanmar Alliance coordinator
JeremyKieron.Stone@plan-international.org
Bhushan Shrestha, BRACED M&E Manager

The BRACED Myanmar Alliance is a partnership between international NGOs, national implementing agencies, and research agencies focused on furthering the resilience agenda in Myanmar. The Alliance members include the lead agency Plan International, Action Aid, BBC Media Action, World Vision, the Myanmar Environment Institute, and UN Habitat. BRACED is a program funded by the UK government, which aims to improve the lives of up to 5 million vulnerable people facing climate extremes and disasters. Over four years, this will be achieved through the efforts of 15 major consortia operating across the Sahel, East Africa, and Asia.

Context

Resilience in Myanmar is evolving out of the established disaster risk reduction community. The BRACED Myanmar Alliance has helped to expand the scope of community resilience to understand all manner of risks that may impact community development activities, including disaster, climate change, socio-economic, environmental and conflict-related disturbances. It is one of the first large-scale programmes in the country to try to define parameters of what resilience looks like in Myanmar communities.

The M&E framework was developed following significant guidance provided by the interim BRACED Knowledge Manager[12] and provides a grounding for the project implementation both in terms of how we assess the existing resilience of communities and how we will measure whether project interventions delivered through BRACED are achieving the expected results. The framework is structured around three key pillars.

- **The theory of change** established a conceptual model of the challenges and needs of Myanmar communities in relation to climatic and disaster shocks and stresses, and set out clear pathways for addressing these challenges at different levels (local to national) through multiple actors.
- **Defined characteristics of resilience** were tailored into a composite index of resilience indicators based on review of existing frameworks including FAO,[13] USAID,[14] and IDS.[15] It was then contextualized for Myanmar through community and practitioner

[12] Prepared by Landell Mills and Garama 3C Ltd on behalf of DFID.Drafted by Nick Brooks with input from Martin Whiteside and EunicaAure. +DFID Resilience Approach Paper; The DFID conceptualframework for resilience can be found at DFID Defining Disaster Resilience.

[13] FAO: Measuring Resilience: A Concept Note on the Resilience Tool.
[14] USAID: THE RESILIENCE AGENDA: Measuring Resilience in USAID.
[15] FAO: Bene (2013) Towards a Quantifiable Measure of Resilience, IDS WORKING PAPER Volume 2013 Number 434.

consultations. This informed understanding of experienced shocks and stresses, and historical and anticipated coping mechanisms. The composite index of resilience developed and practised by BRACED Myanmar Alliance helps to measure degrees of resilience at household level using 30 outcome level sub-indicators across five dimensions of changes – namely: preparedness and coping mechanism; resilience of system and livelihood; establishment of safety nets; communication, access and use of information; decision making and planning. The project evaluation strategy uses a quasi-experimental approach surveying both target and control areas.

- **The BRACED Myanmar resilience assessment framework**[16] establishes a comprehensive context analysis of each target community identifying the vulnerability, capacity and exposure of communities to different shocks and stresses which supports identification of resilience activities and serves as a record for communities to be reviewed and updated as the context changes. This complements the baseline survey in identifying an entry point for resilience building.

The overall M&E is operationalized and coordinated by an Alliance Coordination Unit and M&E manager. All respective partners are responsible for tracking their individual progress through a comprehensive beneficiary and log frame indicator tracking sheet. The monitoring framework tracks both process and results systematically. Monitoring of results, value for money and lessons are fed back into the project management cycle.

Conceptual challenges and lessons learned

BRACED Myanmar focuses on community resilience, tracking changes in resilience (according to defined resilience dimensions) of individual community members through household surveys (resulting in composite indices score – KPI4).

[16] BRACED Myanmar (2015) Community resilience Assessment and Action Cycle.

The entry points for resilience building are diagnostic community resilience assessments which aim to understand resilience of systems in communities. This is complemented by the baseline that tracks a wide variety of community indicators covering livelihoods, basic services, and social safety nets which will be used to evaluate project activities. The tracking of the changes in these indicators helps to show attribution of project interventions to changes in resilience scores but will also be able to track wider external influence especially given the use of control sites in the survey methodology.

BRACED recognizes institutional partnership and collaboration as a building block to strengthening resilience. Supporting activities target different institutions to create stronger enabling environments for resilience. Institutional capacities and resilience are tracked through village, township and national institutional scorecards reviewed at baseline, mid-line and end-line surveys.

Through a participatory process with community members and resilience practitioners, dimensions and sub-indicators were refined, and weightage of the composite index was determined – accounting for multiple hazards. Identification and selection of indicators extensive enough to represent the key characteristics of resilience, yet focused enough to be rolled out through a household survey, involved many rounds of discussion and fine tuning.

The influence of climatic shocks forms a key part of analysis of the end-line data collection to understand the influence (or non-influence) of climate and disasters on the change in resilience scores. For instance, project stakeholders were easily able to explain the difference in KPI score at baseline among different project townships, due to influence of different hazard profiles and exposure to previous support from other projects.

Technical challenges and lessons learned

There were challenges in selection and finalisation of the evaluation methods. Initial investigations

into establishing phase-wise implementation and comparison between early and late interventions was ruled out due to a work plan designed at the beginning of the programme that did not meet the phasing requirements. Shifts in timing would have had significant planning and budgeting implications. A linear approach to implementation and quasi-experimental evaluation approach surveying target and control sites was therefore agreed on to test attribution.

Identifying control villages with similar conditions to the target villages (min 2 km, max 5 km distance, to minimize spillover effects) also proved to be challenging due to the lack of socio-economic data available at local level. In the initial baseline survey, 21 percent of target and control villages did not have matching hazard characteristics and did not report the same shocks. This resulted in the reselection and resampling of a handful of control sites, causing some baseline delays but resulting in better quality comparative data.

A comprehensive qualitative "most significant change" tracking system was launched. However, it has been a challenge to establish an agreed regularity of collection of stories from communities. While more regular collection and analysis would provide better data quality and a better indication of change, it is also important to avoid over burdening community members and implementing teams.

Climate and weather information is used to inform planning and decision making to develop community preparation and response plans, and inform the selection of resilience activities (based on prioritized shocks and stresses).

Limitation in use comes from both access to reliable and accurate data and weak capacity to interpret and use complex climate and weather projections and forecasts. BRACED has therefore incorporated user friendly scenario development and planning tools for analysis of data.

Practical/logistical challenges and lessons learned

Operationalizing the resilience M&E framework has involved a number of challenges, especially within an alliance approach to implementing BRACED. Collaboration and coordination between project implementers and M&E staff is key to effective implementation of the programme in terms of understanding the effectiveness of delivery mechanisms and the effectiveness of resilience interventions, but is challenging in itself.

A strong and effective working relationship takes time to build trust and effective ways of working. This includes communicating complex evaluation methods and approaches, and making them understandable and user friendly for non-M&E staff. Technical knowledge and understanding of why information is relevant and needs to be collected needs to filter to the field level where data collection is undertaken. A central (ACU) M&E manager and designated agency M&E focal points who regularly coordinate through a M&E working group has streamlined the M&E process.

Further, the labour market in Myanmar is very turbulent, and technical staff positions including M&E are difficult to recruit and to retain. This has resulted in a high turnover of expertise and requirement to retrain and sensitise staff to the M&E framework.

The project has also had to find a balance between heavy M&E data collection and implementation works. The project could start to fully roll out data collection and M&E tracking systems only after the start-up phase of the project was complete and activity implementation underway.

The baseline survey was additionally delayed due to the Myanmar elections of November 2015 when community survey work could not be carried out. It is not thought that the delay has impacted significantly on the quality of data, as implementation was in a very early stage during baseline data collection.

Other challenges and lessons learned

Community resilience begins with meeting immediate disaster resilience needs and only then do community members begin to identify and address issues that will take effect over a longer period. The prioritized activities in the first round of community resilience assessments were mainly focused on DRRM rather than resilience and adaptation. Example interventions include evacuation shelters, community infrastructure (access roads and bridges) and early warning systems. Only after these were met did communities start to address longer-term needs including livelihoods, basic services (water, food, energy) and agriculture.

It is anticipated that this will be evident in the resilience KPI scores in the different dimensions of resilience. We expect to see strong improvements in planning and coping mechanisms but less so in livelihoods and systems resilience. A key lesson therefore is that resilience can't be built in one go, sustained activities and interventions need to be implemented within communities – building on new knowledge and information.

The scope of the project covers shocks and stresses. However stresses are generally events that occur over a long period of time that exceeds the project period. Classification of a shock is also subjective and interpretation may differ across respondents who may not consider that disasters such as drought or flooding are shocks, if they are regular events.

This should be reflected in evaluation frameworks that acknowledge that the baseline will not be static and that a KPI score may only be relevant to the context at the time of measurement. Interventions will change and be reprioritized, based on changing conditions.

More regular but lighter touch surveys to track mid-project progress would help to justify longer-term project support and interventions. *Ex post* evaluations would also help to understand the longer-term sustainability of resilience interventions.

Additional information

The BRACED Myanmar Alliance guiding objective is: "To build the resilience of 350,000 people across Myanmar to climate extremes: saving lives, protecting livelihoods, improving institutional coordination, and influencing national policy."

The Alliance is working to achieve its guiding objective by focusing on three areas of work.

1. **Knowledge and resources:** Developing communities' knowledge, skills and increasing access to resources to mitigate the risks of and recover from climate shocks and stresses and other disturbances.
2. **Governance:** Support institutions (government, non-government and private sector) to be more coordinated and responsive, to manage climate and disaster risks.
3. **Learning and advocacy:** Document and disseminate evidence on best practices of strengthening resilience that is used to inform international, national and local policies and practices.

Key indicators to be monitored by BRACED Alliance Myanmar Project

- **Output level (ICF KPI 1):** number of people supported by BRACED to cope with the effects of climate change
- **Outcome level (ICF KPI 4):** number of people whose resilience has been improved as a result of BRACED
- **Outcome level:** number of institutions supported by BRACED better able to protect the lives and livelihoods of most vulnerable, particularly women and children, from climate extremes.

Measuring Resilience in BRACED

The Alliance developed a composite index for resilience (KPI4) during the proposal development phase which helps to measure the degree of resilience at household

level, using 30 outcome level sub-indicators across five dimensions of changes. These include measuring the number of people with:

- increased preparedness and coping mechanisms
- increased resilience of systems and livelihoods
- improved safety nets
- better access to communications, access and use of information
- improved decision making and planning.

The composite index for resilience (KPI4) was refined through community and expert consultations to reflect what resilience means to vulnerable/targeted population. Specific indices were developed to account for the different hazards experienced across three targeted climatic zones (coastal, hilly and dry). The project adapted a quasi-experimental evaluation approach surveying both target and control villages. Control villages were selected from the same township but 2 km away, and 5 km from target villages, to minimize spillover effects. The indices will be tracked through the baseline, light-touch mid-line and end-line survey to assess the degrees of change in targeted people's resilience. The resilience indicators are disaggregated by gender, and the measurement survey ensures 50 percent of respondents are women.

An analysis of subjective resilience will be undertaken based on respondent's perceptions and experience of responding to specific shocks and stresses.

Evaluation questions will be asked to cover:

- To what extent was the BRACED Beda Alliance project successfully designed and implemented?
- What impact did the BRACED funding have on increasing the resilience of people in Myanmar, particularly women and children?
- What processes used and results obtained by the BRACED Alliance project worked best to increase the resilience of vulnerable people and the effectiveness of institutions?
- Are project results the "right ones" for the "right people" (i.e. are they benefitting the poorest and most marginalized groups in ways that build resilience)?
- To what extent has the BRACED Beda Alliance project contributed to improving an enabling environment for resilience building? Has it reached beyond the initial boundaries of the project?
- How sustainable are the impacts of the activities funded by BRACED?
- Was it successful in working towards the longer-term outcome and impact as presented in the ToC?
- To what extent did the project represent good VFM?

To understand institutional capacities and resilience being built through the programme village, township and national, institutional scorecards reviewed at baseline, mid-line and end-line surveys will monitor changes in capacities and behaviours of government and civil society institutions.

A comprehensive qualitative "most significant change" tracking system will also complement quantitative results by providing real life stories of change within target communities.

Annexes

ANNEX

1

Case study template

Resilience Measurement Approaches in Practice (RMAP)

Introduction

The Resilience Measurement, Evidence, and Learning Community of Practice (CoP) is supported by Windward Fund and the Rockefeller Foundation and brings together leading specialists and practitioners in conceptualizing, measuring, monitoring and evaluating resilience to learn from one another, as well as to determine the priorities for growing the field and creating a compelling base of evidence. Itad is leading the work to contribute to the 2nd Convening of the CoP of which this template is an integral part.

Purpose of this template

You have been invited to complete this template as part of a cross-section of practitioners and members of organizations with experience of applying resilience measurement frameworks and tools in the field. Via this template we aim to capture and synthesize the existing knowledge from the community's experiences of practical applications of resilience measure- ment frameworks and tools.

- We envisage this template will capture reflections on the experience of operationalizing/applying a framework and not a description of the framework (e.g. specific questions and indicators etc.) itself.
- We will synthesize the challenges and lessons learned that emerge from the completed templates and try to identify any common themes.
- We will not publish any details included here without prior consent of the contributors.

Why complete the template?

We hope this initiative will help to improve our understanding of how to practically detect and measure changes in resilience at different scales as as well as contribute to the agenda of the CoP forward. In addition to being at the forefront of resilience measurement globally and receiving wider exposure for your work, we see the following benefits for giving time to complete the template:

- An opportunity to present at 2nd Convening of the CoP in Rome on 21–22 July 2016;
- An opportunity to help define the headline challenges for your field; and
- An opportunity for formally document and disseminate your learning.

When completing the template please note:

- The template is structured around challenges and lessons learned in operationalizing resilience measurement frameworks and tools. We have identified three areas within which we believe these challenges broadly fall: conceptual, technical, and practical. However, we recognize that there are likely to be others and have provided an additional section on this basis.[17]

[17] While we have chosen to organise this template around these three broad 'categories' of challenges, we recognise that this is just one of many ways that our thinking can be structured. However, it provides us with a way to structure the discussions and agenda-setting going forward.

- We recognize that you may be at an earlier stage of implementing the resilience measurement framework and that solutions for any challenges encountered may not yet have been found, and indeed this is part of the role of the CoP – to find shared solutions. Please share as much as you are able to at this stage.
- The template should take no more than 1-2 hours to complete.
- We would like the content to be reflection of your experience to date and not just directly extracted from existing documents.
- Where possible, please complete all sections of the template and adhere to the word limits.
- If you have any questions or clarifications, or would like any further support in completing this template, please do not hesitate to get in touch with us using the contact details provided in the email accompanying this template.

SECTION 1: CONTEXT (MAX 500 WORDS)

Use this section to tell us more about the context in which the resilience measurement framework* was developed and is being used. You may find the following questions useful:

- **What is purpose of the framework? Who designed it? Who is responsible for rolling it out?**
- **Who is the primary audience? Internal or external?**
- **What context is the framework being used in?**
- **What does the framework enable in terms of practice and wider learning?**
- **What is the implementation status of the framework? Has it generated data and evidence yet? Is the evidence in the public domain?**

***Please provide a link to or attach any supporting documents which you feel may be useful.**

SECTION 2: CONCEPTUAL CHALLENGES AND LESSONS LEARNED (MAX 300 WORDS)

Use this section to describe any challenges you have experienced in translating the complexity of resilience as a concept into practically measuring 'it'. You may wish to consider the following questions:[18]

- **At what level are you building and measuring resilience? i.e. household, community, or whole system?**
- **Does your framework consider assets, functions, qualities or different dimensions of resilience?**
- **How have you managed to incorporate the dynamics of climate shocks and stresses?**
- **Do you consider the framework you use to be diagnostic (i.e. gauging the level of resilience of a system or household) or evaluative (i.e. testing whether resilience programmes have worked and to what extent), both or other?**

SECTION 3: TECHNICAL CHALLENGES AND LESSONS LEARNED (MAX 300 WORDS)

Use this section to describe any technical challenges you have experienced. This may include challenges with selecting and applying methods, using measurement tools or with data analysis for example. You may wish to consider the following questions:

- **What data collection methods have or haven't worked in your experience?**
- **What means of analysis have you used and how successful has this been in producing results?**
- **How have you managed to integrate climate or weather data into the measurement framework?**

SECTION 4: PRACTICAL/ LOGISTICAL CHALLENGES AND LESSONS LEARNED (MAX 300 WORDS)

Use this section to describe any practical or logistical challenges you have experienced in operationalizing the resilience measurement framework. You may wish to consider the following questions.

- **What barriers to data gathering have you experienced?**
- **What challenges with data quality or analysis have you experienced?**
- **Have you experienced any skills or capacity issues internally or with partners?**
- **What are some of the other major practical challenges, if any?**

SECTION 5: OTHER CHALLENGES AND LESSONS LEARNED (MAX 300 WORDS)

Please use this section to describe any other challenges you may have experienced in measuring resilience which you feel do not fit into the sections above.

SECTION 6: FINAL DETAILS

Who is the main point of contact for this matter? (Please provide the contact point's name and email address)

Are you interested and available to attend the 2nd Convening on 21st-22nd July in Rome? Y/N (delete as appropriate)

Consent

I consent to the completed template and additional documents being shared publically *

I consent to the completed template and additional documents being shared within the Resilience Measurement-MEL CoP only *

ADDITIONAL DOCUMENTS (MAX 800 WORDS)

Please detail any additional documents that will be sent with the completed template:

-
-
-

Finally, in addition to any longer supporting documents you may have attached, please use this section to provide a succinct summary of the framework you have used. You may wish to include the following:

- **Main evaluation questions**
- **High-level goals**
- **Indicators**
- **Methods**

[18] The suggested conceptual considerations are consistent with the ODI report produced for the first CoP convening, entitled "Resilience Measurement Frameworks and Approaches: A Bird's Eye View". However, please do not feel confined to these considerations as there may be others that you consider important to highlight in this section.

ANNEX 2

Identifying the challenges from expert experience

A wide cross-section of practitioners and members of organizations with experience of applying resilience measurement frameworks and tools in the field were invited to submit case studies ahead of the 2nd Convening, sharing their reflec- tions on the common question: what are the challenges in operationalizing these resilience measurement frameworks?

Building on the work presented by ODI in the 1st Convening, a standard case study template was developed, structured around three broad categories of challenges: conceptual, technical, and practical (as well as an 'others' category), in order to help structure the ensuing discussions and analysis. The purpose was to capture and synthesize existing knowledge from the community's experiences of practical applications of resilience measurement frameworks and tools, which could contribute to our understanding of how to practically detect and measure changes in resilience at different scales.

Synthesis and Analysis of Case Study Evidence

Once the case studies were collated, the evidence was synthesized across the case studies, and a framework approach[19] was employed to undertake thematic analysis of the challenges identified. This framework thematic analysis was under- taken in to help structure the discussion at the 2nd Convening, and to inform the writing of this report. More detailed thematic analysis can be found in the framework matrix included in Annex 3.

Sharing and Exploring the Challenges with the CoP

At the 2nd Convening, those who had contributed case studies were asked to give a very succinct 5-minute presentation on their case study, with a focus on the various resilience measurement challenges that emerged from the written case studies. These presentations were actively facilitated to stay within the 5-minute window, and focused on the challenges encountered, rather than on context or results. This was to ensure that the presentations given were snappy and sparked discussion, to allow all participants to get straight to the heart of the session: the key resilience measurement (RM) challenges around operationalis- ing RM frameworks and tools. From their case study reflections, the presenters were

also asked to highlight one key RM challenge that they would most like to be addressed through the CoP's work going forward.

These 'quick-fire' presentations were followed by a short Q&A with the presenters before the discussion

[19] For more information on the Framework approach to thematic analysis, see Jane Ritchie *et al.* (2013) Qualitative Research Practice, London: SAGE.

was opened up to the wider room. The purpose of this discussion was to synthesize the community's knowledge of practical applications of resilience measurement frameworks, and flesh out headline challenges for this field.

Building Consensus Around Key Challenges

A participatory ranking exercise was employed in order to develop a rough but rapid sense of a collective prioritization of the challenges identified. This type of exercise was chosen as the facilitators felt that it promoted an engaged and participatory way of rapidly converging on a collective prioritization of challenges, while allowing each individual par- ticipant an equal initial opportunity to offer their own 'top' challenge, and allowing for multiple debates and discussions without the risk of a minority of participants dominating the discussions.

The exercise began with each participant jotting down what they personally considered to be the top priority challenge for the CoP to address. Participants were then encouraged to mill around in the exercise space, swapping the card they were holding with whichever random person was closest when instructed by the facilitators (meaning the card a partici- pant was holding at this point was no longer their own card).

This 'card swapping' continued several times until the facilitators blew a whistle (or in the case of the 2nd Convening of the CoP, banged the gavel), when the participants were instructed to form pairs with the person closest to them, and then read and discuss the merits of the challenges written on the two cards held by that pair. Two minutes were allocated to reading and discussing the challenges, before the pair had to decide how to allocate seven points between the two cards, according to how high a priority they considered the challenges were for the CoP to address, with the scores written on the back of each card.

This process of milling around, card swapping, pair forming and points allocating was then repeated a further four times, allowing for a maximum of 35 points to be awarded per card/challenge. After these five rounds, the points on the back of each card were totalled up, allowing for the identification of the top (12) challenges with the highest score, which were then verbally shared with the group.

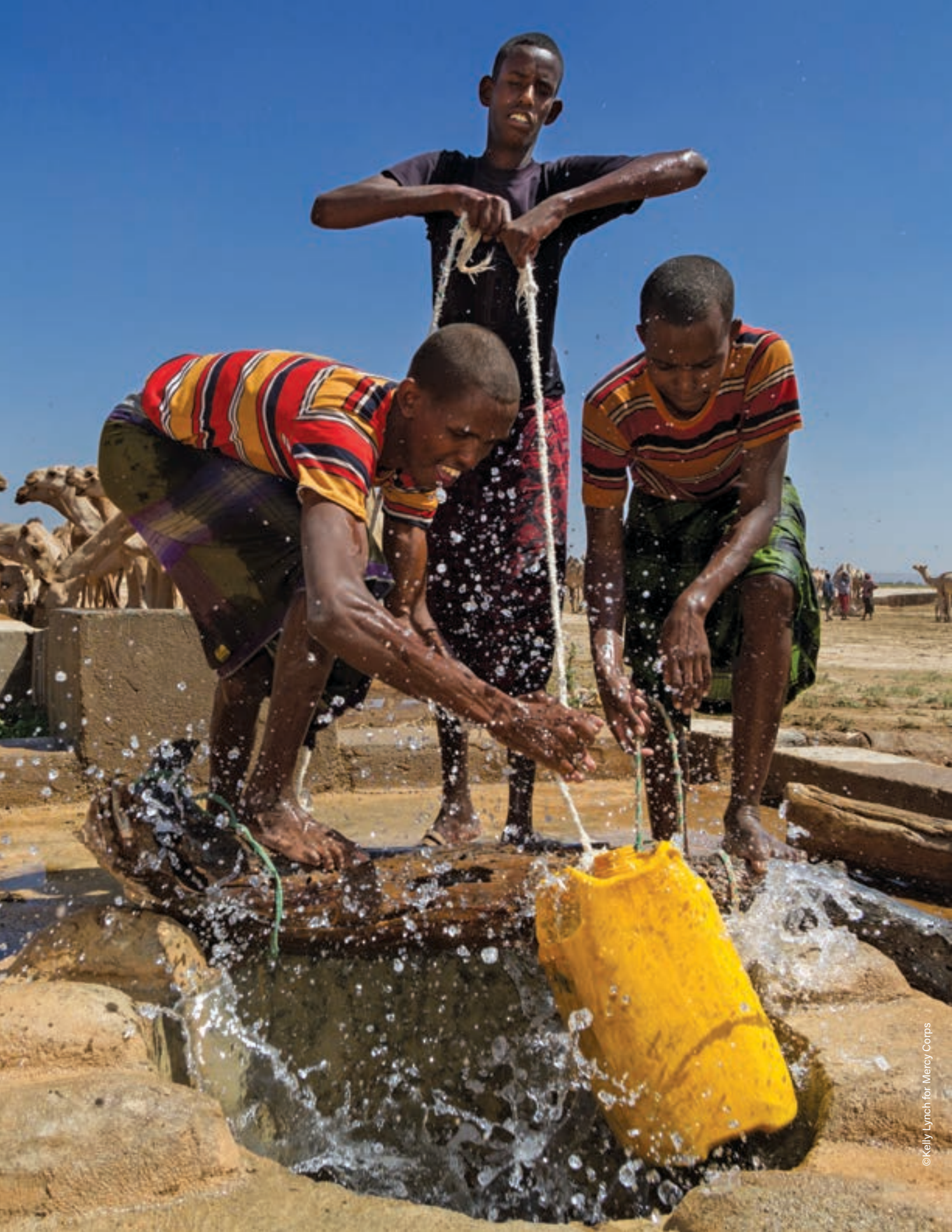
ANNEX 3

Case Study Analysis

	HEADLINE CHALLENGES AND LESSONS			
	CONCEPTUAL	**TECHNICAL**	**PRACTICAL**	**OTHER**
Headline synthesis from CoP discussion	Resilience as an intermediate outcome and and a set of "capacities". This can provide a **definitional challenge**, although there has been broad convergence more recently Other definitional issues – particularly around concepts such as **transformational capacity**. Confounding **conceptual frameworks** and **measurement frameworks** Overarching/general frame- works risk suffering from issues of abstraction and becoming meaningless	**Resilience dynamic** – measurement in the face of shocks and stresses **Composite indicators** – weighting necessitates assumptions and value judgements **Appropriate scale:** balancing an appropriate level of granularity and context, with the ability to generalize. **Appropriate timescales** for maturation of effect in resilience-strengthening results	**Frequent, reactive and timely data collection** – data hungry and expensive, time consuming and risks survey fatigue **"Real-world" constraints** – projects and programmes not designed and sequenced perfectly **Need to have sufficient space** to iterate, innovate and evolve frameworks and methods **Ensuring the right voices are heard** and understood in terms of priorities and capacities (e.g. people in the field, country governments, etc.)	**Framework fallacy** – impossible to measure resilience across contexts, scales, over time, and in the face of shocks and stresses **Capacity** – issues across M&E practice **Too many frameworks?**
CASE 1: STRESS, Mercy Corps	**Transitioning from resilience theories of change to resilience measurement plans.** "Our programme teams have struggled to build on these resilience-informed ToCs to develop M&E plans that fully reflect our approach to resil- ience measurement. A specific challenge has been trying to fit resilience capacities, shocks and stresses, and other resilience- related measures within typical donor M&E plan formats" **Moving beyond measuring household resilience "treating resilience** at the community and other 'higher' levels simply as aggregates of lower units misses a key feature of the concept of resilience. Namely, the non-linear, nested relation- ship between levels, wherein effects observed at one level are linked to effects at another level, but not in a 'one-to-one' relationship" Evaluating programme contributions to resilience "Without these [the major shocks or stresses during the life of a programme], we are unable to measure or model the effects of the program on mitigating the impact of a shock on household or community well-being"	**Prioritizing resilience capacities to measure.** "[It is] difficult to narrow the variables for data collection... [however the] development of pre- analysis plans has also helped us narrow the number of explanatory factors... and made the measurement efforts manageable to conduct, quicker to analyse, and easier to useby the programme team" **Accurately measuring shocks and stressors** **Analysing the relationships between resilience capacities, shocks/ stressors, and well- being outcomes**	**Matching resources to requirements** **Measuring resilience in the absence of a major shock/ stress**	

	HEADLINE CHALLENGES AND LESSONS			
	CONCEPTUAL	**TECHNICAL**	**PRACTICAL**	**OTHER**
CASE 2: RCF TANGO	"Resilience must be measured and subsequently enhanced through **multiple scales** which include understanding household, community, national, and systems-level perspectives"	"**Qualitative data complemented quantitative data** and improved analysis through identifying patterns, strengthening contextual information, and triangulating data" "**Integrating [psychosocial measures]** in data collection helps reveal resilience capacities through the ability to adapt to changing circumstances"	**"Data collection delays, security concerns, and issues with local government staff"** Interference of local agencies Addressed these by engaging in: "**capacity training** with local partners and the translation of questionnaires into local languages to maintain cultural accuracy and sensitivity"	
CASE 3: Oxfam 'Building Resilience'	The aim to build resilience at **multiple scales** means "comparisons across districts, countries, or even higher-level systems is difficult"	"Principally used household (and sometimes individual-level) data... [which] has proved some- what challenging from the perspective of **transformative capacity**"	"**Moving from measurement framework to practical indi- cators is not straightforward...,** this has hinged on conversations with project and partner staff" "It has proved difficult to draw **the line between outputs, intermediate outcomes, and final outcome**s in many cases" "Identifying suitable characteristics of resilience requires **assumptions about what will allow households to absorb, adapt, and transform** – testing these assumptions requires follow-up/panel data" "A number of **unobservable factors** may bias the estimated effects. This would be drastically improved by building similar evaluation designs into the inception phase of projects" "Finding a suitable way to **combine quantitative and qualitative results** has proved challenging" Finding **consultants/survey teams with sufficient capacity** to collect high quality quantitative data in certain contexts is challenging	**Constructing multi-dimensional indices** Tried a: 'budget allocation game' with respondents to try and extract their **subjective weightings** of particular dimensions of resilience

	HEADLINE CHALLENGES AND LESSONS			
	CONCEPTUAL	TECHNICAL	PRACTICAL	OTHER
CASE 7: BRACED Myanmar		**Selection and finalisation of the evaluation methods** "**More regular collection and analysis** would provide better data quality and a better indication of change, it is also important to not over burden community members and implementing teams" "Limitation in use comes from **both access to reliable and accurate data and weak capacity** to be able to interpret and use complex climate and weather projections and forecasts"	"**Collaboration and coordination** between project implementers and M&E staff is key to effective implementation of the programme in terms of understanding the effectiveness of delivery mechanisms and the effectiveness of resilience interventions, but is challenging in itself" Local labour market – "a high turnover of expertise and **requirement to retrain and sensitize staff** to the M&E framework"	A key lesson is that "**resilience can't be built in one go**, sustained activities and interventions need to be implemented within communities building on new knowledge and information" "Evaluation frameworks that acknowledge that **the baseline will not be static** and that a KPI score may only be relevant to the context at the time of measurement. Interventions will change and be reprioritised based on changing conditions" "More regular but **lighter touch surveys** to track mid-project progress would help to justify longer-term project support and interventions" "***Ex post* evaluations** would also help to understand the longer- term sustainability of resilience interventions"



If you are actively working in the field of resilience and would like to learn more about the CoP, please contact:

Co-Director
Resilience Measurement, Evidence and Learning Community of Practice (CoP)
info@measuringresilience.org
www. measuringresilience.org

WINDWARD Fund

Supported by
The ROCKEFELLER FOUNDATION
www.rockefellerfoundation.org