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BRACED aims to build the resilience of up to 5 million vulnerable people against climate extremes and disasters. It does so through 15 projects working across 13 countries in East Africa, the Sahel and Asia.

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RESILIENCE INTEL

Tracking and measuring resilience in large programmes: lessons from BRACED

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The paper shares insights on designing and implementing monitoring, evaluation and learning systems as well as generating useful evidence that informs large resilience-building programmes in an international development context.

HIGHLIGHTS

- The scale of resilience investments like BRACED presents challenges to monitoring, evaluation and learning. Large programmes require both overall coherence as well as flexibility to appropriately target and strengthen resilience across diverse contexts and find a balance between accountability and learning for improvement. The very size and structure of large programmes challenges the extent to which they can be agile and course-correct.

- BRACED shows that measurement frameworks benefit from shifting emphasis away from assessing performance towards generating evidence for learning. To measure and understand resilience, analytical frameworks are needed to understand causal pathways and both processes and outcomes need to be tracked to understand resilience within each context.

- Broad capacity frameworks for resilience measurement such as the 3A's (anticipatory, absorptive, adaptive capacities) help to draw attention to the trade-offs between short-term and long-term resilience gains.

- In our experience there is value in taking an 'evaluative monitoring' approach to bridge the gap between traditional monitoring and evaluation timeframes, to understand how and why change is happening.

- Rather than operating in parallel, our learning suggests that integrating and sequencing quantitative and qualitative methods would allow findings to be layered, to add depth, nuance or attribute change as necessary.

BRACED KNOWLEDGE MANAGER

WHAT IS THIS PAPER ABOUT?

Building climate resilience, defined as the long-term capacity of a system or process to deal with extreme weather events and changes in climate and continue to develop,[1] is becoming a major priority for development actors. Yet practitioners and donors are still struggling with practical issues, in particular – how to measure, monitor and evaluate resilience interventions; as well as understanding the implications of resilience for management, implementation and funding.

The three-year, £110 million, UK Department for International Development (DFID)-funded Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) programme aims to build the resilience of up to 5 million vulnerable people against climate extremes and disasters. BRACED was launched in January 2015 and comprises over 120 organisations working in 15 consortia across 13 countries in East Africa, the Sahel and Asia. A key area of the Knowledge Manager's work was to generate knowledge about monitoring and evaluation practice in a complex resilience-building programme. To this end, the programme developed and tested a variety of resilience measurement approaches and frameworks through a set of monitoring and evaluation efforts.

Over the course of three years, we have learnt a great deal as a result of taking a programme-level[2] view of how resilience is being built in BRACED. This document shares this programme-level view of the experiences and challenges in designing and testing various Monitoring, Evaluation and Learning (MEL) systems, frameworks and methodologies during the three-year implementation of BRACED, including monitoring reporting systems, mid-term and final evaluations as well as quasi-experimental impact evaluations. The purpose of this report is to:

- Contribute to the body of knowledge about monitoring and measuring resilience.
- Share practical MEL[3] lessons about how good practice could be applied to other non-BRACED programmes.

Developing programme-level MEL frameworks for resilience-building programmes is a relatively new area of work, with limited experience to draw on.[4]

The BRACED theory of change (ToC, see annex 2) provided a consistent and relatively robust overarching framework to situate and frame BRACED interventions, projects and the programme as a whole, as well as the key evaluation questions that relate to each ToC pathway.

1 DFID BRACED ToR.
2 While BRACED is a programme that aims to build resilience, the variety of contexts, thematic areas and intervention activities across the programme is more akin to a 'portfolio of projects'. Within BRACED these projects are tied together by a common ToC and logframe that acts as an umbrella, providing some essential coherence at the programme-level.
3 Monitoring, Evaluation and Learning (MEL) is used throughout this paper as shorthand for MEL and M&E, to improve readability.
4 See Routes to Resilience: insights from BRACED year 1.

In addition, each project had its own theory of change and measurement frameworks and designs. Therefore, at the programme level the ToC needed to be flexible enough to be relevant across a number of different socio-political, geographical and climatic contexts, while retaining robustness and coherence. The main purpose of the BRACED ToC was to provide a programme-level vision of change to ensure a common language and minimum alignment of monitoring, results reporting and evaluation efforts across BRACED.

The three approaches, used in combination for MEL in BRACED, included:

Evaluative routine monitoring and results reporting: in order to support learning about *how BRACED is building resilience* to support decision making an evaluative approach[5] to monitoring was designed to support annual programme-level analysis and synthesis of all 15 BRACED projects progress against the ToC pathways. An evaluative approach goes beyond orthodox monitoring practice, which typically tends to focus on tracking progress against milestones. In practice this requires integrating an evaluative lens into monitoring processes so that key evidence, findings and lessons can be generated as projects are implemented. Project IPs provided systematic qualitative and explanatory self-reporting on an annual basis, reflecting upon the changes that were happening as a result of their projects, and how the context was affecting progress and results. Results of these efforts can be found in the paper Routes to resilience: insight from BRACED final year. Additionally, on an annual basis we brought together the ToC-based qualitative evidence (described above) with logframe-generated quantitative reporting.[6] This enabled us to track, measure and understand the processes of change that led to climate and disaster resilience in specific contexts and to specific shocks and stressors.

Realist Midterm and Final evaluations: realist evaluation is a form of theory-driven evaluation. Realist evaluation assumes that the context makes important differences to the outcomes; that no intervention works everywhere, or for everyone. The contexts BRACED projects are working in are complex, with myriad contextual conditions influencing potential outcomes – climatic conditions, diverse historical institutional trajectories, variety in the stability of political and economic conditions, diverse government systems, different organisational cultures, and a wide range of participant characteristics (individuals' identities, gender and ethnicities). This approach was designed to focus on qualitative and explanatory synthesis of the set of project intervention 'packages' across the 15 projects, in order to draw lessons on *what works, where, how, why and for whom*. To build explanations of why interventions may or may not work, realist evaluation identifies theories about how a project or programme is expected to work. These may be implicit or explicit theories that have informed the design of the programme interventions, as well as other relevant theories that offer alternative explanations. Realist evaluation then focuses on understanding how contextual

5 For more information about evaluative monitoring see the BRACED M&E Guidance, Note 5.
6 Logframe indicators are aggregated by the Fund Manager to assess performance for accountability purposes on an annual basis.

factors such as changes to the climate, political structures, cultural norms and location shape and influence how the programme theories play out in practice. Context is understood as the most important influence on whether an intervention succeeds in activating a change process (often referred to as a 'mechanism') that will lead to an outcome. The objective was to produce usable findings that can inform ongoing and future interventions, as well as providing robust evidence on effectiveness for accountability. The mid-term (Making progress: BRACED at the mid-term) and final evaluation (Resilience results: BRACED final evaluation) provide detailed project and programme level analyses of results. A more detailed description of the realist evaluation design can be found here.

Quasi-experimental impact evaluations: the approach aimed to quantitatively determine the extent to which resilience had been built in two selected case study areas – Niger (Measuring changes in resilience as a result of the SUR1M project in Niger) and Myanmar (Measuring changes in household resilience as a result of BRACED activities in Myanmar). Through the use of large sample surveys, changes in different dimensions of household resilience could be tracked between survey rounds by comparing data from baseline and endline, generally two years apart. Attempts were also made to determine what the most effective interventions were in terms of positive changes in resilience. The evaluation was also able to explore any differential benefits geographically (sub-nationally), across dimensions and for sub-groups (poor and female-headed households). Findings from impact evaluations can be found in the paper Evaluating the results of BRACED projects in Ethiopia, Myanmar and Niger.

We discuss the advantages and disadvantages of each of these methods in the methodology and results reporting section below. A more detailed description of each of these activities can be found in the BRACED Knowledge Manager Evaluation Plan. This document provides an overall approach and detailed outline of how the Knowledge Manager (KM) planned to deliver the whole package of evaluative activities across the project and programme.[7]

7 It is important to highlight here that by the time the KM MEL team was in place, Implementing Partners (IPs) had already designed their MEL plans. A rapid review suggested that these were not fit for purpose and in collaboration with DFID and the IPs, a revised set of comprehensive guidance notes was produced. While this led to better aligned plans and in the end, more robust data to help answer some of the programme-level questions, it represented a significant effort by IPs. Essentially a 'retrofitting' exercise, this could have been avoided had the MEL support been pre-conceived and offered during the programme design phase; something to consider for future resilience programming.

LESSONS ON DESIGNING AND IMPLEMENTING IN PRACTICE

Box 1: MEL essential foundations

1. MEL is fully integrated with programme design, planning and learning for on-going testing, experimentation, review and re-planning during the implementation of a complex programme. Yet, ensuring projects and programmes are designed and have the capacity to accommodate change as evidence emerges has repercussions at all levels. For example, at the project level, partners need the freedom to change course as required, based on their learning. Projects may also need to adapt their plans, ToCs and indicators as they learn 'what works' and 'what does not'.

2. MEL is not an end in itself: it needs to be linked to decision making needs. Given the time lag between data submission and synthesis, there are delays in using evidence and lessons to inform learning and decision making at programme level. Large programmes like BRACED prove to be less flexible and adaptable than individual projects, posing limits to the extent to which they can represent the diversity within a programme.

3. Budgets and technical capacity are appropriate to meet the purpose of MEL. MEL for resilience requires different competencies than traditional M&E, both in terms of quantifying changes in resilience and understanding how and why these changes have occurred. The ability to analyse and synthesise qualitative data and identify emerging patterns is more important than knowledge and experience of conventional methods. In our experience, expertise in standard approaches may in fact be a hindrance rather than a help. Given the novelty of the concepts as well as the frameworks and methods being tested, the need for building the capacity of project staff should not be underestimated.

4. MEL frameworks are flexible and allow complex programmes to be constantly reviewed and adapted. Resilience programming is about working under uncertain conditions and being responsive and adaptive to emergent change as contexts evolve. This means that MEL frameworks should not be static, rather they need to be tailored to the implementation stage by, for example, evolving towards asking broader evaluation questions as the programme moves through its lifecycle.

Our lessons are structured around three main steps and the challenges we encountered implementing a results-based monitoring and evaluation function:

1. **Designing a MEL system:** large-scale investments like BRACED require careful thinking about how to set up a programme-wide system that is coherent and robust, yet flexible enough to account for the contextual differences. In this section we address what we learnt when: i) striking the right balance between accountability and learning purposes; ii) embedding a MEL culture at project and programme level; iii) ensuring a common vision and definition of the

resilience concept; and iv) applying learning to inform adaptive decision making within large programmes.

2. **Measuring resilience:** the level at which resilience 'results' are situated within the theory of change has critical implications for measurement. In this section we share the lessons learnt when: i) viewing resilience as both a process and an outcome; ii) applying capacity frameworks to understand resilience in diverse climatic and political contexts.

3. **Reporting results using different methods:** there is no one 'right (set of) method(s)' for monitoring and evaluating resilience programmes. Various methods can provide insights into different levels of a programme – project or programme intervention – and answer distinct questions. In this section we share the lessons we learnt when i) balancing information needs with pragmatism; ii) undertaking an evaluative approach to monitoring; and iii) combining different methods for resilience measurement.

Experiences from BRACED have reinforced some essential foundations for designing programme level MEL systems, frameworks and methods, which are presented in Box 1.

DESIGNING A MONITORING EVALUATION AND LEARNING SYSTEM FOR RESILIENCE

MEL systems enable projects to maximise learning through frank reflection, allowing them to respond and adapt to more efficient and effective implementation; or they can place significant pressure on data collection and reporting. The global debate and discussion about tracking and measuring resilience-building efforts has, so far, primarily focussed on the need to identify quantitative indicators. Furthermore, much attention has been given to project-level approaches to monitoring and measuring resilience, whereas programme-level efforts face a unique set of challenges. While indicators play a critical role in any MEL design, large-scale investments like BRACED require careful thinking about how to set up a programme-wide system that is coherent and robust, yet flexible enough to account for the contextual differences. This is of utmost importance when the investments are carried out in different countries, where contextualisation for measurement limits the ability to draw a common set of lessons. Systematic and high-quality MEL at the programme level across such different contexts, is rare and presents its own specific set of challenges. The four main challenges we faced in BRACED include:

- Striking the right balance between accountability and learning purposes.
- Embedding a learning M&E culture.
- Ensuring a common vision and definition of the resilience concept.
- Applying learning to inform adaptive decision making within large programmes.

Striking the right balance between accountability and learning

Learning and accountability purposes are distinct yet compatible, and need to be reflected and reinforced in the project and programme-level M&E structures. The role, purpose and scope of the MEL system need to be clearly defined from the start, given contention around the dual purpose of accountability and learning. While there are significant overlaps between the two, they are not identical, and they require different frameworks and approaches. The KM MEL system has a clear role on learning – addressing, at programme level, the question of how, why, where and for whom resilience is built. The BRACED Fund Manager (FM) is responsible for overseeing and assessing project performance against the projects' logframes for accountability purposes. In the DFID Annual Review, these two processes converge. By separating these two functions, we assumed the KM MEL team could play a critical 'friend' role, supporting reflection, critical thinking and learning about projects' pathways to change.

Our experience shows that separating the two functions can create a 'false dichotomy' if the necessary structures and resources do not accompany this division. For example, in order to reduce reporting burden, IPs submitted a single annual report to both the FM (for onward reporting to DFID) and the KM (for evidence generation and learning). The report had two distinguishable sections: in Part 1, IPs reported project progress in the last year against the project logframe (accountability) and in Part 2 they provided a narrative reflecting project progress against the project ToC (learning). Although distinct in nature and purpose, the objectives of the two frameworks – accountability and learning – were potentially hindered because of the joint reporting format. In addition, the joint reporting format made the reporting long and cumbersome to projects, who had only planned and resourced for mandatory logframe reporting. This challenged the extent to which IPs were able to analyse and reflect on how and why change was happening (or not).

Accountability and learning, are not necessarily incompatible but are sufficiently different to merit separate consideration. Therefore, in BRACED, we have learnt that to support both functions, clear and separate reporting formats plus adequate funding to support project- to programme-level learning are required.

Embedding a learning M&E culture and trust building

There are potential trade-offs between project- and programme-level MEL needs and interests, which need to be acknowledged and negotiated. There are trade-offs between project-level frameworks that are tailored to collect evidence and generate learning to meet project needs, and approaches to aggregate and synthesise in a way that allows consistency and comparability across a programme. This makes programme-level reporting requirements seem insignificant in addressing project-level learning needs thus discouraging projects from participating in programme-level learning. For example, the BRACED KM was set up after BRACED projects were already designed and approved, so the programme-level theory of change and MEL framework had to be retrofitted to existing project-level M&E plans. To address this challenge, we followed a bottom-up and top-down approach by first developing a programme-level ToC

consistent with project-level vision, and then designing overarching frameworks (see the measuring resilience section) which provide standardisation and coherence across BRACED to facilitate programme-level synthesis. If the KM MEL team was in place from the start of the programme, the retrofit would not have been necessary, minimising perceptions of information reporting as a top-down requirement and instead presenting an opportunity for critical analysis and organisational learning to inform decision making and impact assessment at both the project and programme level.

In addition, trade-offs include decisions about the type and level of support to provide to project partners. The roll-out of programme-level MEL system needs to find a balance between light-touch and resource-intensive options. In BRACED, limited resources to support learning resulted in light-touch MEL support for implementing partners (IPs),[8] in addition to a more resource-intensive approach at key moments, such as in the design and application of the MEL system. To date, our experience shows that engaging projects in a learning process at the programme level requires regular one-to-one support, face-to-face interactions and field visits. When the key purpose of the MEL system is comparability and aggregation, resource-intensive options for project-level support such as MEL training for project implementing partners, complemented by on-going one-to-one interactions with them are better. This need is underlined further in the context of a resilience-building programme where knowledge, capacity and experiences are still emerging, to allow for continual adjustment to the growing body of knowledge and experience. More intensive support is of critical importance to support internal capacity, ensure triangulation of findings and facilitate consistency in reporting efforts across projects. More importantly, it builds the necessary buy-in, trust, open communication channels and spaces for open discussion and sharing of experiences, and so that IPs engage in a learning process from the bottom up.

Demonstrating the added value of programme-level learning right from the start is of utmost importance to ensure understanding of mutual benefits and to generate buy-in. The larger the programme is, the greater the need to engage implementing partners and the donor in developing a common vision and in identifying key MEL questions from the start of the programme. This is achieved by engaging projects early in the development of programme-level MEL frameworks and reporting formats. It is important to support learning needs at both levels – project and programme. However, in practical terms, at the project level this substantially increases MEL activities and reporting burdens, and at programme level, the complexity of MEL systems. Accordingly, there is need to decide the level at which learning is prioritised within the programme, and/or to seek synergies between reporting at programme and project levels.

Agreement about the concept of resilience

Diverse views about the concept of resilience can be accommodated by agreeing a common vision and striking the right balance between granularity for context and

8 This included development of comprehensive MEL guidance notes, offering remote 1:1 support, and supplementary 1:1 support available at key learning events such as the Annual Learning Event.

aggregation for generalisation. The starting point for the development of a MEL system is discussion and agreement about the resilience concept. Despite increased convergence on the concept in recent years, different agencies still have varied mandates and perspectives on climate and disaster resilience. This extends to MEL, as they each define success differently and have diverse approaches to collecting and analysing information. At the programme level, this makes it challenging to establish an integrated MEL system that is useful for all implementing partners, and that enables comparability and aggregation.

In BRACED, we faced tensions and competing agendas concerning the definitions of resilience of different organisations, which in turn hindered lesson learning from both project-to-project comparisons and for aggregation at the programme level. We overcame this challenge by developing a programme level theory of change and qualitative reporting templates broad enough to accommodate context-specific understandings of resilience (see section on measuring resilience). This approach enabled us to identify common patterns and themes across projects. BRACED has demonstrated that multiple conceptual frameworks are critical to tracking and measuring programme results, while having an umbrella framework to connect project to programme that is flexible enough to continue to be relevant as projects progress and to accommodate learning as evidence emerges.

Applying learning to inform adaptive decision making within large programmes

The ultimate purpose of MEL – to build an evidence base that supports adaptive management and informs policymaking – should not be compromised by the size of the programme. Even if the highest quality data is collected and analysed, MEL is not effective if it does not inform policy and enable adaptive management. In our experience, it is possible to work in a large programme and generate meaningful evidence and learning. However, while the timing and sequencing of all MEL activities are critical, *scale is the real issue.* The value of MEL at the project level lies in seeing how adaptive management at the local level can be supported. Scaling that up to make this adaptative at the programme-level is more challenging as a robust synthesis of findings, to support course correction, loses relevance if it comes too late to be used.

Due to the scale and level of analysis required for a programme like BRACED, the reporting task for both IPs and the KM is significant. For example, the KM's annual synthesis of evidence comes after several months of analysis and synthesis, to ensure the evidence and findings are robust, rigorous and representative and to draw out meaningful interpretation – a process which presents delays in informing learning and decision making processes at the programme level. To address this gap, programmes like BRACED, need to foster and facilitate clear communication channels between the project level and the programme level via constant interaction, so MEL activities and subsequent reflection can occur in a timely manner and IPs can promptly apply lessons to project implementation. This is critical for programmes that aim to be adaptive and flexible. Furthermore, quick feedback loops and on-going learning cannot happen in a MEL silo so it is important to ensure all key stakeholders are involved in the review process.

Adaptive management also requires programmes to deal with uncertainty, 'failure' and changing plans. Budgets

and programme designs have to be flexible enough to accommodate change at project and programme level. MEL frameworks should not be set in stone: they should be improved and updated as lessons and evidence emerge. A shift in emphasis is required from thinking about performance (success in meeting pre-prescribed indicators or targets), towards thinking of approaches that maximise lesson learning and can be implemented without fear of 'failure'.

MEASURING RESILIENCE

Despite significant differences in the definition of resilience, there seems to be some convergence across organisations to use capacity frameworks to measure resilience. In practice, the level at which resilience 'results' are situated within the theory of change has critical implications for measurement. In BRACED, resilience is defined as an outcome, which situates resilience as a means rather than an end in itself (with the ultimate goal of improved well-being situated at impact level). Resilience is defined using the 3As framework[9] (absorptive, anticipatory and adaptive capacities), which is used to qualify the mandatory International Climate Investment Fund (ICF) outcome indicator '*the number of people whose resilience has improved as a result of BRACED support'*[10] *(KPI 4)*. The quantitative indicator is used as common yardstick to compare projects across different contexts,[11] complemented with qualitative frameworks for evaluative monitoring intended to generate evidence about both outcomes and causal pathways.

Our experience in BRACED tells us that when resilience is placed at the outcome level, there is considerable pressure on implementing partners to positively report against outcome indicators (i.e. results). This limits incentive for reflective practice, for reporting challenges and embedding learning. To address this, MEL frameworks would benefit from shifting emphasis away from generating evidence to assess 'performance' towards generating evidence for learning. Programmes could consider addressing an explicit question e.g. *'What does resilience look like in this particular context? Why?'* in addition to the milestones and indicators to be reached. A few fundamental learnings relate to the utility and value of qualitative frameworks for resilience measurement:

- Viewing resilience as both a process and an outcome.
- Applying capacity frameworks to understand resilience.

9 See: The 3As: Tracking resilience across BRACED, BRACED Knowledge Manager Working Paper.
10 See 'Summary of ICF Key Performance Indicators' and 'Methodology for reporting against KPI4'.
11 Within BRACED, results against the quantitative resilience outcome indicator (KPI 4) show a net change in resilience scores at the household level. Yet these results were not enough to 'measure' a change in resilience, because at the start of the programme limited consideration was given to understanding the resilience thresholds to determine 'how much resilience is enough?' (i.e. the minimum required level to be able to call a household resilient).

Viewing resilience as both a process and an outcome

To measure and understand resilience, analytical frameworks are needed to understand causal pathways, and both processes and outcomes need to be tracked to understand resilience within each context. Resilience is more than one 'simple indicator' or a combination of outcome level quantitative indicators. There is wide agreement that the multifaceted nature of resilience-building projects requires integrated analytical frameworks in order to better understand the causal pathways linking outputs to outcomes, as well as the factors contributing to resilience building[12]. In BRACED, a combination of qualitative and quantitative frameworks explored the processes of change needed to move reflection beyond the 'extent to which' (outcome), to the 'how' (process) within the ToC. Qualitative frameworks for evaluative monitoring and realist evaluation approaches (see methodology and results reporting) allowed us to identify the key processes and mechanisms required to achieve resilience outcomes within each context. Our evidence demonstrates that it is these *processes* that make 'outcomes/ results' resilient to climate shocks and stresses. We were able to retain the richness and dynamics in reporting, using analytical frameworks.

Yet finding the right balance between collecting relevant and comprehensive information and not over-complicating MEL exercises continues to be a challenge. Prioritising qualitative frameworks allows deeper exploration of the mechanisms and processes that underlie the numbers. When complemented with a handful of mandatory quantitative indicators at the outcome level, measured in ways that allow for some level of consistency, offers an integrated approach. This can provide a combination of quantitative and qualitative information that is useful for both accountability and learning purposes.

Applying capacity frameworks to understand resilience

Capacity frameworks are useful analytical and planning tools that can help identify the ways in which resilience is being built and draw attention to potential trade-offs between short-term and long-term resilience gains. Within BRACED the 3As framework has enabled aggregation, consistency of reporting and comparability across projects to understand the nature of resilience outcomes and the areas in which communities have improved resilience (e.g. diversification of income or improved food security). In particular, over the course of the programme, the framework has helped to qualify resilience in terms of which capacity is needed when, with more progress being achieved under anticipatory and absorptive capacities than adaptive capacity in the timeframe set. In this way, the 3As framework drew attention to the (often) missing 'A' – adaptive capacity, which moves towards longer-term adaptation in changing climatic contexts, and is essential for building resilience to future climatic shocks and stresses. This framing enabled internal learning and reflection about the potential trade-offs between short-term and long-term resilience gains, and to raise questions about how to

12 Resilience Measurement Community of Practice (2016). Analysis of resilience measurement frameworks and approaches. Available from: www.fsnnetwork.org/sites/default/files/analysis_of_resilience_measurement_frameworks_and_approaches.pdf

design programmes to balance short-term priorities with longer-term needs.[13]

When a shock or stressor occurs, resilience measurement can only tell us whether absorptive and anticipatory capacities have been activated. Testing adaptive capacity requires longer timeframes. In the absence of a shock, projects track progress against what we consider to be outcome level indicators of good development, such as livelihood diversification, income or asset creation, that respond to a climate signal. The assumptions underpinning the capacity approach are that such indicators can be considered proxy measures of resilience. Therefore, current frameworks rely on sound theory (evidence and assumptions) underpinning what is necessary to ensure adaptive capacity in the long-term. Yet, the absence of benchmarks to define *what counts, for whom and against which particular shock,* challenge the extent to which projects can claim resilience outcomes.

Box 2, captures our experiences and reflections about how resilience can be tracked and measured with or without shocks or stressors, which would require longer-term MEL plans that go beyond project timelines**.** When a shock or stressor occurs, responses indicate whether that event was anticipated, planned for, and how impacts were absorbed. Yet understanding whether and how communities are able to adapt to the changed context would require measurement over longer timeframes, moving beyond short-term coping to longer-term recovery and adaptation processes. To truly test resilience, shock-activated assessments could be tracked forward beyond the lifetime of a programme into more meaningful timeframes for recovery (years to decades), by adding a formative element to the MEL system or adding an ex-post element several years after the shock.

Each context has a different starting point, and a different trajectory of change. Resilience should be tracked and measured accordingly. The capacity framework enabled us to identify different *trajectories of change* in a variety of contexts. For example, resilience programmes are often undertaken in fragile and conflict-affected environments; in rapidly evolving situations a more flexible and responsive approach to both implementation and to MEL is required. For example, in the absence of stable governance and infrastructure, as well as changing accessibility and requirements to meet peoples' basic needs, project ambitions may need to be scaled back as outcomes are likely to manifest over longer timeframes. Attempts to embed approaches to promote sustainability may also be challenged, as entry points are often to work with or within government structures and technical organisations. In fragile contexts these institutions tend not to have sufficient capacity or are sometimes absent. For MEL, alternative approaches to data collection may need to be considered by working through local networks or organisations to maintain coverage of intervention areas and require alternative entry points or pathways. Each context starts from a different point, and has different pathways and timeframes for change, depending on the unique set of local conditions. In BRACED we have learnt that simplistic assessments of projects' 'success' or 'underperformance' based on performance ratings or 'results' alone are not sufficient.

13 For an analysis of BRACED results and findings see: Routes to Resilience: insights from BRACED final year.

Box 2: Tracking and measuring resilience: with or without climate-related shocks and stressors

In the absence of a climate-related shock or stressor: As well as an outcome, resilience can also be a set of characteristics or processes that underlie outcomes and lay the foundations for other activities. Resilience 'signifiers' are those characteristics that contribute to **development outcomes** and community **well-being** over the long-term in spite of expected shocks and stressors. These include the scale and scope of the activity and outcomes, the nature and depth of change, whether or not it is risk-informed, reduces exposure and/or improves coping, whether there is interconnectedness across scales, and the extent to which it is sustainable.[14] From a MEL perspective, in the absence of a shock or stress, there needs to be greater emphasis on the processes of resilience-building, alongside tracking the development outcomes. Programmes can then demonstrate how success across many areas can form the 'building blocks' towards resilience outcomes. In the absence of climate shocks against which to test the response of communities and households, we have used subjective data[15] to indicate how people feel they are prepared to cope with future shocks and stresses. In Myanmar, we asked people to recall the most recent or significant shock they had experienced and asked whether they felt more or less prepared to deal with that shock now versus before the BRACED project. This provided insights (recognising that they may not be as reliable as objective data) into the efficacy of the project interventions were a shock to occur again. However, it is not only the nature and type of the shock which is important but also the magnitude which can have a bearing on responses. In Myanmar, many people used Cyclone Nargis (a catastrophic co-variate event which claimed the lives more than 140,000 people and devasted large parts of the country) as their reference point and unsurprisingly indicated that they may not be any better able to cope with such an event. This 'high hurdle' probably lead to under-reporting of benefits from the BRACED programme.

In the event of a climate-related shock or stressor: Resilience programme success is measured not by the means of resilience outcomes per se but by the achievement of positive development outcomes in the context of shocks and stressors. Evidence of this is seen in BRACED (see Routes to Resilience: Insights from final year) while the link to the overarching goal of improved well-being remains, as yet unanswered. In the event of climate-related shocks and stressors, resilience capacities are tested and a real-time evaluation could track and measure the resilience responses adopted by stakeholders, and evaluate resilience outcomes. This could be further complemented by formative or ex-post evaluations specific to the shock-affected context that go beyond the lifetime of the programme to measure and understand the critical longer-term recovery element of resilience (distinct from short-term response), which is often neglected and poorly understood.

14 For more information about resilient signifiers see: Resilience Results: BRACED final evaluation.
15 For more information about subjective assessments see: New methods in resilience measurement. Early insights from a mobile phone panel survey in Myanmar using subjective tools. For impact evaluation results in Myanmar see: Measuring changes in household resilience as a results of BRACED activities in Myanmar.

For resilience measurement, supporting progress along development pathways relative to the starting point is a more appropriate measure of resilience gains. This does not mean indicators (both quantitative and qualitative) have to be discarded or that they compromise the collection and analysis of good data: robust learning requires solid evidence. Yet this reinforces the need for analytical frameworks to track and measure processes (see methodology and results reporting below) as 'results' will be variable and manifest over different timeframes in each unique context.

METHODOLOGY AND RESULTS REPORTING

In BRACED, understanding resilience both as an outcome and a process, we adopted a *theory-based approach throughout the MEL cycle*. Underpinning the BRACED MEL framework is the need to critically reflect on and question project and programme ToCs, to foster internal learning and to build robust evidence about how and why interventions are successfully contributing to improving climate resilience (or not). There is no one 'right (set of) method(s)' for monitoring and evaluating resilience programmes. Various methods can provide insights into different levels of a programme – intervention, project, or programme – and answer distinct questions. Based on the nature of the programme, its duration, the specific geographic scale, and the evaluation questions that need to be answered, appropriate methods can be selected. A few learnings from BRACED relate to:

- The value of evaluative monitoring.
- Balancing information needs with pragmatism.
- Approaches to combining different methods for resilience measurement.

The value of evaluative monitoring

There is significant value in taking an evaluative monitoring approach within resilience programmes to bridge the gap between 'traditional' monitoring and evaluation timeframes. The more complex a programme is, the greater the need to support evaluative monitoring processes to understand how and why change is happening (or not). The evaluative monitoring approach taken in BRACED has demonstrated the value of broadening the scope of monitoring from a reporting and accountability function to interrogating and assessing design assumptions. In programmes such as BRACED, we have learnt that it is critical that the monitoring system supports the methods used in order to understand the 'what', the 'why' and the 'how' questions of reflective practice. In practice this requires integrating evaluative thinking into the monitoring processes. With this approach, a realist baseline and realist final evaluation is able to focus on answering how, why, for whom and in what contexts a project or programme has contributed towards resilience and how good practice can be replicated, with an integration of realist evaluative thinking into the monitoring processes for lesson-learning and course correction. This means lesson learning and course correction can take place at the end of year 1 and year 2, rather than just midway through (at mid-term review – MTR). Focusing on *what* a project or programme has achieved is not enough to understand what might

be replicated, this requires a deeper understanding of how and why change happens. Experience from BRACED has shown that it is important to more deeply explore the mechanisms and processes that underlie the resilience outcomes.

Balancing information needs with pragmatism

Qualitative frameworks require more time and resource for reporting, as well as a deeper level of reflection to support learning. A phased approach to monitoring against the ToC could minimise reporting burden. Generally, the more complex a programme is, the greater the need to monitor processes as well as outcomes. Within BRACED, projects were not well-resourced to support qualitative reporting for learning. The approach required reporting against the ToC (as well as the logframe) on an annual basis, to cover activities, outputs, change pathways and outcomes. In reality, we have learnt that change happens slowly – the first year of projects is more about establishing ways of working within their context, where projects are better able to report against activities and some change pathways than more evolved processes. Yet over time, more changes and outcomes begin to emerge. Reporting burden needs to be considered, in addition to ensuring that frameworks are user-friendly. To reduce reporting requirements while retaining the qualitative explanatory approach a time-bound or phased approach to ToC reporting could be taken. This would look in detail at: activities (year 1), processes (year 2), outcomes (year 3). The focus on the ToC shifts over time and ensures reporting demands are kept to a minimum, while providing the level of detail required for understanding resilience. The use of templates to capture any exceptional 'impact case studies' within this approach would highlight any exceptional outcomes/ results, allowing for capturing emergent outcomes under different timeframes.

Approaches to combining different methods for resilience measurement

Monitoring and evaluation approaches can be combined by thinking carefully through the added value of each approach and when and where to apply them. In reality, the monitoring and evaluation approaches remained rather separate in BRACED[16] (see the BRACED KM MEL section) and each had its own focus. Evaluative monitoring captured a large amount of contextualised data across multiple resilience themes and contexts and offered a bridge between gathering monitoring data and conducting full scale evaluation methods (e.g. mid-term reviews), helping to close the gap between the 'M' and the 'E' through learning. This approach is helpful for projects and programmes to course correct throughout their lifetime, as well as highlighting gaps and areas where further research is needed. Realist evaluation focuses in detail on how things work to bring about change, why, for whom and in what circumstances, which also contributes greatly to lesson-learning and course correction. This approach is resource intensive though. Learning from our experiences and reflections on the value of more strongly integrating approaches, we have drawn

16 For a more detailed discussion about challenges and lessons emerging from each method visit:
Lessons from monitoring BRACED
Lessons from applying a realist lens to resilience programmes
Lessons from designing quasi experimental evaluations.

the monitoring and realist evaluation approaches closer together in the BRACED extension period to better build-on and complement each other. This includes taking a selected case study approach to realist evaluation to dig more deeply into aspects of work that are less well known or understood. For example, in the BRACED extension period[17] there is a greater focus on policy influencing activities, which is an aspect that will be explored in more depth through realist case studies.

Our learning concludes that quasi-experimental evaluation is generally not appropriate for complex programmes that comprise 'packages' of interventions, as this requires many groups, clusters and substrata. This approach adds value for attributing change and causal inference for specific interventions, though longer timeframes than were given in BRACED (more than two years) would be more appropriate to evidence impact, preferably conducting the endline survey ex-post, giving projects an opportunity to run for their full length of time and exploring the sustainability of the projects once funding ends. While the findings of this approach are not readily transferable across contexts and need to be complemented with qualitative methods to explore, broaden and contextualise findings, this approach is appropriate for use as an accountability tool. Quasi-experimental evaluation better complements other approaches by looking in depth at single interventions and using this as part of a sequence of approaches, rather than in parallel. In this way, qualitative and quantitative methods could be better integrated and sequenced, so that methods can complement each other and build on the findings of each to add depth, nuance or attribute change as necessary.

FUTURE DIRECTIONS

MEL for large investments in resilience programming is still nascent and BRACED has uncovered critical lessons about how progress can best be measured and reported. Here, we have shared our experiences and lessons based on our experiences over the course of three years. We hope this will contribute to on-going and future efforts to design and implement improved MEL frameworks and methods for resilience-building programmes. While there is no perfect MEL system, lessons to date point to some important practical considerations and implications.

The growing number and complexity of resilience programmes requires sophisticated MEL efforts to support and improve the effectiveness of policy and practice. There will be no definitive 'right' way to measure resilience, but we now have a good understanding of 'what works'. Despite this, several challenges remain, which future efforts (by both researchers and practitioners) could explore to improve collective knowledge. We have identified six primary areas to pay attention to:

1. **What timeframes should be followed when measuring resilience in the context of shocks and stressors?** Within the BRACED timeframe, few large-scale shocks or stressors occurred through which resilience could be

17 From April 2018 to March 2019, with a three-month wrap-up period for IPs.

tested. Yet it is important to reflect on the timeframes of undertaking data collection following a shock or stressor that has impacted on households and communities in the project or programme context. We need to understand peoples' responses to these, and the effects on outcomes following such events, but approaches and methods need to carefully consider the ethical implications of these data collection efforts. Projects and programmes should carefully assess the time-sensitivity of responses and plan data collection around avoiding further harm to affected communities. At the other end of the timescale, it is important to recognise that shock-responsive approaches are only able to capture short-term responses i.e. early warning and anticipation (anticipatory capacity) and coping (absorptive capacity). These approaches do not, in reality, test resilience, which requires an understanding of the longer-term impacts on outcomes (adaptive capacity). Monitoring and measurement approaches therefore need to track effects over much longer timeframes, or as staged ex-post evaluations, to assess the true impact of any shock or stressor over timeframes that are more meaningful for recovery (years to decades).

2. **What timeframes are required to measure 'real' resilient change?**[18] BRACED has found that longer timeframes are needed to understand the extent to which resilience-building interventions have built adaptive capacity, ensured sustainability and supported transformational change.[19] What appears successful in the short-term may not be sustained or may even result in unexpected and unintended negative outcomes when considered over development timeframes. Equally, approaches that may not have achieved as many outcomes during the lifetime of a programme, may have laid solid foundations that enable ownership and self-sustaining change that will manifest beyond the lifetime of a programme. The effects of resilience-building efforts will not be known without further assessment via ex-post evaluations or follow-up research beyond the lifetime of a programme.

3. **To what extent does MEL support adaptive programming within a large and complex programme?** The reality of the possibilities as well as the constraints of adaptive programming in large programmes need to be better understood. Adaptive and flexible approaches are needed to ensure that learning can be fed-in to promote improvement over the lifetime of a programme, rather than retrospectively revealing what worked and what did not. Supporting learning-based decision making and adaptive management is a key function of good MEL systems. Yet within a context of multiple contractual relationships across many organisations; requirements for some coherence and structure at the programme level; and the culture of 'performance' assessment, how much adaptation is reasonable and possible at this scale? BRACED has revealed the importance of ensuring learning and evidence-based adaptative decision making, but it challenges the extent to which this can be done within existing programme structures.

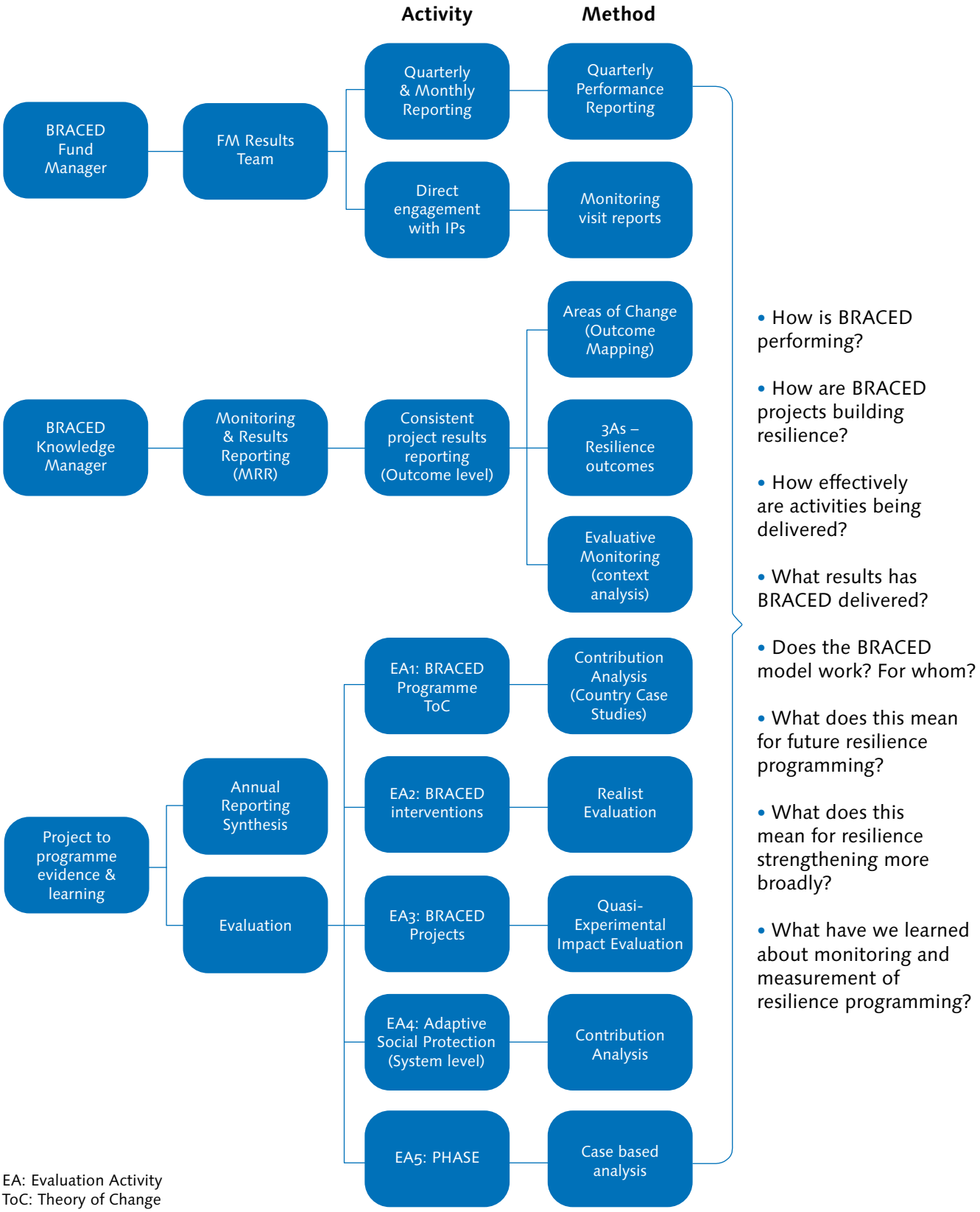
18 See resilience considerations outlined in Resilience results: BRACED final evaluation report (p23).
19 See also: Routes to Resilience: insights from BRACED final year.

4. **How can MEL professionals conduct multi-level analysis to connect work at household and policy levels?** We find that when it comes to resilience 'outcomes', many of the determinants of these outcomes may (or not) be occurring in higher layers and in multiple systems. However, this tends to be a missing piece in MEL systems, which on the whole concentrate on individual or household level outcomes. We need to therefore consider how to make MEL systems able to capture achievements across levels and scales, beyond just the household level, to include community and higher institutional and policy-level change and how, in turn, these affect/effect change at the household level.

5. **What are the most appropriate tools to capture complex change dynamics?** Resilience measurement needs to build on 'good MEL practice' but also explore new approaches that embrace and account for non-linear change and uncertainty. While the BRACED experience demonstrates the value of capacity frameworks, it also reveals limitations in understanding processes and system dynamics. Therefore, we need to think beyond capacities to understand interconnections and interdependencies, power dynamics and socio-political dimensions of longer-term processes (e.g. recovery and 'real' i.e. lasting resilience).

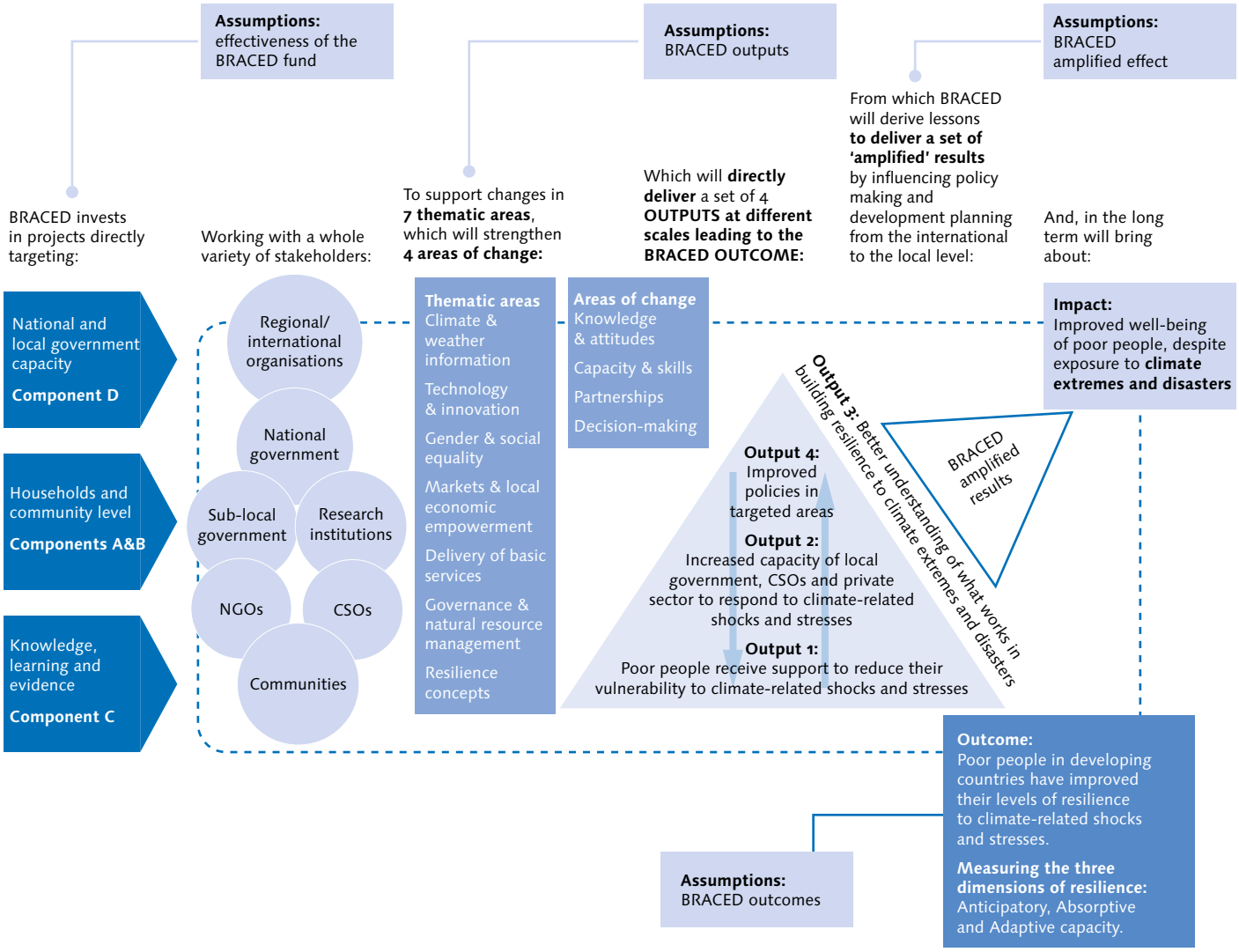
6. **Can resilience be built without transformational change?** Although transformation is not a strong enough focus in BRACED to draw lessons from, evidence to date tell us that building resilience it is not just about responding, coping and adapting to shocks, but it is also about transforming the social, political and/or economic system. Transformational outcomes require two key processes: scaling and embedding approaches into government systems and policies (top-down) and including the most vulnerable and marginalised to achieve changes that are structural, catalytic, scalable and sustainable (bottom-up). Closely related to this, we need to consider how to develop MEL frameworks that include more in-depth gender, power and political economy analyses. This would also lend insights into the extent to which the trajectories of resilience in each context can be sustained in the long term. In addition, this requires ex-post evaluations to enable a comprehensive understanding of how structural changes in political and governance relations, social norms and perceptions change beyond the project lifetime.

ANNEX 1: BRACED MEL 'INFRASTRUCTURE'



EA: Evaluation Activity
ToC: Theory of Change

ANNEX 2: BRACED THEORY OF CHANGE



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The BRACED Knowledge Manager generates evidence and learning on resilience and adaptation in partnership with the BRACED projects and the wider resilience community. It gathers robust evidence of what works to strengthen resilience to climate extremes and disasters, and initiates and supports processes to ensure that evidence is put into use in policy and programmes. The Knowledge Manager also fosters partnerships to amplify the impact of new evidence and learning, in order to significantly improve levels of resilience in poor and vulnerable countries and communities around the world.

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