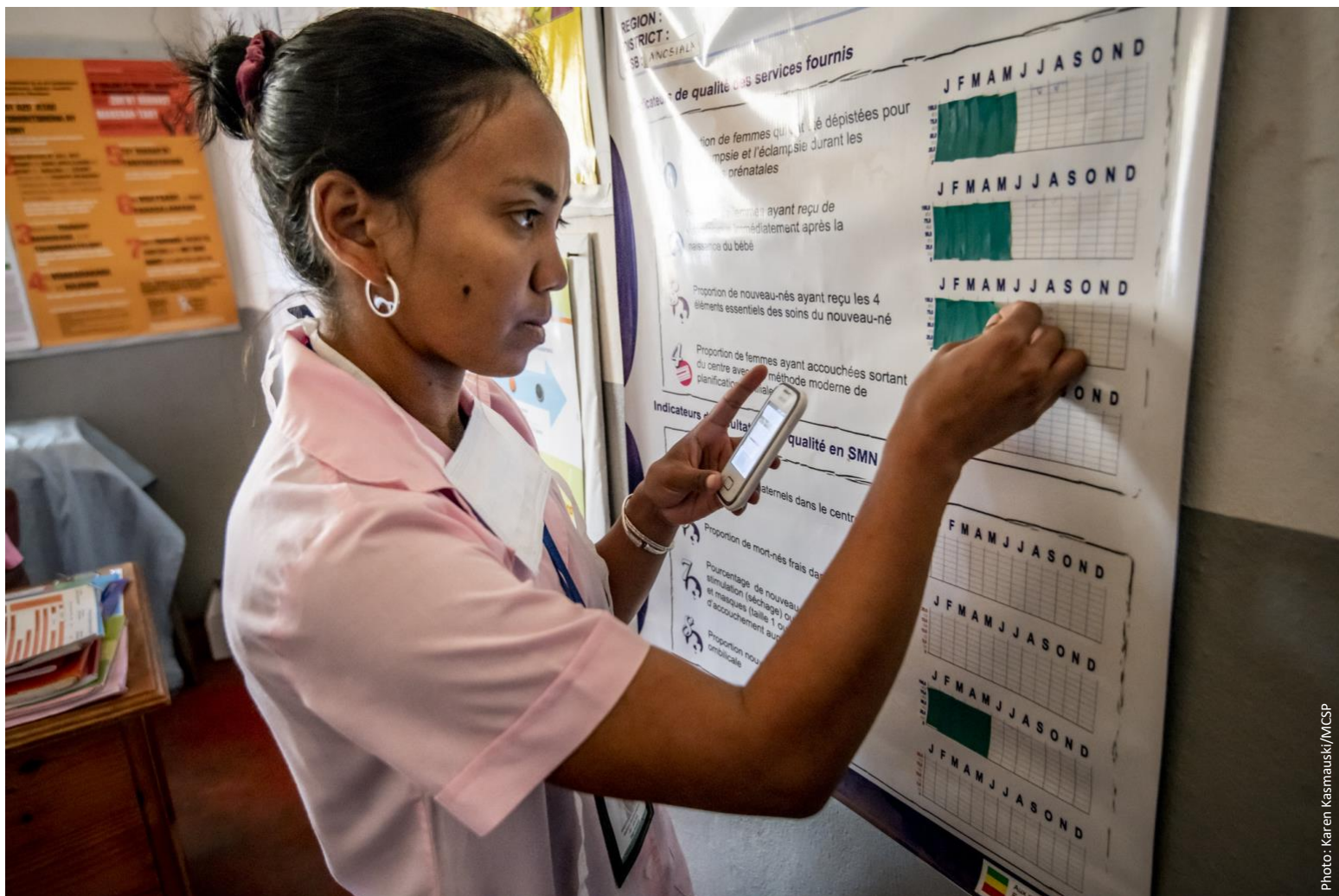# MOMENTUM
Knowledge Accelerator

Photo: Karen Kasmauski/MCSP

■ **Technical Guide**

A GUIDE TO COMPLEXITY-AWARE MONITORING APPROACHES FOR MOMENTUM PROJECTS

November 2020

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ACKNOWLEDGEMENTS

ABBREVIATIONS

ADS	Automated Directives Systems; the policies and procedures that drive USAID's programs and operations
CLA	Collaborating, learning, and adapting
FP	Family planning
M&E	Monitoring and evaluation
MEL	Monitoring, evaluation, and learning
MNCH	Maternal, newborn, and child health
MNCHN	Maternal, newborn, and child health and nutrition
MOMENTUM	Moving Integrated, Quality Maternal, Newborn, and Child Health Services, Voluntary Family Planning, and Reproductive Health Care to Scale
RH	Reproductive health
USAID	The United States Agency for International Development

GLOSSARY

Throughout this brief, we attempt to avoid technical and approach-specific jargon by streamlining terminology. Thus, terms used in this brief may differ from the terms used in other descriptions of complexity-aware monitoring approaches. The terms that we have chosen to use in this brief are listed below, along with the synonymous terms that we have chosen not to use, definitions, and/or examples.

Adaptive learning	An intentional adoption of processes to generate, capture, share, and analyze information and knowledge on a continuous basis from a wide range of sources to inform decisions and adapt programs to be more effective in usual, uncertain, or changing circumstances.
Approach	Method or methodology for complexity-aware monitoring. For example, the most significant change approach.
Clients	The individuals, groups, and organizations that a project or intervention intends to serve or benefit.
Causal framework	A representation of the pathways from inputs through activities to desired outputs, outcomes, and impact or goal. There are several common methodologies—including the logic model, logical framework, and theory of change—with different terminology, structure, and levels of details on assumptions, evidence, etc. Causal frameworks can exist at the project and/or intervention level.
Complexity	Situations in which there is lack of both strong expertise and agreement on what needs to be done. Complexity can result from either complex interventions or environments.
Complexity-aware monitoring	Monitoring approaches that take into account the inherently unpredictable, uncertain, and changing nature of complex situations.
Intervention	An activity, sub-project, program, or workstream. For example, an intervention to improve the quality of maternal health services at referral hospitals in the Volta region of Ghana, or efforts to introduce a new product into the contraceptive method mix in Niger.
Outcomes	Changes, results, or accomplishments. Most complexity-aware monitoring approaches focus on outcome-level changes, or those falling in between outputs and impacts in a results chain. Outcomes can generally be thought of as the changes that are beyond the direct control of the project but within the project's realm of influence. An example of an outcome indicator is the percentage of adolescents who deliver their babies in a health facility.
Participant	An individual involved in the implementation of the monitoring approach. Participants generally include project staff and sometimes external stakeholders, including potentially clients of the intervention. The type of participants included will vary by approach.

Project	A set of interventions for implementation within a set timeframe and budget, used in this document to represent a USAID-funded award. For example, the MOMENTUM Country and Global Leadership project.
Stakeholders	The individuals, groups, or organizations that interact with and/or are affected by a project or intervention. This includes any clients, implementers, community members, and partners, as well as other actors operating in the same context or system. In some instances, stakeholders may include project staff in addition to external stakeholders.
System, System Thinking	A system is the broad set of ever-changing stakeholders, their diverse perspectives, their interrelationships, and the boundaries within which they engage, as they work towards a common purpose. Systems thinking is thus the consideration of the entire system.

OVERVIEW AND INTRODUCTION

The purpose of this document is to provide guidance on the use of complexity-aware monitoring within the MOMENTUM projects. MOMENTUM—or Moving Integrated, Quality Maternal, Newborn, and Child Health Services, Voluntary Family Planning, and Reproductive Health Care (MNCH/FP/RH) to Scale—is the U.S. Agency for International Development's (USAID's) flagship, multi-award program to accelerate reductions in maternal, newborn, and child mortality and morbidity in high-burden USAID priority countries.

This guidance includes an introduction to the key concepts associated with complexity-aware monitoring, guidance to support application of the approaches to MOMENTUM, a summary matrix to quickly compare selected approaches, a brief overview of each selected approach, and resources to support use of these approaches. The overall goal of this guide is to support MOMENTUM partners to use complexity-aware monitoring approaches to enhance their monitoring and evaluation (M&E) and adaptive learning, thereby improving the likelihood of project success.

This guide intends to be a practical resource that helps users compare between and select complexity-aware monitoring approaches. Other existing resources offer deeper analysis on complexity, the principles underlying complexity-aware monitoring, and linkages with systems thinking and adaptive management. A selection of these resources can be found in the Cross-Cutting References and Resources list at the end of this document. In addition, for each complexity-aware monitoring approach covered in this document, references are provided to documents that provide detailed guidance on when and how to implement the approach. References are also included for case studies that describe how these approaches have been used in projects and interventions similar to MOMENTUM.

> **The complexity-aware monitoring approaches discussed in this guide are:**
>
> - Social network analysis
> - Causal link monitoring
> - Outcome mapping
> - Sentinel indicators
> - Pause and reflect
> - Outcome harvesting
> - Most significant change
> - Ripple effects mapping
> - Contribution analysis

This guide builds on the ***Cross-MOMENTUM Monitoring, Evaluation, and Learning (MEL) Framework***, which provides background guidance on MEL, including traditional performance monitoring approaches. The Cross-MOMENTUM MEL Framework supports qualitative and quantitative data collection, evidence generation for the ***MOMENTUM Learning Agenda***, and synthesis and reporting across MOMENTUM awards. The ***MOMENTUM Adaptive Learning Guide*** is another important resource to be used alongside this document; adaptive learning can support the use of complexity-aware monitoring results to improve performance.

The intended audience for this guide is MOMENTUM implementers (including global, country, and field awardees as well as prime and sub awardees) and their counterparts at USAID (collectively "MOMENTUM partners"). Specifically, this guide is intended for M&E staff, as well as project leadership and project or activity managers. It may also be useful for technical or program staff.

UNDERSTANDING COMPLEXITY-AWARE MONITORING

WHAT IS COMPLEXITY AND WHEN SHOULD COMPLEXITY-AWARE MONITORING BE USED?

Complexity refers to situations where there is a lack both of strong expertise and of agreement on what needs to be done. Situations can be technically complicated, when there is agreement on what needs to be done but the technical expertise is lacking, or socially complicated, when there is strong technical expertise available but no agreement on what the approach should be. Complex situations are both technically and socially complicated. Complexity can be thought of as a continuum, as shown in Figure 1, with simple, straightforward interventions in stable, well-defined environments being at one end of that continuum, and chaos at the other. A situation may be complex as a result of the intervention, the environment, or both.[1,2]
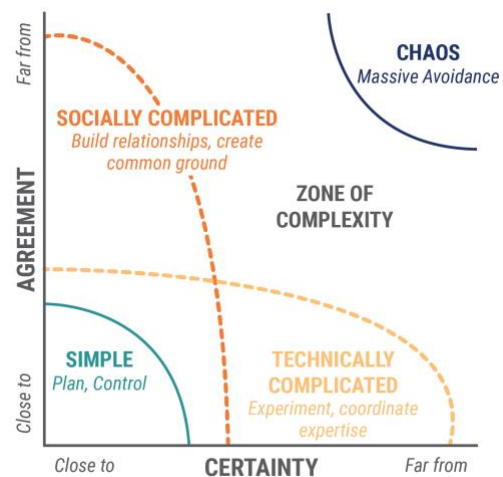
Complexity-aware monitoring includes monitoring approaches that take into account the inherently unpredictable, uncertain, and changing nature of complex situations.

Within the MOMENTUM program, many interventions will fit within the concept of complexity. And many of the complexity-aware monitoring approaches can also be useful for interventions that fall on the "simpler" end of the complexity continuum.

Complexity often occurs when:

- Innovative practices are being designed, implemented, tested, and iterated on.

- The causal pathways between intervention and intended outcome are not clear.

- Interventions aim to change the beliefs and/or behaviors of individuals or social groups (e.g., social norm change interventions).

FIGURE 1. COMPLEXITY CONTINUUM

Source: Michael Quinn Patton, *Developmental Evaluation* (New York: Guilford Press, 2011).

- Multiple changes need to happen together to result in the intended outcome (e.g., introducing a new contraceptive method into a health system).

- The exact steps needed to realize the intended outcome are not clear from the outset (e.g., advocacy for policy change).

- The context or environment is subject to rapid and unanticipated changes (e.g., fragile and humanitarian settings).

- There is political and/or social instability that may affect implementation of a project or intervention (e.g., a nurses' strike or an upcoming election).

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[1] Definition of complexity adapted from Michael Quinn Patton, *Developmental Evaluation* (New York: Guilford Press, 2011).
[2] A longer discussion of complexity can be found in Melissa Patsalides and Heather Britt, "Complexity-Aware Monitoring Discussion Note (Brief)," USAID Learning Lab, USAID, July 31, 2018, https://usaidlearninglab.org/library/complexity-aware-monitoring-discussion-note-brief.

HOW DOES COMPLEXITY-AWARE MONITORING INTEGRATE WITH TRADITIONAL M&E?

The *USAID Automated Directives System (ADS) 201*[3] identifies three types of monitoring: performance, context, and complementary. **Performance monitoring** is the "ongoing and systematic collection of performance indicator data and other quantitative or qualitative information to reveal whether implementation is on track and whether expected results are being achieved." **Context monitoring** is the "systematic collection of information about conditions and external factors relevant to the implementation and performance" of a project. USAID recommends **complementary monitoring**, including complexity-aware monitoring approaches, to supplement performance and context monitoring, especially when changes are difficult to predict and/or interpret.

> ## Social network analysis
> can be conducted as part of baseline and endline evaluations to show change in stakeholder roles, information flows, levels of influence, and other social connections.

Many of the approaches described in this document have been developed to integrate with or build upon traditional performance M&E systems, which are based on causal frameworks, qualitative and quantitative indicators, and a blend of continuous monitoring with occasional evaluations. Choosing to use complexity-aware monitoring approaches does not mean that traditional M&E approaches are not used; they are generally used together in an integrated manner.

For example, some complexity-aware monitoring approaches **build on a project's causal framework** by seeking to better convey the underlying assumptions, the role of stakeholders, and the wider system and broader context within which it functions. These approaches may also strengthen project design by identifying flaws in the assumptions or hypothesized causal chains. In addition, many of the approaches build rigor into their approach by referring back to well-defined and evidence-based causal frameworks.

> ## Causal link monitoring
> expands on a causal framework, while **contribution analysis** relies on an evidence-based causal framework to establish rigor.

> ## Outcome harvesting
> can be used to collect data to report on an indicator such as number and description of policy changes informed by MOMENTUM advocacy.

Complexity-aware monitoring approaches are sometimes mistaken as purely qualitative approaches, but that is not accurate. While some of the approaches are primarily qualitative, others can be used with both **qualitative and quantitative** indicators. In addition, approaches that are primarily qualitative can be applied with quantitative concepts, such as numerical targets or summaries applied to data that is primarily reported as narrative.

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[3] USAID, "ADS Chapter 201: Program Cycle Operational Policy," July 23, 2020, https://www.usaid.gov/sites/default/files/documents/1870/201.pdf.

Complexity-aware approaches also **balance rigor with practical and timely information.** Timely information is needed for adaptive learning and effective management, but the typically long duration of experimental-design evaluations, such as randomized control trials, means that data needed for decisionmaking may be slow in emerging. And in situations of complexity, such formal evaluations may be not possible. Complexity-aware monitoring approaches deliver critical data in a rapid and timely manner using creative tactics to strengthen rigor, such as triangulation of data sources. They can also be used as interim assessments, implemented in

As the monitoring of **sentinel indicators** often does not follow the monitoring schedule for other indicators, sentinel indicators can alert staff that a problem is emerging or that an intervention has made significant progress.

advance of or in between phases of an experimental evaluation, to gather additional insight into how a project is performing and is perceived by its stakeholders.

Most significant change asks stakeholders from across the system to provide their perspective on the intervention and can sometimes identify if and how the boundaries of the system have shifted through implementation.

Complexity-aware monitoring also **integrates well with interventions that use systems thinking**. Many of the approaches take the entire system in which an intervention operates into account. A system is the broad set of ever-changing stakeholders, their diverse perspectives, their interrelationships, and the boundaries within which they engage, as they work towards a common purpose. Systems thinking is thus the consideration of the entire system. Additional guidance on M&E and systems thinking can be found in the Cross-cutting References and Resources at the end of this document.

Other ways that complexity-aware monitoring can supplement traditional monitoring are discussed in the next section.

WHAT QUESTIONS CAN COMPLEXITY-AWARE MONITORING ADDRESS?

Complexity-aware monitoring approaches help to answer several key questions that are often missing from traditional monitoring approaches or, because of the complexity of the situation, cannot be answered with traditional approaches.

These questions can be used to select the most appropriate approach for a particular situation or monitoring need. They are described in more detail below with examples provided. The questions are also included in the quick comparison matrix presented later in this document, along with a more complete list of the approaches that can be used to address each question.

MOST APPROPRIATE METHOD TO ADDRESS QUESTIONS

Question	Illustrative example
What outcomes might be missing? While some approaches begin with a causal framework against which information is then gathered, other approaches begin gathering information and then	Using most significant change to evaluate a capacity building intervention may show that some participants were able to make

draw the causal framework. The ability of these approaches to capture unintended outcomes is among the most appreciated aspects of complexity-aware monitoring. In complex projects and interventions, staff often realize that accomplishments have occurred but that they do not fit neatly within the confines of the traditional performance M&E system. And with innovations or unstable environments, the outcomes might be hard to predict.	improvements in their work beyond what was anticipated, while others used their new skills in ways counter to the intent of the intervention. Neither outcome would have been included in the original causal framework.
What outcomes might be yet to emerge? Typical project timeframes are often inadequate to capture the full realization of outcomes using traditional measures. For instance, achieving a policy change or moving an innovation to scale can take years of advocacy and related work. In situations where the time between outputs and outcomes is long, complexity-aware monitoring can help identify interim milestones that mark progress towards outcomes that are yet to fully emerge.	Outcome mapping can be used to monitor the progress of scaling a health intervention. If the intended outcome is to have the intervention implemented at scale in a country, the progress markers monitored in outcome mapping might include the percentage of districts implementing the intervention and the existence of national-level policy documents to support implementation.
How do stakeholders perceive the project or intervention? Many complexity-aware monitoring approaches are participatory, meaning that they engage project staff and stakeholders in their design and implementation. There are many benefits to participatory monitoring, including the collection of stakeholder feedback. Feedback, particularly from a project's intended clients, can be used to support the causal pathway from the project to an outcome and/or to provide an additional source of information to enhance the credibility of a finding (i.e., triangulation). Complexity-aware monitoring approaches also offer opportunities to gather and consider the perspectives of marginalized and underrepresented groups.	A quality improvement intervention is conducted in a region's health facilities. Ripple effects mapping can be implemented to better understand how stakeholders (e.g., regional leadership, doctors and nurses, other staff, patients, and community members) feel about the intervention and what they believe its outcomes to be. The resulting map and qualitative data can be used to validate findings from a quantitative review of routine service statistics.
What factors contributed to the observed outcomes? While experimental-design evaluations seek to *attribute* change to an intervention, complexity-aware monitoring approaches can build the argument for a project's *contribution* to a change. While there may be less rigor, the upside of a contributions perspective is that it also acknowledges the important contributions of external stakeholders and context. In development, it is rare that one project works alone to achieve change, especially as ministries of health, community groups, and other stakeholders are commonly cooperating on the same interventions and/or engaged in similar interventions.	Multiple groups are implementing interventions to mitigate the impact of the COVID-19 pandemic on MNCHN services. Outcome harvesting can be used to identify outcomes indicating successful mitigation, such as changes in hospital policy or improvement in health facility service statistics, and then to trace those outcomes back to the specific interventions that likely contributed towards those outcomes.

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What is happening in the wider context? Context monitoring can happen without complexity-aware monitoring, but many of the approaches described here can be used to support context monitoring. Complexity and systems thinking recognize that the broader context in which the project operates is likely to have an impact on the project and its interventions. As such, many of the approaches include context monitoring.

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Social network analysis can be used in conjunction with an advocacy intervention to show how stakeholders interact with each other, how information flows among them, and who has influence. This can help the project more efficiently target its efforts and monitor progress towards change.

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HOW ARE COMPLEXITY-AWARE MONITORING AND ADAPTIVE LEARNING RELATED?

In complex situations, unintended consequences are apt to emerge; complexity-aware monitoring is needed to identify such consequences and adaptive learning to respond to them. **Adaptive learning** as defined in the **MOMENTUM Adaptive Learning Guide** is an intentional adoption of processes to generate, capture, share, and analyze information and knowledge on a continuous basis from a wide range of sources to inform decisions and adapt programs to be more effective in usual, uncertain, or changing circumstances.

Both complexity-aware monitoring and adaptive learning have emerged from the same challenge of managing large and/or complicated projects through challenges such as evolving contexts, multiple perspectives, and potential unknowns. Both place a heavy emphasis on flexibility, learning, and responding rapidly to new information.

Additional guidance on how to use complexity-aware monitoring results to make adjustments and improve performance can be found in the *MOMENTUM Adaptive Learning Guide.*

As with performance monitoring data, complexity-aware monitoring findings should be used to support adaptive learning, with data and results reviewed and interpreted and recommendations developed and implemented in a timely and efficient manner. The selection of complexity-aware monitoring approaches covered in this document include options for implementation throughout the project cycle. Results can thus be used for adaptive learning during initial work-planning and regular reviews and check-ins, and in planning, implementing, and responding to mid-term and final evaluations.

Some approaches, such as pause and reflect, included here as representative of complexity-aware monitoring, are also considered adaptive learning approaches. And some of the complexity-aware monitoring approaches include adaptive learning steps within their defined process. Regardless of whether the approach explicitly calls for the development and implementation of recommendations, this should be done through adaptive learning.

In **causal link monitoring**, adaptive learning is built in: the final steps are to interpret and use the collected data to make adjustments to the intervention and then to repeat the entire process.

APPLICATION TO MOMENTUM

ADAPTING COMPLEXITY-AWARE MONITORING APPROACHES

In complex situations, projects need to be adaptable and open to change; M&E systems and approaches should be adaptable as well. While some of the approaches described here have detailed methodologies, rarely are they implemented exactly as described. Adaptations are expected.

Adaptations should consider both the aspects of the approach that are most relevant to the project or intervention and the aspects that are integral to the rigor of the approach. For example, the most significant change question could be used within an existing data collection effort rather than implementing it as a stand-alone exercise. The monitoring aspects of the outcome mapping approach can be adapted to fit within an existing project reporting system.

Complexity-aware monitoring approaches are well-suited to help answer many of the questions in the **MOMENTUM Learning Agenda**. Examples of how approaches can be used to address the learning agenda are noted in the descriptions of each approach.

SUPPORT FOR IMPLEMENTATION

Implementing complexity-aware monitoring approaches can be challenging if staff, leadership, and/or funders are reluctant to use an unfamiliar approach. Reluctant stakeholders can be reassured that these approaches are complementary to traditional M&E and that those systems are not being replaced but supported with additional information. Many of the approaches described here have been in use for over a decade and by projects supported by a wide variety of funders.

Once findings emerge from the complexity-aware monitoring, it is also essential to ensure that they are used in adaptive learning. Plans should be made for sharing the results, not only with leadership and funders but also with staff, stakeholders, and especially the participants in the approach implementation. Engaging others closely throughout the implementation of the approach can help support eventual use of the findings; many of the approaches build this participation into their process.

SHARING FINDINGS AND LESSONS LEARNED

While there is ample evidence about and examples for some of the approaches described here, for other approaches, this type of information is lacking. Case studies for complexity-aware monitoring are especially rare within the field of MNCHN, RH, and FP. The use of complexity-aware monitoring within the MOMENTUM projects thus represents an important opportunity to document and share experiences on the suitability and usefulness of these approaches in different situations.

MOMENTUM partners are encouraged to develop and share case studies on their use of these approaches. Case studies can highlight what worked well, what did not, and why, as well as what was learned and how the project was able to learn from and adapt based on the findings. Case studies can be particularly useful in helping others choose which approach to use for a particular project or intervention. Including details about the length of time to implement the approach, the level of staff effort, and whether or not external assistance was required will be particularly useful in guiding others.

RECOMMENDED APPROACHES

SELECTING AMONG APPROACHES

A recent review found over 100 approaches for complexity-aware monitoring and adaptive management in use by USAID and other implementing partners.[4] We have chosen nine approaches to highlight here as we feel these may be particularly suitable and feasible for MOMENTUM partners. These nine approaches were chosen as they meet a variety of monitoring needs and range from the more rigorous to the more approachable and easier to use. They are among the most well-known and often used approaches within the USAID community. Finally, they are appropriate for the type of interventions implemented under MOMENTUM.

The **matrix** that follows provides a snapshot comparison between the nine selected approaches. They are organized, top to bottom, by when in the project cycle they can be used. The first set of columns in the matrix provides more detail on project cycle timing, as many of the approaches can be used at various stages. The next set of columns provides guidance on the type of questions that the approach can help address. These questions align with the narrative above. The primary type(s) of data that the approach uses (i.e., qualitative or quantitative) is included next in the matrix.

Finally, guidance on the ease of use for each approach, including the level of skills and resources required, the intensity or level of effort from staff, and the type of engagement (i.e., in-person, virtual, or remote) is provided on the far right of the matrix. These approximations on ease of use are provided while also noting that all of the approaches are highly adaptable and context-dependent. Ease of use may vary by how the project chooses to implement it. It is also important to remember that while the highly participatory nature of many of the approaches increases the time and effort required, the resulting stakeholder engagement and feedback can be invaluable.

We suggest choosing several approaches to experiment with over the course of the projects. The approaches fulfill different functions, at times overlapping and at times appropriate to use together. Some of the approaches have aspects in common, as they may have evolved from or intentionally use aspects of another. For example, outcome harvesting uses aspects of contribution analysis, and outcome mapping was developed to complement outcome harvesting.

The matrix can be used to select among approaches and to gather ideas of how to use them together. It is recommended that the approaches selected for a particular project or intervention can be implemented at different times in the project cycle and address different questions. Additional guidance on how specific approaches work well or potentially overlap with each other can be found in the approach overviews that follow the matrix.

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[4] Leni Wild and Ben Ramalingam, "Building a Global Learning Alliance on Adaptive Management," ODI Report, ODI, September 2018, https://www.odi.org/sites/odi.org.uk/files/resource-documents/12327.pdf.

MATRIX FOR COMPARING COMPLEXITY-AWARE MONITORING APPROACHES

Complexity-aware monitoring approach	Timing in project cycle			Questions addressed by approach					Data type		Ease of use		Type of engagement †
	Design & Planning / Formative Assessments	Implementation / Ongoing Monitoring	Evaluation / Interim or Final Evaluations	What outcomes might be missing?	What outcomes might be yet to emerge?	How do stakeholders perceive the project or intervention?	What factors contributed to the observed outcomes?	What is happening in the wider context?	Qualitative	Quantitative	Skills & resources required*	Intensity / Level of effort**	
Social Network Analysis	X		X			X	X	X	X	X	1-3	1,2	1
Causal Link Monitoring	X	X	X		X		X	X	X	X	2,3	1	1,2
Outcome Mapping	X	X	X		X	X	X		X	X	2,3	2	1,2
Sentinel Indicators	X	X	X		X		X	X	X	X	2	1	3
Pause & Reflect		X	X	X		X		X	X		1	1	2
Outcome Harvesting		X	X	X			X		X		2	2,3	3
Most Significant Change		X	X	X		X	X		X		1,2	2,3	1,2
Ripple Effects Mapping		X	X	X	X	X	X		X		2,3	2	1
Contribution Analysis			X				X		X	X	2	2,3	2,3

* 1 = Can be implemented by community level entity; 2= Can be implemented by MOMENTUM project staff; 3= Outside assistance likely needed.

**1 = Able to integrate within existing staff workload and/or short-term engagement of external assistance; 2 = Moderate dedicated staff time needed and/or medium-term engagement and/or; 3 = Dedicated staff needed and/or longer-term external engagement

†1 = Best as in-person engagement with group or in community setting; 2 = Easily adapted for virtual engagement with videoconferencing and related technologies; 3 = Able to complete remotely via desk reviews, email, phone calls, online surveys, etc.

SOCIAL NETWORK ANALYSIS

DESCRIPTION

Social network analysis involves mapping the stakeholders (individuals, groups, organizations) who connect and relate with each other and/or share a common interest or purpose. Staff can then use this improved understanding of the network in which they are working to design, implement, and measure the outcomes of their intervention or project. Usually done as a participatory process, there are several different methodologies, some using software applications such as R, Gephi, or Social Network Visualizer. Social network analysis has been used to study the spread of disease, ideas, information, and beliefs. It is often used in the design phase of a project but can also be repeated over time to assess change. A representation of a visual social network analysis is shown in Figure 2; each circle represents a stakeholder and the lines and arrows represent the relationships between the stakeholders.

PROCESS

The process will vary depending on the specific methodology and/or software application used.

FIGURE 2. SOCIAL NETWORK ANALYSIS REPRESENTATION

1. Establish the parameters (i.e., define the network, level of stakeholders, types of relationships, and participants in the mapping process).

2. Identify the stakeholders and the connections between them.

3. Discuss the level of influence and goals of the various stakeholders.

4. Develop recommendations for the intervention or project based on the analysis.

5. If desired, repeat over time to assess change.

STRENGTHS

- Can identify otherwise hidden sources of influence among stakeholders.
- Can energize participants and create a sense of shared goals.
- Helps to establish a systems perspective among participants.
- Recognizes the roles of diverse stakeholders and can be used to set guidance for engaging them in a coordinated manner.

WEAKNESSES

- Can require a high skill level as well as related staff time.
- Is subject to the knowledge and biases of those participating.
- Needs to consider privacy concerns and data security, as data may be particularly sensitive.

UTILITY FOR MOMENTUM

While social network analysis can be used in design phases for most types of interventions, it is particularly useful in evaluating partnerships and intersectoral work, as well as advocacy, communications, and other social change interventions. It can also be used for context monitoring. Social network analysis can be "skilled" up or down, from hand-drawn stakeholder maps to sophisticated, quantitative analyses using software packages conducted as part of experimental designs.

POTENTIALLY USEFUL FOR THESE LEARNING AGENDA QUESTIONS:

- What strategic partnerships (and under what conditions) were successful?
- What expertise was elevated and how did MOMENTUM contribute to elevating country and regional level expertise to global levels?
- How did digital information systems contribute to data use by different user types?

COMPARISON WITH OTHER APPROACHES

Social network analysis combines well with approaches that seek stakeholder feedback, such as most significant change and ripple effect mapping, as well as contribution analysis. It is similar to outcome mapping and causal link monitoring in that it enhances understanding of the roles of stakeholders, context, and feedback loops. It can also improve understanding of why changes are happening and how existing networks can be leveraged to enable future change.

CASE STUDIES

Katherine Andrinopoulos and Emily Weaver, "Lessons Learned in Using Organizational Network Analysis for Planning and Evaluation of Global Health Programs," Data For Impact, USAID, March 18, 2020, https://www.data4impactproject.org/resources/webinars/lessons-learned-in-using-organizational-network-analysis-for-planning-and-evaluation-of-global-health-programs/.

Natalie Campbell, Eva Schiffer, Ann Buxbaum, Elizabeth McLean, Cary Perry, and Tara M Sullivan, "Taking Knowledge for Health the Extra Mile: Participatory Evaluation of a Mobile Phone Intervention for Community Health Workers in Malawi," *Global Health: Science and Practice*, February 1, 2014, https://www.ghspjournal.org/content/2/1/23.

Luc de Bernis, Mary V. Kinney, William Stones, Petra ten Hoope-Bender, Donna Vivio, and Susannah Hopkins Leisher, "Stillbirths: Ending Preventable Deaths By 2030," *The Lancet* 387, no. 10019, February 13, 2016, https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)00954-X/fulltext.

Carol Kamya, Jessica Shearer, Gilbert Asiimwe, Emily Carnahan, Nicole Salisbury, Peter Waiswa, Jennifer Brinkerhoff, and Dai Hozumi, "Evaluating Global Health Partnerships: A Case Study of a Gavi HPV Vaccine Application Process in Uganda," *International journal of health policy and management*, Kerman University of Medical Sciences, June 1, 2017, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5458794/.

IMPLEMENTATION GUIDES

Rick Davies, The Use of Social Network Analysis Tools in the Evaluation of Social Change Communications, 2009, https://mande.co.uk/wp-content/uploads/2018/08/The%20Use%20of%20Social%20Network%20Analysis%20Tools%20in%20the%20Evaluation%20of%20Social%20Change%20Communications%20C.pdf.

Kimberly Fredericks, "Using Social Network Analysis in Evaluation," Robert Wood Johnson Foundation Evaluation Series, December 30, 2013, https://www.rwjf.org/en/library/research/2013/12/using-social-network-analysis-in-evaluation.html.

CAUSAL LINK MONITORING

DESCRIPTION

In causal link monitoring,[5] the assumptions or "causal links" in between the steps in a causal framework are the focus. Causal links explain the ways in which the project staff and stakeholders use activities, outputs, and outcomes to produce outputs, outcomes, and impact, as shown in Figure 3. These links are added on to the causal framework, along with contextual factors and stakeholder input. Participants use this enhanced causal framework for project monitoring and to test the assumptions underlying the causal framework. Project staff use the reality testing of the enhanced causal framework to better understand successes and challenges and to make adjustments to project design and implementation as needed.

FIGURE 3. CAUSAL LINKS BETWEEN PHASES OF A CAUSAL FRAMEWORK
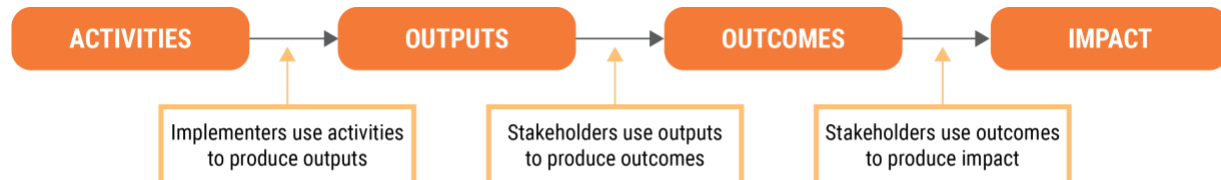
PROCESS

1. Develop (or review and refine) the causal framework.
2. Identify the causal links between the activities, outputs, outcomes, and impact.
3. Further enhance the causal framework with contextual factors and stakeholder review and input.
4. Prioritize causal links for monitoring.
5. Collect monitoring data.
6. Interpret and use monitoring data to make adjustments.
7. Revise the causal framework.

STRENGTHS

- Builds on existing causal framework, while also considering context and roles of stakeholders.

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[5] Causal link monitoring is an iteration of an earlier approach known as process monitoring of impacts.

- Requires minimal additional skills and level of effort to implement.
- Supports adaptive learning through its focus on interim steps and flexibility to change monitoring priorities over time.

WEAKNESSES

- Less participatory than other approaches, although participatory processes can be incorporated.

UTILITY FOR MOMENTUM

As causal links can be thought of as interim steps, causal link monitoring can be particularly useful when the time lag between activities and outputs and between outputs and outcomes is expected to be long or for rapid monitoring and refinement of innovative interventions. It also works well with interventions in which outcomes may be hard to measure, such as with interventions to enhance evidence and data use, capacity, and/or sustainability, or when the anticipated outcomes are unclear, such as with innovations. By testing the underlying assumptions, it can be used to strengthen causal frameworks and implementation. This approach helps staff to prioritize where to focus monitoring efforts by identifying which causal links have the least

> **POTENTIALLY USEFUL FOR THESE LEARNING AGENDA QUESTIONS:**
> - What pilot stage strategies were successful in reducing barriers to access for MNCHN/FP/RH?
> - What was done by programs/countries to successfully mitigate the impact of COVID-19?
> - How did journey to self-reliance strategies vary by country's "placement" within the development continuum?

existing evidence, or where the greatest uncertainty exists in the causal framework.

COMPARISON WITH OTHER APPROACHES

Causal link monitoring can be used in combination with contribution analysis and sentinel indicators. It combines well with approaches to identify unintended outcomes, such as outcomes harvesting, ripple effects mapping, or most significant change, but may potentially overlap with outcome mapping.

CASE STUDIES

Richard Hummelbrunner, Process Monitoring of Impacts: Proposal for a new approach to monitor the implementation of Structural Fund Programmes. CIDADES, Comunidades e Territórios. June 2005. pp.35-56. https://pdfs.semanticscholar.org/8e86/0b463d74622225771ca058213cfc2307ab59.pdf?_ga=2.253656137.19 38138901.1601476158-420975629.1601476158.

Ashley Strahley, "Looking for Cues of Project Impact: The Role of Causal Link Monitoring," MEASURE Evaluation, USAID, February 21, 2019, https://www.measureevaluation.org/resources/newsroom/blogs/looking-for-cues-of-project-impact.

IMPLEMENTATION GUIDES

Heather Britt, Richard Hummelbrunner, and Jacqueline Greene, "Causal Link Monitoring," Better Evaluation, April 2017,
https://www.betterevaluation.org/sites/default/files/CLM%20Brief_20170615_1528%20FINAL.pdf.

OUTCOME MAPPING

DESCRIPTION

In outcome mapping, the causal framework is expanded upon, as participants identify the specific markers of progress that build towards the broader outcomes in the causal framework. These progress markers are labeled as "expect to see," "like to see," and "love to see." Progress towards those outcomes is then monitored (or documented during an evaluation), along with a description of how the project contributed towards the change. Outcome mapping can be used for planning, monitoring, and evaluation. While it builds from an established causal framework, it can help participants think about potential outcomes beyond the causal framework.

PROCESS

1. Develop the outcome map through participatory design and brainstorming session(s).
2. Monitor for progress towards outcomes and the related efforts of the project using journals and/or other data collection methods.
3. For evaluation, use the outcome map as a framework to assess the project's causal framework, collect data on outcomes, and document contributions.

STRENGTHS

- Can engage staff and stakeholders in monitoring through participatory development of the outcome map.
- Recognizes contributions of stakeholders in achieving progress towards outcomes.
- Captures shorter-term progress towards outcomes not achievable within the project's timeframe.
- Can energize participants and spur new action towards change with encouragement to be idealistic and visionary in developing the outcome map.

WEAKNESSES

- Often requires skilled facilitation as it has a detailed methodology and a non-traditional perspective.
- Can be time-intensive, especially if implemented for monitoring across the life of a project.

UTILITY FOR MOMENTUM

Outcome mapping is useful for interventions that are considered hard to measure, such as capacity building, research, advocacy and policy change, social change, innovation, and scale-up. It is also useful for context

monitoring and for interventions in changing environments. The detailed approach can be followed closely or adapted and scaled down to meet the needs of the project.

> **POTENTIALLY USEFUL FOR THESE LEARNING AGENDA QUESTIONS:**
> - What kinds of MOMENTUM lessons on scale-up have been incorporated into global guidance and policies, and how was that achieved?
> - To what extent did activities designed to foster self-reliance at the local level contribute to national-level self-reliance?

COMPARISON WITH OTHER APPROACHES

Outcome mapping is often used as a prospective complement to outcome harvesting, with outcome mapping used to establish where outcome harvesting efforts will be focused. It should be used in combination with approach(es) that engage stakeholders and solicit stakeholder feedback. It can pair well with sentinel indicators but is potentially overlapping with social network analysis and causal link monitoring.

CASE STUDIES

Richard Smith, John Mauremootoo, and Kornelia Rassamann, "Ten Years of Outcome Mapping Adaptations and Support," Outcome Mapping Learning Community, July 19, 2012, https://www.outcomemapping.ca/resource/ten-years-of-outcome-mapping-adaptations-and-support.

Anne Sprinkel, ed., "Phase 1, Method Briefs," CARE Tipping Point, 2017, https://caretippingpoint.org/wp-content/uploads/2019/11/TP_Outcome_Mapping_FINAL.pdf.

IMPLEMENTATION GUIDES

Sarah Earl, Fred Carden, and Terry Smutylo, *Outcome Mapping Building Learning and Reflection into Development Programs* (Ottawa, Canada: International Development Research Centre, 2001), https://www.idrc.ca/en/book/outcome-mapping-building-learning-and-reflection-development-programs.

Terry Smutylo, "Outcome Mapping: A Method for Tracking Behavioural Changes in Development Programs," ILAC Brief 7, August 2005, https://cgspace.cgiar.org/bitstream/handle/10568/70174/ILAC_Brief07_mapping.pdf?sequence=1&isAllowed=y.

SENTINEL INDICATORS

DESCRIPTION

Sentinel indicators are proxy indicators used to alert project staff that change is occurring. Qualitative or quantitative, the indicator(s) may monitor purely contextual factors or progress towards an outcome. Similar to the concept of a bellwether, they often signal that further analysis or specific actions are required.

PROCESS

1. Develop (or review and refine) causal framework and other tools for understanding the system.
2. Identify sentinel indicators at critical points and/or that are representative of the system.
3. Conduct ongoing monitoring of sentinel indicators.
4. Update and revise sentinel indicators as needed.

STRENGTHS

- Can signal changes in context and in relationships among stakeholders.
- Looks beyond the boundaries of a project.
- Depending on selected indicators, can be implemented with relatively little time and effort.

WEAKNESSES

- Can be a challenge to identify appropriate sentinel indicators.
- May require a different frequency to monitor for change in a sentinel indicator than in traditional performance indicators and thus might get "lost" within a larger M&E system.
- May result in unnecessary focus on problems that do not yet exist and may never exist.

Examples of sentinel indicators:

- Stock-outs as an indicator for supply chain strength.
- In-patient deaths as an indicator for health care quality at a facility.
- Measles immunization rate as an indicator for all immunization coverage.
- Policy or curriculum change as an indicator for scale-up of an intervention.
- Positive statement from key decision-maker as an indicator for advocacy process.

UTILITY FOR MOMENTUM

Sentinel indicators are ideal for projects focused on strengthening systems and other wide-ranging or multi-faceted interventions. They may be particularly useful in fragile environments and those subject to rapid change. Ideally multiple sentinel indicators are used together, with some identifying concerns or challenges and others identifying progress or successes.

POTENTIALLY USEFUL FOR THESE LEARNING AGENDA QUESTIONS:

- How did COVID-19 affect health systems, how did the response affect MNCHN/FP/RH services delivery and access, and what was done by programs/countries to mitigate impact?
- How did MOMENTUM contribute to strengthening health systems resilience?

COMPARISON WITH OTHER APPROACHES

Sentinel indicators offer a relatively unique concept in the area of complexity-aware monitoring. The identification of sentinel indicators can build on social network analysis, causal link monitoring, or outcome mapping.

IMPLEMENTATION GUIDES

Travis Mayo, "Sentinel Indicators: A Systems-Based Approach to Monitoring and Evaluation." Presented at the American Evaluation Association, Chicago, IL, March 3, 2016, https://www.fsnnetwork.org/sites/default/files/Results%20from%20a%20Meta-analysis%20of%20Sentinel%20Indicators%20in%20USAID-funded%20Projects.pdf

PAUSE AND REFLECT

DESCRIPTION

Pause and reflect is often considered an adaptive learning approach, but it also fits within the rubric of complexity-aware monitoring as information is collected that can then be analyzed for program improvement. These team and/or stakeholder reflections enable learning about a project or intervention at key points in implementation to support adaptation and improvement. There are several ways to structure or format a pause and reflect exercise; an after-action review is one of the most commonly known.

Additional information on pause and reflect can be found in the MOMENTUM Adaptive Learning Guide.

PROCESS

The process will vary based on the format and/or structure used. The process described here is for after-action reviews.

1. Determine an appropriate time point or milestone for the session and participants.
2. During the session, discuss the following questions:
   - What was planned?
   - What really happened?
   - What went well?
   - What did not go well?
   - What should we do next time?
3. After the session, document, share, and apply recommendations.

STRENGTHS

- Formalizes debriefs to support improvement in future iterations.
- Supports candid discussions that elucidate nuances not easily captured in post-intervention surveys or other evaluation approaches.
- Is easy to implement without specialized skills, software, or training and with minimal level of effort. Can be repeated as often as needed.

WEAKNESSES

- For usefulness, depends on participants and their level of engagement.
- Requires openness to course corrections and strong use of adaptive learning.
- Without facilitation, can turn into a complaint session.

UTILITY FOR MOMENTUM

Pause and reflect is useful for all types of interventions, even small interventions that do not generally warrant monitoring efforts, such as webinars or stakeholder meetings. It can be scaled up or down based on the size of the intervention. Participant groups can be expanded to include stakeholders if desired.

POTENTIALLY USEFUL FOR THESE LEARNING AGENDA QUESTIONS:

- What would need to be done differently going forward to advance the journey to self-reliance?
- What tools, systems, and opportunities were successful in contributing to collaboration, learning, and adaptation?
- What strategies for improving quality, coverage, and equity were less successful and why were they not successful?

COMPARISON WITH OTHER APPROACHES

Pause and reflect is unique in comparison to other approaches, especially as findings and recommendations may not be shared beyond staff. It can be integrated with other approaches, such as in between rounds of data collection.

CASE STUDIES

Tony Pryor, "Doing an after-Action Review (AAR) Online," RealKM (blog), May 4, 2018, https://realkm.com/2018/05/04/doing-an-after-action-review-aar-online/.

Echo VanderWal, "The Luke Commission Uses CLA to Manage Rapid Growth in Eswatini," USAID Learning Lab, August 14, 2019, https://usaidlearninglab.org/library/luke-commission-uses-cla-manage-rapid-growth-eswatini.

IMPLEMENTATION GUIDES

QED Group, LLC, "After-Action Review Guidance," USAID's Knowledge-Driven Microenterprise Development (KDMD) Project, Aoril 1, 2012, https://usaidlearninglab.org/library/after-action-review-aar-guidance-0.

USAID, Facilitating Pause and Reflect, CLA Toolkit, 2018, https://usaidlearninglab.org/sites/default/files/resource/files/cla_toolkit_adaptive_management_faciltiating_pause_and_reflect_final_508.pdf.

OUTCOME HARVESTING

DESCRIPTION

A retrospective narrative approach, outcome harvesting involves searching for outcomes and then seeking to understand the contributions of the intervention to the outcomes. The outcomes can be intended or unintended and positive or negative. The evaluator searches for outcomes and then establishes the contribution of the intervention to the outcome, a process similar to forensic science. While traditional performance monitoring works from the established causal framework to identify outcomes, in outcome harvesting participants identify outcomes that may or may not be in the causal framework.

PROCESS

1. Define questions to guide the process and the sources of data.
2. Based on existing documentation, identify outcomes and draft narrative outcome descriptions.
3. Engage stakeholders to contribute to outcome descriptions.
4. Substantiate or validate the outcome descriptions by triangulating with third parties and/or other data sources.
5. Analyze and interpret the outcome descriptions for learning.
6. Support use of findings.

STRENGTHS

- Can identify unintended outcomes and improve understanding of contributions.
- Is a relatively logical, accessible approach that can be easily understood by stakeholders.
- Employs various means to collect data, as appropriate to the intervention and outcome (document review, interviews, emails, surveys, workshops, etc.).

WEAKNESSES

- Is time-intensive, especially if implemented for monitoring across the life of a project.
- Can require skill in identifying outcomes and writing up high-quality outcome narratives.

UTILITY FOR MOMENTUM

Outcome harvesting is useful in circumstances where quantitative data are lacking or insufficient to describe the outcomes. It is often used for interventions that include advocacy and policy change, social change,

and/or innovation, as well as those operating in dynamic and uncertain environments. It can be used as part of regular monitoring or as part of a mid-term or final evaluation.

COMPARISON WITH OTHER APPROACHES

POTENTIALLY USEFUL FOR THESE LEARNING AGENDA QUESTIONS:

- What evidence is there of institutionalization or sustainable change in use of CLA approaches in MOMENTUM countries? What contributed to these successes?
- How did MOMENTUM contribute to global and regional level guidance and evidence?

Outcome harvesting integrates aspects of contribution analysis. It is often used as a retrospective complement to outcome mapping. While similar to most significant change, the two can be used together. It potentially overlaps with ripple effects mapping.

CASE STUDIES

Jenny Gold, Ricardo Wilson-Grau, and Sharon Fisher, "Cases in Outcome Harvesting: Ten Pilot Experiences Identify New Learning from Multi-Stakeholder Projects to Improve Results," World Bank, June 1, 2014, https://documents.worldbank.org/en/publication/documents-reports/documentdetail/419021468330946583/cases-in-outcome-harvesting-ten-pilot-experiences-identify-new-learning-from-multi-stakeholder-projects-to-improve-results.

IMPLEMENTATION GUIDES

Ricardo Wilson-Grau and Heather Britt, "Outcome Harvesting," USAID Learning Lab, Ford Foundation MENA Office, May 2012, https://usaidlearninglab.org/sites/default/files/resource/files/outome_harvesting_brief_final_2012-05-2-1.pdf.

MOST SIGNIFICANT CHANGE

DESCRIPTION

Most significant change is a participatory, retrospective approach that uses storytelling and narrative to capture and report on outcomes. To elicit stories, participants are asked what they believe the most significant change was that occurred as a result of the intervention or project. The participant assigns the contribution of the project to the outcome in their storytelling. The approach also includes processes for determining which stories are most significant and for learning from the stories. There is a strong emphasis on understanding the values that are important to stakeholders.

PROCESS

1. Determine areas of interest and methodology for story collection.

2. Collect stories of significant change from stakeholders.

3. Intervention stakeholders, at increasing levels of hierarchy, select the most significant stories.

4. Report back to stakeholders the stories and reasons for deeming them most significant.

5. If desired, verify the most significant stories and quantify the extent to which the same type of significant change has occurred across intervention areas.

6. To improve shared understanding of values across stakeholders, repeat the process through several cycles.

STRENGTHS

- Is a relatively logical, accessible approach can be easily understood by stakeholders.
- Can identify unintended outcomes and improve understanding of causal pathways and contributions.
- Can engage and energize stakeholders and create a sense of shared accomplishment and teamwork.

WEAKNESSES

- Can be time- and resource-intensive, as it requires interviews with a wide range of stakeholders, often at various levels of an intervention.
- Is subject to the knowledge and biases of those participating.

UTILITY FOR MOMENTUM

Most significant change may be particularly useful when stakeholders' opinions about an intervention and its importance are inconsistent, such as with large-scale system-wide interventions and/or innovations. It is often used with social change and other community-based interventions. It can be used as part of ongoing monitoring or as a component within a mid-term or final evaluation.

POTENTIALLY USEFUL FOR THESE LEARNING AGENDA QUESTIONS:

- How have innovations and adaptations spearheaded by MOMENTUM shaped the field of measurement?
- How did MOMENTUM approaches address inequities in demand and access?

COMPARISON WITH OTHER APPROACHES

Most significant change should be used in combination with other approaches for comprehensive understanding of an intervention's effects. The most significant change question can be integrated into other data collection approaches to capture outcomes not included in the causal framework for the project or intervention.

CASE STUDIES

"Experiences and Lessons Learned: Implementing the Most Significant Change Method," MEASURE Evaluation, USAID, 2019, https://www.measureevaluation.org/resources/publications/fs-19-410.

"Stories of Most Significant Change: How the Introduction of the Standard Days Methods of Family Planning has Impacted Lives in Five Countries," Institute for Reproductive Health, Georgetown University, 2013, https://irh.org/resource-library/5140-2/.

IMPLEMENTATION GUIDES

Rick Davies and Jess Dart, "The 'Most Significant Change' Technique," Mande, 2005, https://mande.co.uk/wp-content/uploads/2018/01/MSCGuide.pdf.

RIPPLE EFFECTS MAPPING

DESCRIPTION

Ripple effects mapping is a retrospective, participatory, and qualitative approach to identify and document (intended and unintended) outcomes from an intervention. It is implemented as a stand-alone or series of sessions bringing together stakeholders, the end product of which is a visual ripple effects map. The map, for which a representation is shown in Figure 4, can be drawn by hand or using mind-mapping software.

FIGURE 4. REPRESENTATION OF A SIMPLE RIPPLE EFFECTS MAP
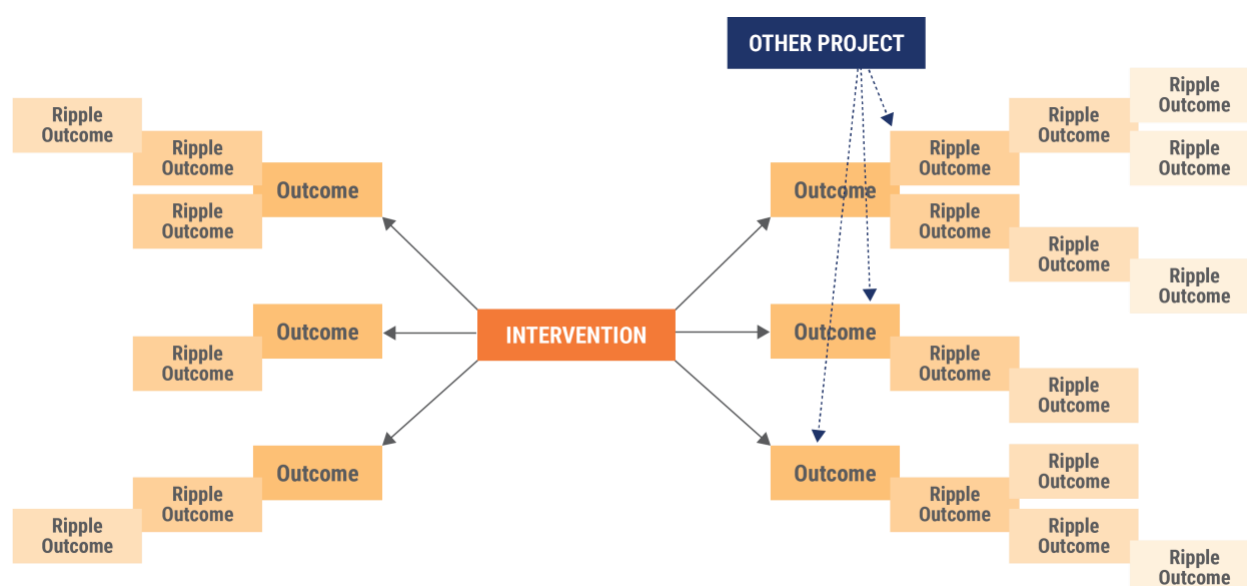
PROCESS

1. Prior to the ripple effects mapping session:

    – Identify and invite participants.

    – Develop interview questions.

2. During the session:
   - Identify outcomes through structured peer-to-peer interviews.
   - Share responses among the participants.
   - Conduct group reflection on the observed outcomes and how they connect to each other and the intervention.
3. After the session:
   - If needed, follow up with participants and other stakeholders to refine the map.

STRENGTHS

- Can engage and re-energize stakeholders and create a sense of shared accomplishment.
- Can identify a broad range of outcomes, intended and unintended, across a range of contexts.
- If implemented as a single session, can be completed in a relatively short time period.

WEAKNESSES

- Requires skilled facilitator to lead the session(s).
- Is subject to the knowledge and biases of those participating.
- Can present privacy and confidentiality concerns.

UTILITY FOR MOMENTUM

Ripple effects mapping is particularly valuable for social change and community-based efforts. It is also useful with novel or innovative interventions when the outcomes may be somewhat unpredictable. The map and the learning that emerges from the process can be used to support advocacy and/or scale-up efforts.

POTENTIALLY USEFUL FOR THESE LEARNING AGENDA QUESTIONS:

- Were any associations seen between strengthened capacity and improvements in health coverage, equity, and/or quality?
- What capacity strengthening efforts (whose and what dimensions of capacity) were successful to strengthen resilience of communities?

COMPARISON WITH OTHER APPROACHES

Ripple effects mapping should be used in combination with a more prospective approach, such as social network analysis or causal link monitoring. It is potentially overlapping with outcome harvesting and most significant change.

CASE STUDIES

"Experiences and Lessons Learned: Implementing the Ripple Effects Mapping Method," MEASURE Evaluation, USAID, 2020, https://www.measureevaluation.org/resources/publications/fs-20-423.

IMPLEMENTATION GUIDES

Scott Chazdon, Mary Emery, Debra Hansen, Lorie Higgins, and Rebecca Sero, eds., *A Field Guide to Ripple Effects Mapping*. *Program Evaluation Series* (Minneapolis, MN: University of Minnesota Libraries Publishing, 2017), https://www.lib.umn.edu/publishing/monographs/program-evaluation-series#Book%202.

CONTRIBUTION ANALYSIS

DESCRIPTION

Contribution analysis establishes the role or contribution of the intervention in leading to an observed outcome. It builds from the intervention's causal framework and as such, requires a well-defined and evidence-based causal framework with risks, assumptions, and evidence gaps identified. This approach recognizes that many factors likely contributed to an outcome, thus providing some elements of context monitoring. It was designed for retrospective use, but can also be used prospectively.

PROCESS

1. Set out the question(s) to be addressed (e.g., "what role did the intervention play in bringing about the outcome?").
2. Develop (or review and refine) causal framework, including risks, assumptions, and evidence gaps.
3. Gather qualitative and/or quantitative evidence to assess the causal framework, the outcome, and potential contributing factors.
4. Develop a contribution narrative describing the intervention, how it led to the outcome, and other contributing factors. Assess the strength of the narrative.
5. Gather further evidence to strengthen the narrative.
6. Revise and strengthen the contribution narrative.

STRENGTHS

- Is a straightforward approach that can be implemented with varying levels of intensity to fit time, budget, and need.
- Can help make sense of unclear or contested causal pathways.

WEAKNESSES

- Can be time-intensive and requires skills in identifying and testing the various contributing factors.
- Requires a strong causal framework but can also be used to assess and revise a causal framework.
- Depends significantly on how it is implemented, as some aspects of the approach are less defined (i.e., what evidence to gather and how).

- Is less participatory than other approaches, although participatory processes can be incorporated.

UTILITY FOR MOMENTUM

While it cannot attribute outcomes to an intervention, in situations where experimental designs are not feasible, contribution analysis can be helpful in understanding if and if so, how, an intervention contributed towards an outcome. Contribution analysis can be used to evaluate all types of interventions and can also be useful in thinking about how to successfully replicate and scale interventions.

POTENTIALLY USEFUL FOR THESE LEARNING AGENDA QUESTIONS:

- How did private sector engagement contribute to increased coverage?
- How did MOMENTUM efforts contribute to supporting positive gender norms and women's economic power?
- What were successful strategies to encourage adaptations based on programmatic evidence at different levels?

COMPARISON WITH OTHER APPROACHES

Contribution analysis integrates well with causal link monitoring and social network analysis. Process tracing, another approach not covered in this document, has many similarities to contribution analysis and can be used to further assess the strengths of a contribution towards an outcome. It should be used in conjunction with approach(es) that identify unintended outcomes and seek stakeholder feedback.

CASE STUDIES

Andressa M. Gadda, Juliet Harris, E. Kay M. Tisdall, and Elizabeth Millership, "'Making children's rights real': lessons from policy networks and Contribution Analysis," *The International Journal of Human Rights*, 23, no. 3, 392-407, https://www.tandfonline.com/doi/abs/10.1080/13642987.2018.1558988.

Maternal and Child Survival Program, USAID, *An Analysis of Contributions to Expanding Access to and Uptake of Quality Family Planning Services in Five States of India*, September 2019. https://www.mcsprogram.org/resource/an-analysis-of-contributions-to-expanding-access-to-and-uptake-of-quality-family-planning-services-in-five-states-of-india/ .

Barbara L. Riley, Alison Kernoghan, Lisa Stockton, Steve Montague, Jennifer Yessis, and Cameron D. Willis, "Article Navigation Using Contribution Analysis to Evaluate the Impacts of Research on Policy: Getting to 'Good Enough,'" *Research Evaluation* 27, no. 1 (January 2018): 16-27, https://academic.oup.com/rev/article/27/1/16/4554784.

Reena Sethi, Alison Trump, May Htin Aung, and Barbara Rawlins, *MCSP Burma's impact on strengthening the health workforce for a better tomorrow: Results from a contribution analysis."* Maternal and Child Survival Program, USAID, December 2019, https://www.mcsprogram.org/resource/mcsp-burmas-impact-on-strengthening-the-health-workforce-for-a-better-tomorrow-results-from-a-contribution-analysis/.

Elaine Van Melle, Larry Gruppen, Eric S. Holmboe, Leslie Flynn, Ivy Oandasan, and Jason R. Frank, "Using Contribution Analysis to Evaluate Competency-Based Medical Education Programs: It's All About Rigor in Thinking," *Acad Med.* 92, no. 2 (June 2017): 752-58, https://pubmed.ncbi.nlm.nih.gov/28557934/.

IMPLEMENTATION GUIDES

John Mayne, "Contribution Analysis: An approach to exploring cause and effect," ILAC methodology brief 16, May 2008, https://cgspace.cgiar.org/bitstream/handle/10568/70124/ILAC_Brief16_Contribution_Analysis.pdf?sequence=1&isAllowed=y.

CROSS-CUTTING REFERENCES AND RESOURCES

Approach-specific resources are provided in the above sections describing each approach. General and cross-cutting resources on complexity-aware monitoring include the following:

Better Evaluation, https://www.betterevaluation.org/.

Jennifer Colville, ed., "Innovations in Monitoring and Evaluation. Discussion Paper," UNDP, November 2013, https://www.undp.org/content/dam/undp/library/capacity-development/English/Discussion%20Paper-%20Innovations%20in%20Monitoring%20&%20Evaluating%20Results%20%20(5).pdf.

Margaret B. Hargreaves, "Evaluating System Change: A Planning Guide," Mathematica Policy Research, Inc., April 2010, https://www.mathematica.org/our-publications-and-findings/publications/evaluating-system-change-a-planning-guide.

Richard Hummelbrunner and Heather Britt, "Synchronizing Monitoring with the Pace of Change in Complexity: A Complexity-Aware Monitoring Principle," USAID Learning Lab, USAID, September 2014, https://usaidlearninglab.org/library/synchronizing-monitoring-pace-change-complexity-complexity-aware-monitoring-principle.

John Kania, Mark Kramer, and Peter Senge, "The Water of Systems Change," FSG, June 2018, https://www.fsg.org/publications/water_of_systems_change.

Bruce Y. Lee et al., "SPACES MERL: Systems and Complexity White Paper," USAID, March 2016, https://pdf.usaid.gov/pdf_docs/PA00M7QZ.pdf.

Michael Quinn Patton, *Developmental Evaluation* (New York: Guilford Press, 2011), https://www.guilford.com/books/Developmental-Evaluation/Michael-Quinn-Patton/9781606238721.

Tiina Pasanen and Inka Barnett, "Supporting adaptive management: Monitoring and evaluation tools and approaches," Working Paper 569, Overseas Development Institute (ODI), December 2019, https://www.odi.org/sites/odi.org.uk/files/resource-documents/odi-ml-adaptivemanagement-wp569-jan20.pdf.

Melissa Patsalides and Heather Britt, "Complexity-Aware Monitoring Discussion Note," USAID, July 2018, https://usaidlearninglab.org/library/complexity-aware-monitoring-discussion-note-brief.

Hallie Preskill, Srikanth Gopal, Katelyn Mack, and Joelle Cook, "Evaluating Complexity: Propositions for Improving Practice," FSG, November 2013, https://www.fsg.org/publications/evaluating-complexity.

USAID, "ADS Chapter 201: Program Cycle Operational Policy," July 23, 2020, https://www.usaid.gov/sites/default/files/documents/201.pdf.

USAID LEARN, "Collaborating, Learning and Adapting (CLA) Framework, Maturity Tool and Spectrum Handouts," CLA Toolkit, USAID Learning Lab, October 2016, https://usaidlearninglab.org/sites/default/files/resource/files/cla_maturity_matrix_overview_final.pdf.

Leni Wild and Ben Ramalingam, "Building a global learning alliance on adaptive management," ODI Report, Overseas Development Institute (ODI), September 2018, https://www.odi.org/sites/odi.org.uk/files/resource-documents/12327.pdf.

Bob Williams and Heather Britt, "Systemic Thinking for Monitoring: Attending to Interrelationships, Perspectives, and Boundaries," USAID, September 2014, https://usaidlearninglab.org/sites/default/files/resource/files/systemic_monitoring_ipb_2014-09-25_final-ak_1.pdf.