RESHAPING MONITORING, EVALUATION, AND LEARNING FOR LOCALLY LED ADAPTATION

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EXECUTIVE SUMMARY

Highlights

- Locally led adaptation (LLA) is an emerging priority among international climate and development donors and community-based organizations alike. Supporters of locally led adaptation can leverage the monitoring, evaluation, and learning (MEL) process to promote local agency and effective, equitable adaptation.
- Monitoring, evaluation, and learning (MEL) is an important process for managing the complexity, uncertainty, and context-specificity of any adaptation intervention, including those that are locally led.
- Different MEL approaches and methods are required that balance power, promote mutual accountability, value local knowledge and priorities, and create value for local actors.
- This paper recommends a systemic shift toward MEL that is locally led, context-aware, and itself adaptive. It provides operational steps throughout the MEL cycle that funders, intermediary organizations, and other institutions seeking to support locally led adaptation can take.

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List of Abbreviations

■ APC	adaptation planning committee
■ BRACED	Building Resilience and Adaptation to Climate Extremes and Disasters
■ CARIAA	Collaborative Adaptation Research Initiative in Africa and Asia
■ CREATE	Climate Resilience Evaluation for Adaptation through Empowerment
■ CSA	climate-smart agriculture
■ CSV	climate-smart villages
■ DCF	Devolved Climate Finance (mechanism)
■ EAG	environmental advisory group
■ FPIC	free, prior, and informed consent
■ GIS	geographic information system
■ ICT	information and communications technologies
■ IIED	International Institute for Environment and Development
■ KYC	Know Your City (program)
■ LDC	least developed country
■ LLA	locally led adaptation
■ MEL	monitoring, evaluation, and learning
■ MSC	Most Significant Change (technique)
■ NGO	nongovernmental organization
■ PEA	political economy analysis
■ PRIME	Pastoralist Areas Resilience Improvement through Market Expansion
■ SDI	Slum/Shack Dwellers International
■ TAMd	Tracking Adaptation and Measuring Development
■ UNFCCC	UN Framework Convention on Climate Change

Context

In its 2019 flagship report, the Global Commission on Adaptation called for an increase in decentralization of adaptation finance to the local level. In 2020, partners of the Global Commission on Adaptation developed principles for locally led adaptation. These principles serve as foundational guidance for supporting and enabling locally led adaptation, and call for actions such as devolution of decision-making, patient and predictable financing, flexible programming, and redressing of social inequalities. This paper is intended to support implementation of these principles by exploring the role of MEL in supporting or discouraging locally led adaptation and to discuss MEL practices and approaches that align with these principles of locally led adaptation.

A growing body of research and practice is grappling with the opportunities and challenges of MEL for adaptation. Emerging evidence and practice centers on the MEL's role in building social capital and equalizing the power dynamics that underpin the use and governance of knowledge generated through MEL. Grounded in the principles of locally led adaptation, this paper builds on these fields of research and practice to discuss how MEL can support local agency and reflect local priorities and expertise in the interest of more effective and equitable locally led adaptation interventions.

About This Working Paper

This paper presents a review of opportunities and challenges in MEL for locally led adaptation. It is based on a review of MEL approaches, practices, and literature, as well as consultations with a range of actors involved in locally led adaptation MEL.

The paper proposes key considerations relevant throughout the MEL cycle that align with the principles for locally led adaptation:

- Recognition of and response to structural inequalities
- Promotion of local agency in decision-making
- Understanding climatic and contextual uncertainty and complexity
- Prioritizing learning processes
- Generating value for local stakeholders

To operationalize these considerations, the paper discusses approaches, methods, and tools specific to each phase of the MEL cycle.

Conclusions and Recommendations

MEL of locally led adaptation requires a long-term systemic shift from traditional MEL to MEL that is locally led, balancing asymmetries in power and accountability. A range of MEL practices and tools are available in the short term to funders, intermediary organizations, and MEL practitioners to support locally led adaptation. However, limitations and practical constraints come with recommended changes to MEL practice, including changes in resources, time, and standard processes. Practical steps throughout the MEL cycle help navigate trade-offs and strengthen locally led adaptation interventions.

To support locally led adaptation through MEL, funders, intermediary organizations, and MEL practitioners should do the following:

- Understand and respond to structural inequalities, including how power dynamics affect the MEL process and whose objectives it serves, and whether different worldviews and definitions of resilience are equally valued. This is critical to ensure that MEL reflects the realities and priorities at the local level and that results are not inaccurate or biased, and to encourage the systemic change required for locally led adaptation.
- Embrace design of MEL systems that give equal or greater priority to downward accountability and learning compared with upward accountability. Distinct processes for accountability and learning can address tension between these objectives.
- Ask how MEL processes and outputs create value for local actors.
- Take a local demand-driven approach to building capacity for self-directed MEL. If MEL intends to support locally led adaptation, local actors themselves should determine what capacity, external expertise, and access to information they need.
- Enlist appropriate approaches and methods to navigate and better understand complexity and uncertainty.
- Create locally appropriate and context-specific indicator frameworks and adaptation metrics. Adaptive capacity is particularly useful as a starting point in defining a set of indicators that apply across scales and contexts.
- Adopt MEL technologies and process innovations as appropriate to increase local ownership.
- Develop MEL systems to support adaptive management, experimentation, and learning from failure.
- Collaborate with knowledge brokers who can translate terminology and concepts between external and local actors to enable ownership and contribution of local partners.
- Ensure that learning is applied, documented, and shared horizontally at the local level and vertically to national and international levels as appropriate, while prioritizing the knowledge needs and gaps of local actors as a primary audience group.

As locally led adaptation progresses, so should theory, practice, and learning about MEL for locally led adaptation. This paper provides a high-level and preliminary analysis of MEL for locally led adaptation, and encourages continued learning from local practice and local expertise in adaptation MEL.

INTRODUCTION

As a process involving power and decision-making, monitoring, evaluation, and learning (MEL) can either perpetuate structural inequity or actively work against it (Emerson 2020). Conventional MEL risks further entrenching the inequities that make certain populations disproportionately vulnerable to climate change. However, there is a paucity of documented experience that addresses the entire cycle of adaptation MEL in a way that intentionally redresses power imbalances between donors and local partners, addresses biases in the knowledge and values that are privileged, and promotes downward accountability to local actors.

This paper discusses the role of MEL in encouraging equitable distribution of resources and agency through locally led adaptation (LLA). It provides an assessment of approaches and practices throughout the MEL cycle that help balance power and accountability, and discusses the advantages and limitations of these practices.

The MEL approaches and practices outlined in this paper are targeted primarily to donor and intermediary institutions and individuals involved in designing or delivering MEL in the context of locally led adaptation or where local ownership is a development priority. Since these groups currently have the power to direct resources to MEL, and influence MEL design and outcomes, they have a critical role in leveraging MEL to support LLA. Local actors, however, are facing the very risks LLA interventions seek to address, and are therefore most directly affected by MEL practices and approaches. As funders and implementers of climate adaptation interventions invest in and prioritize locally led adaptation, assessment of the implications of MEL for LLA can inform approaches and practices that build social capital and encourage equitable distribution of power.

The conclusions and recommendations of this paper are intended to provide practical suggestions for donor and intermediary institutions and MEL practitioners to better support locally led adaptation through MEL, and fundamentally rethink the role of MEL to support their climate resilience and social justice objectives. The advancements in MEL discussed in this paper represent an evolution of good practice in the interest of more effective and equitable adaptation outcomes.

The paper draws attention to the critical role of MEL in supporting locally led adaptation and offers good practices and lessons learned from relevant literature and practice. Section 2 presents key considerations for supporting locally led adaptation that are relevant throughout the MEL cycle, using a set of principles for LLA that were developed for the Global Commission on Adaptation as a conceptual framework. Section 3 walks through each phase of the MEL cycle and assesses specific approaches, methods, and tools that align with the principles of locally led adaptation. This assessment is based on the relevant bodies of research and practice on adaptation MEL, community-based adaptation, participatory MEL, and decolonization of MEL, as well as a set of case studies and consultations with stakeholders of MEL for locally led adaptation. Section 4 synthesizes the key findings from this assessment and presents conclusions and recommendations for MEL to better support and enable locally led adaptation.

1. CONVENTIONAL MEL DOES NOT SUPPORT LLA GOALS

Locally led adaptation recognizes that people closest to the effects of climate change, especially those facing structural marginalization, require the financing and decision-making power to ensure that adaptation investments reflect their priorities. It entails investing in solutions whereby local actors have the agency to make and influence these investment decisions and wield the innovation, flexibility, knowledge, and sense of urgency required to confront the crises of climate change and socioeconomic injustice (Conde et al. 2005).

Locally led adaptation is an emerging priority of some governments, bilateral and multilateral donors, and other institutions. Examples include programs such as the Least Developed Country (LDC) Initiative for Effective Adaptation and Resilience, County Climate Change Funds in Kenya, Enhancing Direct Access programs within funds like the Adaptation Fund and the Green Climate Fund, and localization movements in the humanitarian and development sectors (LIFE-AR 2019; Crick et al. 2019; GCF 2019; Adaptation Fund 2020a). Institutions from grassroots networks to international nongovernmental organizations (NGOs) and funders are calling for the systemic changes required to channel more finance for adaptation to the local level and increase the agency and decision-making authority of local-level actors. In support of these efforts, principles for LLA have been established, and research and guidance are emerging to create enabling environments for LLA.

As adaptation and climate-resilient development investments aim to support local leadership, the process of designing, monitoring, and learning from these efforts must also support local leadership. Locally led adaptation is an approach that challenges some of the underlying assumptions and structures prevalent in international development, emphasizing that to be effective, local actors most directly impacted by climate change must drive the adaptation investments that affect them. This paper defines MEL and LLA terminology as described in Box 1.

Several shortcomings of common MEL approaches remain that must be addressed to support LLA. MEL that prioritizes upward accountability can reinforce asymmetrical power relations between donors and local actors (Ramasobana et al. 2020). Such requirements of upward accountability often create structures that do not

Box 1 | MEL and LLA Definitions

Definitions

Monitoring – Continuous assessment to provide stakeholders with timely, detailed information on the progress of an intervention. Monitoring seeks to support near real-time learning as part of a wider approach to flexible and adaptive management.

Evaluation – The process of understanding the results of an activity, policy, program, or institution. Useful and robust evaluation should inform both accountability and learning depending on the emphasis of the evaluation questions.

Learning – Understanding, by an intervention's stakeholders, of what works, in what contexts, for whom, and why. Learning should be iterative and ongoing, support direct and rapid course correction, and enhance the capacities, particularly the adaptive capacity, of all stakeholders.

Local – May refer to the household, business, community, municipal, district, or province level as applicable to the context and requirements of a given adaptation intervention.

Local actors – Stakeholders of an adaptation intervention or their accountable representatives at the appropriate subnational level; refers to individuals or groups from the whole of society, including the subnational government, local enterprises, civil society, and community-based organizations, as well as households and individuals (Soanes et al. 2020).

Locally led adaptation – Characterized by local people and their communities having individual and collective agency over their adaptation priorities and how adaptation takes place (Soanes et al. 2020).

Agency – Individual or collective power to make decisions and take actions regarding one's own current and future situations and experiences (Cole 2020).

support the learning and adaptive management essential to locally led adaptation (Spearman and McGray 2011). Restricted interpretations of MEL lead to problematic practices, such as a tendency to prioritize products and outputs over the process, and to underestimate the relevance of local knowledge and experience. This risks a process that disempowers or devalues local actors and is not critical of who is affected by the MEL process and how (Pauw et al. 2020; Christiansen et al. 2018; Holzapfel 2016). If MEL systems are not designed to create value and ownership for local partners, they risk being extractive and disrespectful of local actors' time and knowledge (McCreless 2015; CARE 2014). Institutional standards and requirements for MEL often prioritize upward accountability, creating a structure that does not support learning and adaptive management essential to locally led adaptation (Spearman and McGray 2011). These examples of MEL practices and approaches not only fail to support local actors but also undermine the goals of donors and intermediaries to support local priorities.

MEL is a social undertaking. It is applied to social challenges, and it can reinforce or confront societal values and social dynamics such as power and legitimacy. If not approached with the intention to support LLA, MEL practices may conflict with the objectives of locally led adaptation. Traditional MEL is not neutral in its approach to knowledge creation or dissemination. The evidence and knowledge generated in contexts of adaptation

are valuable, but communities affected by adaptation interventions do not always experience this value. The theories of change and indicators guiding MEL do not often reflect local input, let alone local ownership. MEL tends to rely on external experts rather than supporting local capacity to implement MEL. These outputs and inputs of the MEL process also have socioeconomic, political, and environmental implications and are therefore political resources with financial consequences (Chilisa et al. 2016; Frehiwot 2019; Kawakami et al. 2008).

While many conventional MEL approaches and practices may not align with the principles of LLA, the generalized MEL cycle presents important opportunities to support LLA. MEL involves power, decision-making, trust, and communication among participants. These features serve as entry points to support locally led adaptation, including through collaborative, locally led decision-making, integration of social and gender equity considerations, building trust, social capital and local ownership, and evidence and learning about LLA. MEL that leverages these opportunities is more likely to support effective, equitable LLA, including by grounding the design of adaptation in local realities, generating more complete evidence, and mitigating climatic and programmatic risk through iterative learning and adaptive management (Faulkner et al. 2015).

2. KEY CONSIDERATIONS FOR SUPPORTING LLA THROUGHOUT THE MEL CYCLE

Eight foundational principles outline the basic requirements for finance for adaptation that is accessible to and owned by appropriate local actors, and provide a framework for assessing how MEL practices support locally led adaptation. These principles were developed for the Global Commission on Adaptation by the International Institute for Environment and Development (IIED) in partnership with World Resources Institute (Soanes et al. 2021). They build on a decade of foundational work carried out by IIED, with Slum Dwellers International, Huairou Commission, the International Center for Climate Change and Development, and many others regarding financing for adaptation and resource access in communities vulnerable to climate change. The principles are grounded in the recommendations of the Global Commission on Adaptation’s *Adapt Now* report to increase the volume of devolved and decentralized funding available to local actors to identify, prioritize, design, implement, monitor, and learn from climate adaptation solutions (Global Commission on Adaptation 2019).

These principles serve a basis for understanding the potential of MEL to support locally led adaptation. Table 1 summarizes the eight principles and is followed by a discussion of overarching considerations for MEL to support these principles of LLA.

Putting these principles of LLA into practice through MEL entails several key considerations, drawn from relevant MEL research and practice. The remainder of this section discusses tenets for supporting LLA that are relevant throughout the stages of MEL: design and planning, monitoring, evaluation, and learning.

Recognizing and addressing how structural inequalities affect MEL reduces bias. Structural inequalities, such as those related to gender, race or ethnicity, and socioeconomic status, can manifest in different ways in MEL. Unequal value may be attributed to the different worldviews and perspectives, biasing outputs of the MEL process toward the worldviews and perspectives of participants with the most power (Segone 2012; Joyce 2020). For example, if a planning workshop does not provide a safe and inviting environment for

Table 1 | Summary of the Eight Principles of Locally Led Adaptation from the Global Commission on Adaptation

Principle 1	Devolution of decision-making to the lowest appropriate level ensures that those most affected by climate change have agency over decisions about adaptation finance and programming that will affect them.
Principle 2	Addressing structural inequalities faced by women, youth, children, disabled, displaced, and excluded ethnic groups entails actively recognizing and redressing the power dynamics, imbalances, and development deficits that create vulnerability, poverty, and marginalization.
Principle 3	Providing patient and predictable funding that can be accessed more easily requires that funding mechanisms be simplified and finance provided over longer, more predictable timescales to enable greater access to funding by local actors, support adaptive management and learning, and adequately strengthen local institutions.
Principle 4	Investing in local institutions to leave institutional legacies means building and strengthening local institutions by building capacity to understand climate risks and uncertainties, capacity to generate resilience solutions, capacity to facilitate and manage adaptation initiatives, and capacity for local fiduciary and management so that these institutions can provide grants and loans to other local actors for local adaptation actions.
Principle 5	Building a robust understanding of climate risk and uncertainty supports locally led adaptation by ensuring that interventions reflect understanding of local climate risks, current resilience-building practices, and uncertainties about direct and indirect climate impacts on local communities, as well as appropriate tools to handle uncertainties.
Principle 6	Flexible programming and learning recognizes that it is important to maintain budget and programmatic flexibility as well as space for adaptive management and learning.
Principle 7	Through transparency and accountability , decision-making and governance structures are made explicit, so it is clear which decisions are made at what level of organization and by whom. Financing flows should also be made transparent and can be publicly tracked, and ultimate accountability should be to local actors themselves.
Principle 8	Coordinated action and investment by donors, aid agencies, and governments recognize the need for multiple levels of coordination, horizontally among communities and across sectors, and vertically across levels of government and policy processes.

Source: Soanes et al. 2021.

participants with firsthand adaptation experience to speak up, then the outcomes of the workshop, such as a theory of change or indicator framework, will not reflect a complete understanding of challenges and possible solutions. Structural inequalities may be present between local actors and external actors (such as donors and MEL practitioners), among actors at the local level, between local government and civil society, or between women and men (Morchain et al. 2019). As such, it is important for LLA interventions to deliberately encourage equity.

Steps can be taken throughout the MEL cycle to mitigate the effect of structural inequalities on MEL, including conducting gender and social equity assessments, ensuring balanced and representative decision-making structures, and including indicators to understand the equity of decision-making processes. In applying Oxfam's Vulnerability and Risk Assessment methodology in Malawi, Botswana, and Namibia, Morchain et al. (2019) acknowledged how their position as academics would bias the outcomes of the assessment. They broadened the framing of the assessment to include development priorities, in addition to climate priorities, and used translators and breakout groups to mitigate the effect of preexisting cultural norms and power dynamics in group discussions (Morchain et al. 2019).

The importance of local agency applies to decisions made through the MEL cycle. For an intervention to be genuinely locally led, local actors must have agency over their priorities and how adaptation takes place. Extended to MEL, local actors would have agency over the priorities of the MEL system and how MEL takes place in support of the intervention. Ensuring local agency in MEL starts with local ownership to help shape the overall purpose of the MEL system and data collection analysis methods and tools, and actively centering learning processes and products on the needs and demands of local actors (Silva Villanueva 2011; Faulkner et al. 2015).

Increasing access to information by tailoring knowledge products and tools to local audiences, and enhancing capacity to engage in MEL, supports local agency. Local universities and civil society organizations have a role to play as climate knowledge brokers, transforming data and information into knowledge for practical adaptation interventions, often working with local actors to coproduce knowledge on

adaptation experience. Adaptation at Scale in Semi-arid Regions is a university network consortium that translates the experiences and input of communities on the front lines of climate change, giving them the opportunity to influence adaptation policy responses. Similarly, the University of Arizona's Cooperative Extension system provides insights on context-specific local adaptation, researching adaptation processes and disseminating knowledge about local adaptation interventions to help both local government and local actors, particularly farmers, make informed decisions about adapting to changing climatic conditions (Brugger and Crimmins 2015). In an example of local government tailoring adaptation knowledge to its constituents, the Planning Institute of Jamaica shared lessons learned about resilient agriculture by tailoring knowledge products and communications to different local audiences to support decision-making, including local farmers and government utility managers (Adaptation Fund 2020b).

MEL is a process for navigating the complexity, uncertainty, and context-specificity of LLA.

Given the unpredictable nature of climate change and the complexity of social, economic, and ecological factors that affect adaptation, it can be hard to know what the outcomes of LLA solutions will be. MEL can provide a process for innovation, experimentation, and adaptive learning to help manage this complexity and uncertainty. Developing a participatory theory of change helps generate a shared and iterative understanding of local context and the many different factors that may affect the outcomes of the intervention. In monitoring, it becomes important to develop indicator frameworks that integrate social, environmental, and economic factors (such as those based on socioecological systems), and reflect the connections and feedbacks linking human and natural systems (Olsson and Galaz 2012). At the learning stage there should be a focus on learning from unintended consequences and failures as well as successes by drawing on and combining several sources of knowledge and experience, including expert, scientific, and local or indigenous knowledge (Hulme 2015).

Creating value for local actors avoids extractive MEL. Even participatory MEL processes can be extractive of local actors' time, knowledge, resources, and expertise if they do not explicitly create value for them (Wilmsen 2008). Mechanisms for downward accountability can be built into MEL processes through local actors'

active participation and enabling them to assess donor performance (Ebrahim 2003; Van Zyl and Claeyé 2019). Indicator frameworks can support mutual accountability by including indicators that reflect local priorities and definitions of resilience, as well as indicators of agency and social inclusion in the adaptation process (Estrella and Gaventa 1998; Fisher 2014). Cocreation of methods can help ensure that evaluations are useful to local actors, donors, and evaluators alike. Tailoring evaluations to locally determined priorities can have the added benefit of incentivizing participation and interest in the evaluation and the adaptation intervention going forward (Dunkley and Franklin 2017; Fitzpatrick 2012). Learning questions and processes are another opportunity to prioritize the learning goals of local actors over those of external actors (Faulkner et al. 2015).

Effective learning processes support effective locally led adaptation outcomes. Learning is essential to embracing and understanding the complexity of adaptation, and is the process linking data and evidence to the resilience outcomes and other changes that adaptation interventions seek to create (Silva Villanueva 2011; STAP 2017). An adaptation strategy in its own right, learning is especially relevant for locally led adaptation because of its role in building adaptive capacity at the local level (Baird et al. 2014). Local actors learn from both successful and failed adaptation interventions through self-determined experimentation with different coping strategies, or through purposeful social learning processes, to prepare adequate responses and coping strategies to climate risks and intervention outcomes (Tschakert and Dietrich 2010). A fit-for-purpose learning process will reflect different learning needs, goals, and ways of learning among stakeholder groups, and legitimize the diverse types of evidence and knowledge that support them (Alessa et al. 2016).

The process of learning, versus knowledge products such as reports or briefs, is therefore a key consideration for LLA and is most effectively embedded throughout the MEL cycle. Supporting adaptive capacity through learning does require resources and time from all local and external partners involved and should be adequately planned and budgeted for (Tschakert and Dietrich 2010).

Applying these key considerations often entails practical constraints and challenges. The benefits of MEL processes that bring in a wider range of participants and introduce new elements may require additional

time, resources, and capacity. Oxfam International recommends allocating 10–13 percent of a total budget to MEL (Carmona et al. 2018). Local and external partners alike may feel the burden of additional time, resources, and capacity. A challenge for those responsible for designing the MEL system is to balance the priority of local agency with the risk of overburdening local partners. Surveys or baseline studies that take more time than necessary, for example, can exhaust partners and make them less willing to engage in the MEL process (Flatters 2017). Emphasizing local agency to determine roles and responsibilities in MEL and adhering to the “do no harm” principle are strategies to help mitigate this risk.

3. MEL APPROACHES, METHODS, AND TOOLS TO SUPPORT LLA

Drawing on examples and case studies, this section reviews approaches, methods, and tools specific to the four stages of the MEL cycle: design and planning, monitoring, evaluation, and learning. It includes discussion of lessons learned and benefits and challenges to implementing these practices in support of LLA.

3.1. Design and Planning

The methods and tools presented below support design and planning of a MEL system and have implications for the planning and implementation of adaptation interventions and the extent to which they are locally led.

Hiring local experts in senior MEL roles is an opportunity to support LLA. MEL systems that are designed and led by external experts can discount local knowledge and expertise. Such a practice perpetuates power imbalance and is less likely to result in comprehensive MEL systems (Estrella and Gaventa 1998; Van Zyl and Claeyé 2019). Locally available skills and expertise can be appraised in the planning phase of the MEL cycle. Additional resources may be required to engage local or national knowledge brokers and, where MEL experts are not available locally, to strengthen the capacity of local actors to lead MEL processes.

Theories of change can be used as a tool to ensure that adaptation interventions reflect local priorities and realities. Developing a theory of change is a process rather than a static product and can support LLA design by drawing attention to the assumptions and evolving understanding linking intervention activities

and outcomes (Valters 2015). Local input to the theory of change process is most consequential if integrated from intervention inception. This may require a structural change to adaptation programming, however, as theories of change are often defined and designed before local partners are engaged. Routinely revisiting a theory of change throughout an intervention to test progress against locally determined outcomes and to integrate local knowledge and learning provides a deeper understanding of the link between climate change and the results of the intervention (NEF 2017).

Tools to build a detailed understanding of local stakeholder and contextual dynamics include political economy analysis, stakeholder mapping, and community-based climate vulnerability assessment. These three common tools can support assessment of relevant stakeholders, the nature of their vulnerabilities, and sociopolitical, economic, and environmental factors at play in a particular context. Political economy analysis (PEA) is concerned with how power and resources are distributed and contested. A useful PEA informs where locally driven opportunities for change may emerge and where constraints may need to be addressed, including why institutions matter (Teskey 2020). Stakeholder analysis and mapping is a way to identify an intervention's key stakeholders, assess their interests, needs, and incentives and clarify how these may affect and inform an intervention's design and delivery (Rai et al. 2015). Early engagement with diverse stakeholders creates space for them to influence the intervention design and delivery process (Leventon et al. 2016). Community-based climate vulnerability assessment integrates local knowledge and engages communities in the formulation of LLA plans. It provides a clear starting point for the definition of appropriate intervention and wider climatic indicators (ADB 2018).

Creating a climatic baseline and climatic monitoring system is key to understanding the outcomes of LLA. Once a detailed understanding of local stakeholder dynamics has been established, a corresponding and locally specific understanding of the climatic conditions and dynamics affecting those local stakeholders also needs to be developed where feasible. This is often described as a “declining climatic baseline.” Defining and measuring LLA results in the context of these climate dynamics helps actors plan, understand, and learn from an LLA intervention. This may require external expertise and can be constructed in collaboration

with local stakeholders. Establishing a climatic baseline and then monitoring the climatic context in which an LLA intervention is delivered, in parallel to monitoring the results of the intervention itself, informs learning and adjustments required to continue the intervention in the face of climate changes. This is not a simple undertaking due to the temporal and spatial unpredictability of climatic shocks and stresses. For example, flood events are hard to predict and have locally specific impacts. Historical weather and climate records can provide useful climatic baseline data. Geographic information systems (GISs) and other technologies are increasingly being used to overlay and illustrate climatic data baseline and subsequent climatic changes.

3.2. Monitoring

Monitoring can support LLA by providing information for agile course correction, mutual accountability, and learning about the process, context, and expected outcomes (Warner 2017). Some monitoring methods and technologies described below can reduce the burden on participants and ensure that information collected is available and useful to populations who have limited access to climate information. While these examples of technological solutions can support more equitable access to information and influence in the monitoring process, it is important to recognize that not all populations have equal access to technology, and that technology alone cannot address challenges such as local agency in adaptation that are rooted in an imbalance of power.

The concept of adaptive capacity is a useful starting point for defining appropriate indicators and adaptation metrics. Adaptation is often assessed through concepts such as risk, vulnerability, and resilience, or through proxies that are expected to lead to adaptation, such as adaptive capacity (Leiter and Pringle 2018). The UK-funded Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) program created a set of locally defined and context-specific subindicators based on adaptive capacity, including indicators related to new knowledge and skills, new attitudes and behaviors, and shifting institutional relationships, which ultimately supported new, locally driven policies and practices (BRACED 2015).

Monitoring frameworks offer potential to enable adaptive management and prioritize learning. Adaptive management enables experimentation and innovation, and sometimes expects that interventions fail.

Monitoring systems that support adaptive management serve multiple functions: they generate evidence on an intervention's management and quality of delivery, allow for comparison between different types of interventions, focus on near-real-time learning, monitor unintended consequences and failures as well as successes, and ensure shared understanding among MEL participants of how evidence will be applied to support positive change. The Global Learning for Adaptive Management initiative is supporting the wider uptake of adaptive management principles and practices, including in climate change adaptation. This includes a focus on learning about effective MEL for adaptive management. The key is to design LLA monitoring frameworks not just for data collection but also for intentional and collective reflection on the data to support ongoing and real-time learning, course correction, and decision-making (IDS 2020).

Creating open data governance structures can support locally led decision-making. Climate science, earth observation data, and lessons learned about LLA are more likely to be used by local decision-makers if they are accessible through appropriate and demand-driven platforms (Acclimatise 2018). Solutions to data accessibility and application challenges involve open climate data, collaboration, and investments in education and long-term alliances for the codesign and coproduction of knowledge. The principles of open access, privacy, and appropriately packaged and accessible data apply across scales from national and international GIS initiatives down to climate data generated at the local level.

Sharing information about LLA also supports local ownership, decision-making, and social capital. The Mercy Corps Pastoralist Areas Resilience Improvement through Market Expansion (PRIME) project in Ethiopia uses a technology-driven approach to inclusive decision-making and bottom-up data collection. Its online platform, Kiprojects, allows local NGO and program staff to suggest and submit new activities for rapid approval. Staff can also make real-time learning about project progress easily accessible for other team members across Ethiopia (Desai et al. 2018).

Free, prior, and informed consent (FPIC) is another data governance structure that specifically supports the protection of local and indigenous knowledge shared in the context of MEL. FPIC is a principle that informs the right to consultation and is enshrined in the UN

Declaration on the Rights of Indigenous Peoples and the International Labour Organization Indigenous and Tribal Peoples Convention 169 (FAO 2016).

Locally led data collection, data analysis, and learning can be enabled and enhanced through appropriate information and communications technologies (ICT). Although technology cannot solve all problems related to accessibility and inclusion, data collection, analysis, and visualization science and technology innovations can support MEL of LLA by making it more feasible to engage populations who are traditionally hard-to-reach or not given opportunities to express their views, as well as to directly engage local actors in large numbers. Remote sensing, use of social media for data analysis and engagement, electronic financial transactions, and mobile applications and devices are some examples that can support MEL. Locally driven demands for accountability and social activism by civil society encourage uptake of locally accessible ICT tools and platforms, such as through mobile phones. A prominent example is the Slum/Shack Dwellers International initiative Know Your City, described in Box 2.

3.3. Evaluation

There is increasing recognition that conventional evaluations (often characterized as project-focused, ex-post, and designed and delivered by external international evaluation teams) are not fit for purpose or supportive of LLA (IPCC 2014). LLA is inherently subjective and rooted in local context. There are clear benefits for both local participants and funders in tailoring evaluations to ensure that resources are aligned with local needs and desired outcomes. This often requires flexible evaluations and cocreation of evaluation processes. Imposing externally constructed outcomes for adaptation interventions risks misaligning resources with what is needed and valued at a local level, and evaluation methods that will not effectively measure LLA outcomes.

The approaches outlined below draw primarily from influences of participatory action research, developmental evaluation, and realist evaluation. They describe methods that are tailored-for-purpose, context-specific, and use evidence generated from evaluations for the benefit of local stakeholders (Pawson and Tilley 1997; Patton 2008).

Box 2 | Case Study: Slum Dwellers International's Know Your City Campaign**Participatory, pro-poor, people-centered urban governance**

Know Your City (KYC) unites organized slum dwellers and local governments in partnerships anchored by community-led slum profiling, enumeration, and mapping. The KYC initiative demonstrates citizen-generated data collection not simply to support external monitoring processes but also, and more important, as a form of social and political capital that defies traditional power dynamics for slum dwellers in cities. Slum/Shack Dwellers International (SDI) used this extensive data collection to bring perspectives and requirements from the ground up to decision-makers, like local government officials and city planners, in order to inform decisions about resources and adequate responses.

Local ownership throughout the MEL cycle

Young people in informal settlements owned their role in MEL activities (digital data capture and peer-to-peer exchanges) and collaborated in the generation of learning and knowledge-sharing, including media and films centered on living in slums and informal settlements. The KYC campaign created data-sharing and information systems that were transparent and built trust between campaign administrators and local communities. People

who live in informal settlements were trained to create a community profile through learning-by-doing approaches to monitoring, gaining data collection and management skills.

Tech-enabled, citizen-generated data

In-person and widespread monitoring ensured that local perspectives and voices were anchored the campaign outcomes. The Ugandan SDI Alliance and partners built the capacity of enumerators living in slums to use open-source software and handheld GPS devices to identify community assets and risks. Enumerators were also taught how to record and analyze data and produce reports. After local participants validated mapped data, initial digital maps were produced. Local participants then used this information to negotiate with local authorities on potential community development initiatives. The locally led data collection methods applied in the KYC case demonstrate the value not only of the data collected but also of the process to broaden understanding and accountability within the community (horizontal), and on multiple scales among the community, local government, state level actors, intermediaries, and the private sector (vertical).

Sources: Bolnick et al. (2018); Antonio et al. (2012).

Several conventional evaluation methods are closely aligned with the principles of local agency and prioritize learning.

- *Tracking Adaptation and Measuring Development (TAMD)* is a standard methodology employed where participatory evaluation processes are the priority, including participatory data collection and indicator development that ensures local agency in the evaluation process (Brooks et al. 2013).
- *Most Significant Change (MSC)* is a flexible participatory monitoring or evaluation technique in which evaluation practitioners and local stakeholders collect narratives of change following an intervention to understand and highlight the most significant changes resulting from an intervention. MSC narratives and the value attributed to them are validated by other participant stakeholders in the community (Davies and Dart 2005).
- *Appreciative inquiry* is a change management process used as an evaluation tool focused on the strengths of an intervention, learning what is working well

and investing in the factors that sustain successful outcomes. The inquiry itself is a collaborative effort, capturing the positive features of an intervention and encouraging continuous positive change (Acosta and Douthwaite 2005).

- *Climate Resilience Evaluation for Adaptation through Empowerment (CREATE)* is an evaluation method developed by the International Union for Conservation of Nature for policymakers, field practitioners, or local actors. It is based on community-based vulnerability assessments but has been adapted as a tool for community self-evaluation. CREATE is flexible, designed for learning and experimentation, and aims to assess vulnerabilities and adaptive capacities, with the added value of supporting local actors in identifying pilot activities and strategic interventions as well as short-, medium-, and long-term adaptation activities (Shott and Mather 2012).

The climate-smart villages approach described in Box 3 provides a case of participatory, locally driven evaluation tailored to hyperlocal (village) contexts and scaled up for global learning through an accessible database.

Box 3 | Case Study: Evaluating Adaptive Interventions across Climate-Smart Villages

Collaborative evaluation approach

The climate-smart villages (CSV) approach to agricultural research for development aims to help agricultural communities across Asia, Africa, and Latin America adapt to climate impacts. A CSV project has evaluated technological and institutional responses to coping with climate variability and impacts in agriculture through the use of climate-smart agriculture (CSA). Following the rigorous, collaborative evaluation activity, lessons learned were shared through social learning platforms.

The CSV approach was designed to bridge the gap between climate projections and practical agriculture techniques that local actors could use to adapt to climate shocks and stressors. It involved farmer-led assessments and iterative learning and feedback, applied at different scales from local plots to farms, households, and communities.

Collaborative generation of evidence and data collection

CSA techniques are evaluated using a variety of methods, including surveys, farmer group evaluations, and ICT-based feedback tools such as crowdsourcing, to coproduce evidence. The CGIAR research program Climate Change,

Agriculture, and Food Security and its partners designed a multiscale evaluation that was accessible to local actors through a digital platform, reflecting local experiences. In Tanzania, one evaluation tool employed was the 5Q method, which was cost-effective, adaptable, and straightforward, reflecting the farmer's experience and progress at the local level in real time. 5Q uses "feedback rounds" of short, simple surveys based on five tailored questions and automated voice surveys and local technicians speaking directly with farmers.

Lessons learned are widely shared and accessible

Local stakeholders provide input into the design of CSV techniques based on their knowledge of risk management and then assess other applied CSV techniques. Local actors learn about the benefits and barriers of CSV through farmer-to-farmer exchanges, ICT-based tools, farming fairs, women's organizations, and sharing videos of successful technologies, practices often supported by local government engagement. The CSV approach is valuable for stakeholders who benefit from the real-time feedback and access to the lessons and evaluations from other CSVs through an online platform.

Sources: Aggarwal et al. (2018); Jarvis et al. (2015).

Subjective evaluations and self-assessments integrate local stakeholders' values, perspectives, and perceptions of risk. Béné et al. (2019) found that subjective understanding of resilience and a sense of self-efficacy have a strong positive impact on the households' ability to effectively recover from shocks. These results suggest that local actors who have a clearer understanding of their resilience are better able to cope with effects of climate change (Béné et al. 2019).

Use of subjective measures of climate resilience is an emerging approach that offers a simple, efficient, and locally driven alternative to predefined resilience indicators or indices. Subjective measures are used in contexts where capturing real experiences from the bottom up is a priority, when local stakeholder experiences are assessed and compared over time, and where additional methods of measuring resilience complement subjective definitions (Jones and Tanner 2017). The Subjectively Evaluated Resilience Score was used for household resilience surveys in Uganda to understand the resilience capacity of local actors and establish a baseline for an ongoing impact evaluation

(Jones 2019). Similarly, Reckien et al. (2013) developed vulnerability maps based on interviews with five socioeconomic groups in South New Delhi. Local actors' subjective experiences of physical climate impacts and abstract climate concepts were used to determine potential causes of vulnerability and future adaptation options. The vulnerability maps indicated that lower-income groups were more affected by climate-related impacts and would benefit most from infrastructure investments. Subjective measures of resilience and vulnerability create space for a context-specific and localized assessment of an adaptation intervention according to the needs and logic of the community whose resilience is in question.

Culturally responsive evaluations can amplify local voice and support equitable outcomes.

Hood et al. (2015) provide comprehensive guidelines for conducting culturally responsive evaluation. The guidelines recognize the centrality of culturally defined values and beliefs to any evaluation. In culturally responsive evaluation, outcomes are valid if evidence generated is supported by the cultural and local context, as opposed to validity defined by conventional definitions

of research rigor. Culturally responsive evaluation specifically aims to address bringing equity to evaluations through its focus on historically marginalized groups (Hood et al. 2015).

Johnston-Goodstar (2012) suggests that evaluation advisory groups (EAGs) are ideally suited to bringing evaluators and indigenous communities together to discuss the evaluation process. Using language and tools acceptable to indigenous or context-specific worldviews, and centering indigenous voices, EAGs present an opportunity to examine differences in values, norms, and assumptions, and reflect on power relations that might influence the outcome of an evaluation or the evaluation process. For example, the Swinomish Indian Tribal Community in the U.S. state of Washington informed the design of evaluation metrics for a community planning intervention following a process similar to EAGs. After consultations with tribal elders had established a mutual understanding of the evaluation process, “climate change health” metrics were integrated into a conventional evaluation and planning process. Cocreating an evaluative process was also a valuable decision-support and learning tool for the Swinomish community and in other evaluations based on indigenous knowledge (Donatuto et al. 2020; Kerr 2012).

Although not uniquely tailored to locally led action and participation, the UN Children’s Fund guide to evaluation for equitable development draws on decolonial and feminist approaches to evaluation, indigenous knowledge, and human rights practice and could be adapted to the LLA context (Segone 2012). Another resource is the Equitable Evaluation Project, a peer-to-peer platform used to encourage evaluators to reflect on the cultural considerations and racial bias in evaluation processes, tools, methods, and offer approaches that can create positive social change and equitable outcomes (Equitable Evaluation 2017).

3.4. Learning

Common methods of integrating learning into adaptation interventions include regular learning reviews, use of online knowledge-sharing platforms, facilitated learning events or dialogues, and critical reflection through formal evaluation (Harvey et al. 2017). Below we assess a selection of less common approaches, methods, and tools for learning that are especially relevant to the LLA context.

Distinct processes for accountability and learning can address tension between these objectives.

Reporting on target outputs for upward accountability purposes may discourage a culture of learning from failure and flexibility to adapt, and can consume intervention resources like team member time (Spearman and McGray 2011). If integrated from the start of an intervention, a two-track model with dedicated workstreams and resources for separate accountability and learning functions can encourage learning by removing the disincentive to report failure (Fisher and Anderson 2018; Smith 2020). The BRACED program has a dedicated “Fund Manager” who accounts for the effectiveness of the development assistance funding that supports the program, as well as a dedicated “Knowledge Manager” who is responsible for evidence-generation and learning about resilience (BRACED and Bond 2019). Donors can also allocate specific resources for learning or innovation funds to ensure adequate resources and commitment to learning objectives (Harvey et al. 2017). For example, the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA) had a designated “Opportunities and Synergies Fund,” which supports learning and research-into-use for adaptation interventions.

Social learning supports collaborative decision-making for adaptation contexts (Cundill and Rodela 2012). Social learning can support LLA as a process that entails active engagement and agency, recognizing that information, consultation, and participation are insufficient for effective adaptation (Collins and Ison 2009; Cundill et al. 2014).

Social learning is still somewhat ambiguously defined, posing challenges for implementation (Medema et al. 2014). CARIAA addressed this challenge by focusing on creating an enabling environment for social learning, rather than developing a prescriptive learning approach. The enabling conditions the initiative emphasized align with others identified in this paper, including flexibility in resource allocation and scope and separating MEL’s learning and accountability functions (Ensor and Harvey 2015). Initial findings from community adaptation interventions indicate that social learning can bring economic benefits and community cohesion if they are based on sustained engagement with relevant local stakeholders, capacity development for learning, reflection and cocreation of new knowledge, and challenging institutional barriers (Van Epp and Garside 2019).

Prioritizing self-directed learning and creating a learning culture can promote sustained local ownership of LLA (Smith 2020). If not intentionally

locally driven, learning can be top-down and not necessarily meet the learning needs of local actors (Valters 2015). One of many examples of self-directed learning is the practice by farmers in Western Kenya of integrated soil fertility management. Multiple years of group learning led to scaling-out of farming practices and expansion of scope to include additional income-generating activities, suggesting that the advantages of locally owned learning may be worth trade-offs such as additional investment of time, resources, and capacity building (Ramisch et al. 2006).

In South Sulawesi Province, Indonesia, the Climate Adaptation through Sustainable Urban Development research project tested various qualitative and quantitative participatory evaluation methods to understand how well its water resilience project was creating a learning culture. The “Factors of Success” method, a collaborative group exercise that identifies and maps ideas of project success

over time, and the “Obstacles and Enablers” method, in which participants reflect on potential “obstacles” to project success as well as potential “enablers” to overcoming these obstacles, were two qualitative methods that supported critical reflection and anticipatory learning. They could be integrated into a MEL system to promote a learning culture and participatory learning about LLA (Larson et al. 2016).

The case study in Box 4 uses an example from the Devolved Climate Finance mechanism piloted in Mali, Tanzania, Senegal, and Kenya to illustrate how bottom-up learning can support locally led adaptation investments and decision-making.

Learning through games can facilitate the communication of complex systems and support learning and dialogue. This is a method employed in support of climate resilience and disaster risk reduction by the International Federation of the Red Cross and Red Crescent Societies Climate Centre. The Climate Centre’s games use storytelling, active learning, emotional

Box 4 | Case Study: Local-Level Climate Fund Decentralization

Context

The Devolved Climate Finance (DCF) intervention places local actors at the heart of the adaptation management and financing process and seeks to improve the responsiveness of national decentralization policies to local impacts of climate change. The program supports community adaptation initiatives and local governments through prioritized investment in public goods that have a high socioeconomic impact. These public-good investments are identified and prioritized by local representatives against a devolved climate finance budget managed by the local government.

Adaptation planning committees complement learning-oriented MEL systems

The DCF MEL system is based on the TAMD framework and centered on adaptive and flexible management across local and national levels. The DCF mechanism is intended to strengthen existing monitoring, reporting, and verification processes in devolved government financing and planning processes. TAMD assesses the quality and scope of climate risk management investments and practices, then evaluates the local adaptation outcomes and impacts. In Tanzania in 2014, adaptation planning committees (APCs) were established to build trust between donors and local stakeholders. APCs at

the ward or communal level had the autonomy to establish budget priorities, while regional APCs would improve recommendations without vetoing local budget priorities. This mechanism improved the rigor of the resilience planning and ensured that local actors’ needs were addressed while reassuring donors through a collaborative investment oversight process.

Bottom-up learning to inform decision-making

Lessons learned from testing adaptation techniques at the village level are collated through wide community consultations designed to represent diverse social groups and people often marginalized in decision-making, particularly women and young people. APCs and existing village assemblies are used to inform adaptation intervention strategies and spending. The combination of participatory planning tools used in the DCF planning process with local government authorities enabled local actors to articulate their livelihood strategies and led to subjective explanations of community resilience and well-being, as well as local resource use. The lessons learned from these participatory processes generated knowledge and evidence that local government authorities used to inform decisions about local investments and spending and enhance the awareness of climate change impacts in their local area.

Source: DCF Alliance (2019).

engagement, and problem-solving for learning about and managing climate risk and natural disasters (Solinska-Nowak et al. 2018). This unique method requires unique resources, including game facilitators, designers, and willing participants. Although there is insufficient evidence available to link learning through games to adaptation outcomes in the long term, anecdotal evidence suggests strong learning outcomes, especially when participants are involved in the game's design (Bachofen et al. 2012).

Peer-to-peer learning supports local agency and social learning for LLA. One example of peer-to-peer learning for adaptation was an exchange the Adaptation Fund hosted in 2019 focused on resilient water and agriculture. Representatives of various national implementing entities of the Adaptation Fund learned directly from one of their peers in Chile about agricultural resilience to drought, soil erosion, wildfire, and unpredictable precipitation. Following the exchange, they applied lessons learned to enhance agricultural resilience in their respective contexts, three within two months of the exchange (Adaptation Fund 2019).

Knowledge exchange platforms are a vehicle for long-term, cross-scale learning and the building of an evidence base around effective and equitable LLA. Documentation, including through collaboration with knowledge partners such as local universities and dedicated platforms for sharing learning, is a simple but important method to support learning for LLA (Harvey and Fisher 2013). Global platforms appropriate for vertical knowledge exchange about LLA include the annual Community-Based Adaptation conference, the annual UN Framework Convention on Climate Change (UNFCCC) Conference of the Parties, and the annual Gobeshona conference in Bangladesh.

Alternative methods of disseminating best practice for local adaptation horizontally among local actors can include the use of digital media. For example, the North East Network—a knowledge broker for adaptation interventions in the Indian states of Assam, Nagaland, and Meghalaya—uses participatory video to disseminate local knowledge on sustainable natural resource management practices (CDKN 2018).

4. CONCLUSIONS AND RECOMMENDATIONS FOR MEL THAT SUPPORTS LLA

There is increasing recognition that adaptation happens at a local level, and that local actors therefore should have agency over the adaptation interventions affecting them. National governments, multilateral development banks, bilateral donors, and international NGOs are investing in locally led adaptation to achieve resilience objectives that prioritize the communities at the front lines of climate impacts.

We recommend 10 ways in which institutions and individual practitioners, especially funders and intermediary organizations, can begin to align MEL with the principles of locally led adaptation. The recommendations outline opportunities to promote local agency in decision-making about the MEL process and to ensure that local actors have influence in critical decisions throughout the MEL cycle on the purpose of the MEL system, the theory of change behind the intervention, learning goals and processes, metrics and indicators to assess progress, how data is collected and used, what external support is needed, and evaluation approaches and objectives. The following recommendations are listed in the general order of the MEL cycle, although many apply throughout MEL.

1. All actors in the MEL process should **understand and respond to structural inequalities**, including how power dynamics affect the MEL process and whose objectives it serves, and whether different worldviews and definitions of resilience are equally valued. This is critical to ensure that MEL reflects local realities and priorities and that results are not inaccurate or biased. Basing theories of change and indicators on subjective definitions of resilience and local and experiential knowledge provides a way for MEL to reflect local priorities and perspectives. By prioritizing goals of local actors and legitimizing local knowledge and experience, MEL systems should aim to redress power imbalances and be part of a funder's strategy to ensure that investments reach communities and reduce social and gender inequalities.

2. Funders, intermediaries, and practitioners should **embrace the design of MEL systems that give equal or greater priority to downward accountability and learning** compared with upward accountability. Distinct processes for accountability and learning can address tension between these objectives. Funders, intermediary organizations, and MEL practitioners should allow local partners to determine learning goals and collaborate to decide which approaches will best support these goals. Emerging approaches and tools that can support learning for LLA include social learning, learning through games, peer-to-peer learning, and virtual learning.
3. Funders and intermediaries should **ensure that MEL creates value for local actors**. MEL processes and the data and learning they generate should prioritize the knowledge and learning needs of local actors equally with funders' MEL goals, which frequently relate to measuring progress and performance.
4. Funders and intermediaries should **take a local demand-driven approach to building capacity for self-directed MEL**. For MEL to support locally led adaptation, local actors themselves should determine what capacity, external expertise, and access to information they need to lead MEL that supports their goals in the long term. Engage knowledge brokers in this process as needed.
5. MEL practitioners should **adopt appropriate methods to navigate and better understand complexity and uncertainty with regard to climate dynamics and locally led adaptation contexts and settings**. This entails creating shared and comprehensive understanding both of local stakeholder and contextual dynamics, on the one hand, and locally specific understanding of the climatic conditions affecting local stakeholders, on the other. Establishing a climatic baseline and monitoring system and employing social assessment tools support understanding of relevant stakeholder and contextual dynamics as well as the outcomes of an LLA intervention.
6. MEL practitioners should **create locally appropriate and context-specific indicator frameworks and adaptation metrics**. Adaptive capacity is particularly useful as an adaptation metric and as a starting point in defining a set of context-specific LLA indicators. Indicator frameworks should also look to better integrate social, economic, and environmental dimensions of LLA, recognizing the spatial and temporal interconnectedness of these systems in adaptation. In order to support LLA, metrics and indicators must reflect what local actors view as important to measure and as reflecting their definitions of vulnerability, adaptive capacity, and strengthened resilience.
7. MEL practitioners should **leverage MEL technologies and process innovations as appropriate to increase local ownership, voice, participation, and representation**. Data collection and data analysis technologies across mobile applications, remote monitoring systems, climate and digital advisory services, and other technologies can be used both to increase access to climate data and information to inform decision-making, and to facilitate locally driven data collection and governance platforms.
8. With support from funders, MEL practitioners should **develop systems to support adaptive management, experimentation, and learning from failure**. This will entail promoting a culture that accepts learning from failure, building in time and resources to support iterative learning from the outset of an intervention, and designing monitoring frameworks that enable adaptive management for course correction. Encouraging near-real-time learning and openness about what works, what doesn't, and why can foster a nimble intervention that is more likely to achieve its adaptation goals and help mitigate risks associated with financing and programming requirements for locally led adaptation.
9. Funders and intermediaries should **engage knowledge brokers as appropriate to enable ownership and contributions by local partners**. Differences in cultural norms and terminology should not interfere with a funder's ability to engage local actors, or with local actors' ability to engage in the MEL process. Knowledge

brokers may have a role to play in facilitating local agency throughout the MEL cycle—for example, in the design and theory of change development, defining indicators, analyzing monitoring data, and sharing evaluation findings and lessons learned.

10. All actors involved in MEL should work together to **ensure that learning is applied, documented, and shared**. To promote more effective, equitable LLA interventions and build up an evidence base around LLA in the long term, learning should be shared and applied both horizontally at the local level and vertically through global knowledge exchange platforms, such as the annual UNFCCC Conference of the Parties, the annual conference on Community-Based Adaptation, the UN General Assembly, and the annual Gobeshona conference. Evidence and learning generated through the MEL process should, however, first meet the knowledge needs and gaps of local actors as a primary audience group.

The changes needed to enable widespread locally led adaptation will take time, and the same applies to shifting MEL for LLA. MEL practice to support LLA also often entails significant changes or trade-offs compared with current adaptation MEL practice. However, there are meaningful, concrete steps we can take to have more supportive MEL while managing constraints.

The authors of this paper believe that both the systemic shift and the practical steps can be taken in parallel—combining some relatively simple and immediate practical changes to existing MEL systems with a longer-term journey to systemically shift how MEL supports LLA interventions. Many of the practical steps suggested can be made in isolation or retrofitted to existing MEL systems. The systemic shift in approach requires that those funding, designing, and delivering MEL systems reconsider the value and use of MEL, placing the core emphasis on local ownership, downward accountability, and locally driven learning from the outset.

In keeping with the principle of coordinated action and investment for locally led adaptation, horizontal and vertical learning and knowledge-sharing will support this journey. Leveraging global platforms to share learning and exchange knowledge about LLA interventions can support more effective LLA in the long term.

MEL that supports locally led adaptation will also support improved LLA outcomes, enabling more context-sensitive, agile, equitable, and sustainable efforts to build climate resilience at the local level.

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ABOUT WRI

World Resources Institute is a global research organization that turns big ideas into action at the nexus of environment, economic opportunity, and human well-being.

Our Challenge

Natural resources are at the foundation of economic opportunity and human wellbeing. But today, we are depleting Earth's resources at rates that are not sustainable, endangering economies and people's lives. People depend on clean water, fertile land, healthy forests, and a stable climate. Livable cities and clean energy are essential for a sustainable planet. We must address these urgent, global challenges this decade.

Our Vision

We envision an equitable and prosperous planet driven by the wise management of natural resources. We aspire to create a world where the actions of government, business, and communities combine to eliminate poverty and sustain the natural environment for all people.

Our Approach

COUNT IT

We start with data. We conduct independent research and draw on the latest technology to develop new insights and recommendations. Our rigorous analysis identifies risks, unveils opportunities, and informs smart strategies. We focus our efforts on influential and emerging economies where the future of sustainability will be determined.

CHANGE IT

We use our research to influence government policies, business strategies, and civil society action. We test projects with communities, companies, and government agencies to build a strong evidence base. Then, we work with partners to deliver change on the ground that alleviates poverty and strengthens society. We hold ourselves accountable to ensure our outcomes will be bold and enduring.

SCALE IT

We don't think small. Once tested, we work with partners to adopt and expand our efforts regionally and globally. We engage with decision-makers to carry out our ideas and elevate our impact. We measure success through government and business actions that improve people's lives and sustain a healthy environment.