Briefing

Climate change; Monitoring, evaluation and learning

Keywords:
Adaptation, climate, monitoring and evaluation (M&E), Paris Agreement, resilience

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Policy pointers

As climate risks escalate, governments and donors will need to invest in effective adaptation programmes to keep sustainable development on track.

If these measures are to succeed, governments will need robust monitoring, evaluation and learning mechanisms, which could improve national planning.

Governments could streamline the evaluation process by integrating these adaptation monitoring systems with existing sustainable development frameworks.

There is therefore an urgent need to better understand how to build on and benefit from these systems as cleanly as possible and maximise the contribution that adaptation can make towards sustainable development.

How integrated monitoring and evaluation systems can help countries address climate impacts

Climate change impacts are already being felt around the world and they seriously threaten the achievement of the Sustainable Development Goals.[1] With climate impacts playing out in endlessly varying combinations, policymakers need effective systems for learning what sort of adaptation works. This briefing shows how governments will need to think differently about how they monitor and evaluate their adaptation initiatives if they want to keep sustainable development on track.

Successful climate adaptation demands an improved approach to monitoring and evaluation

There is little doubt that climate risks will make it even more difficult to achieve the Sustainable Development Goals (SDGs), and could dash hopes of reaching them by the 2030 target. Economic activities that were sustainable under current or historical climatic conditions may no longer be tenable as climate change profoundly alters the ecosystems that sustain human life. The increasing prevalence of water scarcity, the loss of land to rising sea levels, natural disasters, and extremes of temperature could render entire regions uninhabitable. The gravity of such risks was captured in the following statement from the 2007/2008 Human Development Report: "Climate change threatens to erode human freedoms and limit choice. It calls into question the Enlightenment principle that human progress will make the future look better than the past."[2]

To prevent climate change derailing decades of development progress, governments could help societies adapt. For the purposes of this briefing, we define adaptation as the process of supporting people to assess the risks that climate change poses to environmental and social systems, and then eliminate, minimise or cope better with the resulting impacts. In addition, countries will also need to invest in reducing greenhouse gas emissions in ways that will complement adaptation, such as by investing in low carbon and energy-secure societies. Unless governments take steps to help communities adapt in this way, many development initiatives will fail and it will be impossible to achieve the SDGs or meet the objectives of the Sendai Framework on Disaster Risk Reduction.[3]

The question is therefore not whether adaptation is necessary, but what are the most effective ways to achieve it. Given the almost infinite diversity and complexity of climate impacts, governments will only have a hope of finding the answers if they establish robust systems for monitoring, evaluating and learning (MEL) from their adaptation experience (see Box 1). This process of continuous, iterative learning needs to happen at sub-national, national and international levels, and should aim to answer the following questions:

1. Are we doing the right things?
2. Are we doing them well?
3. How do we know we are doing them well?
4. What could have been done differently?

Climate adaptation does not happen in a vacuum

Understanding the triple loops of MEL is therefore critical to ensuring that adaptation, mitigation co-benefits and sustainable development can all succeed and inform broader development planning. For the purpose of this briefing, we will focus on the interlinkages between MEL systems for adaptation and sustainable development (see Figure 1).

Integrating adaptation and development MEL

Climate adaptation actions do not happen in a vacuum: they will be most likely to succeed if they are embedded with existing initiatives in national and adaptation planning to promote sustainable development, both at national and international scales.[4]

At the global level, the three main frameworks for securing human development and wellbeing are: the SDGs, the Sendai Framework and the Paris Agreement on Climate Change.[5] Uniquely among these compacts, the Paris Agreement includes specific criteria that adaptation initiatives should meet, namely that they be: country-driven; gender-responsive; participatory and fully transparent; consider vulnerable groups, communities and ecosystems; based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems; and integrated into relevant socioeconomic and environmental policies and actions.

At the national level, governments and other actors will need to find ways to assess adaptation performance within the broader context of monitoring and evaluation (M&E) systems designed to track national development. In this way, adaptation can be seen as an iterative learning process, with adaptation and improved M&E being integrated into development planning cycles. This approach could yield important new sources of evidence to enhance the effectiveness of development policy at both the national and sub-national levels.

Box 1. Definitions

Monitoring is the collection of data to track the progress of adaptation actions and the achievement of objectives.

Evaluation is the assessment of adaptation actions to determine their effectiveness and impact, as well as their efficiency and sustainability, and the extent to which they have fulfilled specific objectives.

Learning focuses on what has worked and what has not. It involves identifying which adaptation actions have led to better development outcomes despite worsening climate hazards, which have not, and why.

Using national monitoring and evaluation systems for more harmonised adaptation reporting

One of the problems governments face is that they already have multiple layers of reporting requirements — none of which may capture the essence of the lessons they need to learn from adaptation initiatives. For example, past monitoring has tended to focus on project implementation, rather than on evaluating the effectiveness of each programme in delivering better development. Moreover, ministries, government departments and other agencies in developing countries have tended to tailor their approach to monitoring to satisfy the reporting requirements of climate funds or donor-funded projects. The emphasis has been on accounting for how resources have been spent, efficiency and value for money. These M&E efforts also tend to be short-lived as they are often funded through technical assistance and support, and may not be sustainable once funding cycles are complete.

The Paris Agreement, under its Enhanced Transparency Framework, calls for transparency on adaptation actions. Countries are asked to provide information on progress to adaptation targets as stated in their Nationally Determined Contributions (NDCs). In addition, collective progress of all parties will be assessed through a global stocktake. Although adaptation reporting is voluntary (Article 13.8), assessing national adaptation progress can help countries to inform national planning and commitments.

Alongside the Paris Agreement, at least two other major country-led reporting processes tackle issues linked with climate adaptation: the SDGs and the Sendai Framework.[6]

This broad focus on MEL across different agreements represents both an opportunity and a risk. It offers an opportunity because the international community is investing in MEL capacities in developing countries. It poses a risk because these countries are faced with an unprecedented challenge in terms of developing the necessary MEL and statistical systems, which could lead to widespread duplication of effort, double counting in reporting outcomes for development and adaptation (which many frameworks consider separately), and consume large amounts of time and money.

To maximise the benefits of M&E while avoiding these pitfalls, we believe that governments should invest in M&E systems that build on — or integrate with — existing national planning and evaluation systems.[7] This would help to streamline workflow and reduce reporting burdens, while also minimising waste and winning 'buy-in' from the people responsible for making sure these systems work.

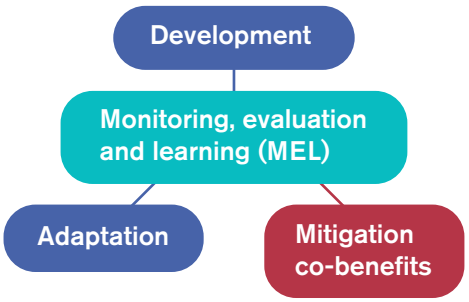
What do we want to measure in the context of adaptation, national development and SDGs?

It is impossible to meaningfully monitor, evaluate and learn from climate adaptation initiatives without knowing what good adaptation looks like. There can sometimes be a tendency to consider adaptation as an end in itself. But adaptation outcomes should always be evaluated on how well they succeed in securing development outcomes and human wellbeing in the face of the risks posed by climate change. Ultimately, it is tangible results in these areas that will reveal whether adaptation has worked (see Figure 2), not narrower measures of whether projects have been properly implemented or money responsibly spent.

There are no all-purpose ways to assess adaptation outcomes. The purpose of any M&E will determine what gets measured. For example, whether it is to allocate funds or to assess adaptation performance.[6] But there are two broad ways to think about measuring adaptation: short-term and long-term (Box 2). In the short-term, monitoring focuses on assessing the extent to which governing institutions are leveraging their powers, adopting policies and laws, and enforcing them to help people become more resilient and agile in the face of climate risks. In the longer run, monitoring should assess the extent to which adaptation interventions have safeguarded progress on a broad range of development parameters that might otherwise have been eroded by climate change. Countries such as Uganda, Cambodia and Mozambique are effectively assessing progress against these variables under their national frameworks.

As part of M&E systems, a suite of variables will be needed, including some that measure the functioning of institutions and governance mechanisms in relation to climate risks (climate risk management indicators); context- and scale-specific variables that capture key factors influencing vulnerability, resilience and adaptive capacity; variables of development performance, and human and environmental wellbeing; and variables of evolving climatic conditions and hazards.

Figure 1. Integrating MEL systems

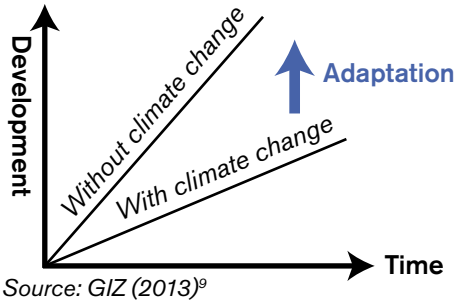


How can we embed adaptation M&E within development planning?

Investing in integrated adaptation and development M&E systems will allow countries to assess the benefits of adaptation without creating additional layers of reporting. Integrating development and adaptation M&E systems can be facilitated by:

- **Integrating adaptation information into the planning and M&E cycles:** joint metrics and data collection tools will allow countries to use existing databases to assess progress against different framework agreements (SDGs, climate and disaster risk reduction). For example, Cambodia's national M&E for climate change is embedded within its National Strategic Development Plan. Uganda has integrated climate change indicators into its national indicators under its Output Budgeting Tool, used by the Ministry of Finance, Planning and Economic Development.[8]
- **Using common development data and evidence to assess progress:** some development parameters are also relevant to adaptation M&E. These include indicators of climate-sensitive aspects of development such as those relating to water, agriculture, losses from (and people affected by) climate-related disasters and certain health impacts (such as incidences of climate-sensitive diseases). Other indicators such as school attendance may also exhibit historical correlations with climate. Improvements in these variables despite worsening climate hazards could suggest that adaptation is working. Interpreting these

Figure 2. What do we want to measure?



Source: GIZ (2013)[9]

Box 2. Unpacking adaptation concepts: what are we measuring?

A holistic approach to adaptation M&E[10] will address:

i. How institutions and governments are **managing climate risks**

ii. How the actions of institutions and governments are influencing the **vulnerability, resilience and adaptive capacity** of people and systems on the ground

iii. How the evolution of vulnerability, resilience and adaptive capacity is affecting **longer-term development outcomes** and wellbeing in the context of **evolving climate hazards**.

Short-term: adaptation performance	Long-term: development performance
Institutional climate risk management:[11] institutional processes and governance mechanisms that directly address climate risks or influence how people and systems respond to them. ***Indicators:*** *certain institutional capacities and mechanisms, policies, plans, legislation etc.* **Resilience:** the ability to continue functioning in the face of shocks and stresses. **Vulnerability:** the susceptibility to being harmed when exposed to an external shock or hazard. ***Indicators:*** *context-specific indicators relating to capacities, assets, resources, behaviours, enabling environments and so on.*	**Development outcomes:** improvements in resilience and adaptive capacity, and reductions in vulnerability, represent intermediate goals that should ultimately improve human wellbeing and reduce the costs of climate-related stresses and shocks. ***Indicators:*** *standard measures of human, economic, environmental wellbeing, avoided health and economic losses etc.* **Climate hazards:** extremes, long-term trends and other climate-related phenomena that have the potential to affect development outcomes. ***Indicators:*** *meteorological variables and climate indices describing the hazards that affect the aspects of wellbeing (represented by the development outcome indicators).*

indicators in the context of relevant climate information is a way of developing more robust assessments of adaptation effectiveness.

- **Strengthening relationships of accountability between departments:** collecting and maintaining data will require considerable resources and investment. Many countries have limited capacity to gather, manage and analyse relevant data. In addition, there is little understanding of adaptation, how it relates to development and how it might be assessed. There needs to be a concerted effort to ensure that technical capacity exists and that there is accountability between departments to identify and implement adaptation actions and track their impacts on development performance. Some countries have passed an act to enable data sharing between departments, for example in Kenya.

Notes

[1] Sustainable Development Goals are a set of 17 global goals adopted in 2015 as a "universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity" (UNDP). / [2] UNDP (2007) Human Development Report 2007/2008. Fighting climate change: Human solidarity in a divided world. / [3] Sendai Framework for disaster risk reduction (2015-2030) was adopted in 2015 as a voluntary non-binding agreement that recognises "that the State has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders" (UNISDR). / [4] Anderson, S (2011) Climate change and poverty reduction, CDKN Policy Brief. https://cdkn.org/wp-content/uploads/2011/08/CDKN_poverty-reduction_FINAL.pdf / [5] Paris Agreement is a legally binding global climate deal that was adopted in the Conference of Parties (COP21) in 2015 by 195 countries setting out a plan to put the world on track to limit global warming below 2°C (UNFCCC). / [6] Leiter, T and Olivier, J (2017) Synergies in monitoring the implementation of the Paris Agreement, the SDGs and the Sendai Framework. GIZ GmbH. www.adaptationcommunity.net/wp-content/uploads/2017/11/giz2017-en-cc-policy-brief-synergies-PA_SDG_SF.pdf / [7] Leiter, T and Pringle, P (2018) *Pitfalls and potential of measuring climate change adaptation through adaptation metrics.* In: Adaptation metrics: Perspectives on measuring, aggregating and comparing adaptation results. UNEP DTU. / [8] Kajumba, T and Karani, I (2015) Influencing the development and integration of national standard climate change indicators into the monitoring and reporting frame works in Uganda. ACCRA Briefing Paper. www.worldvision.org.uk/files/4014/5322/0933/ACCRA_Briefing_Paper_November_2015.pdf / [9] GIZ (2013) Integrating Climate Change Adaptation into Development Planning, M&E training modules. / [10] Brooks, N, Anderson, S, Ayers, J, Burton, I and Tellam, I (2011) Tracking adaptation and measuring development. Climate Change Working Paper No. 1, IIED, London. http://pubs.iied.org/10031IIED / [11] Rai, N, Brooks, N and Nash, E (2015) Tracking adaptation measuring development: a manual for national governments. IIED, London. http://pubs.iied.org/10134IIED

Summary

Climate change threatens to wreck the chances of achieving the SDGs by 2030. Governments seeking to maintain the momentum towards sustainable development will have to help societies adapt to the challenges climate change will bring. Such schemes will only succeed if policymakers introduce effective systems to monitor, evaluate and learn from their experience. By integrating such systems into national and international development frameworks, governments can minimise duplication of efforts and maximise the contribution that adaptation can make towards a more sustainable future.

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