

## Policy pointers

**Adaptation could be tracked** at a high level in Nepal through adding a few key indicators to government systems and coordinating information across important ministries.

**To assess results across interventions** requires a more in-depth evaluative approach that could be undertaken within a district when required.

**Institutional scorecards** are an easy and useful way to monitor progress at different levels of government.

**Community focus** groups and household survey data can be used to supplement higher level tracking and need to monitor external changes as well as look at changes over time.

## Tracking adaptation and measuring development in Nepal

This briefing reports a case study from Nepal that empirically tested the Tracking Adaptation and Measuring Development (TAMD) methodology for evaluating the effectiveness of approaches to climate adaptation. Nepal has many climate change projects, so this study used a quasi-experimental approach to bring together results across interventions, comparing and aggregating their contributions to building resilience. The briefing explains how the study tested using locally developed theories of change to look at how interventions made their contribution; scorecards to measure village and district level progress; and household surveys to identify which locally relevant indicators show changes over time. It draws out the policy implications for how to monitor and evaluate adaptation in Nepal and how to use the TAMD framework approach both for national government monitoring and in-depth evaluation within a district.

Tracking Adaptation and Measuring Development (TAMD) is a twin track framework that evaluates adaptation to climate change. It uses two sets of indicators or two 'tracks'. One follows how well and how widely a country or institution is managing climate risk (looking at readiness and capacity). The other examines how successful adaptation interventions are at reducing climate vulnerability (by measuring resilience and development performance at the appropriate level).

There are also indicators that track how well an intervention assists the climate-vulnerable poor and an attempt to check how further climatic changes might disguise results. For a general introduction, see our briefing 'TAMD: A framework for assessing climate adaptation and development effects'.<sup>1</sup> The framework has been tested by six countries. This briefing examines what that testing might mean for climate adaptation policy in Nepal.

### TAMD research in Nepal

The Nepal feasibility test specifically aimed to understand how changes in community and household resilience might be measured and aggregated across different interventions.

Nepal has many different climate change programmes and interventions each with their own monitoring and evaluation frameworks.<sup>2</sup> The TAMD research tested a method to help the government track progress and measure effectiveness as a whole, looking beyond individual projects.

Researchers under guidance of the government coordination committee for TAMD chose two interventions to pilot the approach: the Livelihoods and Forestry Programme working to support community forest management and the Local Adaptation Plans of Action developing local climate change action plans. Both address community development through community-led planning. The pilot looked at each intervention

## *Institutional scorecards help build the national picture of resilience*

within a village development committee (VDC), the lowest administrative level in Nepal.

Researchers then compared VDCs with the projects with ones that had not received this type of intervention. The VDCs were matched for similar climate risks (either flood, landslide or variable rainfall) and similar socioeconomic profiles. All VDCs in Nepal are part of an institutional strengthening

programme (the Local Governance and Community Development Programme) building disadvantaged groups' participation in local decision making. VDCs were chosen in two different districts in Nepal, one in the mid-hills (Rukum) and one on the plains (Nawalparasi).

Researchers mapped the institutional context of each intervention using a series of scorecards that tracked climate risk management at the VDC level and within the local project institutions, such as the community forest users groups and ward citizen forums. They then tried to identify how well the interventions targeted the climate-vulnerable poor by checking who attended meetings, where they lived and how vulnerable they were to climate hazards.

Researchers then used focus groups with local people to understand how the community understood recent interventions in their area and what they thought the benefits were. Communities also identified indicators that showed either increased resilience or increased vulnerability to their own climate risks. For example, some communities identified that owning an ox for ploughing meant a household could plant as soon as the weather allowed. Households that rent an ox must wait until one is available, so lack flexibility and often suffered more from erratic rainfall.

Using the focus group data and project information, the research team devised household surveys to use in each VDC. These surveyed indicators of general mountain vulnerability,<sup>3</sup> as well as indicators related to the area's specific climate hazard — landslides, floods, variable rainfall and hazards identified by the community. The survey also reconstructed a baseline through community recall, as reliable historical data was scarce.

Survey results were then used to compare changes over time between the different VDCs: those with specific climate change or forestry projects and those where only participatory planning had increased. Researchers used various approaches when examining which indicators showed changes over time, which differed between the groups, and how climate and weather data could contextualise any changes (for example if one VDC seemed to have shown no improvement, the rainfall data may show this was in the context of very erratic rainfall). Observational data can also be supported by local interviews.

Our research provided two proposed approaches to tracking adaptation and measuring development in Nepal: monitoring systems through government processes and an evaluative approach for more in-depth analysis. It also revealed cross-cutting findings useful for policymakers using the TAMD framework and selecting adaptation indicators.

### **Using specific TAMD tools for better adaptation policy**

Specific tools for monitoring and evaluating adaptation (described below) will be useful for policymakers designing government programmes as well as those overseeing development

**Table 1. A village development committee scorecard**

<b>Climate Change mainstreaming/ integration into VDC Planning</b>	Specific measures to address climate change (adaptation/mitigation) have been identified and funded There is a VDC climate change plan. (VDCs with a Disaster Risk Reduction plan score 50%)
<b>Institutional coordination</b>	There is a body for coordinating climate change actions at the village level (unit etc) There is long term funding for this unit and coordination
<b>Budgeting and finance</b>	A specific budget has been allocated for climate change There is an identified fund for additional climate risks (VDCs with a disaster fund score 50%)
<b>Institutional knowledge/ capacity</b>	Some people involved in planning have climate change awareness Some people with formal climate change training are involved in planning
<b>Use of climate information</b>	Annual planning is affected by historical trends of climate variability from informal observation/experience Relevant climate information from local weather stations or other reliable sources is available and used
<b>Participation</b>	Those living in landslide, flood or drought affected areas are represented proportionately in VDC planning processes around climate change measures These groups' participation is sustained throughout the lifecycle of the climate change measures
<b>Awareness among stakeholders (Reps of Ward Citizen Forum and other civil society)</b>	At least 25% of stakeholders involved in local planning fora are aware of potential or available responses to climate change Stakeholders in local planning fora have specific information on village climate issues (drought, landslide etc)
<b>Learning and flexibility</b>	The VDC has incorporated information on past disasters into future plans The VDC has incorporated information on expected slow climate changes into future planning

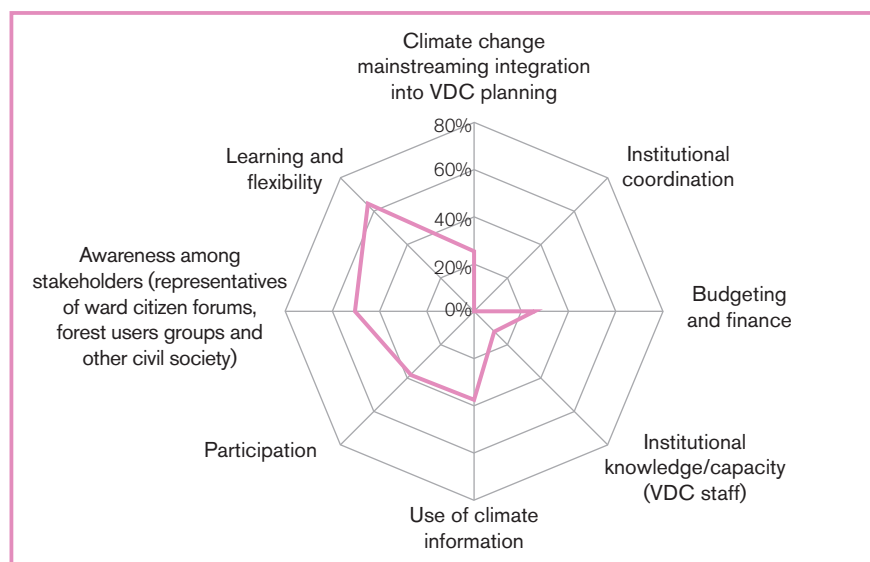
partner's programmes and considering common elements to incorporate across adaptation work in Nepal so that the interventions themselves and the connections between them are strengthened.

**Institutional scorecards.** Researchers and government partners found institutional scorecards a useful tool to monitor changes at the village (VDC) and district (district development committee, DDC) level and so help build the national picture of resilience. The team developed specific institutional indicators that would allow small changes to be tracked and also to show any pre-cursors to good climate risk management, such as learning and flexibility within local government. The study team worked with key individuals in local government to fill out the scorecards and collect evidence and narratives, and found data were easily collected and collated. The scorecards offered several categories between 'yes' and 'no'. This meant small improvements could be identified, and should help track improvements over time. The team and government partners also found it important to show the results in a clear visual way so policymakers and others could quickly assess and compare progress in any village or district over time.

Although different projects take varying approaches to institutional risk management in Nepal — with some not targeting local institutions and others working entirely through them — tracking the level of institutionalisation across the country could help in targeting future interventions as well as monitoring the effectiveness of those that do seek to build institutional capacity. Figure 1 gives some of the results from Nuwakot VDC in Rukum District and shows how the results can be clearly presented and used for policy purposes. The diagram shows for example that institutional coordination is very low in this VDC, but the VDC has good learning and flexibility (important pre-cursors to climate risk management) and is building awareness. Keeping a record of DDC and VDC scorecards and asking project interventions to also collect and update this data would be an important national tracking system.

**Community focus groups and household surveys.** Community focus groups were an important tool for understanding the community's theory of change on how it responds to climate hazards and why some people are more resilient than others. Community suggestions for indicators were sometimes at odds with local government perceptions of local resilience gained through district and village workshops. This highlights the importance of using participatory methods to design surveys on community resilience and also of making them

**Figure 1. Results from Nuwakot VDC, Rukum**



**Table 2. Percentage of respondents owning livestock, Nawalparasi District**

Year	Kolhuwa VDC (Matched VDC)	Rampur Khadauna VDC (Livelihoods and Forestry Programme)
1998	63.7	54.4
2013	74.5	74.6

specific to the local context and climate hazard. For example, some people were vulnerable to landslides in Rukum district, because they live on very steep slopes and depend on a small amount of land. In Nawalparasi, the main hazard was floods because of housing type and the location of agricultural land. Community focus groups let the research team target the household survey to the local context and climate hazard and complemented expert literature used to construct some of the more generic resilience indicators. This approach also showed the importance of combining generic resilience indicators (for comparability and high level aggregation) with contextually specific resilience indicators (to look at local changes). Such contextual changes can be changed into unitless scores if appropriate.

The household survey identified the need for a baseline (reconstructed, if necessary) from which to look at changes over time between different VDCs and against which to monitor contextual factors. VDCs being compared may have had different starting points, so it is important to look at how the indicators have changed (here over five years) rather than at just their present value. For example, the two VDCs in Nawalparasi district both had similar livestock ownership (around 74 per cent), but in Rampur Khadauna VDC this had increased 20 per cent over the past five years, whereas in Kolhuwa there had only been a 10 per cent increase (see Table 2).

Some VDCs had experienced significant changes since the reconstructed baseline that

were unrelated to climate change or the resilience interventions, such as getting access to an all-weather road. It was important to collect this information to put changes in context. Other data were needed too: climate data and secondary data were patchy, but could be used to support conclusions or to put other changes in context. For example, interviews with local stakeholders, combined with loss and damage data from agriculture and household survey data on changes in climate, let the research team build up a picture of the climate context, helping give some background to the changes in development performance. Although imperfect, this use of 'good enough' data helps to build better overall understanding.

## Overall approaches to tracking adaptation and measuring development

As well as these specific tools, the TAMD feasibility study also proposed two overall approaches for tracking adaptation in Nepal. These would integrate some of the above techniques into the national framework and system.

**An evaluative approach for a closer look.** A key issue in Nepal is the many projects and programmes addressing climate change. It can be difficult for policymakers to track the cause of district-level or national changes in resilience. This feasibility study has shown that a quasi-experimental approach can be used by a district if needed, for example to assess the effectiveness of its adaptation portfolio or where to direct future investment. This type of evaluative approach requires household and community-level data specific to the local hazard and context and so is not feasible for national level tracking.<sup>4</sup> Such an evaluation may be useful for a policymaker wanting to: check on progress in a district, consider which approaches are being most successful, and/or target resources to particular areas or aspects of local livelihoods.

**Monitoring through government systems.** There are existing data collection systems such as through the Ministry of Federal Affairs and Local Development in Nepal that could adopt indicators to track climate finance, how climate change is integrated into local planning, and changes in resilience in the villages, municipalities and districts. This would allow the government to support some of their national indicators with a more grounded understanding

of the context at the district, municipality and village level. It would also help target institutional initiatives and support.

A few key indicators from Nepal's Census and/or National Living Standards Survey could be combined with some qualitative explanation of available climate data to put development changes 'in context' with climate changes. Much of the data needed for this high-level tracking already exists and is collected in different parts of the government. The key challenge lies in how the Ministry of Science, Technology and Environment (MoSTE) can bring together existing data from across government to track adaptation planning and resilience at a high level in different districts.

Policymakers need to find a system to coordinate and collect this information in a useful way without necessarily needing to collect anything new. One way to do this would be through a simple tracking sheet of 4–6 indicators at the VDC and DDC level (including both institutional indicators and development performance) with each indicator requested and supplied by the relevant ministry and collated and monitored by the MoSTE for their relevance to climate change adaptation and resilience with the support from the National Planning Commission.

## Conclusions

The TAMD feasibility test in Nepal has tested specific tools for monitoring and evaluating climate change adaptation and made them relevant to the Nepalese context. Using institutional scorecards, community focus groups and household surveys can all help policymakers target their interventions and support within the country. These tools will also help demonstrate effectiveness to external audiences. Researchers also proposed two overall approaches to checking the effectiveness of climate adaptation in Nepal — tracking through existing systems and an in-depth evaluative approach. Using these approaches in government programmes or incorporating them into development partner's initiatives would start to build a more cohesive and integrated national framework for tracking adaptation progress in Nepal.

### Susannah Fisher, Anil Shrestha, Prabha Pokhrel and Dinesh C. Devkota

Susannah Fisher is a researcher in IIED's climate change group. [www.iied.org/users/susannah-fisher](http://pubs.iied.org/users/susannah-fisher). Anil Shrestha is a researcher at IDS Nepal. Prabha Pokhrel is a social development expert and chairperson at IDS Nepal. Dinesh C Devkota is a policy expert and advisor at IDS Nepal.



## Knowledge Products

The International Institute for Environment and Development (IIED) promotes sustainable development, linking local priorities to global challenges. We support some of the world's most vulnerable people to strengthen their voice in decision making.

The Integrated Development Society, Nepal (IDS Nepal) is a non-profit development NGO working to uplift the lives of poor and underprivileged people through community-managed development projects. [www.idsnepal.org](http://www.idsnepal.org)

### Contact

Susannah Fisher  
[susannah.fisher@iied.org](mailto:susannah.fisher@iied.org)

80–86 Gray's Inn Road  
London, WC1X 8NH  
United Kingdom

Tel: +44 (0)20 3463 7399  
Fax: +44 (0)20 3514 9055  
[www.iied.org](http://www.iied.org)

IIED welcomes feedback via: @IIED and [www.facebook.com/theiied](http://www.facebook.com/theiied)

This research was funded by UK aid from the UK Government, however the views expressed do not necessarily reflect the views of the UK Government.



## Notes

<sup>1</sup> Anderson, S (2012) TAMD: A framework for assessing climate adaptation and development effects. IIED. <http://pubs.iied.org/17143IIED/>  
<sup>2</sup> Fisher, S and Slaney, M (2013) The monitoring and evaluation of climate change adaptation in Nepal: a review of national systems, IIED, London. <http://pubs.iied.org/10064IIED/>  
<sup>3</sup> The work of ICIMOD on the mountain specific vulnerability index. See [www.icimod.org/?q=8034](http://www.icimod.org/?q=8034)  
<sup>4</sup> For the full approach see Devkota *et al.* (2013) Tracking Adaptation and Measuring Development (TAMD) in Nepal: Feasibility testing phase Q2 Report. <http://pubs.iied.org/10063IIED/>; and Fisher, S *et al.* (forthcoming) TAMD in Nepal.