

Briefing

Climate change,
drylands and pastoralism

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Policy pointers

Communities' intimate knowledge of the local environment and resources leaves them best placed to plan and achieve climate-resilient livelihoods.

Resilience planning tools support communities to articulate holistic livelihood strategies and local priorities.

Reformed state planning can create an enabling environment for effective community adaptation by learning from and incorporating community livelihood strategies.

Developing and incorporating locally relevant climate information services can have positive, rapid impacts on both government and community decision making.

Enabling resilience: bridging the planning gap in Tanzania

A drought in 2009 demonstrated the vulnerability of Tanzania's northern districts to climate change. In the past, community livelihood strategies have allowed people to remain productive in the context of climatic variability. But short- and longer-term resilience is being undermined by the government's inability to support and strengthen people's adaptive strategies to a changing climate. Communities and governments need to develop a long-sighted, coordinated approach to climate-resilient development. This briefing examines how district governments in Tanzania are improving participatory processes and making effective use of climate information to create an enabling environment to support community-led adaptation strategies.

Communities have in-depth and accumulated knowledge of their local environment. This gives them a unique understanding of how they can best adapt to the predicted impacts of climate change. 'Autonomous adaptation' is when communities use their available resources and knowledge to adapt to their changing environment. In some communities, this is organised by customary institutions, who guide communal decision making on key resources and assets.

But these institutions are not always formally recognised by centrally managed, under-resourced government bodies with different interests. This can undermine effective natural resource governance, limiting adaptive capacity and lessening the effectiveness of incremental adaptation.

Planned state-led adaptation is often necessary to implement long-term actions that support numerous beneficiaries. National governments must provide an enabling environment to ensure local people's knowledge and priorities can take the lead in planning resilience building. Governments can use state services, institutions, laws, policies and finance to provide

the support, information and resources needed to develop and learn from communal autonomous adaptation. This will help tackle the root causes of vulnerability.

Focus on Tanzania

The 2009 drought showed Tanzania's northern districts to be vulnerable to climate change. Losses of over 70 per cent of livestock left thousands of people unable to support themselves or their families.¹ Adaptation will help communities build future resilience to similar impacts.

Government efforts to support this process are still in their early stages; financial, technical and institutional capacity is limited. Research in Tanzania's Monduli, Ngorongoro and Longido districts has identified a significant gap between government and local planning processes, leading to missed opportunities for community-led resilience building (see Table 1).

Customary planning systems are responsive to seasonal change. Some groups, such as pastoralists, employ a livelihood strategy that is adapted to take advantage of unpredictable change and variability. Long-standing customary

Gaps between government and local planning lead to missed opportunities for community-led resilience building

institutions guide community resource management decisions. Traditional leaders meet to determine locations of grazing reserves and carefully manage local natural resources,

agreeing reciprocal access between clans and village-based authorities. Local farmers, while not guided by similar institutions, use assumptions about the nature of the coming rainy season to decide where to plant, which

seed type to use and how much food to store for the dry season. But the government budgeting and planning cycle does not recognise or incorporate such local plans, creating a weak enabling environment for autonomous adaptation.

Local planning processes have developed over many years in a context of ongoing seasonal variability typical to arid and semi-arid areas. This variability will probably increase as the impacts of climate change affect the area, but local people have the potential and knowledge to adapt effectively. Policy and planning processes now need reform to enable communities to cope with future climate hazards.

Local government authorities gather community opinions through a participatory process called Opportunities and Obstacles for Development (O&OD) — a series of activities designed to highlight local needs, and potential challenges to

community development. Although it encourages some transparency and accountability, it is an expensive and time-consuming process with limited effectiveness.

O&OD marks the start of the annual government planning and budgeting cycle, and always takes place in July. This is in direct contrast to community planning — a process that starts just before the onset of the wet season in October, adjusts to seasonal developments and continues to respond to changes throughout the year. This is problematic because local priorities can change between July and October, depending on the nature of the season in the intervening months. Because O&OD tools do not adequately capture the holistic and seasonal nature of planned community livelihood strategies, suggested outcomes for government planning often have limited development impact and are of limited use to local people.

Rigid, centralised budget guidelines and inadequate funding also mean that many suggested investments that arise from O&OD cannot be implemented. This leads to disappointment with, and distrust in, government activities. The process is open to manipulation by local politicians and civil servants, who are known to alter outcomes for personal political gain.

Bridging the planning gap

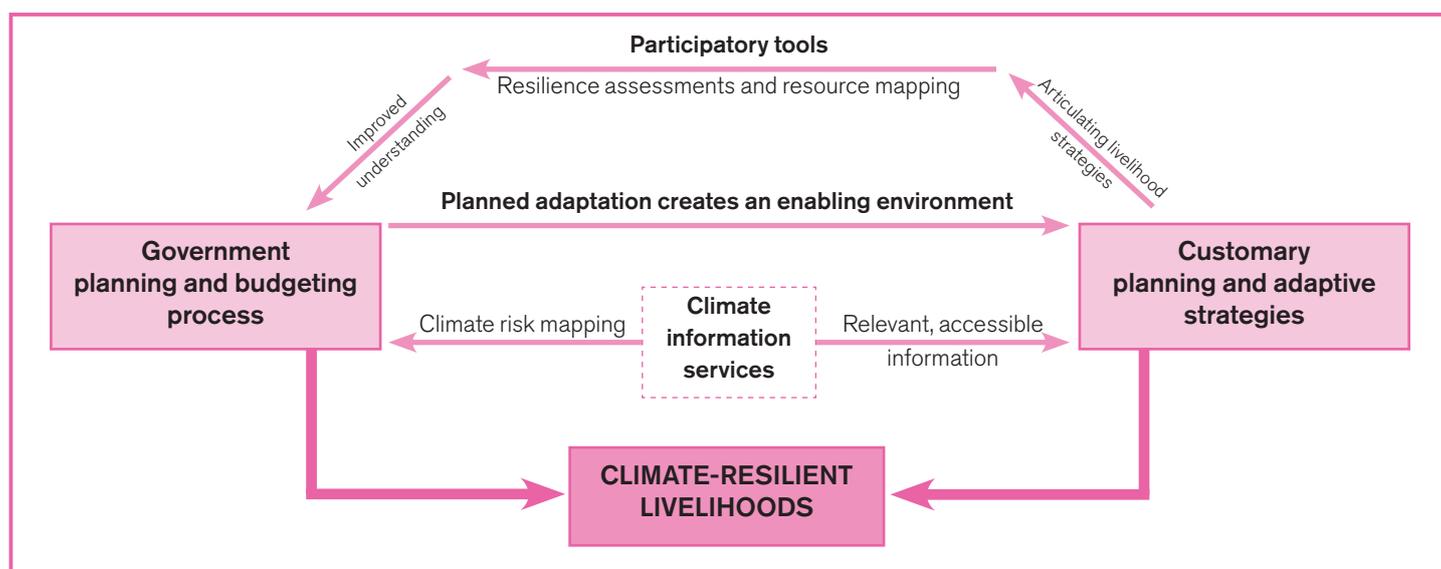
Monduli, Ngorongoro and Longido district governments have been implementing a project to support climate-resilient development, with technical support from the Tanzanian Natural Resource Forum, Hakikazi Catalyst and IIED. This has included training government staff on climate change and its impacts on typical livelihoods in arid areas, developing improved participatory community planning tools and piloting a way to draw down finance from national climate funds. The project pays particular attention to bridging the gap between government and community planning systems (see Figure 1).

Districts have piloted the use of resilience planning tools that allow local people to articulate their adaptive, holistic livelihood strategies in response to seasonal and long-term change. Resilience planning has two parts:

Resilience assessment. A five-day workshop run by government planners where community members use livelihood dynamics tools to articulate the rationale that underpins their adaptive strategies. It establishes community understanding of wellbeing and end goals for community development, identifying what makes households resilient to climate change and practical priorities to enhance their resilience.

Table 1. Highlighting the gaps between government and community planning systems

Government planning and budgeting	Community planning
Annual processes that cannot be changed once spending priorities have been established.	Flexible and continuous throughout the year. Allows communities to respond to unexpected events and seasonal change.
Centrally set spending conditions and directives limit district government ability to support locally articulated priorities.	Priorities for action are driven by status of local natural resources at any given time of year.
Participatory planning tools are not designed to capture the complexity of livelihood strategies, which leads to misunderstanding or ignorance of local needs.	Based on locally experienced needs and accumulated knowledge of how to manage climate variability. Continuous positive interface with variability.
Current budgeting guidelines focus on infrastructural investments such as schools, clinics and water points.	Focuses on governance of land and natural resources through forward planning and negotiated access rights.
Planning departments lack capacity to effectively use climate information to support planning.	Systems are constantly adapting strategies to respond to seasonal change.



Resource mapping. A participatory process where communities digitally map the resources they depend on for livelihoods, livestock movement routes, cattle dips and other important local characteristics. It helps communities articulate why certain resources are important at particular times of the year and provides a resource map they can use to support effective planning.

The planning process was enhanced by incorporating the Tanzania Meteorological Agency's climate forecasting and information services, which has two main elements:

Climate risk mapping. Assesses long-term risks and potentialities, based on predicted and past climate events. The process uses local knowledge of previous climate hazards and scientific data to gauge risks to existing resources, settlements or other infrastructures. It uses forward- and backward-looking knowledge about climate change to climate proof existing infrastructures and plan for future climate-resilient investments.

Community feedback collection exercises. Ascertain how people access climate information and what details they need to guide their livelihood decisions. Farmers and pastoralists use climate information when choosing seed types, planting locations or making decisions about moving or selling livestock.

Emerging findings and outcomes

The project has implemented resilience planning tools in nine divisions across the three districts. Each division contains several villages, usually with similar socioeconomic profiles. In the context of O&OD's village-based approach, the decision to pilot the division as the spatial unit for planning

reflects a new district-level understanding of the large areas and wide range of resources needed to practice livelihood strategies that are specific to these localities.

The resilience assessments revealed the following common key factors among people who have recovered from climate hazards:

- The ability to move livestock or cash crops unhindered across long distances to seek resources or markets, including across village, district or country borders.
- The ability to access key resources such as water, vaccinations for cattle and fertiliser for crops, through personal wealth or government services.
- Strong social links between neighbours and family members. Communal or extended family responsibility for assets and their owners is key to supporting poorer groups within the community through periods of stress.
- Ownership of assets — such as food stores or large herds — before the onset of a climate hazard provides a basis to prepare for and manage a crisis. Assets can be sold to feed the family or to invest in alternative income-generation activities.
- For poorer groups, the ability to work for others, as a herder or farm labourer, is important for accumulating assets or finding employment at difficult times. Those who cannot offer labour, such as pregnant women, women with young children, elderly and disabled people, are extremely vulnerable to the impacts of climate change.

Based on these factors and current challenges to livelihoods, the project identified four emerging priorities across the nine divisions. Water and

Figure 1. Bridging the planning gap

land use concerns were the main priorities for both farming and pastoralist communities.

1. Rehabilitating and constructing water resources to support access for humans and livestock, and for irrigation. This may be a direct response to increased competition for water resources from population growth and agricultural spread, which is further exacerbated by climate change.

2. Improved land use planning and recognition of customary resource and land management systems. O&OD tends to identify infrastructural needs, but land and resource governance play a significant role in inhibiting climate-resilient livelihoods. Pastoralists are concerned about the encroachment of agriculture, private investors, national parks and conservation areas into their traditional grazing areas and across livestock mobility routes. Prohibitions on entering private land and national parks hinder access to high-quality forage or water resources. Losing access to land for dry and wet season grazing also weakens customary planning processes. Such land loss has been further exacerbated by the impacts of climate change.

3. Market infrastructure development. This could support higher prices and an improved ability to cash in assets in preparation for dry season and drought.

4. Developing the quality of productive assets. For example, improved seeds for farmers, or breeding programmes for pastoralists, could help people take more effective advantage of the market.

Participatory resource mapping played an important role in further articulating these issues. The maps show how natural resources are used in practice, and communities can use them to advise government planners where to locate new services without degrading nearby resources through overuse. In Longido, local government authorities are already using maps to support land use planning and fairer divisions of agricultural, urban and grazing lands.

Climate risk mapping (CRM) and feedback collection exercises have had an immediate impact. CRM has already been incorporated into district plans for irrigation development, with some valley areas developing rice paddies, which they expect to be extremely productive. Feedback collection identified the failings of

seasonal radio forecasts, which most people considered irrelevant or untrustworthy. These broadcasts have since been made more relevant to local needs, detailing probable start and end dates to the season and predicting rapid temperature changes. This has rekindled trust in radio forecasts, with farmers altering seed choices and pastoralists making livestock movement decisions in direct response to them.

Moving forward

The outcomes of resilience assessments and resource mapping are already having an impact on government planning. District governments have made a commitment to incorporate the findings into planning and budgets where possible, and resource maps are being used to articulate livestock movements and support land use planning.

But challenges remain to establishing a comprehensive enabling environment for locally led resilience building. Assessment findings and investment priorities can only be incorporated if they harmonise with existing, centrally set guidelines. There remains little scope for districts to invest in projects that are outside existing budget guidelines or block grant conditions. Local government has little flexibility to adapt annual budgets in response to seasonal change or natural disasters, leaving them vulnerable to climate shocks. CRM has yet to be institutionalised, and government will need to prioritise investments for climate proofing measures or forward-looking planning.

The next phase of the project will seek to address some of these problems. Creating a Climate Adaptation Fund to draw down finance from national to district level will enable locally elected committees to prioritise how a portion of district funds is spent, introducing a level of flexibility in response to local priorities. Giving communities more authority to support their own autonomous adaptation activities will complement annual government planning processes currently in place. If government reforms can integrate priorities drawn from participatory engagement, there will be significant progress towards climate-resilient livelihoods. Reforming the planning process in this way would allow more flexibility and provide financial support to meet local needs.

Sam Greene

Sam Greene is a consultant with IIED's Climate Change Group.



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 Tanzania Natural Resource Forum seeks to improve governance and accountability in Tanzania's natural resource sector to achieve more sustainable rural livelihoods and better conservation outcomes.

Hakikazi Catalyst is a Tanzanian economic and social justice advocacy organisation working with communities to strengthen governance and generate a common understanding of the implications of policy for livelihoods and local opportunities.

Contact

Sam Greene
sam.greene@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

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Notes

¹ Melewas, J and Allport, R (2010) Assessment of the impact of the 2009 drought on pastoralist livelihoods in northern Tanzania. Report commissioned by FAO, TRIAZ the Tanzania Natural Resource Forum and VETAiD. / ² Anderson, S (2014) Getting ahead of the curve: when climate adaptation has to get radical. IIED. / ³ Msangi, A et al. (2014) Community and government: planning together for climate resilient growth. Issues and opportunities for building better adaptive capacity in Longido, Monduli and Ngorongoro districts, northern Tanzania. IIED / ⁴ For a detailed explanation of resource mapping, see Rowley, T (2013) Participatory digital map-making in arid areas of Kenya and Tanzania. Participatory Learning and Action 66, 51–66. IIED.