

PARES Case Study of Engagement & Involvement for Resilience

Case Study Title/ID: Ethiopia, Drought, Knowledge System Alignment

Country/location: Ethiopia – Dubluk, Elwaye, & Gomole Districts, Borana Zone

Crisis/challenge type: Drought

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PARES Domain illustrated by this case study:

Social Relations & Structures (Knowledge system alignment): blending traditional/indigenous knowledge with scientific/technical knowledge platforms

Recommended Actions

For Communities: Use both traditional signs and scientific information to guide decisions and preparedness.

For Government: Institutionalize platforms for meteorological experts and traditional forecasters to discuss seasonal forecasts.

Support regular dialogue before drought seasons.

For NGOs & health program implementers: Facilitate regular pre-season forums linking scientific experts with traditional forecasters and community leaders.

For Funders: Support programs that promote blending of traditional and scientific knowledge.

Invest in participatory forecasting and community engagement.

Data for this case analysis

Primary data from three districts/villages – 18 key informant interviews; 9 focus group discussions; 20 validation workshops. All collected in 2023.

Key Message

Blending of traditional and scientific knowledge – When traditional seasonal forecasting and scientific drought forecasts are jointly interpreted and aligned, communities perceive the information as more credible and actionable, enabling and more coordinated responses to drought.

Case study summary

In drought-prone Borana Zone, both scientific forecasting systems and indigenous knowledge traditions play important roles in understanding seasonal climate patterns. Meteorological offices generate scientific drought forecasts, while wise men conduct traditional seasonal forecasting using local indicators and accumulated experience. Through collaboration facilitated by disaster risk management offices, scientific experts and traditional forecasters compare and jointly interpret their forecasts before the onset of drought. When the two systems align, the information is perceived as more credible and meaningful to the community. This combined knowledge provides a stronger evidence base for preparedness planning and supports coordinated early action to reduce drought impacts.

Detailed explanation of engagement mechanisms

Context that provides the conditions in which the observed actions work

In Borana zone, communities experience recurrent drought and rely on both formal scientific forecasting systems and strong indigenous knowledge traditions. Meteorological offices at district level generate scientific drought forecasts using climatic data, while ‘wise men’ interpret seasonal patterns using environmental indicators and accumulated local experience. Traditional forecasters hold strong cultural legitimacy and are widely trusted within communities. At the same time, scientific forecasts provide broader climate analysis that can identify emerging patterns. Disaster risk management offices, health extension workers, agricultural development agents, and local leaders create institutional links between technical experts and communities. This coexistence of knowledge systems, combined with repeated exposure to drought creates a setting where communities actively seek reliable seasonal information. As a result, there is an opportunity for dialogue between scientific and traditional forecasting approaches, enabling communities to draw on multiple sources of knowledge when understanding drought risks.

The actions (mechanisms) that were observed to lead to resilience outcomes

The pathway operates when scientific and traditional forecasting processes are brought together through structured dialogue and interpretation. Meteorological experts generate seasonal drought forecasts, while wise men

develop predictions based on local indicators and experiential knowledge. Through discussions facilitated by district disaster risk management offices, the two groups compare observations and interpret seasonal signals before anticipated drought periods. Rather than replacing one system with another, the process allows insights from both to inform a shared understanding of expected conditions. When scientific forecasts and traditional indicators align, confidence in the predictions increases; when they differ, discussions help clarify uncertainty and refine interpretation. The blended insights are then communicated to communities by elders, local leaders, health extension workers, and agricultural development agents in locally meaningful ways, strengthening the credibility and relevance of the information.

Observed outcomes

As a result of this knowledge blending process, communities develop greater confidence in drought risk information and a clearer understanding of seasonal conditions. The combination of traditional insights and scientific forecasts increases the perceived reliability and cultural relevance of early warning messages. Communities become more willing to discuss risks collectively and consider preparedness actions before drought impacts intensify. Households and local leaders are better able to plan ahead, adjust livelihood strategies, and protect assets based on anticipated climate conditions. This shared understanding supports coordinated decision-making and reduces uncertainty about when and how to respond. Over time, the use of blended knowledge strengthens the community's ability to anticipate and respond to recurring drought risks, contributing to improved preparedness, reduced vulnerability, and enhanced resilience.

Case Evidence

Vignettes #7 and #8 in Ethiopia – Drought – Supporting Evidence document

Related Case Studies

Social relations and structures

Ethiopia – Drought – Trusted Leaders and Intermediaries

Ethiopia – Drought – Social Capital and Collective Action

Learning and capabilities

Ethiopia – Drought – Embedded and Equitable Partnerships

Other relevant case studies

Ethiopia

Ethiopia – Covid19 – Resource Mobilization and Management

Ethiopia – Covid19 – Multi-sectoral Collaboration

Drought

Uganda – Drought – Trusted Leaders and Intermediaries

Uganda – Flood – Drought – Social Capital and Collective Action

Uganda – Flood – Drought – Multi-stakeholder Coordination

Uganda – Flood – Drought – Embedded and Equitable Partnerships