



CBM UK PROJECT EVIDENCE BRIEF #11

Promoting inclusive climate resilience in Bungoma County, Kenya

Disability leadership, early warning systems and livelihoods

Project snapshot

Promoting inclusive climate change resilience in Bungoma County

Locations:

Cheptais, Kanduyi and Kopsiro in Bungoma County.

Timeframe:

April 2023 – December 2025.

Project partners:

CBM Global, Kenya Red Cross, The Disability Empowerment Network (DEN) and the county government of Bungoma.

Project funders:

Australian NGO Cooperation Program – DFAT ANCP

Project context

Bungoma County is predominantly rural and 78% of households rely on rain-fed agriculture.¹ The region faces high levels of multi-hazard risk from floods, landslides and prolonged periods of drought and 96% of respondents in the endline survey had experienced at least one type of climate related disaster. Soil degradation, crop destruction and market price volatility endanger agricultural livelihoods and have contributed to high levels of food insecurity, with 57.48% of households unable to meet their nutritional needs.² This setting provides important insights for other regions disproportionately impacted by climate risk.

Centred on the needs of marginalised groups, including youth, women, indigenous groups and people with disabilities, the project supported inclusive early warning systems, climate resilient livelihoods and fostered leadership among local authorities and organisations of persons with disabilities (OPDs). These activities reflected all four pillars of action outlined by the Global Early Warnings for all campaign – risk knowledge, detection and monitoring, dissemination and communication and response capacities.³

Project outcomes

8,417

people directly supported, including 2,380 people with disabilities

12,000+

community members educated on climate action via community engagement

7,000

households assisted with livelihood strengthening and diversification

16

local government first responders trained in inclusive emergency preparedness and first aid



Image caption: Wycliffe, 49, received a white cane and training on climate change through the project. Here he is receiving seedlings from a member of the Kenya Red Cross team.
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¹ [County Government of Bungoma \(2024\) Annual Development Plan \(ADP\) FY 2025/2026.](#)

² [Stella, W.M. \(2021\) 'Food and nutrition security status of households in Bungoma County Kenya'.](#)

³ [WMO \(2022\) Early Warnings for All: The UN Global Early Warning Initiative for the Implementation of Climate Adaptation.](#)

Overview

Disability inclusive resilience building and local leadership can strengthen institutions, increase anticipatory action and reduce risk across entire communities. Insights from a project implemented in Bungoma County Kenya, show that climate resilient livelihoods and leadership by local authorities and organisations of persons with disabilities (OPDs) are essential components of inclusive early warning early action (EWEA) systems. These are useful for policy makers, programme implementers and funders that wish to explore how to facilitate inclusive early warning early action systems.

When systemic barriers to participation are addressed, such as registering people with disabilities with national bodies, people with disabilities take protective action at the same rates as other groups. This aligns with the principles of the UN Convention on the Rights of Persons with Disabilities⁴ and the United Nations Office for Disaster Risk Reduction (UNDRR) Sendai Framework for Disaster Risk Reduction⁵ which affirm that exclusion is driven by systemic barriers not individual capacity.

Introduction

As climate change increases the magnitude and frequency of extreme weather events, some regions face disproportionate risk.⁶ In the Global South, many households in rural regions depend heavily on subsistence farming, and natural hazards such as floods, landslides and prolonged droughts threaten these livelihoods. The UNDRR Global Survey report on disability shows that 85% of people with disabilities have not participated in community disaster management and risk reduction in their communities, and 56% lack access to risk information.⁷ These gaps highlight the urgent need for action on disability inclusive disaster risk reduction (DiDRR).

Guided by evidence from a project in Bungoma County, Kenya, this project evidence report demonstrates the importance of shifting local decision-making to marginalised groups and their representative organisations. This can drive more equitable and effective resilience building. Co-designing inclusive early warning systems with people with disabilities, youth and indigenous groups strengthened institutional capacity and coordination among local authorities and OPDs. This improved local knowledge and data on people with disabilities, supported their registration to the Government's National Council for Persons with Disabilities (NCPWD), and increased their representation in local governance processes.

⁴ [United Nations \(2006\) Convention on the Rights of Persons with Disabilities. New York: United Nations.](#)

⁵ [UNDRR \(2015\) Sendai Framework for Disaster Risk Reduction 2015–2030.](#)

⁶ [IPCC \(2018\) Global Warming of 1.5°C. An IPCC Special Report. Edited by V. Masson-Delmotte et al.](#)

⁷ [UNDRR \(2023\) 2023 Global Survey Report on Persons with Disabilities and Disasters.](#)

Methodology

This brief draws from an endline evaluation that used quantitative and qualitative methods, a baseline assessment, programme reports and CBM’s monitoring, evaluation and learning mechanism⁸. The endline assessment included a survey of 739 households carried out across the project locations and two control locations, Kaptama and Webuye West. This included people with disabilities, youth and indigenous populations and was disaggregated by age, sex and disability. Survey findings were complemented by key informant interviews with partners, local officials and community leaders as well as focus group discussions with women, youth, people with disabilities, indigenous groups and men from marginalised groups.

What the evidence tells us

The following section presents key learnings from the project endline evaluation and internal reporting process. Tailored approaches for different at risk groups enabled enabled people with disabilities to access warning information and take protective action at comparable rates to other groups.



Source: Pulse Kenya Consults Ltd (2025) endline evaluation.

⁸ Pulse Kenya Consults Ltd (2025) Endline evaluation of Promoting Inclusive Climate Change Resilience in Bungoma County. Unpublished evaluation report for CBM.

Inclusive communication and dissemination

Key finding:

Early warning messages are most effective when alerts are locally generated, disseminated through multiple channels, and tailored to the needs of different marginalised groups.

"Before, we waited for disasters to happen. Now when warnings come, we prepare early by moving animals and storing food."

FGD Participant, Cheptais

The effectiveness of early warning messages relies on more than technical forecasting, it requires timely, clear and accessible information. This must reflect local contexts, use multiple dissemination channels and tailor messages to the response capacities of different marginalised groups. This is necessary for facilitating accessible warning messages, a critical part of dissemination and communication, one of the four pillars of the UNDRR framework for EWEA systems.⁹

In collaboration with the Meteorological Department of Kenya, the project established an EWEA system that combined locally generated indigenous knowledge on weather patterns with scientific meteorological data. This enhanced the relevance, accuracy, and community ownership of early warning information. To strengthen accessibility, alerts were tailored to different at-risk groups and disseminated through community influencers, community radios, SMS alerts, visual signboards, public address systems and local language posters. These strategies were developed through a co-production workshop at the start of the programme that included people with disabilities, indigenous groups, women and youth.

Access to warning messages was substantially higher among all populations in project areas (92.9%) compared to control locations (63.5%). In project areas only 6.9% of people with disabilities and 8.9% of youth reported being unable to act because they did not receive a warning message compared to 30% and 40%, respectively, in project areas. Community members also reported increased trust in warning information and increased anticipatory action. This highlights the importance of local knowledge and community ownership to improve the accessibility of warning messages and encourage preparedness behaviours. These findings demonstrate that participation by marginalised groups in the design of EWEA systems can strengthen accessibility and increase anticipatory action across entire communities.

⁹ [UNDRR \(2025\). UNDRR Strategic framework 2026-2025](#)

Supporting response capacities

Key finding:

When people with disabilities receive the support needed to act on warning information, they take protective action at the same rates as other groups within the community.

“Messages come, but without guidance or support, it is hard to act quickly.”

FGD, People with Disabilities, Cheptais

Early warning messages only translate into early action when preparedness capacities and barriers to participation are addressed.¹⁰ Factors such as mobility limitations, inaccessible shelters, risk perception, levels of trust and cultural attitudes can all influence whether people are able or willing to act on warning messages and take protective actions such as sheltering in place, evacuating, having an emergency bag ready or food preparation.

In partnership with local ODPs and the Ministry of Health a total of 277 people with disabilities accessed appropriate assistive devices such as wheelchairs, hearing aids, prosthesis, walking sticks and white canes. Alongside tailored disaster risk and climate resilience training, this helped many individuals to increase their anticipatory capacity and confidence. In the endline evaluation 90.5% of those that received warning messages reported taking at least one protective action compared to an average of 63.5% in control areas. This included 93.1% among people with disabilities, 91.4% among youths, 92.5% among women and 94.5% among men.

The similarity in these results among different groups across project areas shows that tailored support and evacuation planning enables all groups to act on warning messages. This is important because 17% of people with disabilities surveyed in the UNDRR Global Survey Report on disability and Disasters reported that they still faced difficulties evacuating despite sufficient access to early warning messages. Critically, people with disabilities showed the highest level of increase in their perceived safety and ability to prepare for extreme weather events compared to other groups. This highlights the importance of tailored mechanisms to remove barriers to participation for people with disabilities.

¹⁰ [UNDRR and WMO \(2025\) Global Status of Multi-Hazard Early Warning Systems 2025.](#)

Climate resilient livelihoods and early warning

Key finding:

Livelihood diversification is a more effective strategy for reducing household economic and agricultural loss from extreme weather events than startup capital alone.

"We no longer depend on maize alone. When rains fail, poultry and vegetables still help us survive"

Participant from Kopsiro

Strengthening livelihoods and ensuring food security are essential for building resilience to extreme weather events, including those associated to climate change. Early warning systems and climate resilience interventions and awareness raising must include mechanisms to protect and diversify people's livelihoods.¹¹ Agricultural diversification strategies can also improve soil health, biodiversity and crop resilience which can reduce household losses from extreme weather events.

In this project, targeted livelihood support, including diversification strategies, helped participants to foster multiple income streams, maintain economic stability and reduce household losses. After training and skills workshops a significant number of households adopted climate-resilient livelihood strategies (from 44.5% to nearly 90%). Diversifying crops and expanding to animal farming supported access to milk consumption and sale and provided manure to increase soil health and productivity. Multiple participants in focus group discussions explicitly discussed the connection between early warning systems, livelihood diversification and reduced agricultural and economic losses. Many also stated that when warning messages come, they now take action to protect their livelihoods, such as storing food or moving livestock.

These strategies led to household income increases across all target groups, with the highest relative gains recorded among youth (38.6%), reflecting strong responsiveness to skills training and livelihood interventions. This also reduced household losses, with 88% of households in project areas reporting reduced losses compared to 60% in control areas, where some reported increases. Startup capital was often found to be diverted when households couldn't meet their basic needs. This creates a reinforcing cycle where limited livelihood diversity reduces the ability to meet basic needs and slows recovery from environmental shocks. For this reason, livelihood diversification should not be seen as a value add, but a core component of effective EWEA systems and resilience building.

¹¹ [UNDRR and WMO \(2025\) Global Status of Multi-Hazard Early Warning Systems 2025.](#)

Local leadership by organisations of people with disabilities

Key finding:

Local leadership by OPDs increased opportunities for people with disabilities to access legal rights, community services and social protection, this reinforces resilience over time.

The project worked directly with 36 OPDs on various aspects of disability mainstreaming. Their leadership helped identify barriers to participation and improve access to services for people with disabilities. Throughout the project, 619 people with disabilities were registered with the National Council for People with Disabilities (NCPWD). This helps response organisations identify where people are, which is crucial for effective preparedness and response. For individuals this unlocks access to services and social protection. Placing registration officers within rural communities decentralised the registration process and removed the need for people to travel long distances to register at central offices.

Strengthened relationships between OPDs and local government also fostered institutional and policy gains. As a direct result of the project, the Climate Change Committee in each ward now includes at least one person with a disability. Local OPDs also played a critical role in the development of the first 'Bungoma County Climate Change Policy' and its action plan which explicitly mentions people with disabilities and strengthening partnerships with OPDs as one of its guiding principles. Catalysed by engagements within this project, a senior leader of local implementing partner and OPD, DEN, now holds an official position within the Bungoma County Government. This demonstrates that when preparedness systems are designed in partnership with local actors, it can drive long term social and institutional benefits that extend far beyond disasters and their recovery processes.

Learning from experience

1. Investing in climate resilient livelihoods is an essential component of early warning systems and response capacities.

In this project multiple participants explicitly discussed the connection between early warning systems, livelihood diversification strategies and reduced agricultural and economic losses. Though these strategies did not lead to substantial increases in income, particularly among lower income groups and people with disabilities, they did enable households to take anticipatory action, reduce loss and recover more quickly from extreme weather events. This highlights the importance of combining early warning systems with livelihood diversification strategies, but also the necessity of measuring livelihood resilience by more than income metrics.

2. Community ownership and local leadership enhances the sustainability of climate resilience interventions.

Local leadership had clear positive impacts across Bungoma County. This built stronger connections between OPDs and local authorities and increased the representation of people with disabilities in local decision-making. This allows people with disabilities to impart their expertise and ensures that activities are contextually relevant to the needs of local populations. This ensures the sustainability of inclusion gains and presents opportunities to scale up institutional and policy change.

3. Locally led partnerships must recognise the diversity, capacities, and unequal power dynamics within and across OPDs.

A key learning was the need to ensure balanced access across different disability groups, as people with physical, sensory, intellectual and psychosocial disabilities face different challenges to access and participation. Tailored outreach approaches are required to connect to underrepresented OPDs and people with disabilities. This is important because women, older adults, people with difficulties communicating and remembering and those in poverty are less likely to be associated with OPDs¹². NGOs, funders and policy makers must recognise the intersectional dynamics that shape marginalisation. This includes recognising the contributions of smaller and informal OPDs who are often unacknowledged, underrepresented and underfunded. Strengthening alliances with a variety of OPDs, enhancing OPD capacity-building, and understanding the lived experiences and community-based realities of OPDs are essential for strategic locally led partnerships.

¹² Banks et al., 'How representative are organisations of persons with disabilities? Data from nine population-based surveys in low- and middle-income countries'.

Recommendations

1. Integrate livelihood considerations into inclusive early warning systems.

In regions that rely heavily on agricultural livelihoods funders and programme implementors should invest in livelihood diversification strategies. Monitoring the impact of livelihood strategies should include income resilience indicators such as stability, recovery time, savings and reduction in losses as well as increases in income.

2. Institutionalise OPD leadership in climate and disaster governance.

Policy makers and programme implementers should strengthen OPD participation and leadership within disaster risk management and climate governance structures. This must go beyond consulting people with disabilities and include their leadership in the design, implementation and evaluation of policy and practice. This can improve decision-making, accountability, and local ownership of resilience systems. This requires adequate resourcing and capacity building of OPDs.

3. Recognise and remove barriers to early action for people with disabilities.

Policy Makers and programme implementers should prioritise the removal of systemic barriers that prevent people with disabilities and other marginalised groups from acting on early warning information. This includes preparedness support, accessible communication, disability registration pathways and access to assistive devices where required.

4. Utilise preparedness programmes to strengthen representation and access to services.

All stakeholders should utilise the opportunity presented during preparedness interventions to connect and increase the registration of marginalised groups such as youth and people with disabilities to available community-based services. This includes early warning systems, health services and representative civil society organisations such as OPDs.

5. Strengthen disability-disaggregated data and evidence.

Reporting and monitoring, evaluation and learning systems should systematically collect and report disability-disaggregated data. Data disaggregation must move beyond broad demographic categories to better understand the intersecting nature of factors such as disability, age, gender and socioeconomics.

Conclusion

Effective disaster risk reduction and climate resilience requires integrated, inclusive, and context-specific EWEA systems that are supported by tailored preparedness measures. In this project, coproduction increased the accessibility and reach of EWEA systems and promoted more effective anticipatory action. Livelihood diversification was shown as a crucial component of reducing household losses and ensuring effective EWEA systems, demonstrating its value for reducing disaster risk. Donors and programme managers must recognise that marginalised groups, particularly people with disabilities, may require additional support, such as assistive devices, to engage with and act on warning messages.

To build on these gains the next phase of the project will expand to more sub-counties and continue to strengthen the leadership capacity of OPDs. This will include greater attention to the intersectional drivers of vulnerability and exclusion, community-led risk mapping and the “Training of Trainers” to expand a network of community-based climate, gender and disability inclusion champions. The aim is to scale-up institutional changes that support disability inclusive governance and increase the capacity of marginalised groups to prepare for and respond to climate related hazards.



Image caption: Wycliffe became a community climate champion through the project. He now plants seedlings to protect against deforestation and speaks to churches and other local groups about climate change. ©CBM UK/Plateau Media.

Acknowledgements

This brief was collaboratively produced by CBM UK, CBM Australia and the CBM Kenya Country Team. This was made possible through the contributions of many individuals and organisations. We extend our appreciation to implementing partners The Kenya Red Cross and DEN for their leadership throughout the project and to all interviewees, community members and focus group participants who generously shared their experiences and insights. We also thank our funders Australian NGO Cooperation Program – DFAT ANCP for making this project possible.

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