

Strengthening Early Warning Systems for All: Evidence and Lessons from Last-Mile Communities



Early warning systems save lives, but only when people act on warnings.

Drawing on [community-based studies](#) across 15 contexts worldwide, this research shows that even where early warnings exist, they often **fail to reach people or trigger action**. Focusing on last-mile communities — those who are geographically isolated, socially marginalized, or otherwise hard-to-reach — the report explains **why warnings break down** and how to **make them work for everyone**.

Barriers and Enablers across the Four EWS Pillars

Barriers	Enablers
<ul style="list-style-type: none">⚠ Low risk perception due to limited exposure to severe events or lack of involvement in risk knowledge activities⚠ Climate shifts undermining prior risk knowledge and traditional indicators	 Disaster Risk Knowledge
<ul style="list-style-type: none">⚠ Data gaps and weak local forecasting capacity, including equipment, skills, coordination⚠ Technical or overly generic forecasts that are difficult to understand or use for decision-making	 Monitoring & Forecasting
<ul style="list-style-type: none">⚠ Late or unreliable delivery caused by weak infrastructure, poor coordination, or single-channel dependence⚠ Low trust in the source or messenger, with warnings dismissed as spam or misinformation when unfamiliar	 Warning Dissemination & Communication
<ul style="list-style-type: none">⚠ Economic precarity forces people to choose livelihoods over safety, leading many to disregard warnings⚠ Delayed warnings reduce the lead time needed to act, especially those with mobility or access constraints	 Preparedness to Respond

Core Recommendations for Effective EWS



Promote Inclusivity: Center real needs, capacities, and priorities in EWS design

- ↗ Engage marginalized groups as co-owners in EWS design, operation, and evaluation
- ↗ Build feedback mechanisms so community input drives improvements
- ↗ Embed inclusion in policy, governance, and sustained financing



Ensure Accessibility: Remove barriers to receiving and understanding warnings

- ↗ Use layered, redundant channels based on the local info landscape
- ↗ Apply universal design so messages are clear and consistent across formats
- ↗ Strengthen last-mile delivery through trained volunteers and trusted intermediaries



Enable Actionability: Make it possible to act on warnings in real-world conditions

- ↗ Provide warnings with clear, feasible protective actions – not just hazard description
- ↗ Link warnings to anticipatory action support so people have resources to act in time
- ↗ Invest in community-led preparedness education and planning

Read the full report



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