

Webinar Summary — 24 June 2026

Where the System Doesn't See: Geography, Identity, and Access

How place and identity shape last-mile access to warnings

About this session

The second of [four webinars](#) in Reaching the Last Mile, a series sharing findings from **15 community-level studies across 14 countries** supported through the [GDPC Research Grants Program](#). The series carries one argument: coverage does not guarantee protection. A system can reach a geographic area on a map while the people inside it never receive, understand, or act on a warning.

Where [Session 1 examined](#) who is excluded by *how warnings are designed and delivered*, Session 2 turned to a related question: ***who do early warning systems fail to see — because of where people live, who they are, or how decisions get made at the local level — and what would it take to reach them?*** Three researchers presented evidence from very different settings: Deaf and Hard-of-Hearing communities in Vietnam, drought-exposed farming communities in Eswatini, and flood-prone rural communities in Albania. Across all three, **similar patterns surfaced**: the warning reaches the place, but identity, language, trust, and local conditions decide whether it reaches the person.

► Watch the full session: [Webinar 02 recording](#)

1. Breaking the circuit of information poverty: early warning for Deaf and Hard-of-Hearing communities

Abdul Rohman · RMIT University Vietnam

The problem

Vietnam is home to roughly **one million Deaf and Hard-of-Hearing (DHH) people**, and for them physical proximity to a warning is meaningless if the warning is inaccessible. Standing next to a siren offers no protection if you cannot hear it. Rohman's central argument is that **the last mile is cultural, not geographic**: current metrics report "100% geographic reach" while delivering close to 0% informational coverage to this group, because they conflate proximity with access. Disability interventions are also frequently generalised across very different groups, so the specific needs of DHH communities, which are about language and sensory access, not mobility, get missed.

The study

Drawing on [research with DHH communities in Vietnam](#), Rohman documented how warnings move through three official modalities and where each one breaks down — then traced the informal system communities built in their place. The work is grounded in the lived experience of community members and DHH club leaders, and treats their existing coping strategies as evidence rather than anecdote.

Where the official system breaks down

- **Sirens and loudspeakers** — a sensory barrier. They reach broad areas instantly, but DHH individuals (especially those living alone) are bypassed entirely unless a hearing neighbour intervenes.

- **Long, dense text alerts** — a literacy barrier. Multi-paragraph official announcements are hard to parse for many whose first language is sign, a gap widened by systemic exclusion from formal education.
- **National TV sign-language interpreting** — an identity barrier. Broadcasters use only the standardized northern sign system, so audiences in central and southern Vietnam may not follow it. The alert becomes culturally unfit and effectively meaningless.

What communities built instead: the grassroots resilience engine

In the absence of accessible official warnings, DHH communities engineered their own four-step pipeline. A mainstream broadcast (often inaccessible text or audio) is the raw material; a **trusted hearing ally** — usually a family member — summarises the complex announcement; DHH leaders then **co-create accessible content**, capturing TV screenshots, recording custom sign-language videos in the local dialect, and writing simplified subtitles; and the finished alert is **micro-distributed** instantly through closed, highly trusted Facebook and Zalo groups. The practical insight for practitioners: these groups are not informal social chatter but **highly efficient, life-saving infrastructure to integrate with, rather than to build over.**

How to engineer an inclusive alert

- Prioritise embedded sign-language video over complex text, using the regional dialect (northern, central, or southern) native to the target audience.
- Use concrete, real-world photography — actual shelters, real life jackets, specific flooded roads — not generic vector illustrations or animation. As one DHH club leader put it, the community is accustomed to images and video, and text can be confusing.
- Overlay stark, high-contrast universal symbols (a green check for safe actions, a red cross for danger) to bypass literacy barriers — avoiding stylised or artistic icons that can be read differently across sign systems.



Recommendations

- **“Datafy” vulnerability.** Local authorities should proactively map households with DHH members before a disaster, so targeted warnings can actually be sent.
- **Move from passive broadcast to direct digital outreach.** Shift from public loudspeakers to targeted SMS and localised Facebook pushes that reach DHH individuals where they already congregate online.

- **Invest in trusted social networks.** Maintain detailed, privacy-respecting databases of vulnerable locations and develop community champions to bridge gaps.
- **Design with, not for — from the start.** Co-design should begin at the outset and continue through evaluation, not start at the prototype-testing stage; plan for sustainability so knowledge transfers as people come and go.

In the Q&A, Rohman extended the model to Indonesia — where he lives about 10 km from the Merapi volcano — arguing that a “one-size-fits-all” warning is a fallacy across 17,000+ islands and hundreds of cultures. The task for designers is to **capture how communities already read their environment** (cloud shapes, bird and animal behaviour) and make those organic practices transferable, rather than imposing outside assumptions.

► Rohman — Breaking the Circuit of Information Poverty: [View the slides](#) / [Read the full paper](#)

2. Received but not actioned: barriers to drought early warning in Eswatini

Felix Mamba · University of Eswatini

The problem

In Eswatini’s most drought-vulnerable regions — Lubombo and Shiselweni — the problem is rarely that a warning never arrives. It is that warnings are received but not acted upon. Mamba reframed meaningful coverage accordingly: **not just the successful delivery of a signal, but a community’s ability to interpret it, trust it, and translate it into protective action.** The stakes are high. Over **70% of the population relies on rain-fed agriculture**, and the 2015/16 El Niño drought caused an economic loss of about E3.84 billion — roughly 7% of GDP — compounded by chronic poverty, water shortages, and land degradation.

The study

A mixed-methods study targeted the **most drought-prone, remote, agriculture-dependent communities through risk profiling.** It combined a household survey of 796 homesteads (face-to-face) with key-informant interviews — community leaders, household heads, community motivators, and the meteorological department — and focus group discussions, aiming to surface both the barriers to action and locally-adapted recommendations.

Key findings

- **Reach is high, action lags.** About three-quarters of respondents could physically access warnings and most received them, yet a meaningful share never converted that information into protective action — the central disconnect of the study.
- **Language excludes.** Warnings are issued mainly in English, a second language; many rural residents use siSwati, so the message does not land in the language people actually speak.
- **No “how-to,” and probability misreads.** Technical phrasing such as “above-normal rainfall” does not tell a farmer whether to plant. Many also misread probability — a “90% chance of rain” that does not materialise once is enough to destroy trust in the source.
- **Distrust suppresses response.** Roughly 47% of respondents perceive official warnings as unreliable, making them hesitant to act; gender and age further shape who can access and act on information.
- **No feedback loop.** Communities have no channel to report real-time impacts back to authorities, so dissemination never improves.

Indigenous knowledge as a parallel — and trusted — system

Nearly all community members lean on locally-reliable indicators, which they often trust more than official forecasts. These include the call of the rainbird (Burchell's Coucal), heavy fruiting of the dwarf turkey berry signalling a drought year, the flowering of certain trees before rain, and the shape of the moon. Mamba reported tracking the rainbird's call against observed rainfall and finding it reliable around **98% of the time**. Critically, many of these indicators have a plausible scientific basis, and communities use official and traditional signals as a **mutual validation system**: when the two agree, people act; when they conflict, they fall back on the indigenous system they have always trusted.

Recommendations

- **Integrate indigenous indicators into formal forecasts** to raise the perceived legitimacy and uptake of official warnings, and validate local practices to build credibility.
- **Translate and simplify.** Issue warnings in local dialects, strip out jargon, and add clear protective actions; pair this with capacity-building so local authorities and citizens can turn alerts into action.
- **Build two-way feedback and post-event consultation** to learn which channels actually worked during a real threat and refine accordingly.
- **Use redundant, multi-channel delivery** (SMS, social media, and community meetings alongside radio), strengthen rural network coverage, modernise hydromet stations, and formalise institutional roles through national legislation.

Asked about communities with no mobile or internet coverage, Mamba pointed to **existing human infrastructure — community meetings** — as the most dependable fallback channel where technology fails.

► **Mamba — Overcoming Barriers to Actionable Early Warnings in Eswatini:** [View the slides](#) / [Read the full paper](#)

3. Bridging the gap — inclusive early warning strategies in last-mile rural Lezha

Ita Bonner · Agricultural University of Tirana, Albania

The problem

Albania has a high World Risk Index (2023) and ranks among the top 20 countries in Europe and Central Asia for disaster displacement (2008-2021). **Lezha**, in the north, is a compound-risk environment: historically wetland, it was reclaimed during the communist era and left structurally flood-prone, and it has experienced two of Albania's strongest earthquakes in 40 years. A national Multi-Hazard Early Warning System exists — but **its reach to last-mile communities was unknown**. Bonner structured the question around three tests a warning must pass to be useful: can people **access** it, **comprehend** it, and feel able to **act** on it?

The study

A survey of 270 residents across three rural administrative units — Balldren, Shëngjin, and Shënkoll — examined each stage of that chain, alongside humanitarian-aid access and community-voiced needs. Bonner brought deep local knowledge to the work, having previously written the municipality's disaster-response plan for children with disabilities.

Access, comprehension, action — a chain that breaks at every link

- Access. **46% do not receive warnings without actively seeking them**, and only 11% find information easy to access. Television dominates (89%), social media reaches 58%, and SMS reaches just 5% — so investing in text

alerts would be a misplaced effort. Barriers cluster around unstable internet, poor phone signal, power outages, late-arriving information, and the absence of a trusted official source.

- **Comprehension. 69% say information is not communicated clearly** (or did not know), and only 6% report excellent understanding. Comprehension tracks strongly with age and education — no one educated only to primary level reported excellent understanding — and 91% do not consult additional resources to fill the gap.
- **Action. 94% have taken no preparedness measures** and 70% have never taken part in an emergency drill. Crucially, this is not explained by gender, age, or location — it is systemic across all communities studied.

Aid that does not reach the people who need it

Humanitarian support is concentrated in urban centres. Only **15% can access timely aid during or after a disaster**, 84% feel neutral and not resilient, and just 4% of women (versus 11% of men) confirm they can reach assistance — a downward spiral for households that are already vulnerable and often do not know aid exists. Many farmers also will not evacuate unless their livestock can be moved to safety, putting both livelihoods and lives at risk.

Recommendations

- **Diversify channels and simplify language.** Combine TV, social media, Albanian-language mobile apps, and printed materials; use plain, non-technical, local language (Albanian, not English); and help communities identify which sources are trustworthy.
- **Run regular, hazard-specific training.** At least annual community exercises tied to local hazards — training was both underused and explicitly requested by residents.
- **Keep face-to-face engagement central.** Involve local leaders (“village elders”), schools, and businesses, and train volunteer groups to support dissemination and response — design with, not for.
- **Bring aid beyond urban centres.** Establish known gathering and evacuation points in rural areas and ensure women and lower-income households are not excluded from support.

In the Q&A, Bonner added **radio and trusted community leaders** as effective channels where connectivity fails, noting that in parts of Albania these leaders are called “elders” for their role, not their age.

▶ **Bonner — Inclusive early warning strategies in last-mile rural Lezha:** [View the slides](#) / [Read the full paper](#)

Cross-cutting takeaways

- **Coverage ≠ reach.** In all three studies, being inside a “covered” area did not mean a warning arrived, was understood, or was acted upon — because of sensory and language barriers, missing protective guidance, late timing, or eroded trust. Measure people reached, not geography covered.
- **Trust is the trigger for action.** A received signal only becomes a protective decision when people believe it. Source credibility, two-way feedback, and respect for indigenous and local knowledge were decisive across Vietnam, Eswatini, and Albania.
- **Language and clarity decide whether a warning works.** English-only or jargon-heavy alerts failed in both Eswatini and Albania; plain, local-language messages with concrete “what to do now” guidance consistently outperformed them.

- **Communities already have working channels.** Trusted micro-networks (Facebook/Zalo groups), community meetings, radio, and local leaders are existing life-saving infrastructure. The consistent prescription is to integrate with them, not replace them.
- **Design with, not for.** Every presenter independently arrived at the same conclusion: genuine, sustained participation of last-mile communities — from the start of design through evaluation — is what makes warnings relevant, trusted, and actionable.

Resources & additional links

- ▶ Series landing page: [Reaching the Last Mile](#)
- ▶ Meta-synthesis report (full report, executive summary, infographic): [GDPC cross-study meta-synthesis](#)
- ▶ All 15 research projects: [Meet the Researchers](#)