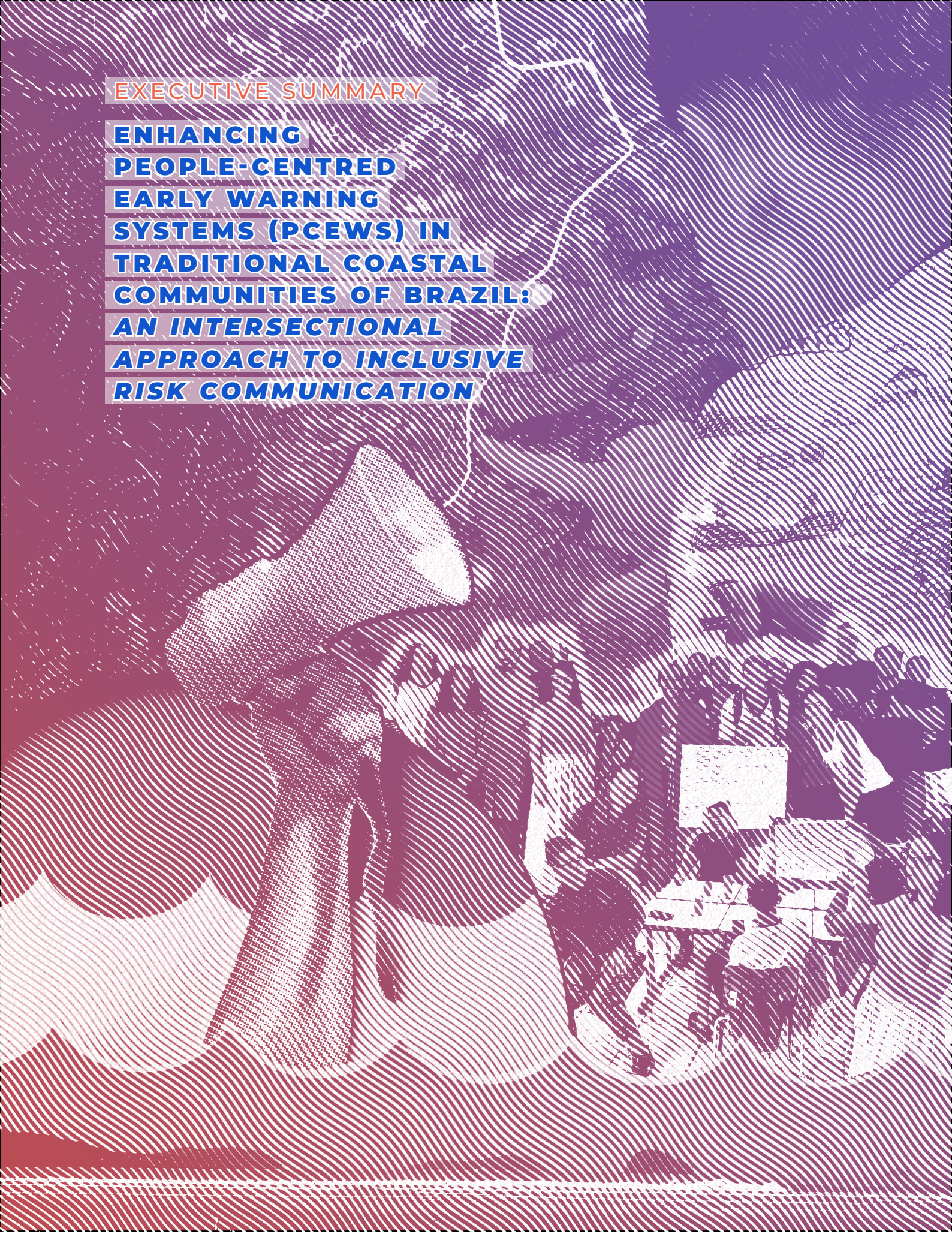
EXECUTIVE SUMMARY

ENHANCING PEOPLE-CENTRED EARLY WARNING SYSTEMS (PCEWS) IN TRADITIONAL COASTAL COMMUNITIES OF BRAZIL: *AN INTERSECTIONAL APPROACH TO INCLUSIVE RISK COMMUNICATION*



Global Disaster Preparedness Center

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This paper builds upon the Inclusive guidelines on Disaster Risk Management to acknowledge and address the needs of "last mile" communities—those most vulnerable and often excluded from mainstream disaster preparedness actions.

The study areas are the "Costa Verde Region", formed by the mountains called 'Bocaina' (in Rio de Janeiro) and 'Serra do Mar' (in São Paulo). In the municipality of Paraty (RJ), the Quilombo do Campinho da Independência is located , and the Caiçara community of Ubatumirim, Ubatuba (SP).This region was chosen due to its history of extreme floods, landslides, coastal erosion, and strong winds.

The main objectives of the project consisted of:

01 Document the main impacts caused by climate-related disasters over the last years in two Traditional Communities living in coastal areas of Brazil.

02 Identify barriers to disseminating and communicating early warning messages within these communities.

03 Create a community-based risk communication prototype based on an intersectional vision of the capacities and needs of local traditional communities..

KEY FINDINGS

Our results show that from 2006 to 2023 floods were the most prevalent disaster in both municipalities where the TLCS are situated. In Paraty, floods accounted for 57% of all reported incidents, while in Ubatuba, they accounted for 80%. Major events occurred between 2009 and 2024. The main impacts of these events include severe health issues, such as dermatological conditions and viral infections, emotional distress, occupational disruptions, loss of livelihood, infrastructure damage, and fatalities.

By conducting a series of workshops, household surveys and storytelling sessions, we found that the main barriers to sharing early warnings within the territories:

Information about potentially hazardous events is often delayed, with updates reaching the public only after the event has occurred.

The communication networks in the territory rely on technologies that frequently fail during emergencies, rendering them unreliable.

There is a lack of clear differentiation between official warnings and misinformation, causing confusion and mistrust in early warning messages.

The identified priority groups are school-age children and youth, individuals with disabilities, the elderly, and those in geographically isolated areas. Each of these groups has characteristics that make them more likely to struggle while coping with severe climate events.

KEY RECOMMENDATIONS

To improve long-term risk management, implementing a transdisciplinary strategy of impact assessment is crucial. To guarantee that an integral compensation of losses and damages for people directly and indirectly impacted by disasters will be provided, accurate impact information is needed for developing efficient DRM strategies and establishing impact-based EWS (de Brito et al., 2024). To this end, official reports and local knowledge can be combined to improve the accuracy of disaster impact reports. This should consider data from official databases and local-scale observations made together with directly affected communities. Impact reports should identify those affected, classify losses and damages, and structure reports accurately, with the intention of making them widely available.

To overcome the main barriers to the dissemination and communication of warnings identified, it is necessary to develop a robust strategy for distinguishing official warnings from misinformation. This can be achieved by implementing source-differentiated warnings and sending coordinated messages that will be multiplied by local community members. Warning messages must carry visible authority logos and local organisations should verify the source of warnings to confirm their credibility and actively discredit misinformation. Testing effective communication sources in each territory and among different social groups is also essential. This requires assessing the individual decisions made to respond during emergencies.

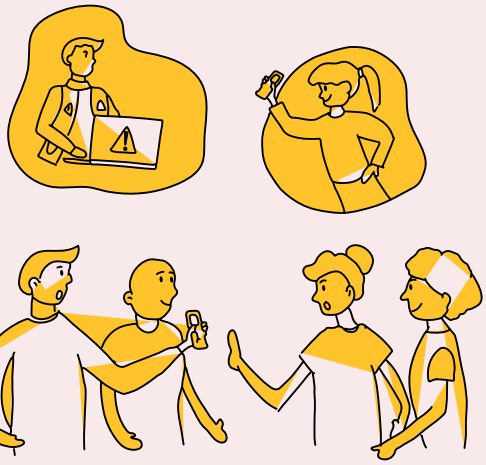
It is also important to recognise the significant presence and impact of women, who not only form the majority of community leaders but are also at the forefront of community engagement and caregiving. From a gender perspective, it is clear that during emergencies, it is necessary to mobilise families with children, people with disabilities and elder family members first. This strategy often results in more care work for women. Hence, a deeper understanding of women's various roles – productive labour, reproductive labour, and leadership – is vital to ensure that the responsibilities placed upon them do not become disproportionate or unfair.

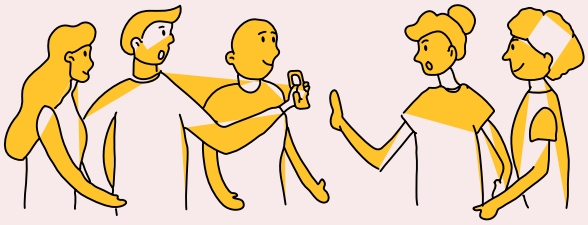
To advance the actionability of warnings, future interventions should explore the redundancy in communication targeted to the identified priority groups, design, test and evaluate evacuation protocols from houses to shelters, specifically involving these groups and additionally, formulate customised response plans and emergency kits. Therefore, the next phase of this research is to apply and test the developed prototype, assessing how the local community will respond to the warnings and providing training for emergency drills based on risk scenarios.

RISK COMMUNICATIONS PROTOTYPE

01 Mapping priority groups

Hold initial meetings and gatherings to encourage plural participation, and active listening that allows for horizontal dialogue to adjust demands and expectations. Define who participates and how based on diverse cultural perspectives to identify and locate households that would struggle the most to protect themselves.





03 Designating messengers

Along with identifying stakeholders among local authorities, the community has to appoint speakers for internal and external communication. Residents who are living in, near the community or with easy access should be responsible for reaching out to the priority families designated and conducting them to temporary shelters. Additionally, it is necessary to define individuals who will notify civil defence in emergencies and identify backups for these roles.

02 Understanding communication needs

Identify the communication needs of vulnerable groups using various platforms and media to connect school-age children and youth, individuals with disabilities, older adults, and geographically isolated households.

04 Performing simulations based on risk scenarios

Invite local authorities to conduct simulations on different risk scenarios. By selecting relevant scenarios and then planning in detail and assigning roles, participants can practise the full response cycle from warning to evacuation. After the simulation, feedback should be collected to assess the effectiveness of the response. This feedback is then used by the community to refine and improve their disaster plan, ensuring readiness for real emergencies. These simulations are vital for protecting lives and enhancing overall preparedness.

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ETHICAL APPROVAL

Ethical approval was obtained from the Social Research Ethics Committee of University College Cork (log 2023-156).

Realization

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Partnership

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