Policy Brief: Data Readiness for Disasters: Gap Analysis Workshop

Executive Summary

CENAPRED, together with CrisisReady, Direct Relief, and GFDRR, explored the potential of human mobility data and earth observation services to identify gaps and support the effective implementation of the National Disaster Risk Reduction framework. The workshop was held on March 22-23, 2022, at the CENAPRED offices.[1]

Disasters are social dynamics, not natural events, which create responsibilities to ensure that hazards should not evolve into disasters. Therefore, data plays a crucial role in the risk-reduction, response, and recovery decision-making processes throughout the disaster management cycle. Unfortunately, while political will is present, there is often a lack of awareness, agreements, and networks to utilize novel data sources, such as human mobility data collected from digital devices. Ideally, these would be established before disasters occur.

Three key gaps were identified by participating stakeholders: 1) data access through private providers, 2) analytical capacity through agency and academic partners, and 3) collaborative networks linking data providers, analysts, and decision-makers.

The group identified missing data that could be useful for DRM, such as origin-destination matrices to map population displacement and resettlement, building damage assessment through remotely sensed imagery, and historical analysis of evacuation and vulnerability patterns stratified by income to inform risk-reduction modeling. Several participants emphasized the need to retain the memory of historical events and outcomes, which can inform future disaster response models and risk reduction. Likewise, inter-agency communications require effective data planning. Different agencies have additional data needs pertinent to their areas of responsibility, and those needs and responsibilities may not be coordinated.

Policy Recommendations

1. Set up data-sharing agreements prior to disasters (mainly with INEGI & CENAPRED)
2. Designate data stewards to drive improvements in collaboration and analysis. According to NYU GovLab, data stewards are organizational leaders responsible for creating public value by using their organization's data for collaboration, access, and analytical insights.
3. Set up data pipelines based on established methodologies and decision-making needs.
4. Set open standards for sharing data and analytical products.

Next Steps

- Identify specific collaborators and invite them to the network. Generate a directory of the network (name, university, contact details)
- Set up data agreements between data providers, agencies, and academic partners.
- Test the inclusion of new data in risk models by hosting data simulation exercises.
- Evaluate if there is mobility and other data from Meta that could be included in the Atlas Nacional de Riesgo.

---

[1] For further information and other CrisisReady funded projects, please access: http://www.crisisready.io. The videos of the workshop are in CrisisReady Youtube channel