

Acknowledging Community Risk Perception in DRR Policies in Latin America: Three key lessons

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Risk Perception Matters

Risk perception, how an individual understands and feels about a particular risk, varies significantly according to one's prior experience and exposure. Official Disaster Risk Reduction (DRR) policies reflect an understanding of risk that prioritises saving lives and reducing infrastructural damages during and after disasters. In many informal settings of Latin America and the Caribbean, communities have traditional, locally specific understandings of and responses to risks. ADAPTO research across Latin America and the Caribbean reveals that local perceptions, preferences, and practices are disregarded and unacknowledged in the institutional planning for DRR. As a result, DRR often fails to value the locally specific, situation-responsive approaches, or to empower residents to participate in the DRR process. This failure hinders proper assessment of disaster risks, as advocated by Sendai Priority 01, and impedes progress towards inclusive and resilient settlements (United Nations Sustainable Development Goal 11).

Carahatas, Cuba

A coastal village of 591 inhabitants is vulnerable to meteorological hazards (e.g., hurricanes). Cate in 1985, Michelle in 2001, and Irma in 2017 hit the village. As per future projections, half of the village will be underwater by 2050 and entirely by 2100.

San Andres, Colombia

A small tourist island of 67000 inhabitants is vulnerable to tropical storms, hurricanes, and freshwater scarcity. Only 1% of its total groundwater is potable, 69% very polluted, and 30% moderately polluted. Locals get water even once a week or 21 days.

Salgar, Colombia

A town of 20,000 inhabitants is exposed to torrential floods and landslides. It lost 100 people and over 300 houses in the 2015 landslide.

KEY TAKEAWAYS

- DRR policies need to be flexible so that local authorities can adjust local measures based on the unique perception and urgency of a community.
- In addition to scientific knowledge, it is important to know and respect the vernacular explanation of risk, local perceptions, and residents' attitudes in a particular context.
- DRR policies should aim to secure public safety and also ensure their psychological, socio-economic and cultural belongingness and equity.

Residents' knowledge and experiences with hazards remain largely underutilized in the disaster risk reduction field—policy-makers only rely on scientific knowledge to develop mitigation strategies. In response to this gap, ADAPTO investigated risk perceptions and responses in Carahatas, San Andres, and Salgar. This research aims to complement scientific knowledge and inform DRR policies at the local and national levels.



"The sea is not the enemy...we spent a lot of time on the sea...we know it, if you don't know the sea you should not be in it. If you are afraid of it you should not get in contact with it. I know how to navigate both during day and at night."

The local attitude and perception of a coastal fishing village in Carahatas





The authority's perception

The authority perceives climate change and variability, in particular sea-level rise and its impacts, as a major risk and prioritize, based on scientific assessment. they adopt several plans (e.g., Law 212 of relocation) to protect people from risk-prone coastal areas.



Comunity perception

Residents see the rise in sea-level rise and changes in precipitation as secondary problems. Residents feel capable, based on long experience and 'solidarity', to tackle such problems. Their main concerns are with socio-economic problems (e.g., sending their children to schools).

AN ANDRES

The authority perceives water scarcity as a major risk linked to climate change. Evacuation simulations organized by the San Andres Government are now called "A search for resilience" and focus on Hurricane response. Government-run water and sewage systems seem to be effective in dealing with water shortage.



The authorities consider floods, water surges, landslides, and droughts as major problems. They see illegal settlement on the river banks as increasing vulnerability to such events. Since the 2015 landslide, a comprehensive DRR plan was adopted to make people safe from such events, offering rural people 308 units of peri-urban housing away from the river. Native islanders have decades of experience dealing with hurricanes and managing water. The newcomers, 70% of populations, lack this know-how. The real problems are not related to the weather but rather the corrupt officials that have permitted 'excessive' mainland immigrants.

Residents are concerned with the loss of indigenous vegetation and the threats to their water-related livelihoods. They consider that the disaster risk regulations are invasive because they limit their economical activities and social practices. Locals are also worried about the violence in their settlements, which they consider to be a result of crime and corruption. Problems

Reducing objective risks is the goal of DRR plans. Local perception of coping with climatological events, which have persisted over generations, is ignored in DRR planning. Most villagers reject the relocation plans. They prefer known-risks in a familiar setting rather than unknown-benefits with uncertainty.

Local know-how and women-led traditional approaches (e.g., domestic rainwater harvesting) are replaced with government-run aqueduct. The services reaches only 60% of residents and force others to buy water, which cost about 30% of their household expanses. It creates new economic vulnerability and social inequity.

The affected residents lost their rural modes of living and strong attachment to their lands, traditions, and environment. The DRR Initiatives save their lives but create new challenges related to unemployment and inequality. Corruption hinders the possibility of creating healthier relationships between citizens and the environment.





Conflicts Result From Varied Risk Perception

Most government approaches in Latin America and the Caribbean recognize that global warming is exacerbating climate hazards that make people vulnerable. ADAPTO's research found that in informal, traditional, and/or marginalised communities, residents seldom consider risks resulting from atmospheric or climatic conditions. They are instead most aware of recurrent everyday problems, such as poor road infrastructure, resource extraction, political conflicts, corruption, or, most tellingly, the emerging socio-economic and cultural challenges linked to relocation as part of DRR initiatives. Local communities aspire to improve their social status rather than adapt to climate change.

Residents have specific risk-management knowledge acquired through local innovation and trial-and-error responses to past events. For example, in Carahatas, community members construct canals next to roads to improve drainage and prevent floods. They build cages of wood and wire mesh on stilts, with heights depending on previous floods, to protect domestic animals. Locals are confident in their traditional approach: "if something falls, we build it up again."

Relocation affects people's attachment to place, culture, environment, and livelihoods, forged over generations. Citing such reasons, residents resist relocation. Where relocation has occurred, the new generation loses the opportunity to learn the know-how of traditional livelihoods and risk-management attitudes. To resolve conflicts, the scope of DRR policies needs rethinking. ADAPTO highlights three following key lessons for DRR policymakers. "If the government ever forces me to leave, I would rather live on my boat than relocate to one of the apartment buildings inland."

 A local narrative expressing their disregard for the DRR plan



3 Key Lessons

Lesson 01



Allow flexibility





Understand local voice





Consider culture too

DRR policies need to be flexible so that local authorities can adjust the measures based on the unique perception and urgency of a community.

Every community has its own way of dealing with disasters. But the local governments in Latin America and the Caribbean rarely have the interest or 'right' capacity to adapt plans to be sensitive at the local level. Even when local officials recognize community's issues and their urgency, they still need to comply with national regulations and policies that often do not fit the localities' needs. For example, residents in Carahatas enjoy the complacency of partially implemented Law 212—a national law for relocation allowed by their local government, but fear that the Law will be fully implemented by the central government soon.

In addition to scientific knowledge, it is important to know and respect the vernacular explanation of risk, local perceptions, and residents' attitudes in a particular context.

Risks are often explained in abstract terms, for example, "adaptive capacity" and "resilience". In this sense, ADAPTO research shows that residents may focus on attitudes, practices, and emotions (rather than "capacity") in facing misfortunes and overcoming challenges. Experiential learning, obtained over generations, helps and DRR initiatives that neglect such localized learning may fail. For example, the government has hardly drawn on the unique, traditional behaviours, such as womenled approaches to reducing water use and rainwater harvesting that function to manage water scarcity in San Andres.

DRR policies should aim to secure public safety and also ensure their psychological, socio-economic, and cultural belongingness.

ADAPTO research reveals that natural disasters are not merely disruptions to the normal social order, but to some degree, also the product of disruptions. Residents often see the primary risk as not being related to natural disasters themselves but to the disruptions in their attachment to place, community, livelihood, and environment. For example, Salgar's new and safer urban dwellings pose new socio-economic challenges for the locals. Their household expenses increased significantly because of urban taxes, and they are not allowed to run home-based income or make gardens.



ADAPTO is a multidisciplinary research project funded by the International Development Research Center (IDRC) and coordinated by the Disaster Resilience and Sustainable Reconstruction Research Alliance (<u>Euvre Durable</u>) from 2017-2021. It investigates climate change adaptation in informal settings in understanding and reinforcing bottom-up initiatives in Latin America and the Caribbean. For more information, see: <u>http://www.grif.umontreal.ca/acciones/en_index.html</u>

Resources

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