

Behavioral science  
can nudge people  
to evacuate to a safe  
location in the event  
of a natural disaster

In Haiti, more than 96 percent of the population is exposed to two or more natural hazards in their lifetime. The human and economic impacts of these hazards, including hurricanes, floods, earthquakes, and landslides, have been severe. Between 1961 and 2012, the country experienced more than 180 disasters, causing the death of more than 240,000 people.<sup>1</sup> Many disaster-related fatalities are preventable if people evacuate to a safer place in a timely fashion. However, in Haiti, due to a variety of structural and behavioral barriers, people often do not do so.

The World Bank's Disaster Risk Management team and the Mind, Behavior and Development Unit collaborated to understand, through a behavioral approach, the structural and behavioral barriers that limit evacuation decisions when Haitians are presented with a catastrophic event, and to identify key strategies for effective evacuation. Existing research and field evidence demonstrated the poor state of early warning systems (EWS) and shelters, among others. Coupling these structural barriers with a behavioral approach looking at psychological and social barriers may strengthen Haiti's resilience to natural disasters.

This exploration provides evidence and recommendations for effective communication delivery and information sharing in Haiti's complex context. Ensuring proper, behaviorally-informed disaster preparedness policies, including ensuring that emergency shelters and related response mechanisms are well established and managed, can save lives, reduce infrastructure vulnerabilities, and combat economic and human losses.



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## The Project

In an effort to provide actionable solutions to safe evacuation, the World Bank, with support from the EU-funded ACP-EU Natural Disaster Risk Reduction Program, managed by the Global Facility for Disaster Reduction and Recovery, conducted qualitative research, including:

- An extensive **desk review**, which helped inform our understanding of EWS, disaster preparedness, and evacuation behavior in the Haitian context as well as in other developing countries.
- Key informant interviews complemented these findings. **Key informants** included the Civil Protection Directorate (Direction de la Protection civile – DPC), development counterparts working with the DPC, international partners working on disaster risk management, and NGOs.
- Qualitative fieldwork included six **Focus Group Discussions** and 16 **Semi-Structured Interviews** with Civil Protection Committees (Comités Communaux de Protection Civile – CCPC), community leaders, and the general population in Paillant and Les Cayes municipalities. Sites and respondents were intentionally selected to allow for a comparison of evacuation behaviors in rural and urban areas and between those that had previously evacuated or not.



## Key Findings

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This diagnostic provided insights into structural and behavioral barriers, including existing communication channels, preparedness and response capacity and risk knowledge and internalization.



Often, the population does not receive the alert messages (**Warning Alerts Failure**), leading to a preventable outreach problem. No reliable process exist to communicate information about an approaching storm to the entire population. Existing communication channels fail to share information to the whole population in a timely manner. Constraints included limited funding, insufficient training, and a lack of necessary equipment, including vehicles and radios, to disseminate messages. This leaves rural regions particularly neglected. Stakeholders, including mayors who are meant to relay information to CPCCs, may misunderstand their roles and responsibilities.

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When the information arrives, messages are not adapted to what the average person in Haiti understands (**Unclear Language**), resulting in people not knowing where to go or what to do. People often do not understand the messages, given their complexity, and lack of key information about the desired behavior. People are more likely to evacuate when they have an accurate understanding of the severity of a storm. There is also a general distrust in the messenger. Though they are volunteers, CCPC members are rarely validated as trustworthy sources and are often viewed as acting on behalf of the State.



Even when information arrives and is understood, people do not realize or accept their actual level of risk. Many negate the information received because they do not want to believe it (**State of Denial**). Others feel there is little they can do to prepare to save themselves (**Fatalistic Belief**) and, given that they are not forced to evacuate, they prefer to stay with their possessions in the hopes they can wait out the storm (**Hyperbolic Discounting**).

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Even if people want to evacuate, they may lack resources and view shelters as unsafe. Many do not have an emergency evacuation shelter close to home, making it impossible to heed warnings if they lack transportation (**Lack of Resources**). There is a lack of shelters that can withstand hurricane force winds, especially in rural areas, and structures do not always abide by building codes and standards. Theft and sexual assault are rampant and people that have had poor experiences with emergency evacuation shelters might avoid them (**Negative Experiences**).



## Policy Implications and Possible Interventions

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Combatting the barriers that contribute to people's preference to stay at home may not require costly or complex interventions. Most recommendations tweak, refine, and simplify existing systems using a human-centered approach, ensuring solutions are designed based on on-the-ground realities, and consider the current mindset, beliefs, and barriers of the target population. Opportunities for policymakers include simplifying and increasing the saliency of communication messages and channels, training messengers to deliver concise and persuasive messages, changing mindsets regarding perception of risk and evacuation, and strengthening EWS curriculum at schools. To keep shelters preserved and promote codes of conduct, re-thinking their design

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to increase safety and introducing a community recognized figure as a shelter manager may work.

Insights from this work have already been integrated in the design of the [Strengthening Disaster Risk Management and Climate Resilience Project](#). The project provides meaningful opportunities to strengthen disaster preparedness and emergency response capacity, construction and rehabilitation of shelters, and project management and implementation support.

Incorporating a behavioral perspective into the project ensures these recommendations are positioned to combat the social, psychological, and structural barriers to efficient EWS.

## About eMBeD

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The Mind, Behavior, and Development Unit (eMBeD), the World Bank's behavioral science team in the Poverty and Equity Global Practice, works closely with project teams, governments, and other partners to diagnose, design, and evaluate behaviorally informed interventions. By collaborating with a worldwide network of scientists and practitioners, the eMBeD team provides answers to important economic and social questions, and contributes to the global effort to eliminate poverty and enhance equity.



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REFERENCES:

1. Source: Haiti Country Risk Profile, World Bank Group, 2018.

Last Update: January 22<sup>nd</sup>, 2020