

Stories of Impact

A series highlighting achievements in disaster risk management

Prioritizing Climate Resilient Transport in Belize



REGION: LATIN AMERICAN AND THE CARIBBEAN
FOCUS: RISK IDENTIFICATION, RISK REDUCTION, RESILIENCE TO CLIMATE CHANGE
COUNTRY: BELIZE



RESULTS:

- Engaged 35 agencies to build climate resilience in the transport sector.
- Identified four critical regions with the highest flood susceptibility for climate-resilient interventions.
- Developed a Road Network and Asset Database – a first in Belize’s history – to ensure road planning and maintenance is risk-informed and more efficient.
- The methodology developed and piloted in Belize has been shared with transport and disaster risk specialists in Africa, Latin America and the Pacific to inform future resilient transport efforts globally.

PROJECT DESCRIPTION:

Safe roads and reliable transportation are critical in the event of a natural disaster. The Global Facility for Disaster Reduction and Recovery (GFDRR), along with the World Bank, has been working closely with the Government of Belize to increase the climate resilience of the road network and manage disaster risk by identifying priority investments.

Through an innovative methodology that includes participatory processes and advanced data collection and analysis, the Government is informing targeted investments from international donors, including a \$30 million Climate Resilient Infrastructure Project through the World Bank – part of a transformative shift towards a strategic, cost-efficient investment approach to climate and disaster risk in Belize.



GFDRR
Global Facility for Disaster Reduction and Recovery



WORLD BANK GROUP

CONTEXT:

Belize is highly vulnerable to disaster risk, and especially climate-related hazards. Average annual losses from hurricanes alone are estimated at nearly \$7.7 million, which may increase with climate change. Deterioration in transport infrastructure exacerbates Belize's disaster vulnerability – with limited redundancy in road networks and 70% of the population living near primary and secondary roads, flooding on roadways can cut access to emergency response, as well as social and economic movement. A lack of reliable data, however, has severely limited the Government's ability to make informed investments, leading to a request for support from GFDRR and the World Bank to identify key opportunities to build transport resilience.

APPROACH:

Due to the unique challenge of a data scarcity, World Bank and GFDRR teams rolled out a unique multi-criteria evaluation process, engaging a wide range of stakeholders across seven indicators to help prioritize the socio-economic and climate-risk impact of roadways. Teams also worked with engineers from the Government of Belize to analyze flood susceptibility. The methodology was tailored to draw from existing data, expert and local knowledge, and strategic survey processes to make up for information gaps, ultimately leading to the creation of a robust geospatial model to further enable decision-making.

Analysis at each stage was conducted with technical representatives from 35 separate agencies, then validated by participating CEOs. The Cabinet endorsed the final results and selected one of the identified priority areas for investments under the World Bank financed project – ensuring balanced, targeted risk-reduction efforts.

NEXT STEPS:

To ensure the sustainability of the investments the project enabled, the team is conducting a Transport Asset Management technical assistance program with resources from GFDRR to provide continued expert guidance and support. Teams are also developing an online interface to make it easier for policy-makers to use the data collected under the project. Moreover, in an effort to spread lessons learned from the groundbreaking effort, GFDRR and the World Bank are also developing a Practitioners' Guide aimed at providing guidance for the prioritization of climate-resilient investments in data-scarce environments, based on the process piloted in Belize.

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*ALL MONETARY VALUES IN USD



"We are very pleased with the outcomes of the multi-criteria evaluation of Belize's road network that was conducted by the Government of Belize and the World Bank. The results influenced our decisions on which roads to invest in and ensured that the selected investments will improve the country's resilience to climate change and climate variability. The process was participatory and involved both technical officers and Chief Executive Officers. The participatory nature of the process certainly facilitated the adoption of the results."

– Ms. Yvonne Hyde, Chief Executive Officer, Ministry of Economic Development

LESSONS LEARNED:

Lack of data should not limit engagement with countries on information-based decision-making. One of the biggest challenges to development is the lack of reliable and adequate data. To address this, the team applied methods that combined quantitative and qualitative information, rigorously compiled existing information, and supplemented with new data acquired from teams on the ground.

High-level decision makers should be intimately involved in identifying investment priorities. In this project, more than 15 CEOs and 35 technical representatives were actively engaged in the evaluation process. Having executive-level engagement led to the full ownership and endorsement of the results, leading to sustainable investments.