## STRENGTHENING RISK DATA FOR URBAN RESILIENCE IN BANGLADESH

### Building a resilient future

#### AT A GLANCE

Country: Bangladesh Risks: Cyclones, Floods, Earthquakes GFDRR Areas of Engagement: Scaling up city resilience, promoting resilient infrastructure



BANGLADESH'S FIRST EVER OPEN SOURCE GEOSPATIAL DATA COLLECTION AND SHARING PLATFORM

Until recently, government agencies as well as the private sector in Bangladesh had been producing vast amounts of geospatial data, but largely without the ability to share these data seamlessly without delay. Accordingly, a key focus for GFDRR's engagement has been to provide technical and financial support toward the development and sustainability of GeoDASH, Bangladesh's first ever open source geospatial data collection and sharing platform. Ss of the end of fiscal year 2020, nearly 3,000 users representing over 50 public, private, and civil society organizations have shared data, making available 740 datasets from road network maps and building footprints to the location of water, gas, and utilities in a secure platform. All of these datasets are available to the public in a widely usable format.

Government agencies in Bangladesh, including in the city of Dhaka, are now leveraging the GeoDASH platform to reduce duplication and minimize costs in their geospatial data collection efforts. The Dhaka North and South City Corporations, the Capital Development Authority, and the Dhaka Water Supply and Sewerage Authority, for instance, have agreed to utilize the platform to collaborate on mapping roads as well as on gathering data on building footprints, water supply, and sewerage facilities.

GFDRR

Over much of the past decade, Bangladesh's development prospects have been buoyed by a record of strong and sustained economic growth. Yet even as the country's bustling urban areas, including the capital city Dhaka, have helped fuel that growth, rapid and unplanned development is leaving millions of people more vulnerable not only to natural hazards, including cyclones, floods, and earthquakes, but also to the impacts of climate change.

In response to this challenge, Bangladesh has embarked on a comprehensive urban resilience agenda. The government strongly recognizes the importance of risk data for informing and driving that agenda. Under the Japan-World Bank Program for Mainstreaming Disaster Risk Management (DRM), GFDRR has been supporting national efforts to strengthen the infrastructure for collecting, sharing, and analyzing risk data.

#### INFORMING RESILIENCE PLANNING AND INVESTMENTS IN BOTH URBAN AND RURAL AREAS

At the same time, government agencies are also making use of GeoDASH's web application, which enables users to visualize and analyze the data to inform their resilience planning. For example, through this application, Bangladesh's Local Government Engineering Department has been using geospatial layers from the Department of Disaster Management's multi-hazard risk and vulnerability assessment to produce cyclone risk maps for critical infrastructure. These maps will, in turn, inform its investment plans for cyclone shelters in both urban and rural areas of Bangladesh.

To ensure that the government of Bangladesh is able to sustainably utilize GeoDASH in its resilience efforts, GFDRR has also been supporting a comprehensive training program for officials on how to use and administer the platform. As a testament to its commitment, the national government, which manages GeoDASH, has integrated the platform into its National Spatial Data Infrastructure policy.

#### ALIGNED WITH GFDRR'S URBAN RESILIENCE PORTFOLIO IN BANGLADESH

GFDRR's support for strengthening risk data is one of a range of urban resilience engagements with the government of Bangladesh. For instance, under the Japan–World Bank Program for Mainstreaming DRM, technical assistance is currently being provided toward developing a strategic environmental assessment of Dhaka, now in its final stages. The assessment, which makes use of the data layers uploaded in GeoDASH, will integrate environmental concerns into the government's ongoing plans to enhance resilience in Dhaka– such as retrofitting public buildings and updating land use plans and building codes.

Furthermore, GFDRR has partnered with the World Bank on the \$173 million IDA-funded Bangladesh Urban Resilience Project, a multisectoral disaster risk reduction program that has been informed by geospatial data analysis through GeoDASH. The project drew from Japan's experiences in (i) formulating DRM policies; (ii) establishing and operationalizing emergency operations centers; and (iii) developing ICT infrastructure for multi-stakeholder engagements in metropolitan cities, which were shared with the project's technical experts in a technical deep dive implemented by the Japan-World Bank Program. In addition, Japan's experiences in the continuous updating and enhancing of regulations, institutional frameworks, financing, and staff capacity, following disasters, and the enabling DRM policies which allow for building code enforcement were applied through the project to achieve improved preparedness and resilient investments.

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organizations have shared data on the GeoDASH platform, making available

> 740 datasets

#### LESSONS LEARNED

Despite increasing interest among both public and private

sector stakeholders in Dhaka to exchange critical geospatial data, many had hesitated to do so, in part because of privacy and security concerns. Accordingly, GeoDASH was established in line with best practices in data privacy and security; for instance, it allows organizations to utilize the sharing platform while limiting other users' ability to see more sensitive data uploaded to the platform.

"If Bangladesh is to thrive, we must make our cities more resilient, and we must do so quickly. Through this project, we expect to have an impact on the long-term disaster resilience of the urban centers of Bangladesh."

-Abdul Latif Helaly, Chief Engineer, Capital Development Authority (RAJUK) and Project Director, Bangladesh Urban Resilience Project

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