InnovationLab

Further your understanding of disaster risk

GLOBAL FACILITY FOR DISASTER REDUCTION AND RECOVERY **GFDRR**

Open Data for Resilience Initiative (OpenDRI)

Increasing resilience through open data

Started in 2011 by GFDRR, the Open Data for Resilience Initiative (OpenDRI) applies the concepts of the global open data movement to the challenges of reducing vulnerability to natural hazards and the impacts of climate change. OpenDRI supports teams to build capacity and long-term ownership of open data projects with client countries that are tailored to meet specific needs and goals of stakeholders.

Suite of complementary programs

Open data platforms To increase public access to risk information, OpenDRI engages in *dialogue with governments* on the value of open data through working groups, pilot projects that evolve into long-term locally owned open data projects. OpenDRI provides *technical solutions and assistance* for the project implementation through GeoNode (www.geonode.org), a free and open source data sharing platform.

Open data platforms allow for the *storing, analyzing and managing of data* that is critical for planning, policies and decision-making. Partners can collate and share layers of geospatial data, combine those layers into visualizations and exchange both the raw data and collaborative maps.

Community mapping and crowdsourcing To engage communities in the *creation of accurate and timely data* about the rapidly evolving urban and rural environments in the place they live, OpenDRI works with governments and local communities to utilize simple, collaborative, crowdsourcing mapping tools such as OpenStreetMap (www.openstreetmap.org).

Often using OpenStreetMap, OpenDRI's community mapping projects *mobilize the residents* of a place to collect and maintain geospatial data about their built environment and its exposure to natural hazards. Mapping projects also take advantage of remote mapping and crowdsourcing by *engaging the international community* through partnerships with development organizations and universities.

Risk communication and analysis To communicate risk more effectively to decision-makers in *planning, preparedness and response activities*, OpenDRI worked with the Indonesian and Australian governments to develop InaSAFE software (www.inasafe.org). By combining data from scientists, local governments and communities, InaSAFE *provides insights* into the likely effects of disaster events.

InaSAFE is a targeted, flexible tool that can provide *targeted impact calculations to disaster scenarios*, ultimately engaging communities and decision-makers by advancing their understanding of risk. With a consistent and easy-to-use interface, InaSAFE allows users, with minimal training, to load new data for analysis.

Photo: Specialists receive training on the award-winning InaSAFE platform.
Photo credit: The World Bank

Case study
Malawi

Malawi is vulnerable to droughts and severe flooding, with the most recent floods in early 2015 affecting 638,000 people and causing US$81 million in damages. Recognizing a need to better understand their disaster risk, the Government of Malawi has undertaken a series of improvements, supported by the World Bank, to use risk data effectively.

To ensure that these rich data sets are shared and used to better prepare for floods, OpenDRI has been engaging with the Government of Malawi.

To help ensure that historical and current data remains accessible and useful, the Shire River Basin Management Technical Team and the Department of Disaster Management Affairs supported by the OpenDRI team launched an Open Data Platform, called the MASDAP GeoNode (www.masdap.mw). This online platform has given the Government of Malawi, the public, and other key stakeholders access to information about their environment and their disaster risk.

With limited information about people and infrastructure in this area, it was exceedingly difficult for the government to prepare and plan for the impact of flooding. Community mapping activities are collecting data about the built environment for a flood risk modeling exercise and planning and preparedness activites. All the data collected will be uploaded on OpenStreetMap and made available on the Malawi open data platform.

This newly acquired data of the built environment is used with InaSAFE, a flexible tool that can provide targeted impact calculations to disaster scenarios. InaSAFE enables both ex-ante and ex-post scenario assessments in Malawi.

Photo: Malawi community mapping.
Photo credit: Emma Phillips

More info at www.opendri.org

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