



InnovationLab

Further your understanding of disaster risk



GFDRR
Global Facility for Disaster Reduction and Recovery



St. Lucia Discussing the surface water and slope stability issues and potential drainage solutions at a Mosaic community meeting.

Informing decisions, supporting clients

To meet the needs of a rapidly changing world, GFDRR Innovation Lab supports the use of science, technology, and open data in promoting new ideas and the development of original tools to empower decision makers in vulnerable countries to strengthen their resilience to disaster risk.

Pushing boundaries

Recent breakthroughs in the field have enabled better access to disaster and climate risk information and a greater capacity to create, use, and communicate this information. GFDRR Innovation Lab has proven to be a leader in groundbreaking thinking in the pursuit of furthering the world's understanding of current and future disaster risk.

Partnering for change

GFDRR Innovation Lab activities are designed and implemented in partnership with government institutions and key international and local partners, ensuring that all activities add value in planning and implementing activities.

Program areas

100+

million people

in 50 countries gained better risk information

Identifying risk The foundation for good disaster risk management is risk identification. Innovation Lab helps clients identify and understand disaster risk by:

- Managing the risk assessment process from design to delivery of results
- Ensuring risk assessments are targeted, authoritative and usable
- Translating technical data into understandable, actionable information

When a country is knowledgeable about the disaster risk it faces, it can then create effective measures to mitigate potential impacts to its society and economy.

30+

countries

with 1500 geospatial datasets

Utilizing open data Cutting-edge tools and capacity building activities from the *Open Data for Resilience Initiative (OpenDRI)* advance a community's ability to understand its risk. These tools:

- Increase accessibility of data using *open data platforms*
- Engage communities and create geographic information with *community mapping*
- Anticipate potential impacts of disaster scenarios through *risk communication and analysis*

Either standalone or combined, these programs have been successful at building a local community around enhancing knowledge of risk.

800+

attendees

at UR2014, Producing Actionable Information

Sharing knowledge The pre-eminent platform in the field of disaster risk identification and assessment, *Understanding Risk (UR)* provides a space for over 3,000 experts and practitioners to:

- Collaborate and form nontraditional partnerships
- Share knowledge, best practices, and latest innovations
- Further the world's ability to assess risk

Every two years, the UR community convenes at global forums. The success of the Forum has been translated into targeted, local events, such as in Haiti, Brazil and Sub-Saharan Africa.

10+

countries

supported by spatial impact assessments

Assessing damage When disaster strikes, it is often difficult to estimate the full extent of impact. *Spatial Impact Assessment (SIA)* uses remote sensing and open data resources to:

- Identify areas of change after a disaster
- Determine the extent of population affected
- Estimate impact to infrastructure and other sectors

GFDRR Innovation Lab can provide targeted information, enhancing a country's ability to mobilize resources or validate a Damage and Loss Assessment (DALA).

1000+

participants

in Code for Resilience 2014

Bridging communities *Code for Resilience (CfR)* connects local technologists and disaster risk experts to create civic-minded digital and hardware solutions to increase resilience. CfR provides:

- Mentorships, training programs, and code sprints resulting in hardware and software solutions
- Programs that help technologists understand disaster risk management issues
- Forums to connect innovative teams with experts in the field

Mentorship and collaboration are key to ensuring success in creating solutions that address real-world challenges faced at the local level.

Supporting an at-risk country: **The Philippines**

One of the most hazard prone countries in the world, the Philippines is exposed to typhoons, floods, landslides, droughts, earthquakes, tsunamis, and volcanic eruptions. In 2013, Typhoon Yolanda tore through the country killing 8,000 people, affecting 16 million more, and resulting in \$10 billion in damage or 6% of GDP.



Photo: The Philippines, disaster risk mapping by government officials, nongovernmental organizations (NGOs), academics, and community members helps identify hazards in the Cagayan de Oro City region, better enabling resilience building. Photo credit: Horacio Marco C. Mordeno/MindaNews

Powering open source technology

To utilize open source and open data to further the country's understanding of disaster risk, GFDRR Innovation Lab held a Code for Resilience hackathon in Manila in 2014 that resulted in 24 hardware and software apps in response to 5 challenges submitted.

Additionally, the government of the Philippines has developed a disaster impact scenario tool, WebSAFE, which was created as a result of open source technology that the GFDRR Innovation Lab, through OpenDRI, helped support in Indonesia. By creating this community around the Indonesian open source tool, the Philippines was able to harness the code to tailor WebSAFE to meet its unique needs.

Responding with data

When Typhoon Yolanda struck the island nation in 2013, OpenDRI supported the creation of an open data platform (yolandadata.org) to collect all geospatial data available to determine local impacts on infrastructure.

Using data from the open data platform and crowdsourced information, GFDRR Innovation Lab partnered with other organizations to conduct an initial spatial impact assessment of all affected provinces using remote sensing technologies.

Sharing knowledge at UR2014 Forum

Less than one year after Typhoon Yolanda made landfall in the Philippines, the country's Secretary of Finance addressed attendees at the 2014 Understanding Risk Forum.

As a champion for disaster resilience, Cesar V. Purisima spoke of work in the Philippines to engage all levels of society to increase resilience, from grassroots initiatives to government policies. Secretary Purisima elaborated on insurance schemes and risk sharing proposals that the Philippines and other countries have discussed, such as mandatory insurance among countries.

www.gfdr.org/innovation-lab

www.understandrisk.org | www.opendri.org | www.codeforresilience.org | www.geonode.org | www.inasafe.org