Short Term Consultant (STC)

Terms of Reference

Job Title:	Risk Data Library Developer
Unit:	IDURM (formerly GFDRR)
Location:	Remote location with mission travel
Days:	50 days with possibility of extension
Starting Date:	2nd September 2025
Language:	English

Background

The Risk Data Library is a suite of open data, standards, and tools designed to support action on disaster and climate risk in the most vulnerable countries. A key component of the suite is the Risk Data Library Standard (RDLS), an open data standard for describing the datasets used in climate and disaster risk assessments.

A wide range of organizations produce or use disaster risk information, including humanitarian agencies, insurance companies, academic institutions, and multilateral development banks. The RDLS offers to those organizations a common way for describing the data used and produced in risk assessments, and covering hazard, exposure, vulnerability, and modelled loss and damage data.

The Risk Data Library project is managed by the Global Facility for Disaster Reduction and Recovery (GFDRR) at the World Bank Group, through its Digital Earth line of work. To support the adoption and use of the Risk Data Library both within and outside the World Bank Group, the Digital Earth team is seeking to recruit a web developer.

This Short-Term Consultant position is financed through a Gates Foundation grant.

Duties and Responsibilities

Scope of Work

The primary objective of the Consultant is to support the code implementation of the Risk Data Library catalogue and metadata editor.

In detail, the Consultant will:

- Evaluate project objectives feasibility against selected software (JKAN, custom JS) and infrastructural capacity (GitHub)
- Improve and customize JKAN RDL catalogue (jkan.riskdatalibrary.org)
- Support development of JSON metadata editor (from existing proof-of-concept)
- Improve workflow to write metadata and ingest metadata files into selected data catalogues
- Develop a dashboard to summarize the amount of urban risk data available globally / by region / country based on RDLS metadata. The Risk Data Library Index (working title) is a tool designed to help track and compare the availability of risk data across countries or cities, based on the standardized categories defined in the Risk Data Library Standard. It offers a structured way to assess what hazard, exposure, vulnerability and risk datasets are available - or missing - in each location.

Specific Tasks

RDL JKAN catalogue development

1. JKAN search customization and AI tools implementation:
    a. Catalogue search function optimization with context semantic (in conjunction with WB AI team)
    b. Auto-metadata harvester - from other data catalogs compliant with the RDLS
2. Implement JSON-2-MD data conversion as automated workflow, OR change the JKAN compile module to work directly from JSON data.

Risk Data Library Index

3. Evaluate selected software (including but not limited to JKAN, custom JS) and infrastructure capacity to support the project objectives.

4. Develop a user-friendly dashboard and workflow to summarize the contents of the base data catalog in the chosen technology. This should include:
    a. Reporting data summaries for urban areas as defined in the GHS-UCDB R2024A - GHS Urban Centre Database 2025 dataset (for proof of concept, filter for a subset of the largest urban centers per region).
    b. Data summaries, to include number of urban risk datasets available globally and per region / country / urban area.
    c. An example of an interface to emulate is: The Humanitarian Data Exchange (HDX) Overview of Data Grids. Data category would refer in this case to the type of data required for urban risk assessment, for example, ‘hazard’, ‘structures’, ‘power supply’, ‘transport’, ‘urban drainage’, ‘education’, etc.
    d. Consider the feasibility of listing the datasets included in the summary metrics, with their license and access URL.
    e. Querying metadata represented using the Risk Data Library Standard (RDLS)

5. Develop a data availability tracking function to capture summary metrics at regular points in time (globally and per region / country / urban area) and present those on a timeline interface in the dashboard.

RDLS Metadata editor

6. Support the development of an online metadata editor for RDL-Schema, currently under development.
7. Integration between metadata editor and JKAN to smoothly submit metadata into the catalogue.

Location and duration

The consultant will be based in Washington, D.C or work remotely on a Short-Term Consultant assignment (50 days with possibility of extension).

Rate

Proportionate to expertise and experience levels.

Selection Criteria

Required criteria

Key qualifications required for this assignment include:

- A degree in the field of computer science, web development or other relevant fields;
- Good knowledge and technical skills working with metadata formats;
- Strong development experience of data catalog or geoportal (CKAN, JKAN, PostGIS, PostgreSQL, Geoserver, Geonetwork, Geonode, Maptiler);
- Comfortable working with GitHub platform;
- Proficiency in English.

Additional criteria

- A good understanding of risk data environment;
- Capacity for effective multi-tasking with demonstrated ability of being an independent starter with minimal supervision, and a high capacity to persevere for results;
- Strong communication and advocacy skills, including ability to write concisely and clearly and synthesize complex documentation and ideas for a range of audiences;
- Excellent inter-personal skills and proven ability to work in a team and intercultural environment;
- Able to work in an environment of diverse cultures.

How to apply

Application deadline: midnight Eastern Standard Time, Friday 22nd August 2025.

Please send a CV and cover letter to Pierre Chrzanowski (pchrzanowski@worldbank.org) and Mattia Amadio (mamadio@worldbank.org) with the email subject “STC application: Risk Data Library Developer”.

Short-listed applicants will be required to (online) interview.