



The Risk Data **Library**

Opening up risk information for better risk management

Technical Steering Group #1
19 November 2025

Agenda



● Introductions

● Update

- **Gates Foundation Funding scope and activities**
- **RDLS Team**
- **Current state of development**

● Your questions, feedback

Technical Steering Group

● Role:

- Receive updates on development of the RDLs; current focus on improving workflows and adding support for urban scale risk information and baseline / contextual datasets.
- FEEDBACK: technical updates and decision points; wherever possible we'll provide very targeted questions or requests, centred on utility for users and potential for take-up.
- Discuss how best to raise RDLs profile as a public good tool for the risk community and embed it in workflows for risk analysts.

● Timeframe: Until July-August 2026

● Members:



Environmental Change Institute



Workplan under Gates Foundation funding

1.1 Development of City Scan Web Tool

Funding to end 2026

1.2 Development of City Scan Methodologies and Guidance

1.3 Urban Settlement Footprint

USD 2 million overall funding

1.4 Development of Scalable City Extreme Heat Scan Product

1.5 Adoption of City Extreme Heat Scan as Online Webtool

1.6 Improving, testing and expanding use of NBSOS Biodiversity Modules

1.7 Expanding Applications of Urban NBSOS with Development Partners

2.1 Development of Urban Resilience Data Skills Curricula and Training Materials

3.1 Revision of Risk Data Library Standard and Functionality Improvements with Urban Focus

3.2 Development of City-Level Dashboard for Tracking Risk Data

3.3 Creation of City-Focused Platforms for Data and Resilience Understanding

RISK DATA LIBRARY ENVIRONMENT



● Landing page

riskdatalibrary.org

● Standard repository

github.com/GFDRR/rdl-standard

● Documentation

docs.riskdatalibrary.org

● RDL Data Catalog

jkan.riskdatalibrary.org

● RDL Collection on WB Catalog

datacatalog.worldbank.org/search/collections/rdl

Organisational chart

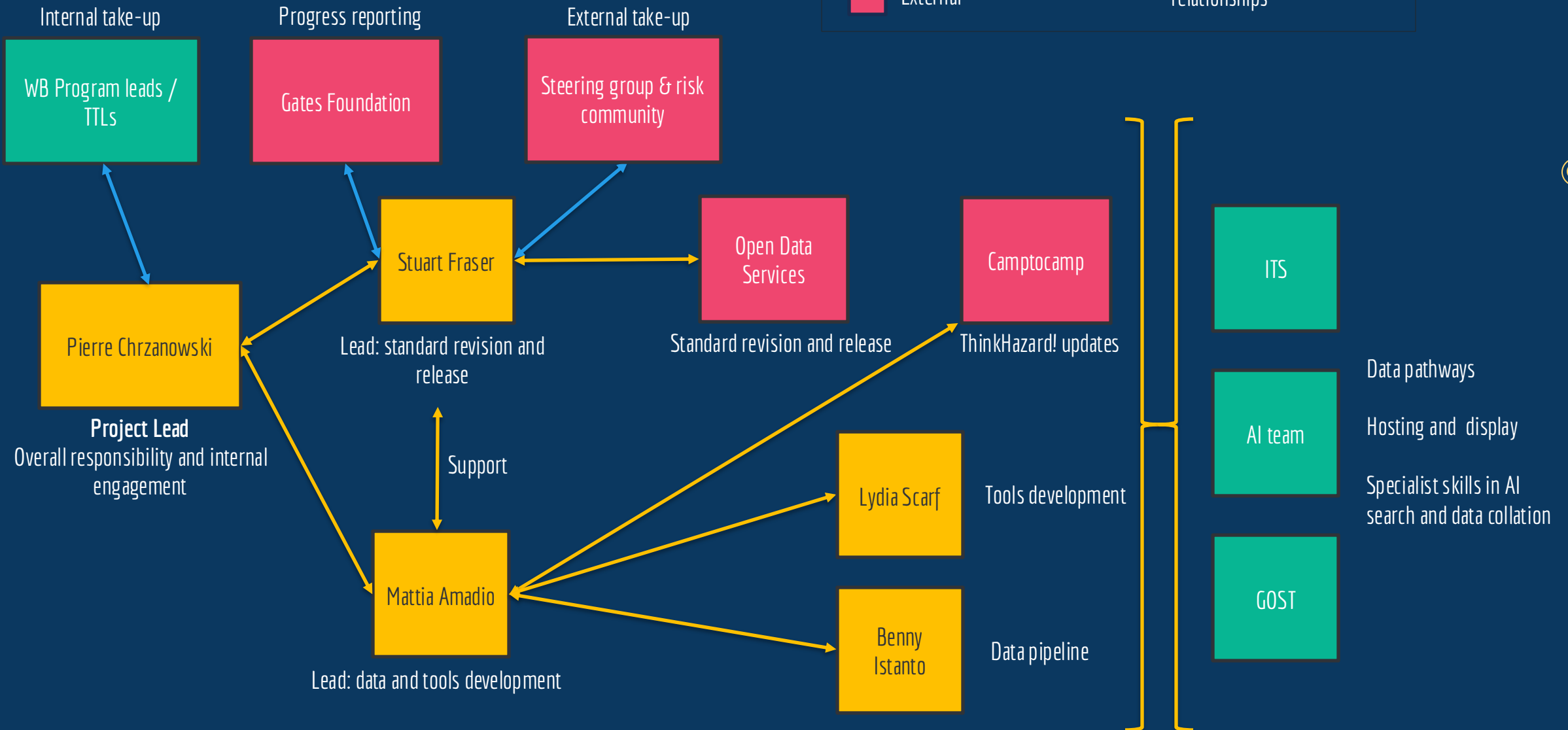
RDLS team

WB unit

External

Development activities

Funding / community relationships





Workplan under Gates Foundation funding

| | 2025 | | | | | | 2026 | | | | | |
|--|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|
| | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| A1 RDLS development with urban focus | | | | | | | | | | | | |
| A2 City level dashboard tracking urban risk data | | | | | | | | | | | | |
| A3 Data, guidance, tools for urban risk analysis | | | | | | | | | | | | |



April-August 2025: Planning, recruiting, contracting. Internal technical review and consolidation.
September onwards: Main implementation with partners.



Risk Data Library Standard: develop urban focus

| | 1.1 Key urban data review | 1.2 Review and update RLDS for urban data | 1.3 Update documentation and learning material | 1.4 Integration of RDLS into WB processes |
|---|--|---|---|--|
| Progress  | Reviewed urban risk assessments and data | Updates planned by section, identified sources | Development starts on completion of 1.1 and progress in 1.2 | Not started Continuing to promote use of RDLS outside WB, develop use cases |
| Blocks  | n/a | Development starts on completion urban review (1.1) | n/a | n/a |



| | 2025 | | | | 2026 | | | | | |
|---|------|-----|-----|------|------|-----|------|-----|-----|--------|
| | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| A1 RDLS functional development with urban focus | | | | | | | | | | |
| 1.1 Key data for urban risk assessment | | | | M1.1 | | | | | | |
| 1.2 Review and update RDLS for describing urban risk datasets | | | | | M1.2 | | | | | |
| 1.3 Update RDLS documentation and learning material | | | | | | | M1.3 | | | |
| 1.4 Support integration of RDLS into WB processes | | | | | | | | | | To Oct |

Risk Data Library Standard: urban data tracking

| | 2.1 Upgrade RDL Catalog functionality | 2.2 City level dashboard - track urban data | 2.3 Populate RDLS catalog; hackathons |
|---|--|--|---|
| Progress  | Updates being proposed by WB team based on urban data review and development of new workflow | Starting development for the integration of latest schema versions in RDL catalog (JKAN) | Good progress in data pipeline Baseline: 79 datasets |
| Blocks  | Delayed contract start | Waiting to define urban components after review and schema update | Not started identifying data collections to cover in hackathons |



| | 2025 | | | | 2026 | | | | | |
|---|------|-----|-----|-----|------|-----|-----|------|-----|------------|
| | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| A2 City level dashboard for tracking urban risk data | | | | | | | | | | |
| 2.1 Upgrade RDL catalog functionality | | | | | | | | | | |
| 2.2 RDL Index: City level urban risk data tracker | | | | | | | | | | M2.2 |
| 2.3 Populate RDL catalog incl. organising hackathons & data sprints | | | | | | | | Hack | | Q3/4 Hacks |

ThinkHazard!

3.1 Update scores and add urban level

3.2 Update written content

3.3 Develop and upgrade for urban risk screening

Progress



Scores have been updated for 7 hazards on new boundaries for ADM2 and Urban level - in re

Updates planned by section, identified sources

Data sources e.g., urban boundaries sourced

Blocks



Hazard classification to be run globally for Flood types (3)

Identifying resourcing / ITS routes in WB to assist

Vendor contract started this week



| | 2025 | | | | 2026 | | | | | |
|--|------|-----|-----|-----|------|-----|-----|-----|-----|-----|
| | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| A3 Data, guidance, tools for urban risk analysis | | | | | | | | | | |
| 3.1 Update TH scores and add urban level | | | | | | | | | | |
| 3.2 Update written content for TH | | | | | | | | | | |
| 3.3 Develop / upgrade ThinkHazard features to serve urban risk screening | | | | | | | | | M3 | |

Promotion

A Bottom-Up Approach to Building a Climate Resilience Stack

Policy Report — February 2025

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3.1 Leveraging open standards in the climate resilience stack



Institute for
Innovation and
Public Purpose

Example 4: The Risk Data Library Standard (RDLS)

The RDLS is an open metadata standard for describing risk datasets used in climate and disaster risk assessments. This makes it easier for risk data publishers to describe datasets and for users to access this data. The RDLS also provides guidance on packaging and formatting risk datasets. The Risk Data Library serves as an open data catalogue, leveraging and demonstrating the value of the RDLS.



Table 3. How the Risk Data Library Standard can support climate resilience stack capabilities

| Capability | Value of open standard |
|--------------------------------|--|
| Data Collection | Integration with KoboToolbox/ODK: KoboToolbox and ODK are primarily used to gather field data. If integrated using the RDLS, field data could be more easily catalogued with existing data (like historical hazard data, vulnerability data, or socio-economic factors) to provide more comprehensive situational awareness and even pre-populate or prompt questions to enrich data. |
| | Centralized Repository for Baseline Data: The RDL can serve as a repository of pre-existing risk data, offering a starting point for understanding the specific vulnerabilities of affected populations and enabling quicker, more data-informed decisions. |
| Analytics and Machine Learning | Enhanced Analytics with RDL: RDL's structured datasets can be used with analytics tools to create predictive models that assess risk exposure and project future needs. For example, combining RDL data on past flood occurrences with real-time weather data could help model future flood risks, guiding emergency response planning. |
| | Customizable Risk Indicators: Using RDL's data, organizations can establish indicators for specific crises (e.g., flood vulnerability or disease spread risk) that can then be fed into machine learning models to predict high-risk areas, thus enabling targeted intervention. |
| Geospatial Mapping | Integration with mapping: The geospatial nature of many RDL datasets makes them directly useful in mapping tools like QGIS, enabling visualizations of risk-prone areas. By layering RDL data with real-time crisis data, responders can get a detailed view of areas with the highest need. |
| | Enhanced Visualization for Decision-Making: Visualizing RDL data spatially can help identify at-risk populations, plan resource allocation, and set priorities. |

Activity / feedback

- [NEW] Metadata Editor to help users populate and validate metadata of risk datasets

The screenshot displays the RDLS Metadata Editor interface, which is a web-based tool for creating and validating risk dataset metadata. The interface is divided into three main panels:

- Schema Configuration:** This panel on the left allows users to select a schema version (currently RDLS 0.3) and choose dataset sections to include. The sections are: General Metadata (Required), Hazard Metadata, Exposure Metadata, Vulnerability Metadata, and Loss Metadata. A custom schema upload area is also present.
- RDLS Metadata Form:** The central panel contains the form for entering metadata. It includes fields for Title, Description, Dataset version, and Dataset purpose, each with a description and an example. A green "RDLS Form Ready" button is visible in the top right of this panel.
- Live Preview & Validation:** The right panel shows the validation status, which is currently "Not validated". It displays a JSON schema snippet and a message indicating that 0/0 fields are valid.

https://gfdrr.github.io/CCDR-tools/_static/RDL_MDE.html

Activity / feedback



Already had suggestions from Tom around scripting the creation of metadata and merging into JKAN

Exploring application to disaster loss database

<https://jkan.riskdatalibrary.org/>

Risk Data Library catalog (beta)

Datasets

RDL Project

/ Datasets

Categories

| Exposure | 20 |
|---------------|----|
| Hazard | 48 |
| Loss | 4 |
| Vulnerability | 7 |

Countries

| | |
|--------------------------|---|
| Afghanistan | 8 |
| Burkina Faso | 1 |
| Burundi | 1 |
| Central African Republic | 1 |
| Chad | 1 |
| Show 25 more... | |

Geographical Scale

| | |
|--------------|----|
| Global | 17 |
| Regional | 20 |
| National | 14 |
| Sub-national | 28 |

20 datasets

Search...

Afghanistan Asset exposure

Collection of exposure datasets for risk assessment purpose in Afghanistan. Includes: - Location, area and USD value of rainfed and irrigated agricultural crops. - Total exposure value of buildings for different occupancy types: urban and rural structures, residential, non-residential, and industrial area. Values expressed as replacement cost (USD), area (m2), or number of elements (count). - Location, count and USD value (when available) for the following infrastructures in Afghanistan: airports, bridges, dams, health centers, hospitals, power plants, roads, schools and universities. - Population count and GDP value in USD for three macrosectors (Industry, Agriculture and Services) in Afghanistan.

Developed by (version): GFDRR (2018)

Geo Coverage: Afghanistan

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Central Asia exposure dataset - agriculture (wheat and cotton)

Cotton and wheat cropland in Central Asia. The dataset has been developed based on cropland data (cotton, wheat) collected from local data provided at sub-national level.

Developed by (version): Chiara Scaini (2022)

Geo Coverage: Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan, Uzbekistan

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Central Asia exposure dataset - airports

Collection of airport location and extent.

Developed by (version): Chiara Scaini (2022)

Geo Coverage: Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan, Uzbekistan

Next meeting

🟡 January (date TBC)

🟢 Urban data review will be complete; ODS will have reviewed proposed changes

- In January begin to iterate those proposals / embed into v1

🔴 The ask for then:

- Feedback on urban data collection when complete (data categories, attributes we're including)
- List of urban risk projects that could be proposed for the data pipeline (WB / non-WB) - w/ brief description, contact person and data location
- Try the metadata editor on a small example, let us know how you get on