Open Data for Resilience Initiative

Suranga Kahandawa
Senior Disaster Risk Management Specialist

Acknowledgement:

Vivien Deparday and GFDRR Innovation Labs Team

Developing Risk Information to Inform Decisions

Create a platform to inform resilient development across sectors

RISK REDUCTION

PREPAREDNESS

FINANCIAL PROTECTION

RESILIENT RECOVERY

Create a Portfolio of Activities to *Increase Resilience*

Develop Detailed Physical Risk Assessment by collection, management, and analysis of data

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The Problem

- Risk Assessment/ Understanding Risk is the basis for risk management

- Risk Assessments require accessible, detailed and up to date data on the hazard, exposure and vulnerability

- In most of the developing countries, there are significant gaps in data

- The **data issues**:
  - Fragmentation and duplication across ministries and development institutions
  - Discoverability and inaccessibility
  - Stale and incomplete data
  - Curation expense
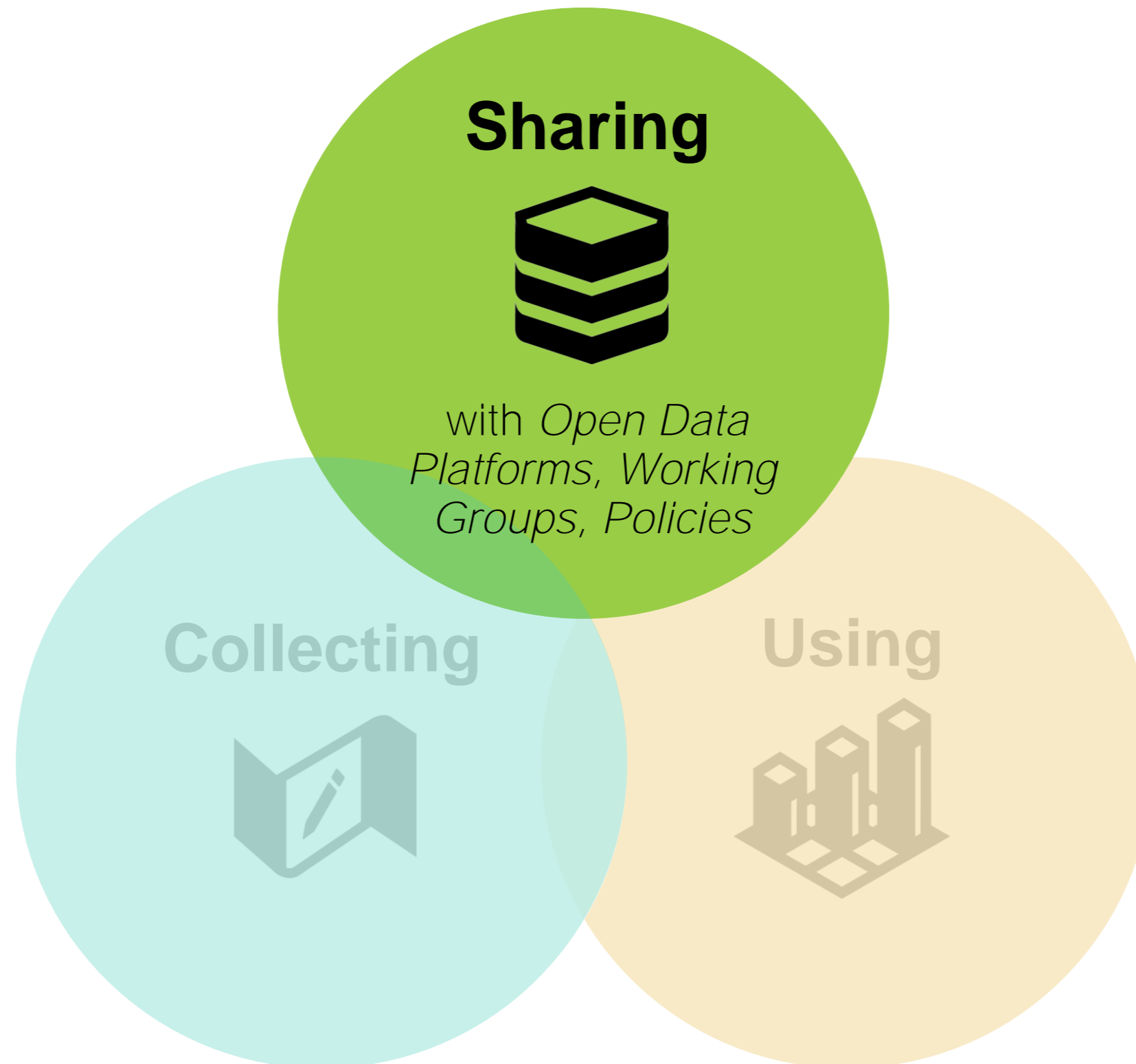 - Weak Usage/Application creates a disincentive for investment in data

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Collecting Risk Information to Inform Decisions

Open Data for Resilience Initiative

Open Data for Resilience
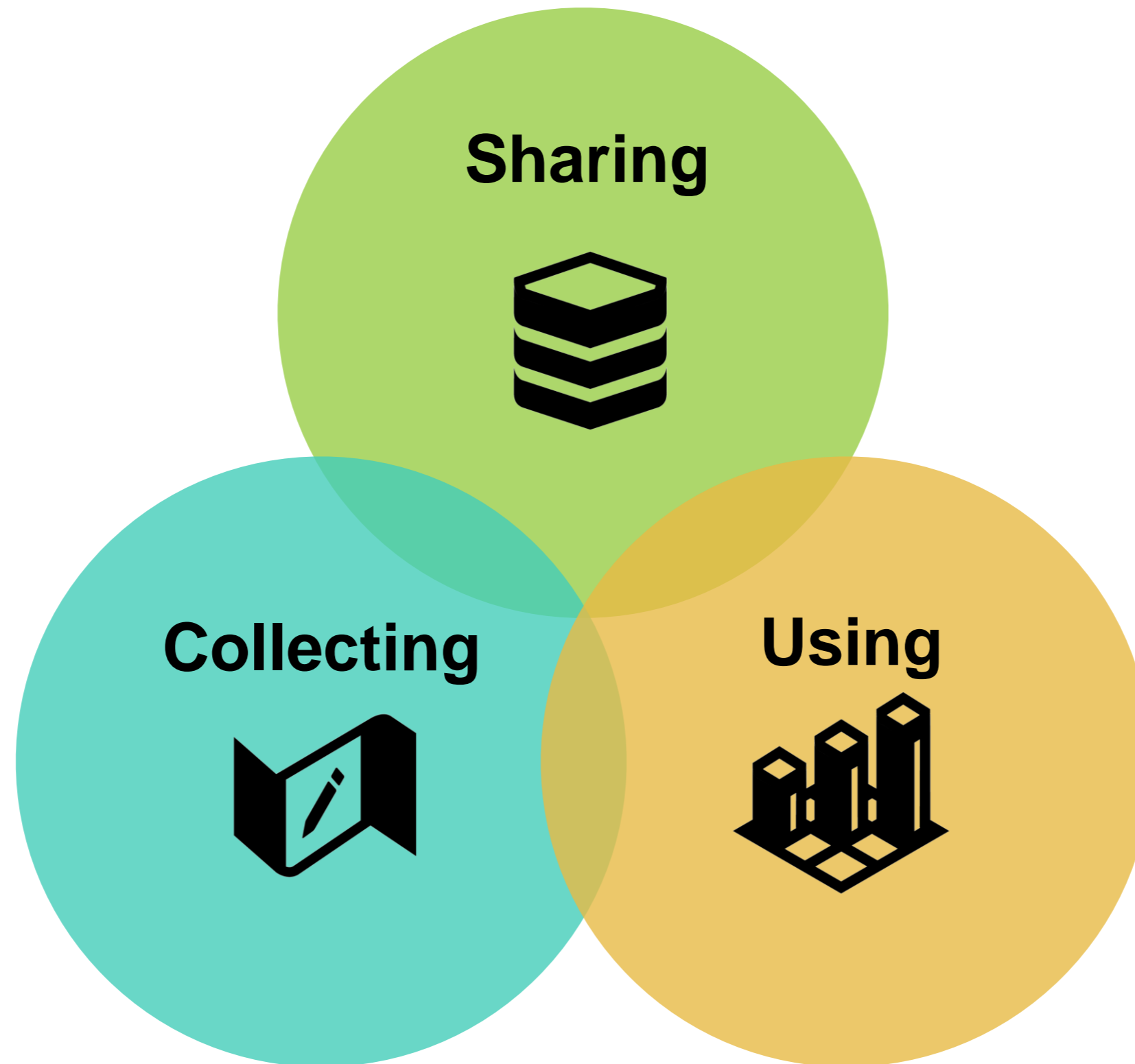
Sharing Risk Information to Inform Decisions

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MASDAP Data Maps About | Search Sign in

Malawi
Spatial Data Platform

A public platform for GIS Data
to support development in Malawi

Get Started »

Search for Malawi Data.

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Discover the available datasets.

BOUNDARIES BUILDINGS CLIMATE ELEVATION GEOLOGY HEALTH

LAND COVER NATURE PLACES POPULATION TRANSPORTATION WATER

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GeoDASH LAYERS MAPS DOCUMENTS ORGANIZATIONS NEWS SIGN IN REGISTER বাংলা

Bangladesh

GEODASH.GOV.BD

AN OPEN SOURCE GEOSPATIAL
DATA MANAGEMENT AND
VISUALIZATION PLATFORM

Learn more

| 96 | 2 | 20 | 43 |
| Layers | Maps | Organizations | Users |

HOW IT WORKS
Just a few quick steps from creating your map to publishing it

Register Upload Layers Create a New Map

ThinkHazard!

Identify natural hazards in your project area
and understand how to reduce their impact

Enter location... (e.g. Turkey, or Istanbul)

River flood Earthquake Drought Cyclone Coastal flood Tsunami Volcanic ash Landslide

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RISKINFO Disaster Risk Information Platform
Risk Information for all...

English ▼

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Flood and Landslide Situation

On 15 May 2016 Sri Lanka was hit by a severe tropical storm that caused widespread flooding and landslides in 22 districts out 25 districts in the country, destroying homes and submerging entire villages. At least 104 people are known to have died following this disaster; 99 people are still missing, the majority due to a landslide in Aranayake, Kegalle District, which devastated three villages.

DATA LAYERS
RiskInfo lets you upload, manage, and browse data. Search for data that is valuable to you, or upload your own data.

Hazard Exposure Base Data Risk

GEODASH.GOV.BD

AN OPEN SOURCE GEOSPATIAL DATA MANAGEMENT & VISUALIZATION PLATFORM

Learn more

239	**6**	**44**	**228**
Layers	Maps	Organizations	Users

HOW IT WORKS

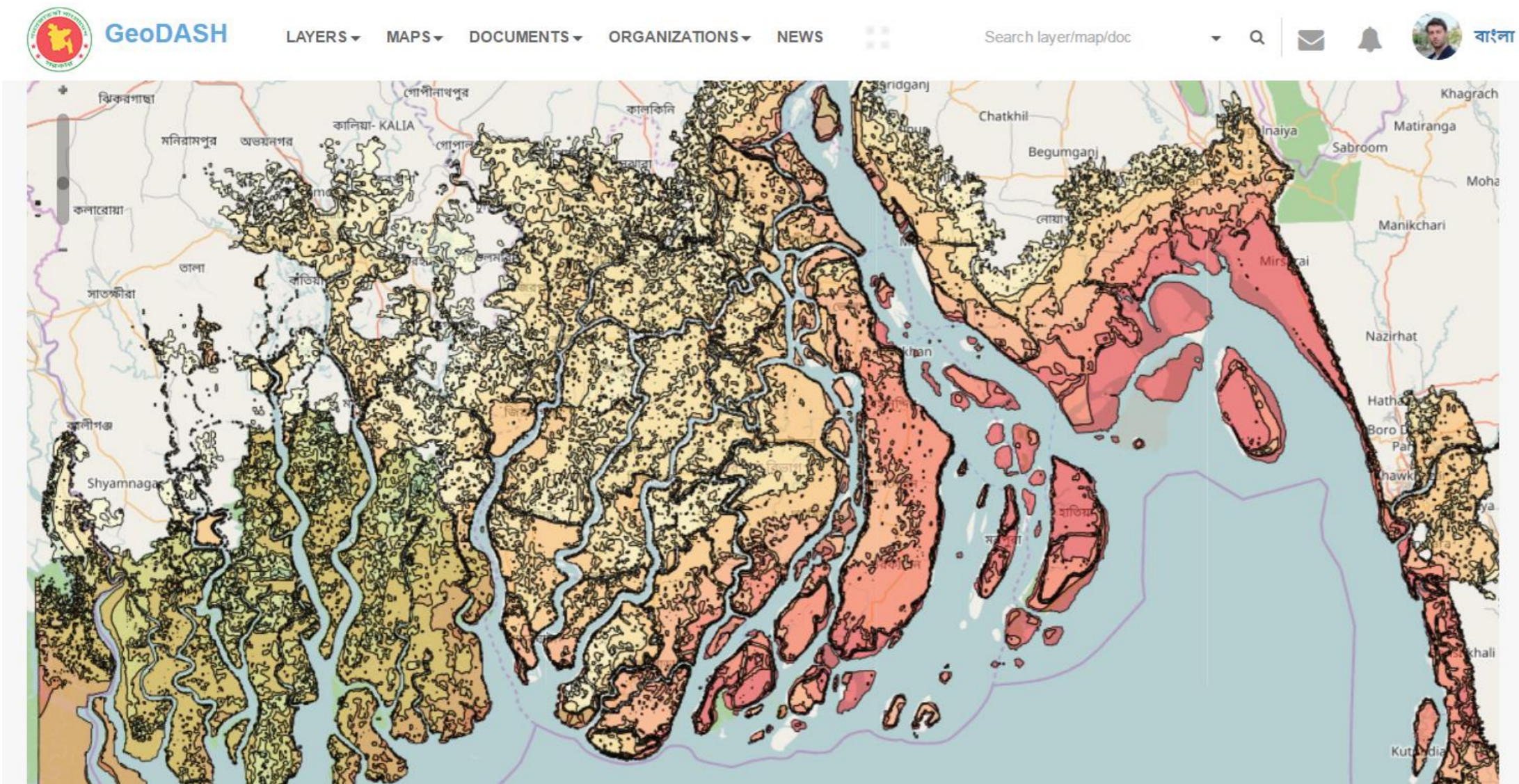Just a few quick steps from creating your map to publishing it

Register

Upload Layers

Create a New Map

GeoDASH

Organization: Department of Disaster Management
Layer: Cyclonic Storm Surge Risk, 100 Year Return

GeoDASH: Collaboration between Organizations

How can Dhaka increase its resilience to disasters and provide better services to its most vulnerable?

Data Sources
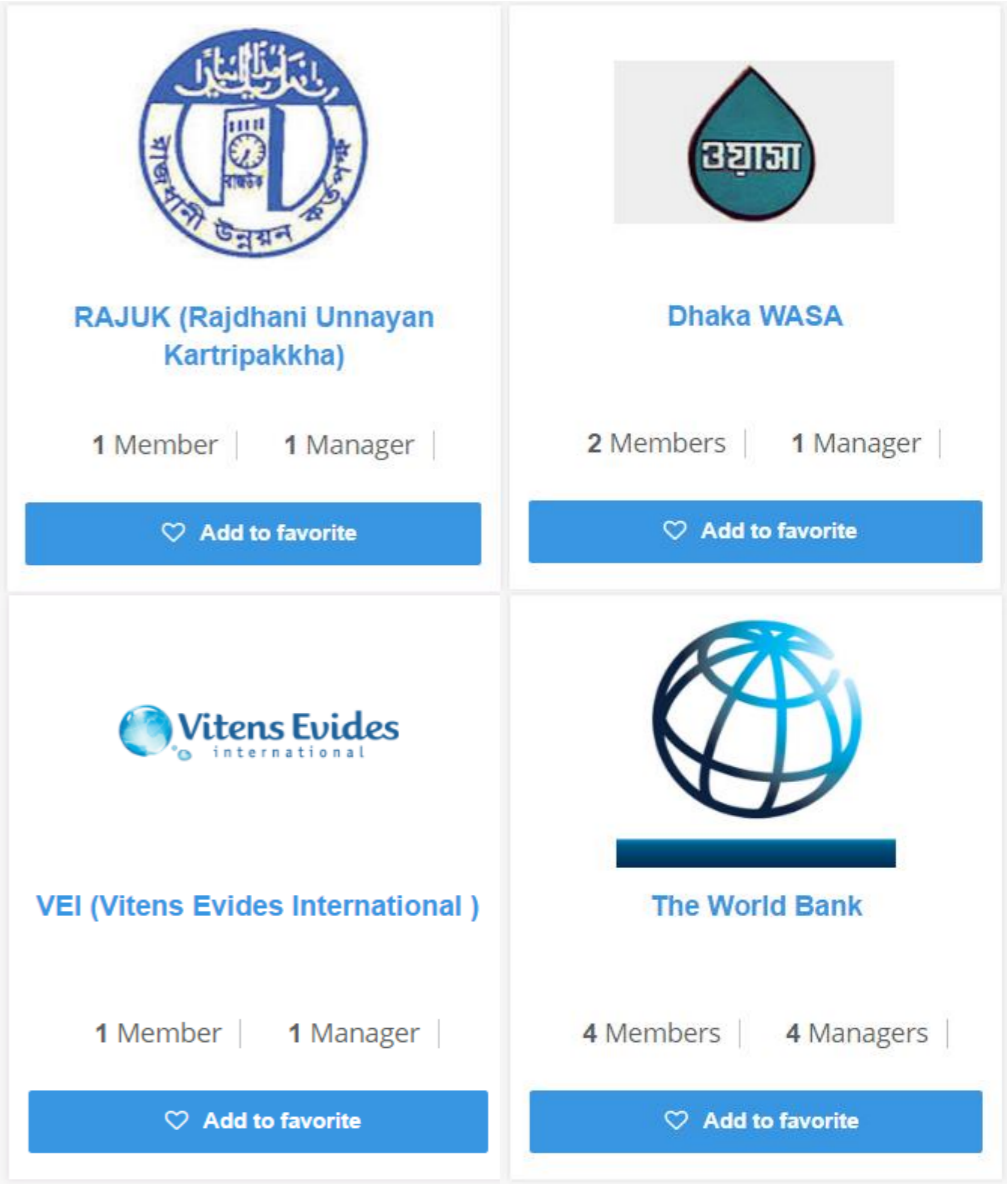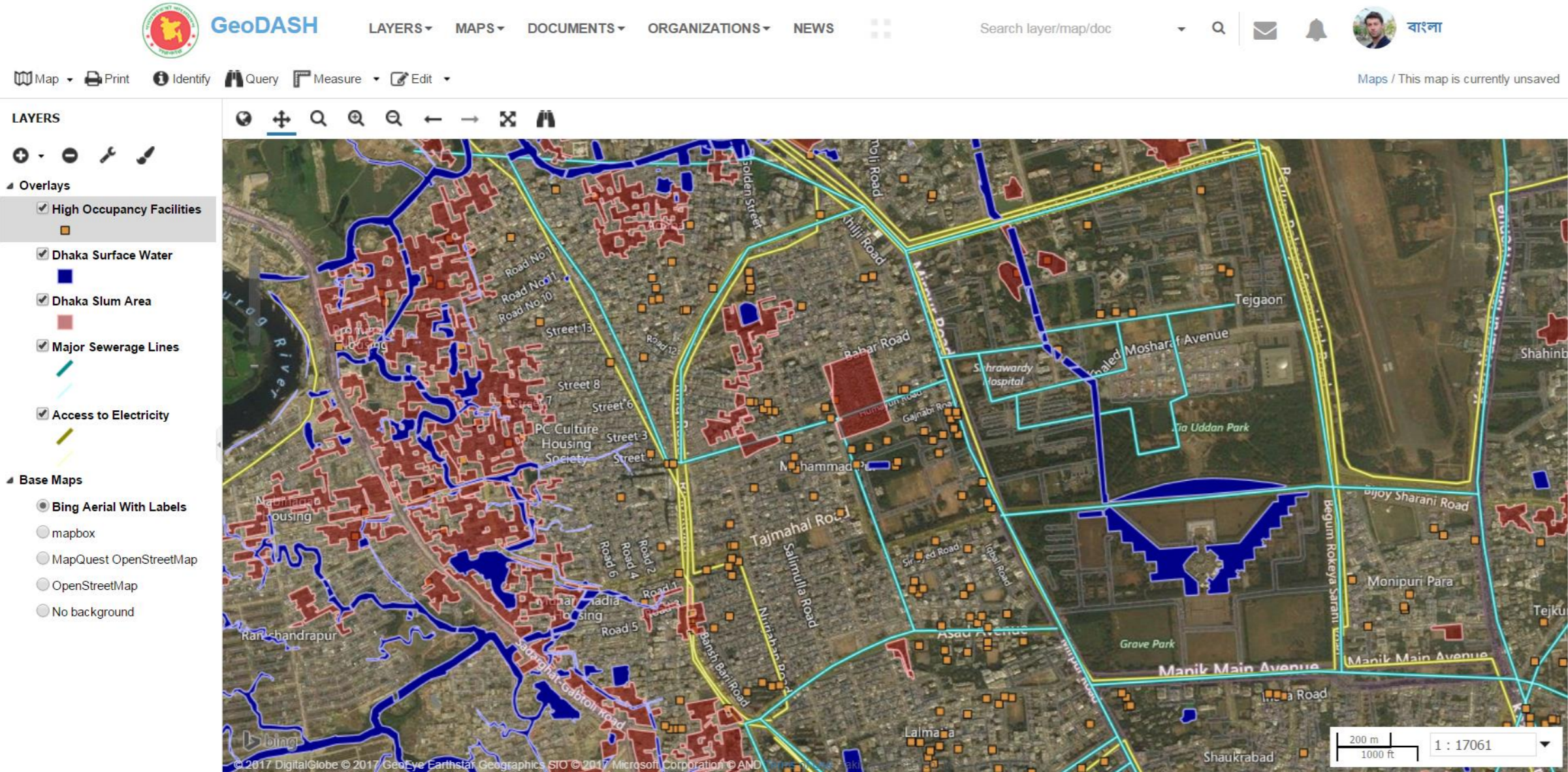
Different Information for Different Use and Users

Think Hazard!

Collecting Risk Information to Inform Decisions

Open Data for Resilience Initiative

Traditional Approach to Data Collection

Consultant driven

Opaque collection

Expensive upfront

Recurring costs

Static

Out of date

**Unengaged
Unaffordable
Unchanging**

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Advantages to a Collaborative Approach

Data collection using the OpenStreetMap platform

Resources focused towards building capacity

Transparent & Reusable

Scalable and Maintainable

Foster more usage of the data

TECHNICAL INSTITUTIONAL

Collaborative

Builds Govt capacity to understand risk

Building local ownership and trust in the data

Raises community awareness of risk

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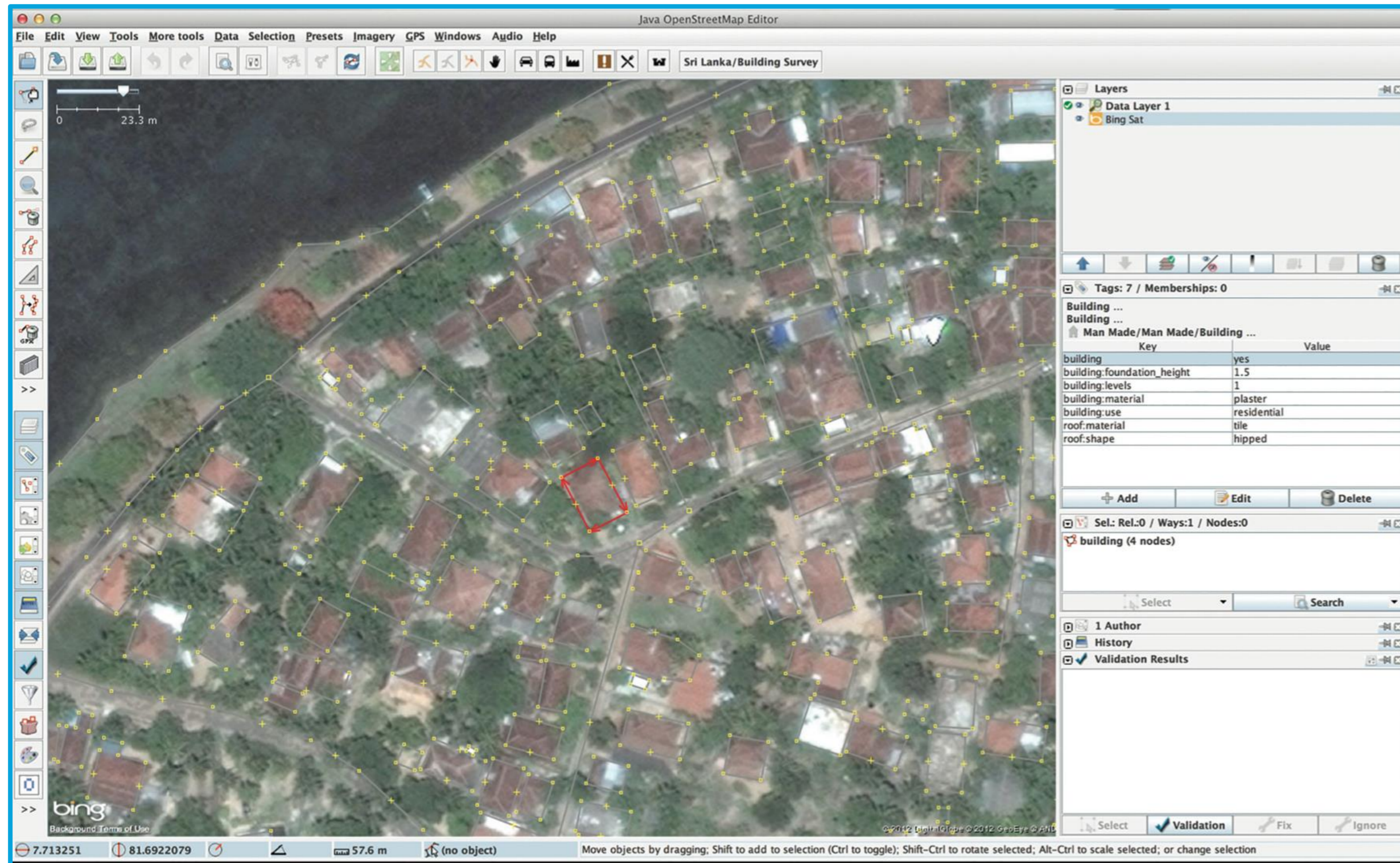
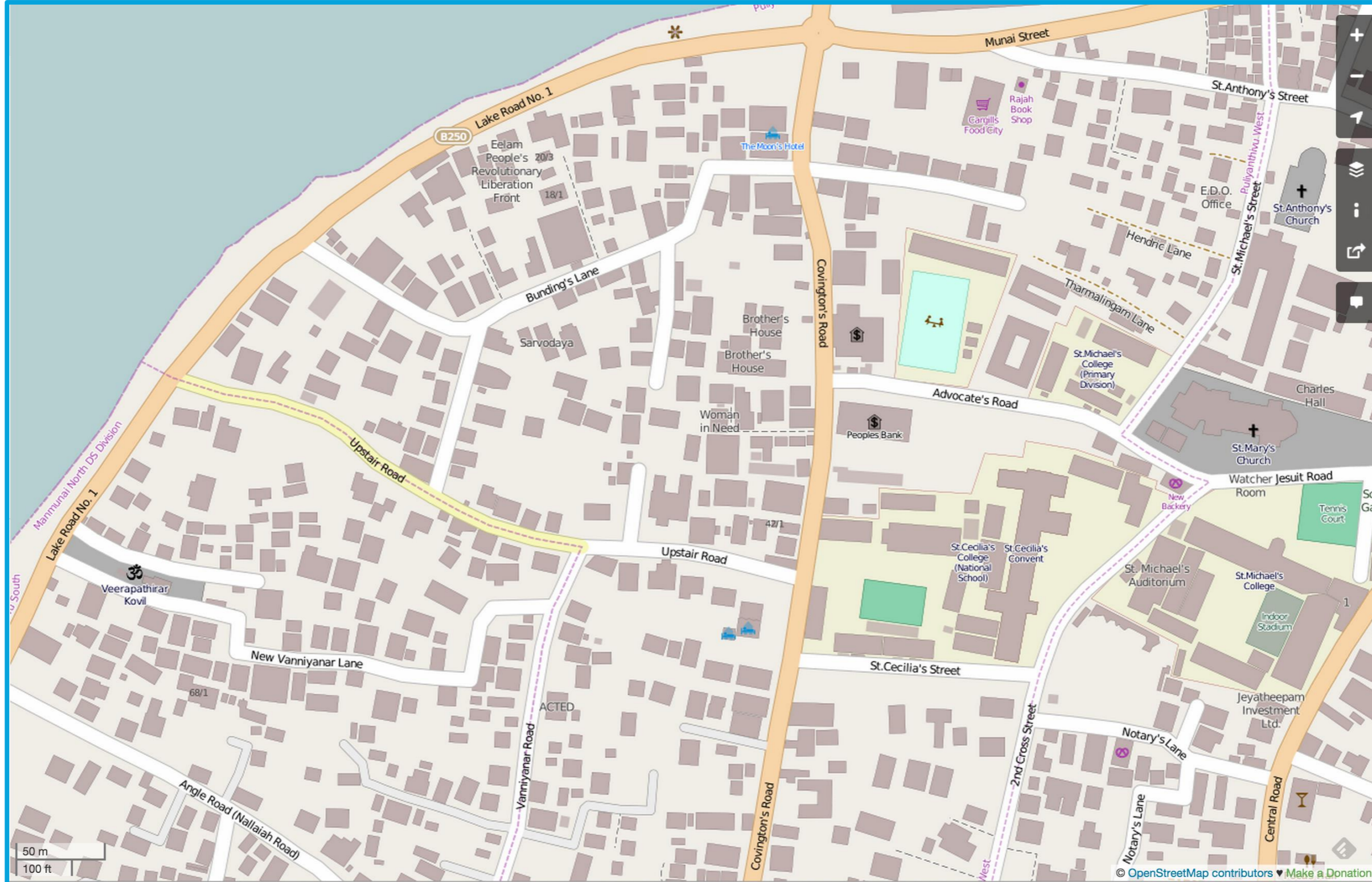# OpenStreetMap

OpenStreetMap　　**Wikipedia + Location**

Tracing Imagery
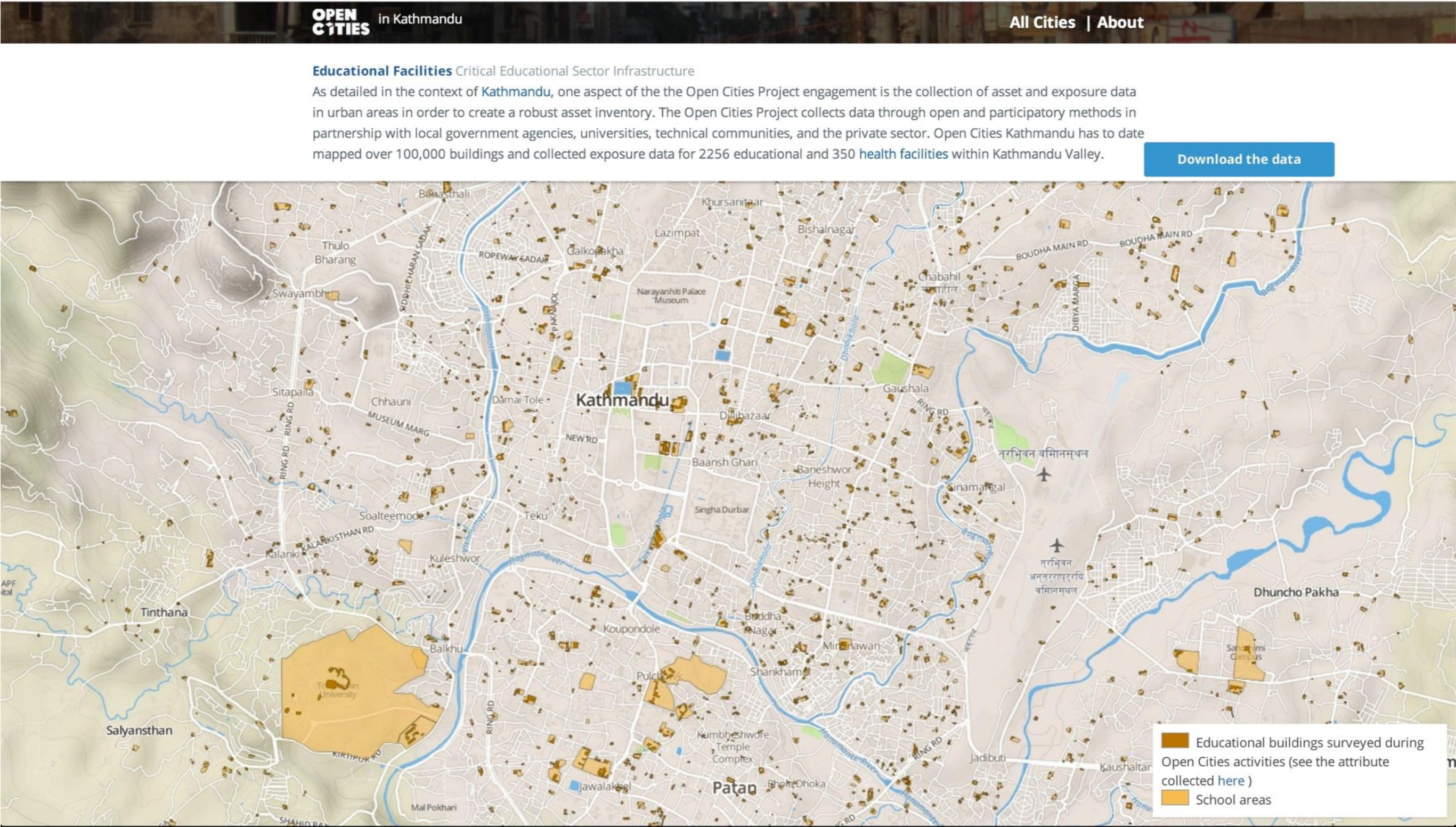
Tracing Imagery

Digitizing Local Knowledge

Example – Kathmandu, Nepal
Mapping Schools and Hospitals for Seismic Risk Assessment

OPEN CITIES in Kathmandu   All Cities | About

Educational Facilities Critical Educational Sector Infrastructure

As detailed in the context of Kathmandu, one aspect of the the Open Cities Project engagement is the collection of asset and exposure data in urban areas in order to create a robust asset inventory. The Open Cities Project collects data through open and participatory methods in partnership with local government agencies, universities, technical communities, and the private sector. Open Cities Kathmandu has to date mapped over 100,000 buildings and collected exposure data for 2256 educational and 350 health facilities within Kathmandu Valley.

Download the data

Educational buildings surveyed during Open Cities activities (see the attribute collected here)
School areas

Example – Batticaloa, Sri Lanka
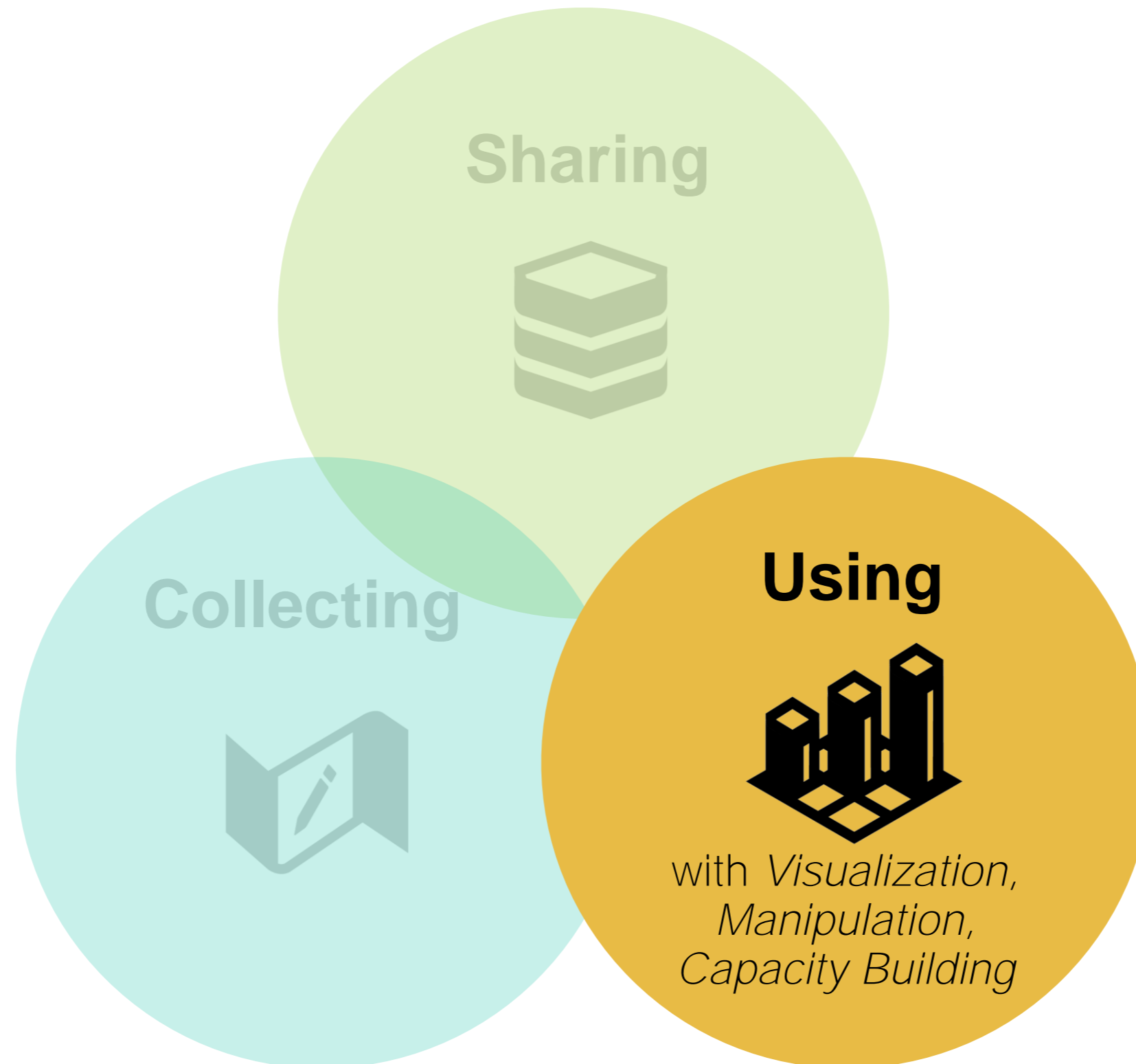
Tandale Ward - Dar Es Salaam

Tandale Ward - Drainage Map
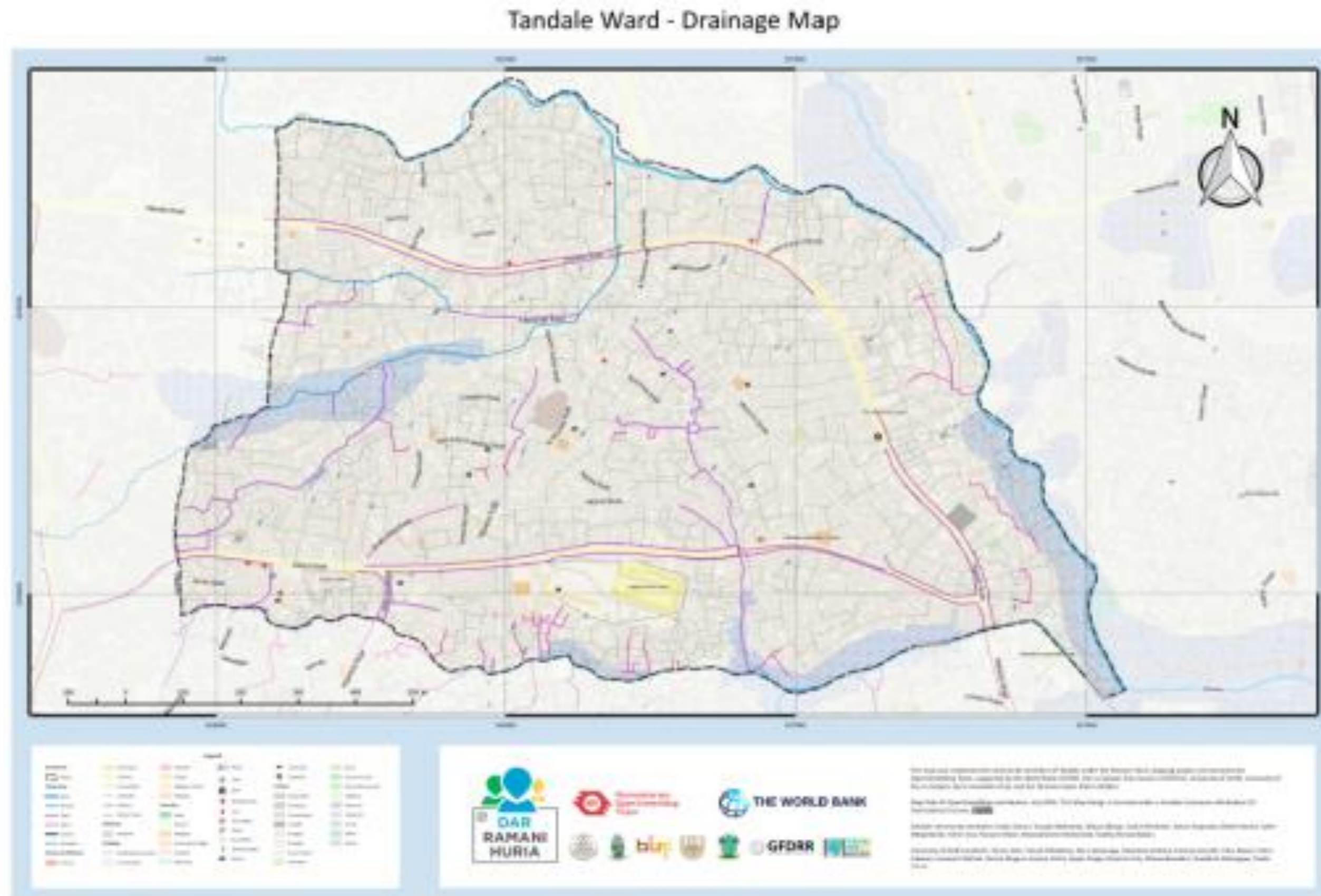
Using Risk Information to Inform Decisions

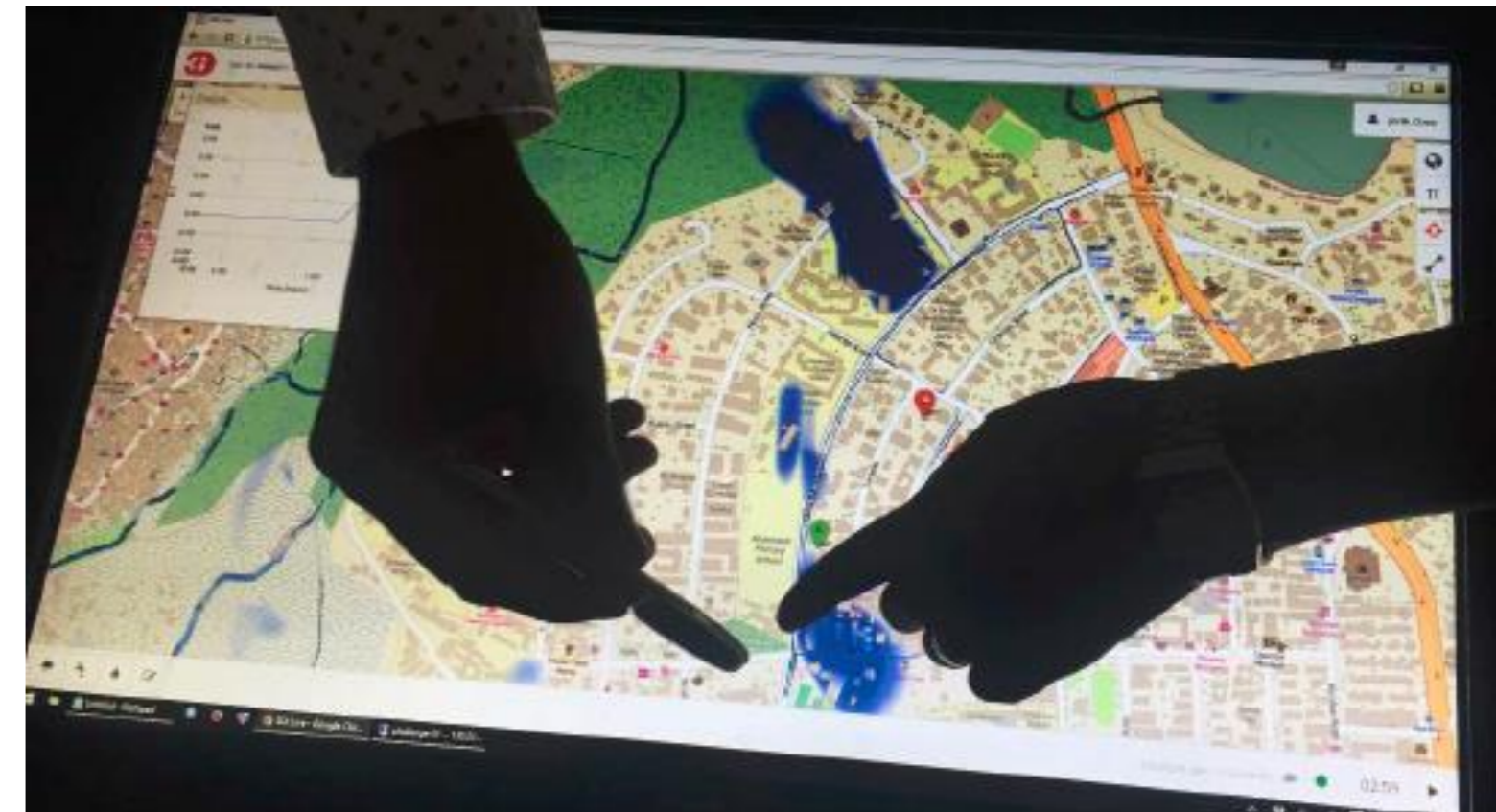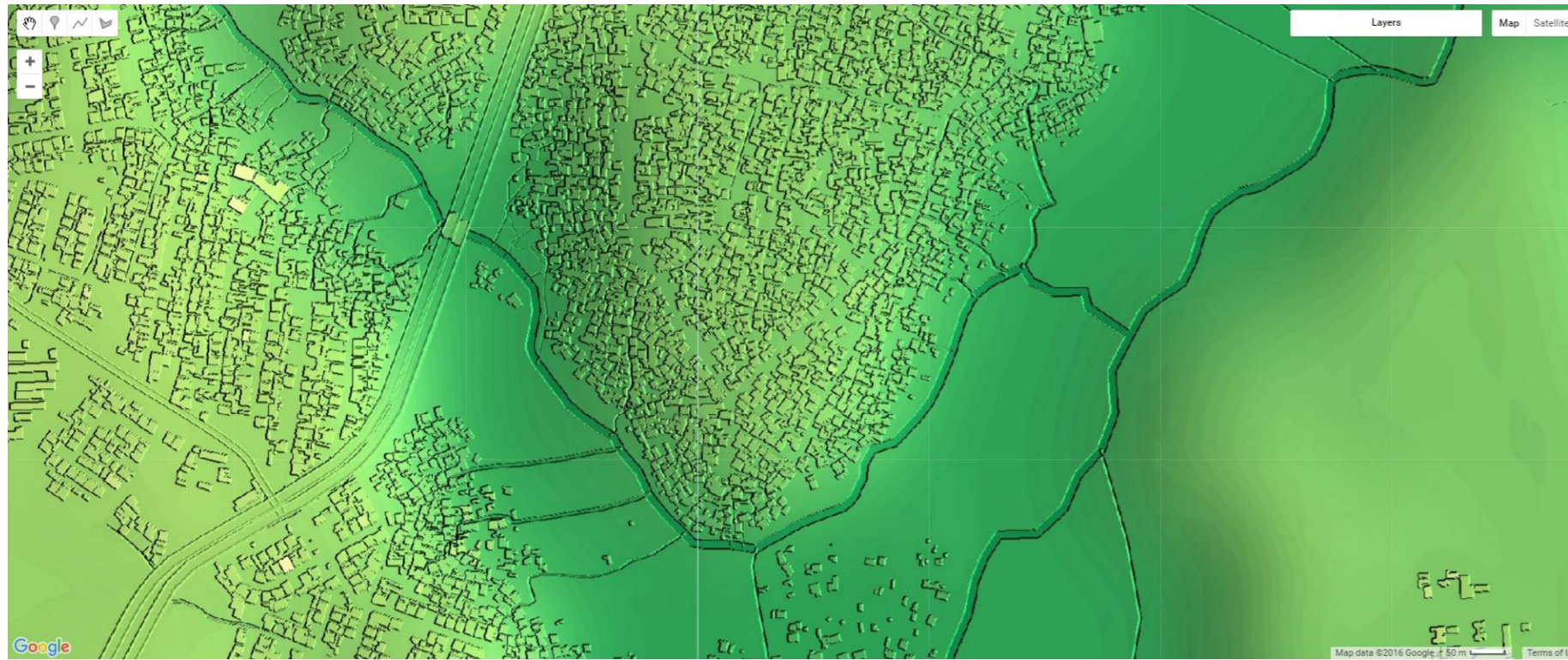## Open Data for Resilience Initiative

Dar Es Salaam, Tanzania:
*Mapping Flood Prone Areas and Managing Infrastructure with Local Governments and Red Cross*
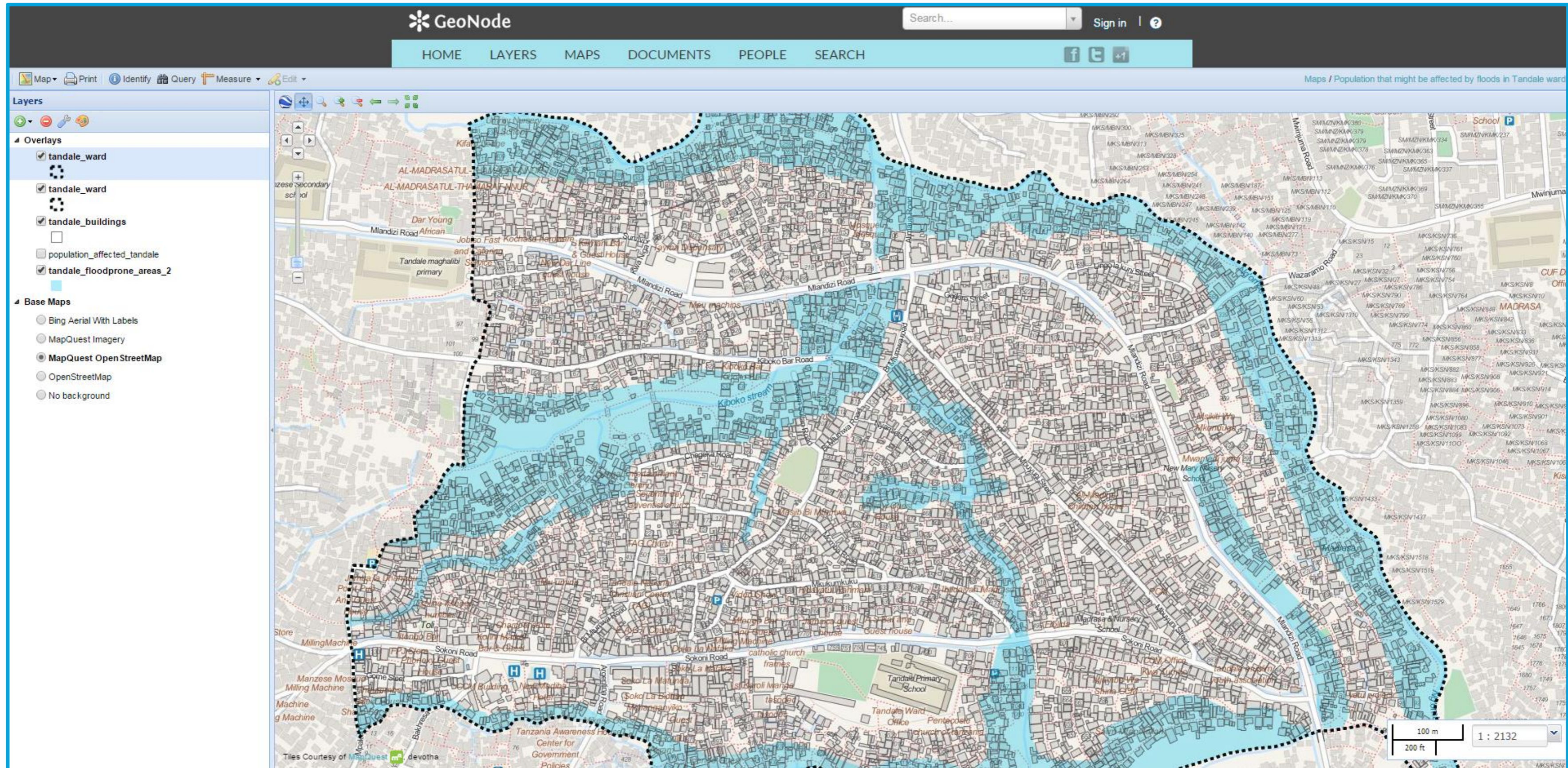
Participatory Terrain Data and Modelling

Using Data through Open Source Tools Tailoring Information

InaSAFE – Scenario-based contingency planning

❑ Get the best available scientific and community data to bear on disaster management decisions.

❑ More aware of the risks that we face; and be better coordinated and less surprised when a disaster strikes.
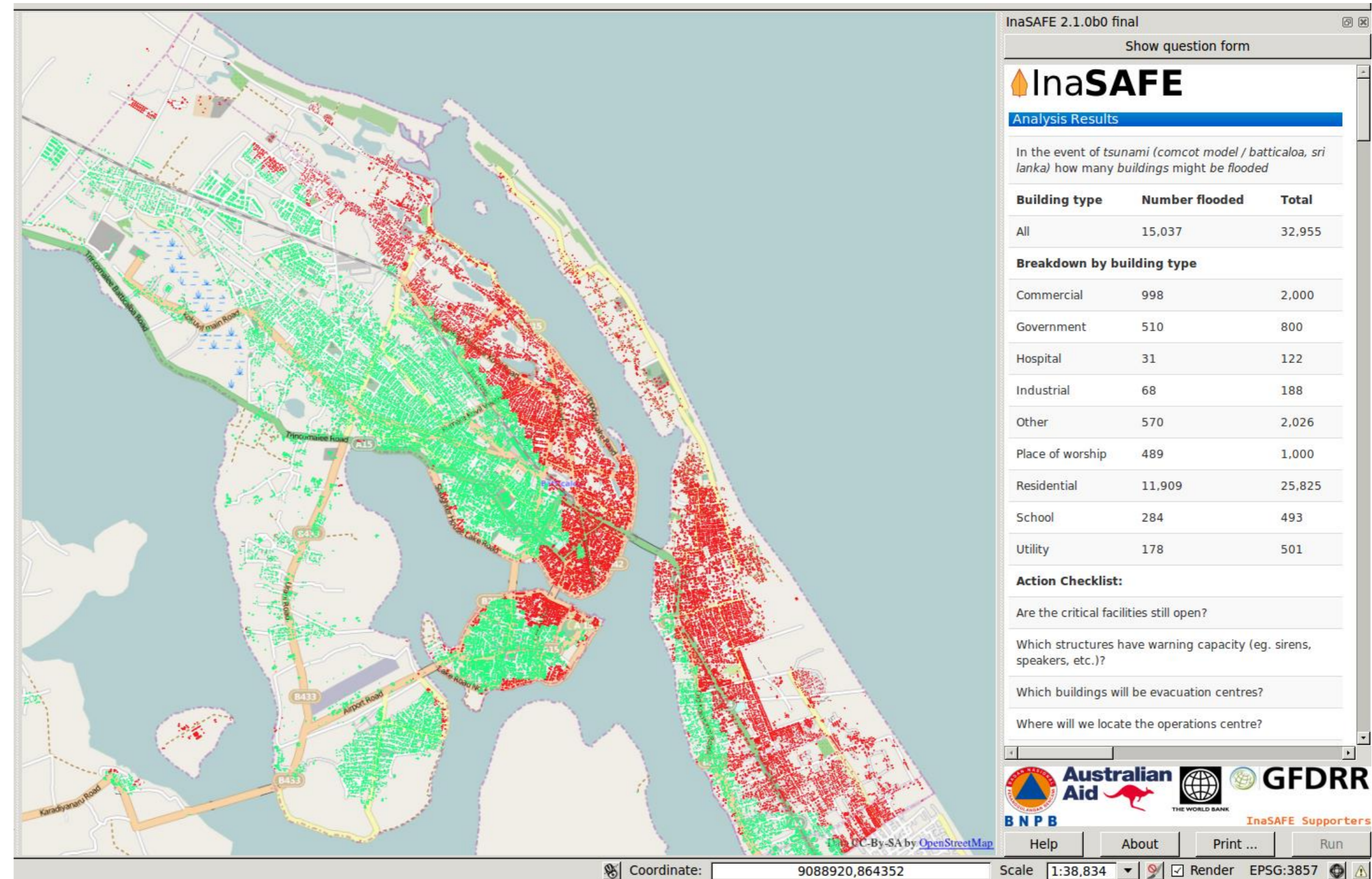
InaSAFE – Flood Scenarios Tandale

Adopt a Drain – Twaa Mtaro

Building Capacity

Building Capacity

Building Capacity

Citizens as Sensors

Maps For Everyone

Empowering citizens to create free, open maps: mirror of the community

READ MORE

Thank You!

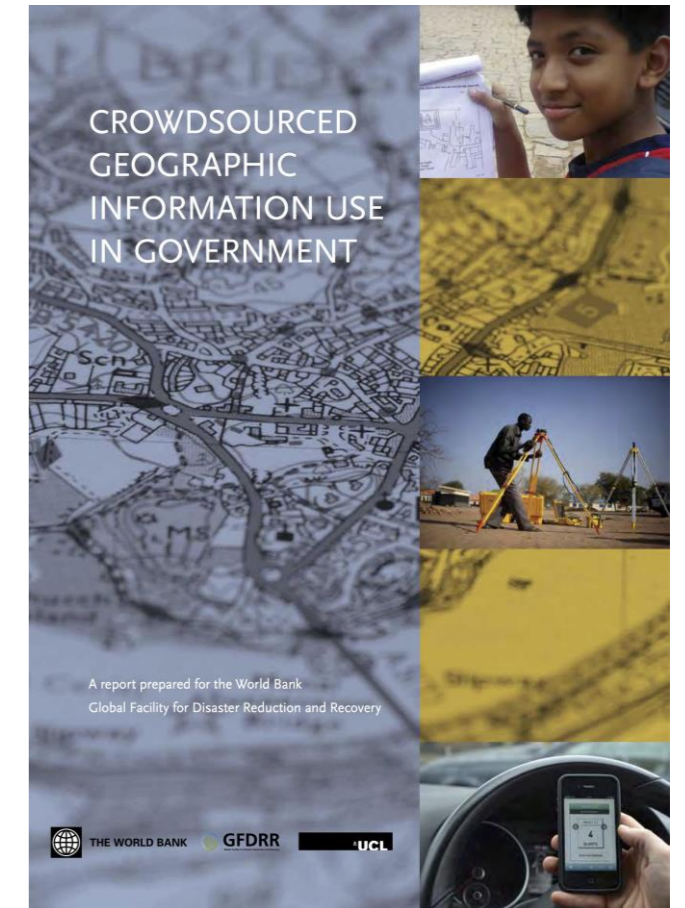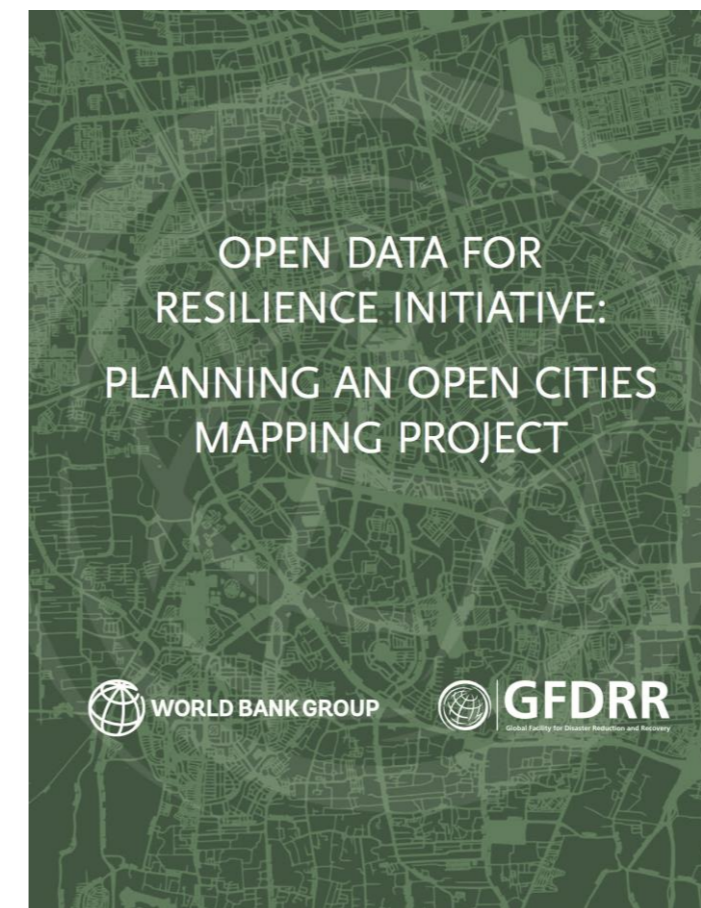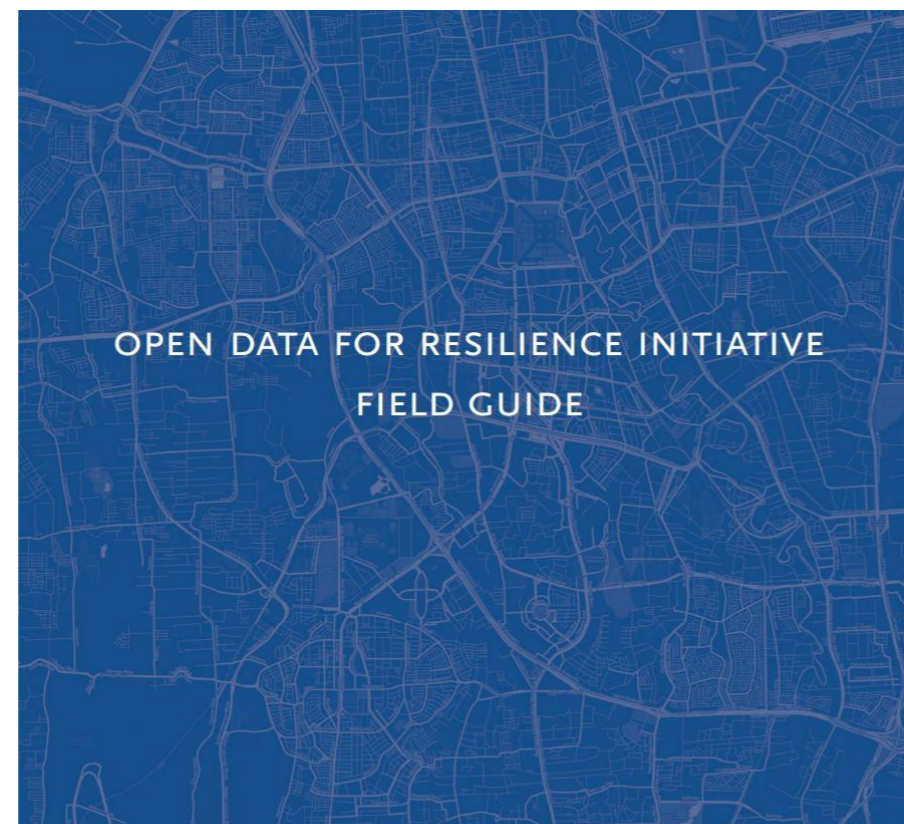**Website: www.opendri.org**

OPEN DATA FOR RESILIENCE INITIATIVE

Policy Note and Principles

GFDRR | OpenDRI Open Data for Resilience Initiative

OPEN DATA FOR RESILIENCE INITIATIVE
FIELD GUIDE

THE WORLD BANK | GFDRR | OpenDRI | American Red Cross | OCHA | UNISDR | USAID

OPEN DATA FOR RESILIENCE INITIATIVE:
PLANNING AN OPEN CITIES MAPPING PROJECT

WORLD BANK GROUP | GFDRR Global Facility for Disaster Reduction and Recovery

CROWDSOURCED GEOGRAPHIC INFORMATION USE IN GOVERNMENT

A report prepared for the World Bank
Global Facility for Disaster Reduction and Recovery

THE WORLD BANK | GFDRR | UCL

OpenDRI Open Data for Resilience Initiative

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