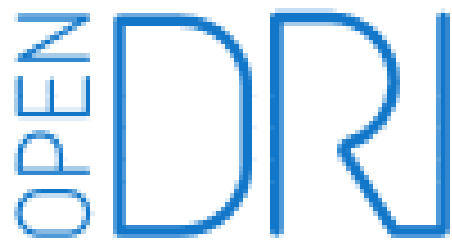
A nighttime aerial photograph of a city, likely Sofia, Bulgaria. The central focus is the Alexander Nevsky Cathedral, a large, ornate building with multiple domes and arches, brightly illuminated with warm yellow lights. The cathedral stands out against the dark sky and the surrounding city. The city itself is densely packed with buildings, many of which have their lights on, creating a pattern of small, glowing windows and streetlights. In the background, the city gives way to a dark, hilly landscape with some distant lights visible on the horizon. The overall atmosphere is serene yet vibrant due to the artificial lighting.

Advancing the State of Open Data and its use for DRM in the Balkan

Photo by Alexandr Bormotin on Unsplash



Open Data for
Resilience Initiative

Pierre Chrzanowski, Open Data Specialist
pchrzanowski@worldbank.org



GFDRR
Global Facility for Disaster Reduction and Recovery

www.opendri.org

OpenDRI brings the philosophies and practices of the global open data movement to the challenges of reducing vulnerability and building resilience to natural hazards and the impacts of climate change across the globe.



SHARING
DATA



COLLECTING
DATA



USING DATA

OpenDRI principles

Disaster risk data should be:



1. Open by default



2. Accessible, Licensed, & Documented



3. Co-created



4. Locally Owned



5. Communicated in ways that meet needs of diverse users

Open Data projects in the disaster risk space should be designed to:



6. Engage user communities



7. Develop Strong Institutional Partnerships



8. Prioritize Open Source



9. Set clear, long-term goals

www.thinkhazard.org



Enter location (e.g. Indonesia or Bali)

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Serbia

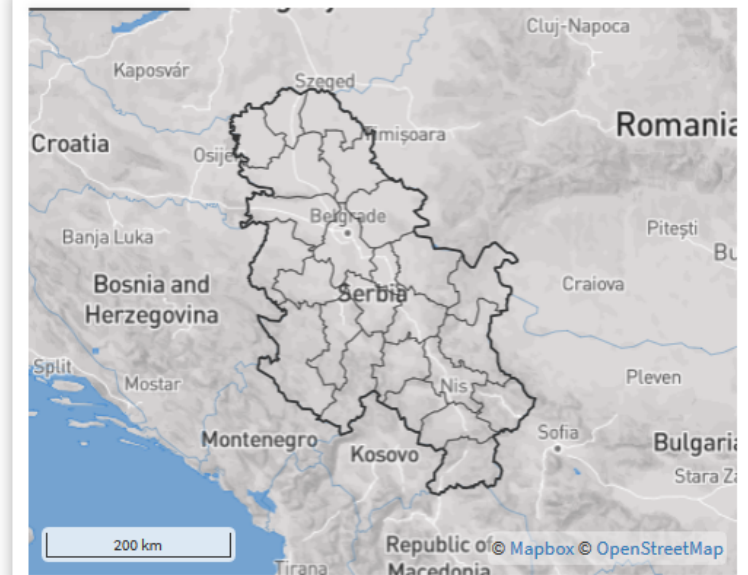
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Serbia



River flood	High
Urban flood	High
Wildfire	High
Earthquake	Medium
Water scarcity	Medium
Extreme heat	Medium
Coastal flood	Very low
Landslide	Very low

HAZARD LEVEL



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MASDAP Data Maps About Sign in

Malawi Spatial Data Platform

A public platform for GIS Data to support development in Malawi

Get Started

Search for Malawi Data.

Search

Advanced Search

Discover the available datasets.

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AN OPEN SOURCE GEOSPATIAL DATA MANAGEMENT AND VISUALIZATION PLATFORM

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96 Layers 2 Maps 20 Organizations 43 Users

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

- Register
- Upload Layers
- Create a New Map

InnovationLab GeoNode
Open data to further your understanding of disaster risk

Layers Maps Documents People Groups Type your search here ... Sign in

Hazard datasets

We maintain a curation of hazard datasets at the global and country level. Tools like ThinkHazard! use these datasets in the backend.

- Earthquake 53 datasets
- Drought 7 datasets
- Flood 23 datasets
- Tsunami No datasets
- Storm Surge
- Strong Wind
- Volcanic Ashes

RISKINFO Disaster Risk Information Platform
Risk information for all

English Register Sign in

Home Layers Maps Documents People Groups Search

Flood and Landslide Situation

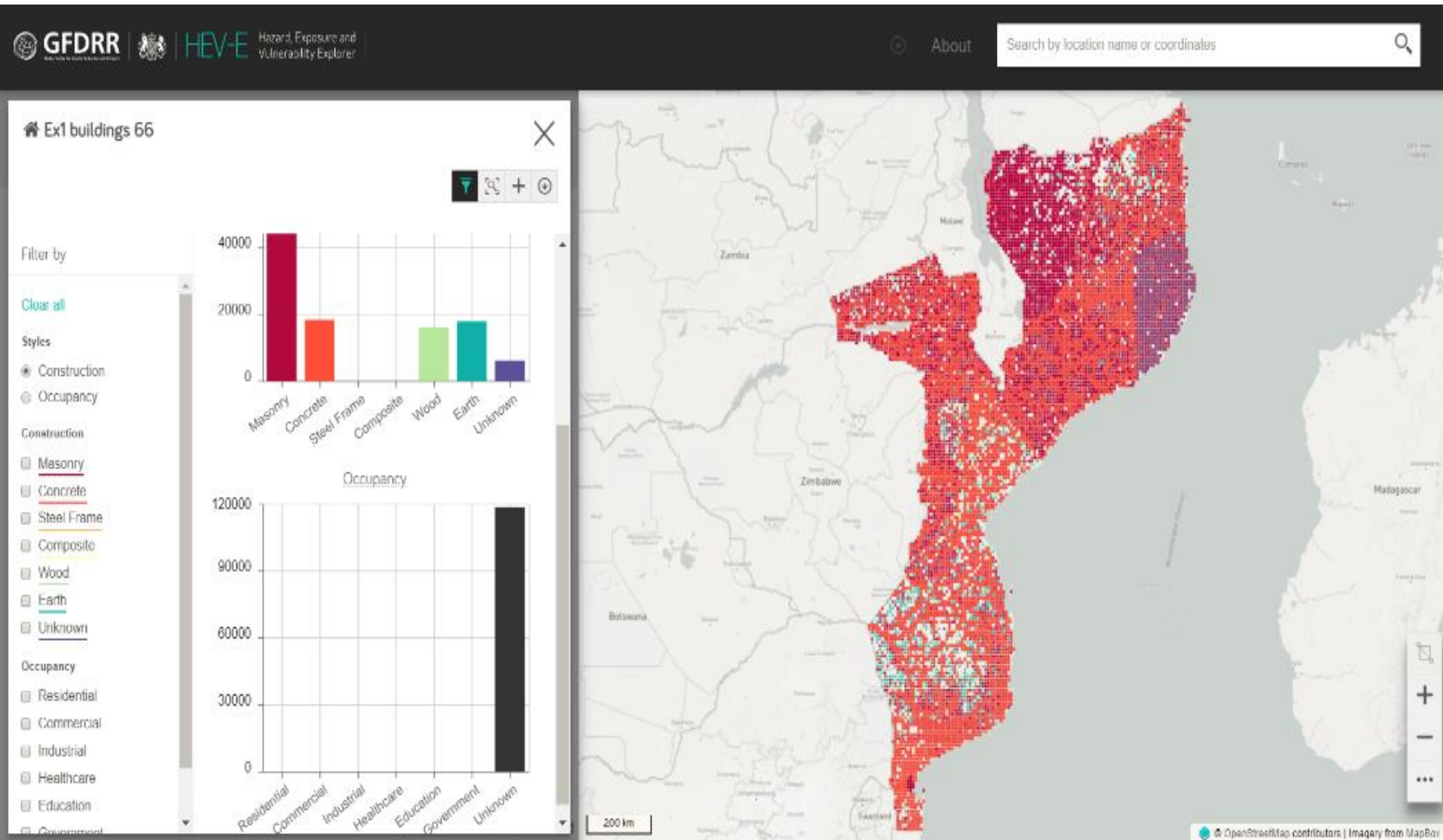
On 15 May 2016 Sri Lanka was hit by a severe rainfall event that caused widespread flooding and landslides in 22 districts in the country, destroying homes and threatening entire villages. At least 104 people are known to have died following the disaster, 29 people are still missing, the majority due to a landslide in Akkavila, Kandy District, which has affected 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.

- Buildings
- People
- Documents
- Disasters

www.assess-risk.info



opencitiesproject.org



Open Data for
Resilience Initiative
<https://opencitiesproject.org/>

OPEN CITIES AFRICA

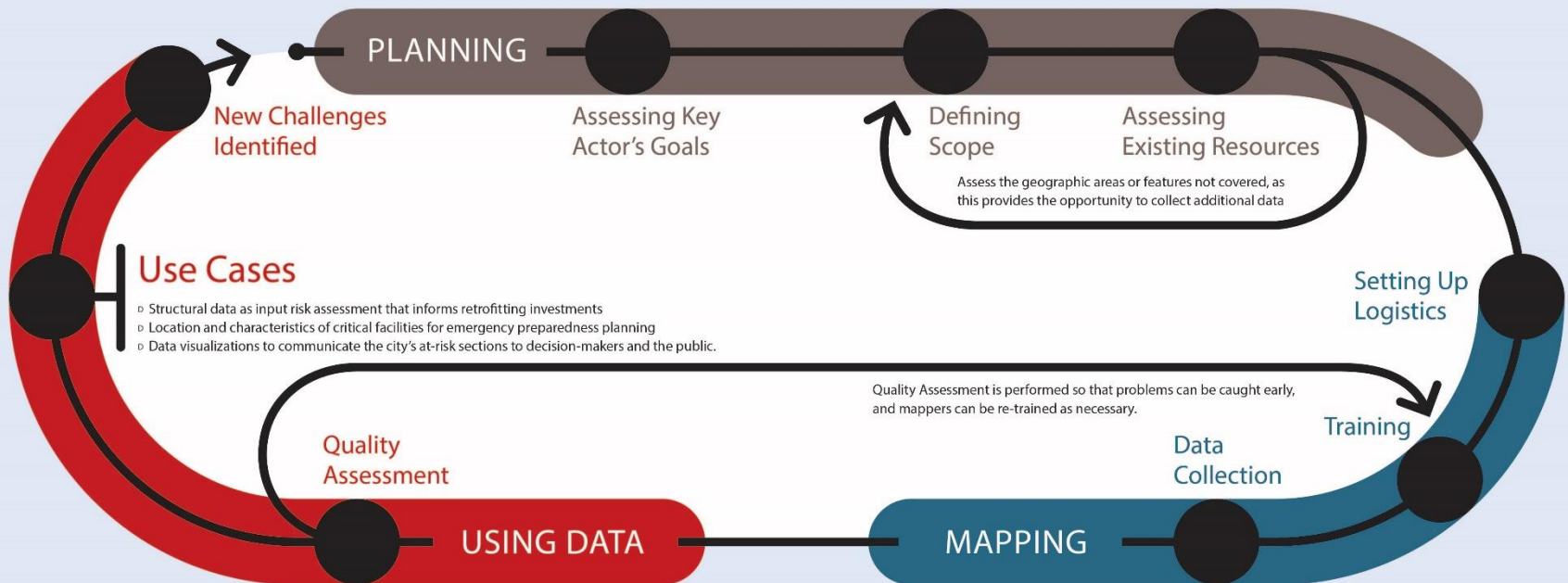
OPEN DATA TODAY TO BUILD RESILIENT AND SUSTAINABLE SOCIETIES TOMORROW

ABOUT

opencitiesproject.org

Open Cities Process Diagram

Designing and executing Open Cities projects is a complex task that involves a great deal of coordination with partners, technical and scientific work, team and volunteer coordination and management, and logistical work. While the format of this book necessarily presents these steps as linear, in practice these tasks are ongoing, iterative, and happening in parallel.



Building the Ecosystem

Each part of an Open Cities project offers opportunities for involving new participants, demonstrating the value of open data, and supporting the growth of the networks organizations and individuals who can continue to

update the data or champion the work after the project itself is complete. Finding ways to build the ecosystem of data contributors and users involved in an Open Cities project is key to long-term sustainability and impact.

We are data workers

Open Data for Resilience Needs Assessment for Serbia

Draft version, October 31, 2016

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Hazard / Exposure / Base	Datasets	Name / Title	Agency owning the data (name, contact person, phone, email)	Agency maintaining the data (name, contact person, phone, email)	Spatial Coverage (national, name of particular islands, districts, etc.)	Highest Resolution Available	Spatial representation type (vector, raster, tabular data) if applicable	Format of the dataset (incl. "hard copy")
Hazard								
Flood	Existing Hazard Zones							
	Maps or GIS shapefile that identify flood prone areas for given return periods, and severity information (e.g. flood depth)	Floods Prone Zone Return Period 100 and 1000 years	Water Directorate and Public Water Management Companies		only partial coverage, the rest will be developed under the IPA project			
	Meteorological Data							
	Historical rainfall data	Rainfall trends in Serbia from 1961 to 2009	Laboratory for development of the open source geospatial technologies, Department of Geodesy and Geoinformatics of the Faculty of Civil Engineering, University of Belgrade	Laboratory for development of the open source geospatial technologies, Department of Geodesy and Geoinformatics of the Faculty of Civil Engineering, University of Belgrade, kili@grf.bg.ac.rs	Serbia		Shapefile	XML
	Stream flow data							
	Historical streamflow data							
	Location of stream gauging stations	Distribution of stations on regional stations and on the basins of major rivers	Republic Hydrometeorological Service of Serbia	Republic Hydrometeorological Service of Serbia	National	No geocoordinate published	Descriptive - Distance from the river mouth (km)	HTML presentation pages
	Water levels				National	-	-	HTML presentation pages
	Topography							
	Watershed boundaries	Watershed_bigger	Republic Hydrometeorological Service of Serbia, published by Republic Geodetic Authority	Republic Hydrometeorological Service of Serbia	National	-	Vector	ESRI shapefile

Index.opendri.org



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TRACKING OPEN DATA FOR DISASTER RISK MANAGEMENT

A collaborative and global assessment of availability and ease of use of data related to natural hazards

466
datasets

29.6%
open data

30
locations

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Which data?

The Components for Assessing Risk

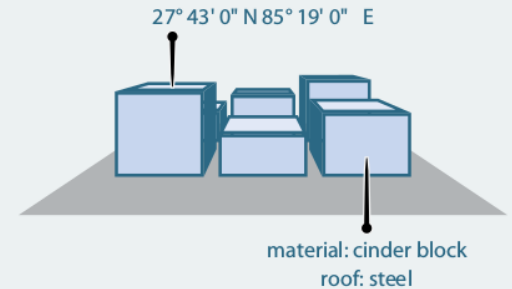
HAZARD

The likelihood, probability, or chance of a potentially destructive phenomenon.



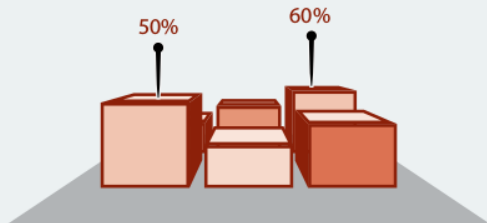
EXPOSURE

The location, attributes, and values of assets that are important to communities.



VULNERABILITY

The likelihood that assets will be damaged or destroyed when exposed to a hazard event.



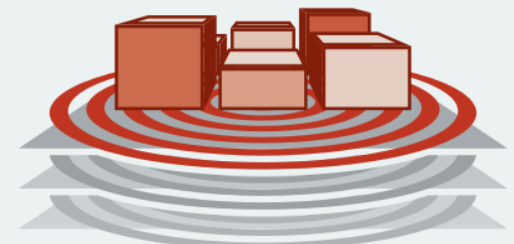
IMPACT

For use in preparedness, an evaluation of what might happen to people and assets from a single event.

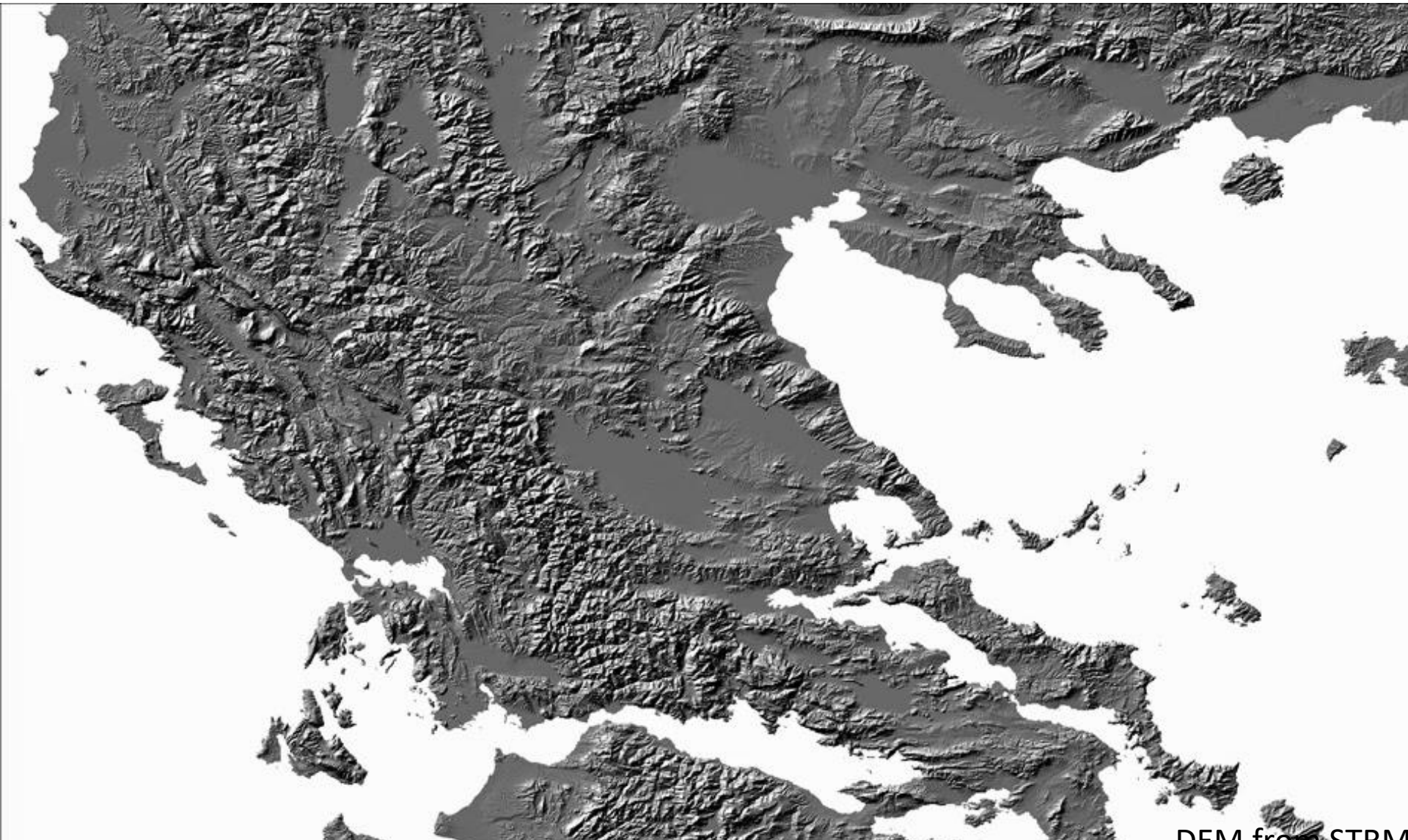


RISK

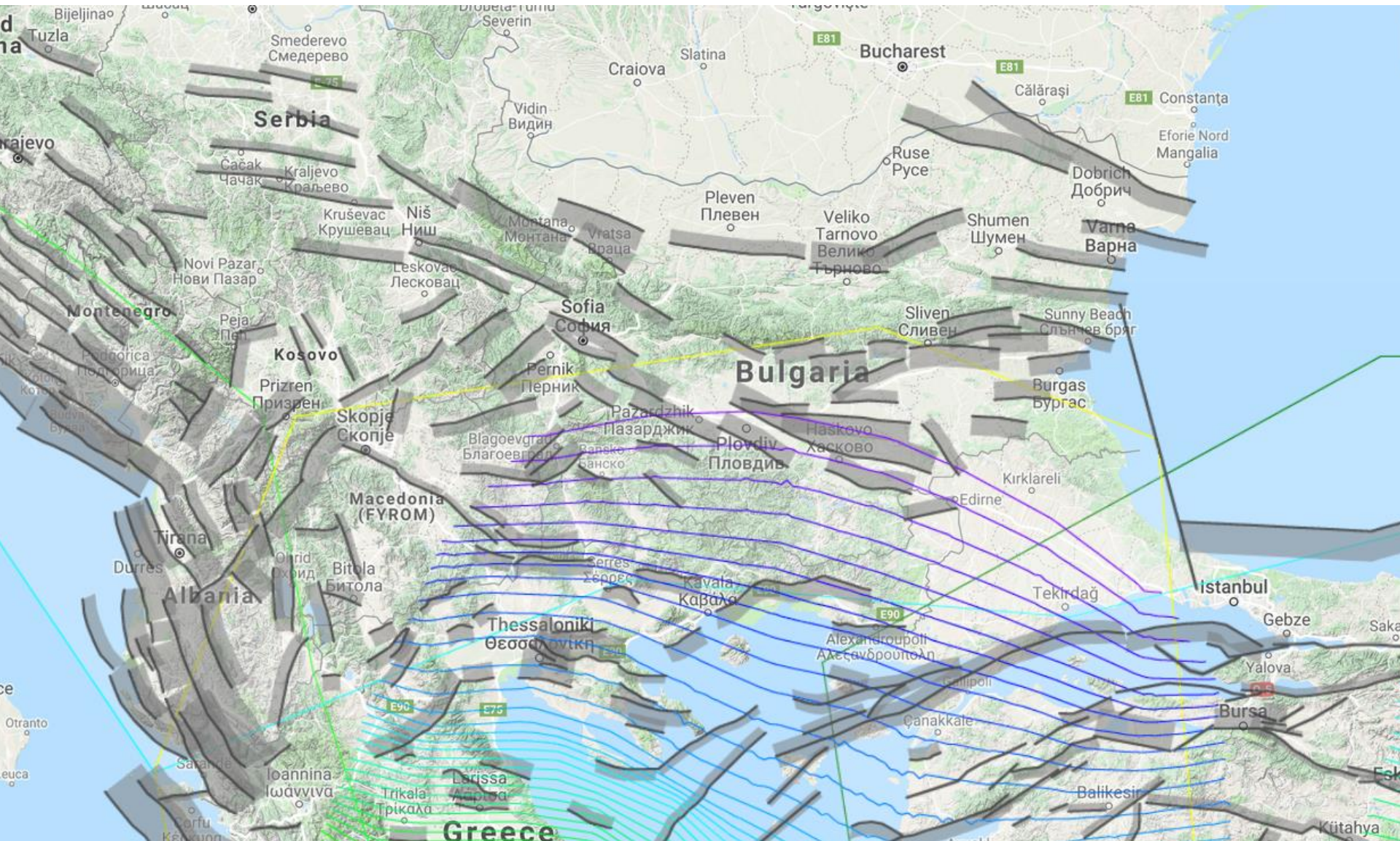
Is the composite of the impacts of **ALL** potential events [100s or 1,000s of models].



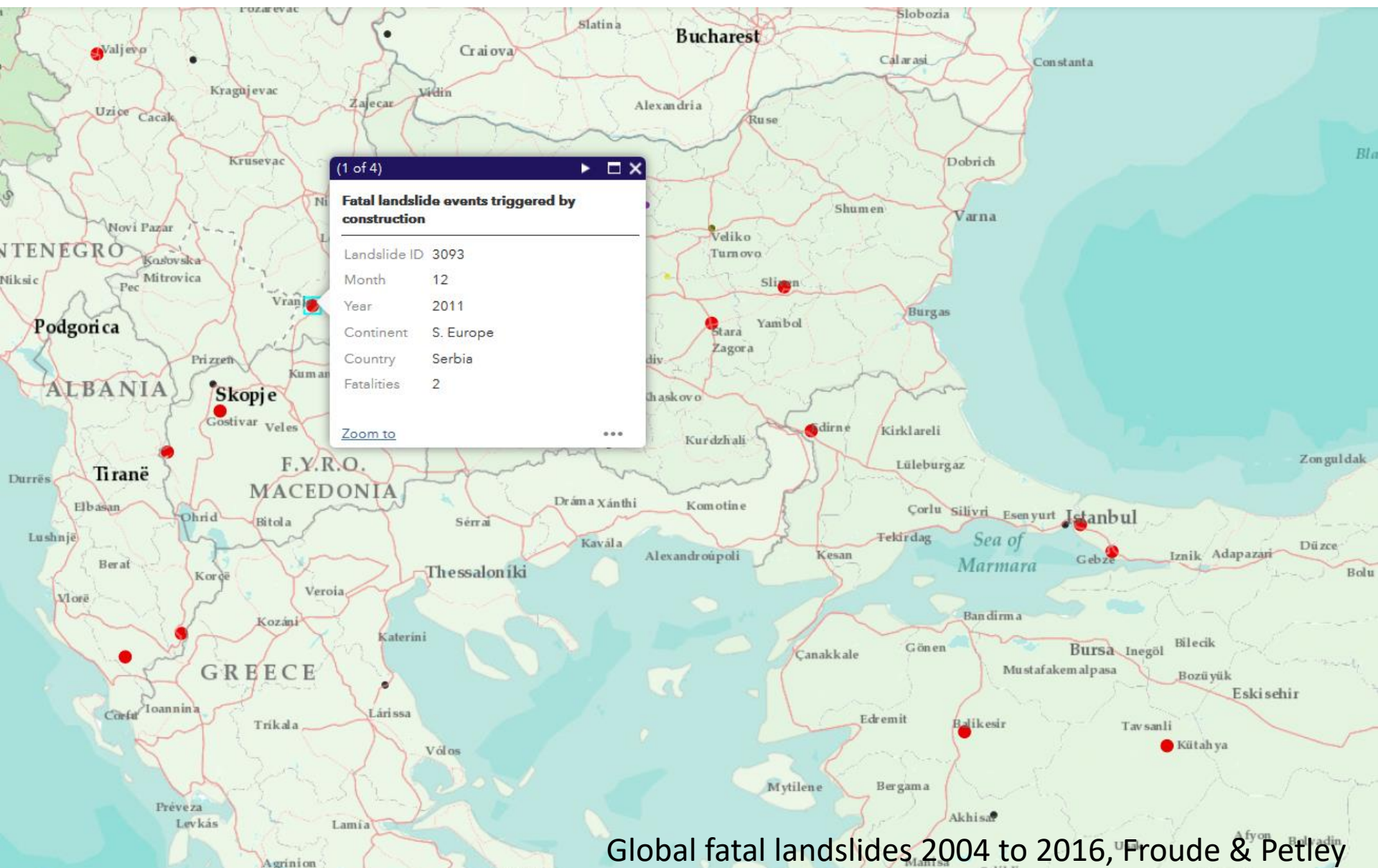
Digital Elevation Model



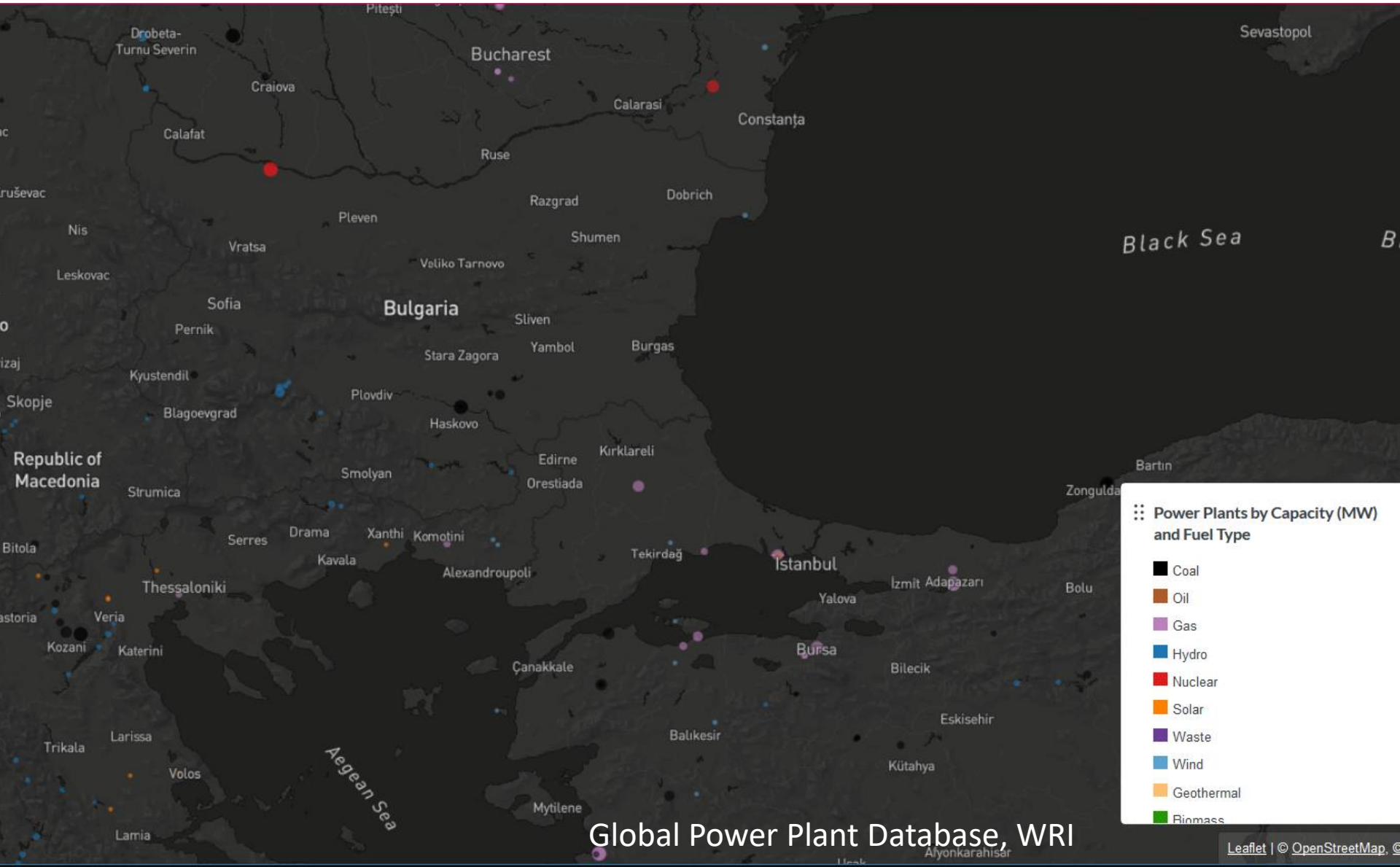
Hazard specific data



Past hazard events



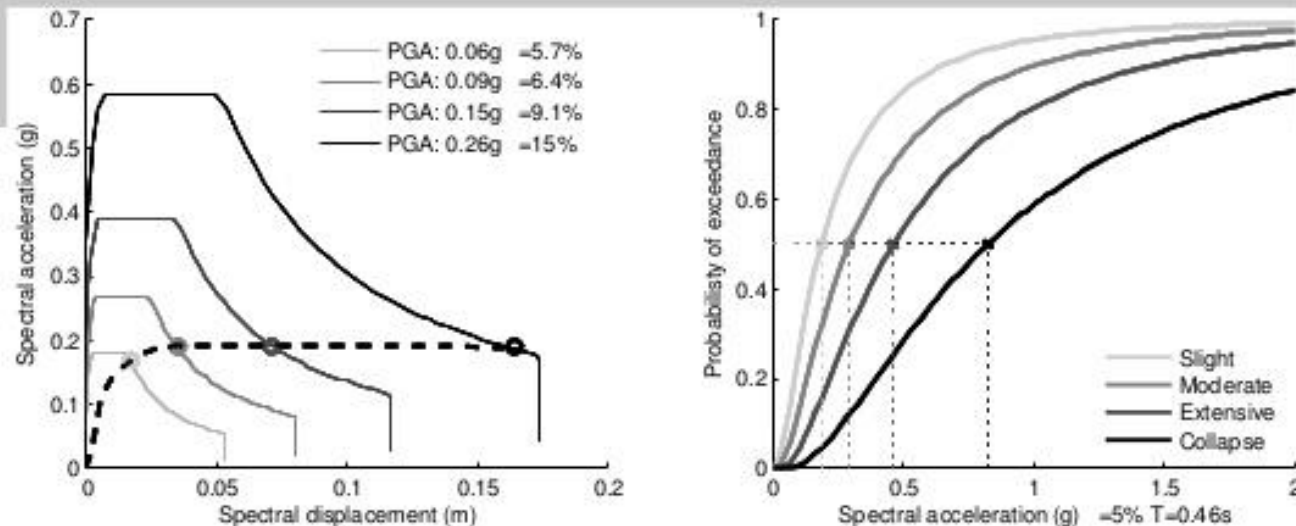
Critical infrastructures



Vulnerability curves

Development of a new fragility/vulnerability model

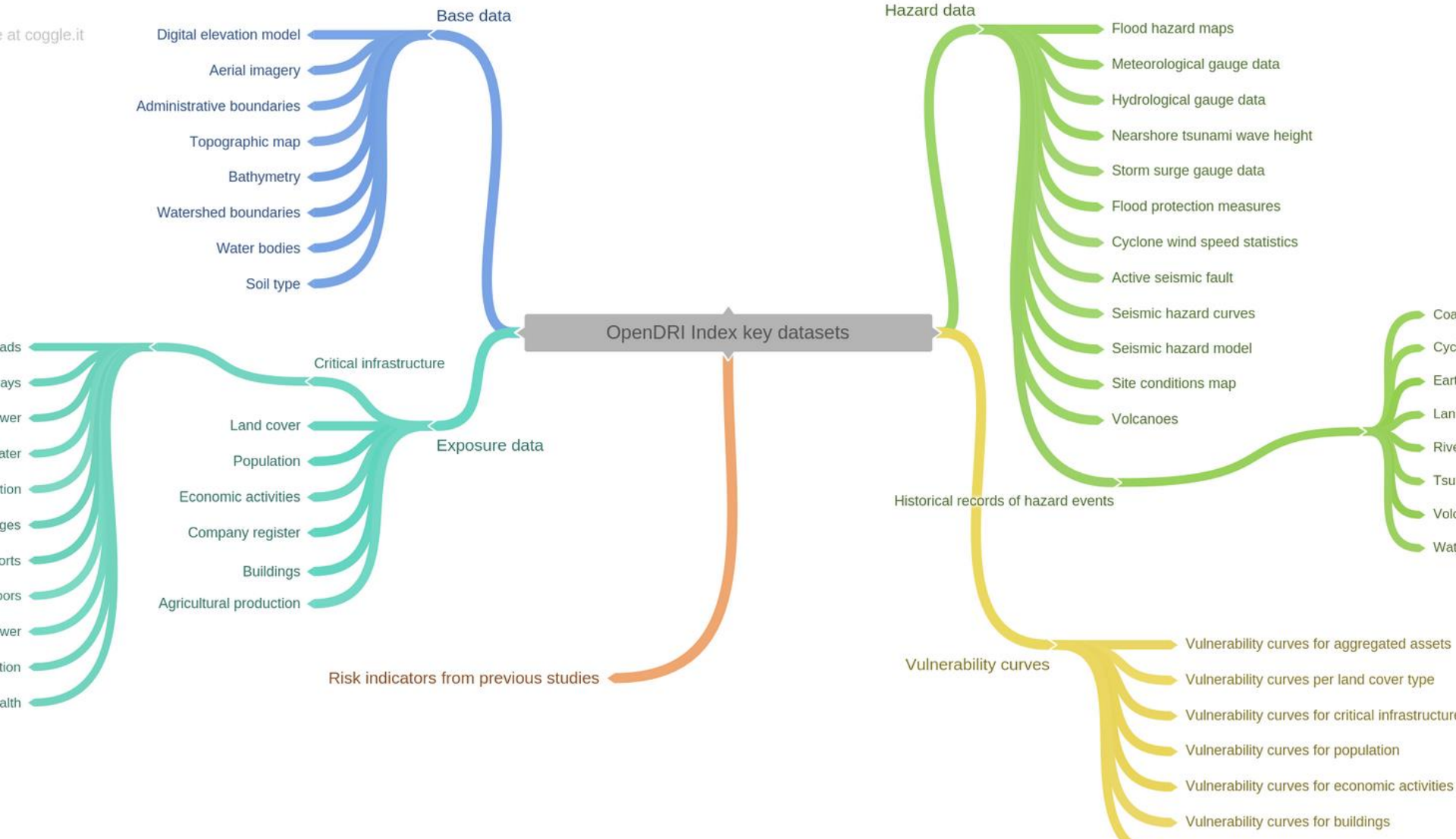
- For masonry typologies, a simpler methodology was employed



Capacity curves from the work of Carvalho et al. 2002 were combined with the capacity Spectrum method (Freeman, 2002) to derive sets of fragility curves

36 key datasets

at coggle.it



What is open data?

*“Open means **anyone** can **freely** access, use, modify, and share for any purpose”*

opendefinition.org

A dataset available online, free of charge, without restriction on re-use, in an open machine readable format, together with its metadata, is open.

What is NOT open data?

- *A paper document*
- *A PDF file*
- *Data under paywall*
- *Data available on request only*
- *Data only restricted to academia*
- *Data available through web service*
- *Google Map*
- *And so on ...*