



Release of GEM's Global Earthquake Hazard and Risk Products (v2023)

OVERVIEW OF PRODUCTS

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Secretary General

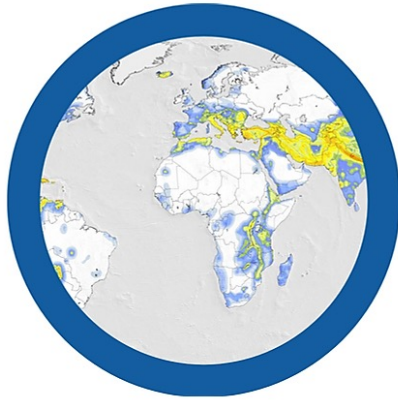
PAVIA, 13TH OCTOBER 2023



working together
to assess risk

GEM
GLOBAL EARTHQUAKE MODEL

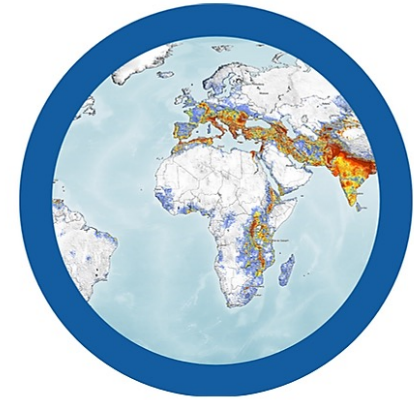
OO
OPENQUAKE



Global Hazard Map



OpenQuake Engine



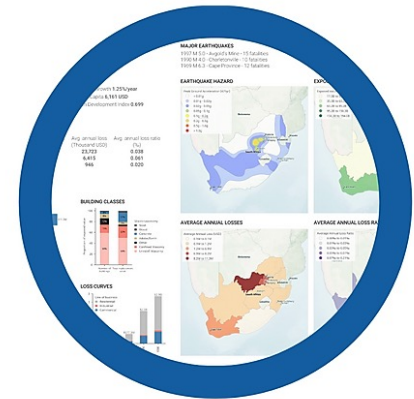
Global Risk Map



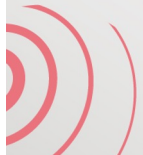
Global Exposure Model



Global Vulnerability Model

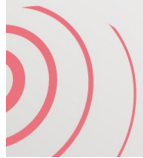


Risk Profiles



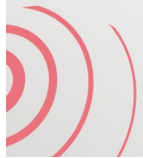
Flagship Products - Key Features

- Global seismic hazard mosaic (v2023.1):
 - **First open release** of global hazard map data (PGA with 10% probability of exceedance in 50 years on rock), downloadable as a **raster file**;
 - Release of updated hazard models from the mosaic (input files for the **OpenQuake engine**);
 - Updated interactive geoviewer with **global hazard map** (v2019 vs v2023);
 - Downloadable high-resolution image file and B1 size **poster**.
- Global seismic risk mosaic (v2023.1):
 - **Five average annual risk metrics**: economic loss, buildings lost, built-up area, fatalities, homeless
 - Updated interactive geoviewer with **global risk maps**;
 - Downloadable high-resolution image files and B1 size **poster**.



Flagship Products - Key Features

- Release of global exposure models (v2023.1):
 - **Open release** of admin 1 models for **215 countries/territories** in the world;
 - Can be used to run risk calculations with the OpenQuake engine;
 - Updated interactive geoviewer with **global exposure maps**.
- Release of global (building) vulnerability models (v2023.1):
 - **Open release** of building vulnerability models for 215 countries/territories in the world;
 - First release of separate models for **structural** damage, **non-structural** damage, **contents** damage and **fatalities**;
 - Can be used to run risk calculations with the OpenQuake engine.
- Release of country/territory seismic risk profiles (v2023.1):
 - **Open release** of **190** country/territory seismic risk profiles



Please attribute to the GEM Foundation with a link to:
<https://www.globalquakemodel.org>



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