

GEM Hazard Team Wiki

Welcome! This is the home page of the wiki maintained by the GEM hazard team.

GEM hazard team develops a comprehensive suite of tools for building earthquake hazard model and for computing seismic hazard. We also collaborate with several national organisations and international projects at the development of new and openly accessible earthquake hazard models. One of our current major goals is the construction of a mosaic of hazard models that by the end of 2018 will have global coverage. This mosaic is built relying as much as possible on models created either through community-based project or by renown national agencies and international projects.

In this wiki you will find information on the models and tools prepared by the GEM hazard team, on past projects and on initiatives where we are currently involved.

Tools

The hazard component of the OpenQuake-engine

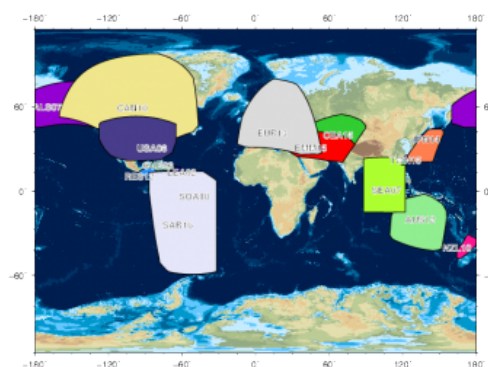
• Toolkits for the preparation of basic datasets and for building the PSHA input model
The GEM hazard team leads the development of a comprehensive suite of tools for the preparation of basic datasets, the construction of various components of the PSHA input models, and for the calculation of hazard. All these tools are part of the OpenQuake suite, a collection of datasets, tools and models for earthquake hazard and risk modelling developed by the Global Earthquake Model.

Hazard models

GEM is creating a database of earthquake hazard models that by 2018 will have global coverage. This database is a collection of openly accessible PSHA input models described using the format used to describe PSHA input models for the OpenQuake-engine. The models included in this database are primarily models developed by well recognised national research institutions, international projects or through scientific collaboration.



If you want to learn more about the tools we develop or you want to contribute please have a look at the links below:



Datasets

GEM sponsored five international projects aimed at the construction of either a global uniform dataset or of guidelines providing recommendations on the procedures to be used for the construction of a component of a PSHA input model.

Team

Current members

- Julio Garcia [Hazard modeller]
- Robin Gee [Hazard modeller]
- Kendra Johnson [Hazard modeller]
- Marco Pagani [Hazard modeller - Team coordinator]

In addition, GEM support the construction of homogenised datasets at regional scale. For example, within the [SARA project](#) the various groups of scientists involved created homogenised catalogues of hazardous faults, past earthquakes and a 'flat-file' summarising the strong-ground motion recordings for several earthquakes occurred in the past decades in South America.

In 2016 the GEM Hazard Team published an "extended" global earthquake catalogue covering the period 1900 - 2013. More information on this catalogue can be obtained at the following link:

<http://gji.oxfordjournals.org/content/206/3/1652>

- Valerio Poggi [Hazard modeller]
- Richard Styron [Active Fault specialist]

Former team members

- Laurentiu Danciu [now at SED-ETH Zurich]
- Damiano Monelli [now at Tokio Millennium Re Ltd.]
- Graeme Weatherill [now at GFZ Potsdam]

Former students

- Luis Rodriguez
- Yen-Shin Chen

Current projects

- Probabilistic Seismic Hazard Assessment for the Republic of Armenia
- Caribbean and Central America and Risk Assessment (CCARA)

Past projects

- South America Risk Assessment (SARA)
- Sub-Saharan Africa Risk Assessment (SSAHARA)

From:

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<https://hazardwiki.openquake.org/start>

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