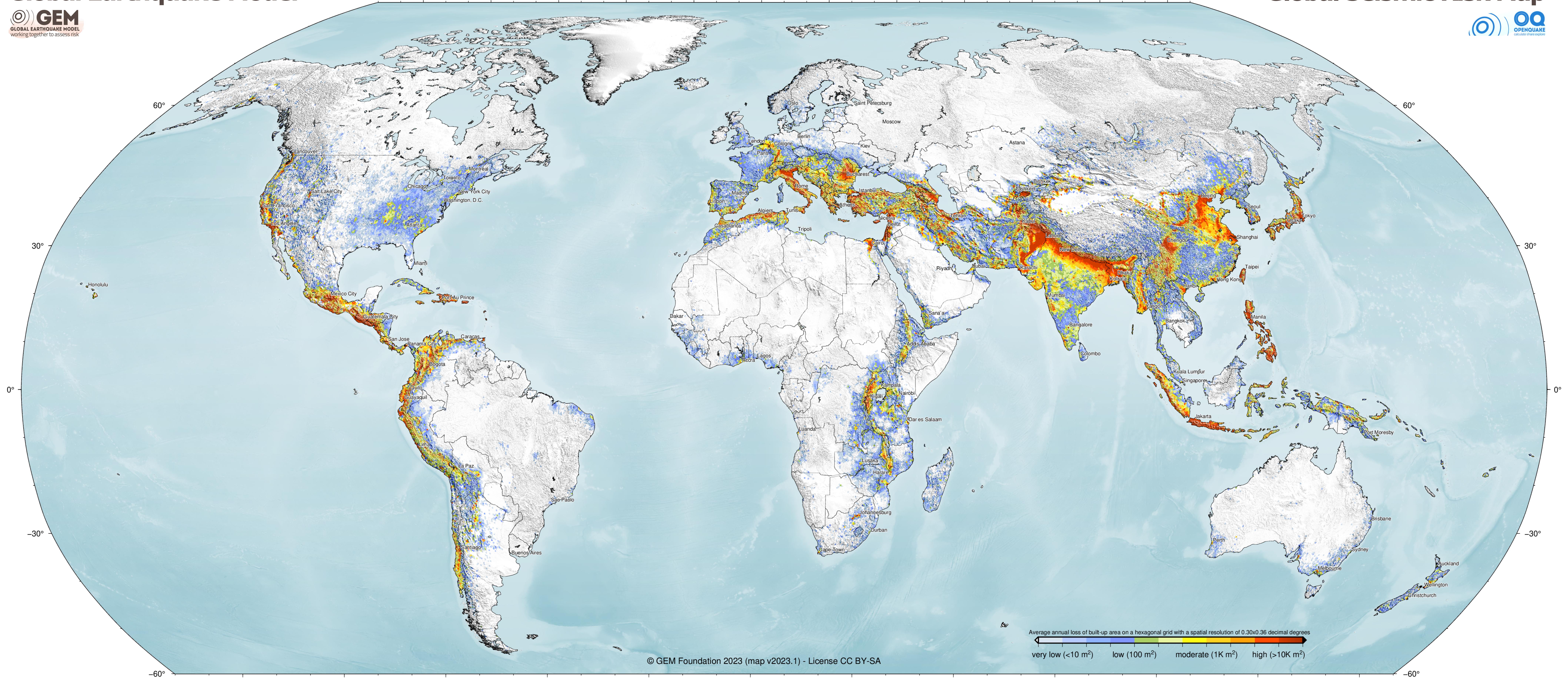


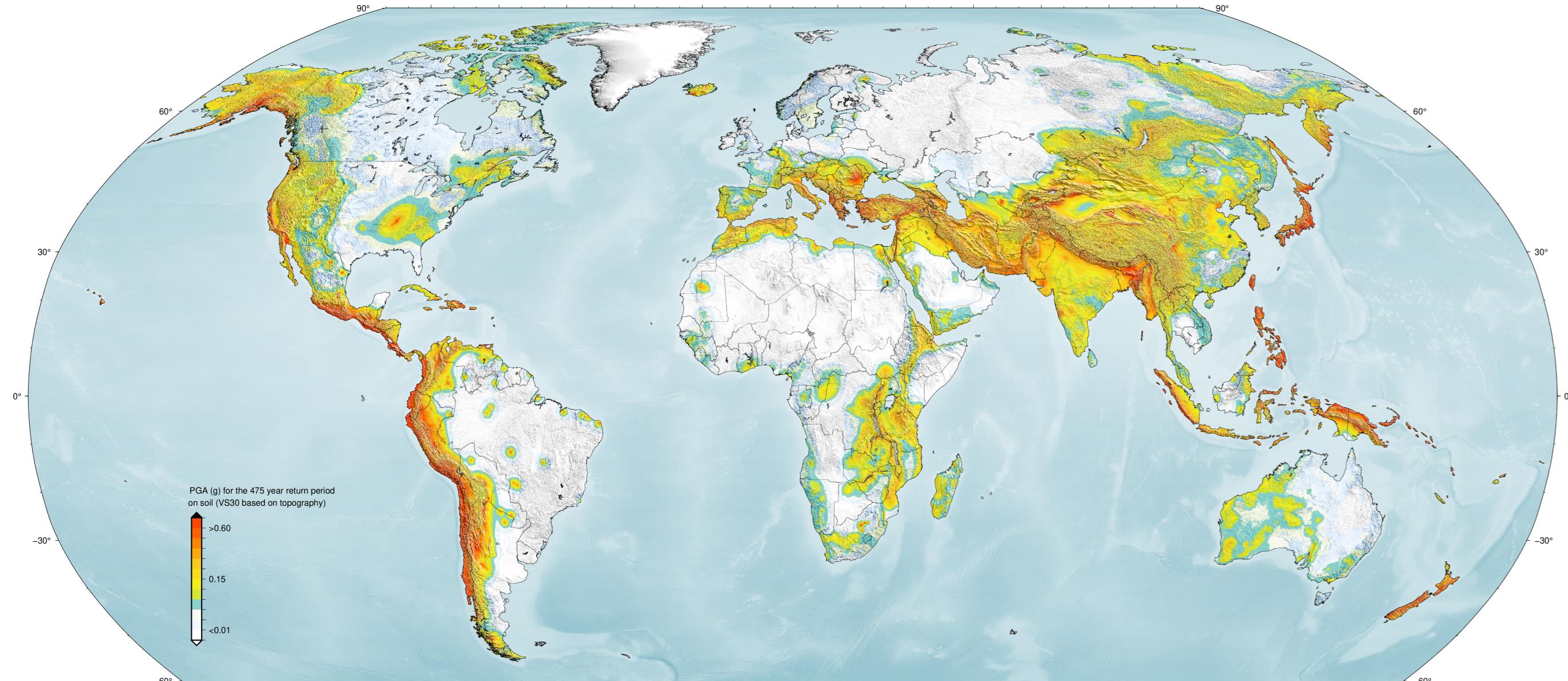
Global Earthquake Model



Global Seismic Risk Map

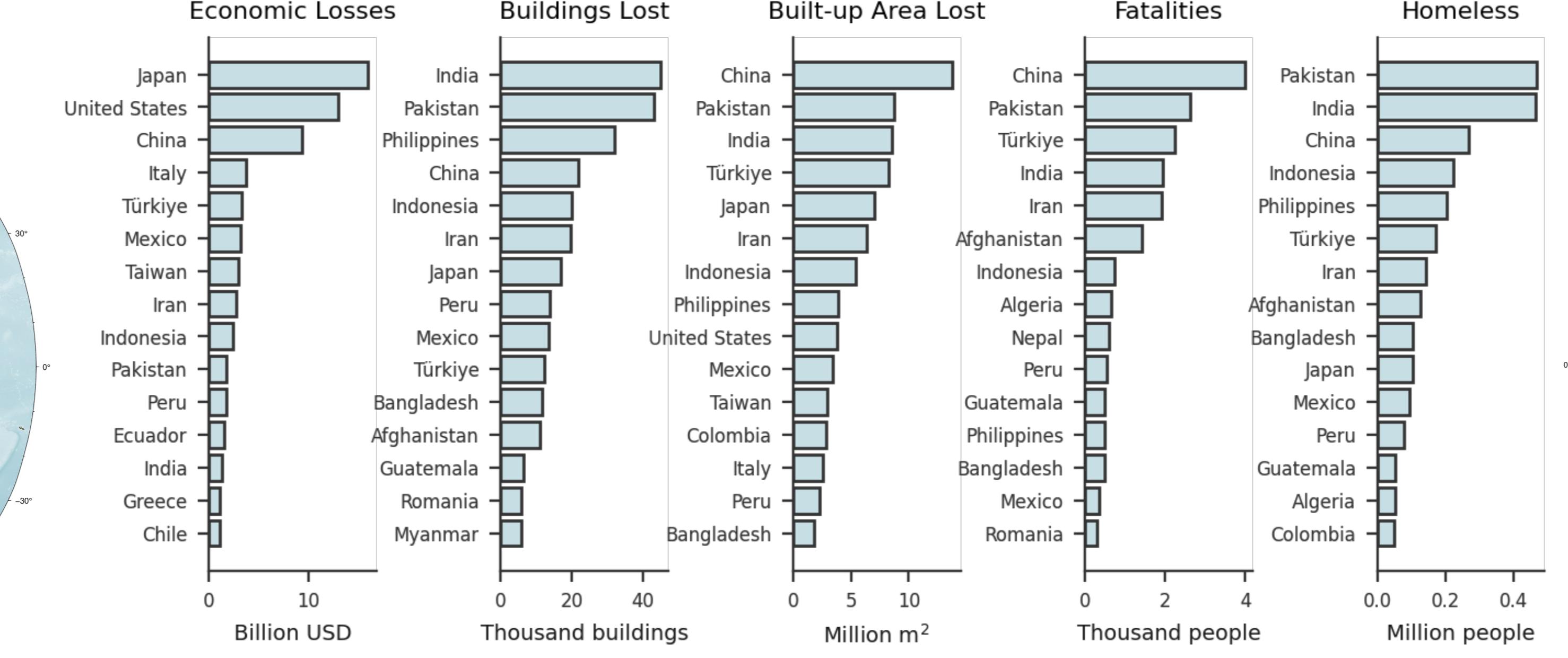


Global Seismic Hazard Map

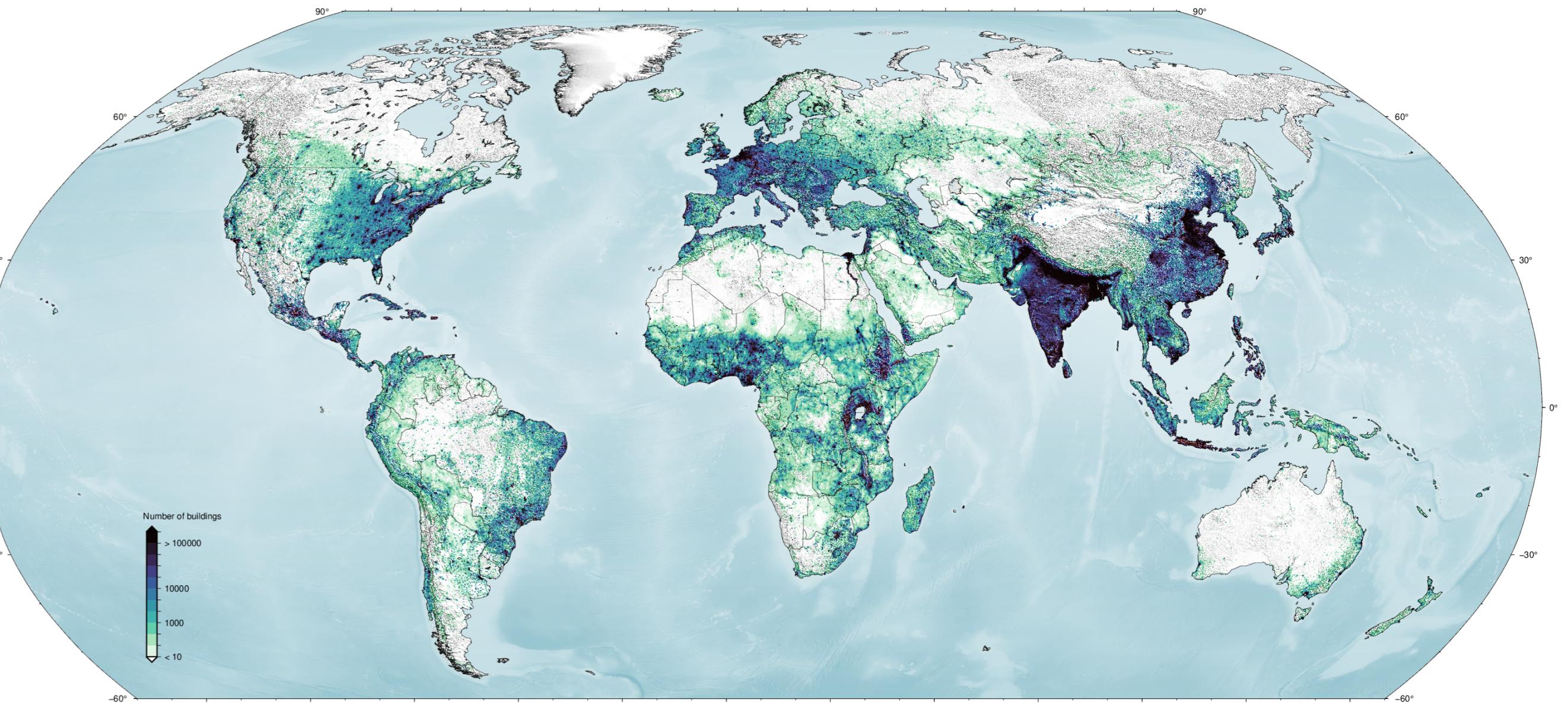


Global Earthquake Model (GEM) Global Seismic Risk Map
The Global Seismic Risk Map (v2023.1) poster comprises three global maps, and a ranking of the top 15 countries or territories according to five risk metrics. These results are an update of the global maps released in 2018, as described in Silva et al. (2020). The main map presents the geographic distribution of average annual loss of built-up area due to ground shaking to the residential, commercial, and industrial building stock. It does not consider the effects of tsunamis, liquefaction, landslides, and fires following earthquakes. The Global Seismic Hazard Map depicts the geographic distribution of the Peak Ground Acceleration (PGA) with a 10% probability of being exceeded in 50 years, computed for reference soil conditions (shallow soil) and well-sited buildings. The Global Exposure Map depicts the geographic distribution of residential, commercial, and industrial buildings. The average annual losses and number of buildings are presented on a hexagonal grid, with a spacing of 0.30 x 0.36 decimal degrees (approximately 1.000 km² at the equator). The central bar plots present the ranking of the top 15 countries or territories according to five risk metrics: Average Annual Economic losses (in billions of USD), Average Annual Number of Buildings Lost (in thousands), Average Annual Built-up

Global Risk Ranking of Top 15 Countries and Territories



Global Exposure Map



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The Global Earthquake Model (GEM) Foundation
The GEM Global Seismic Risk Map is a product of the GEM Foundation. Initiated by OECD's Global Science Forum in 2006, GEM was formed in 2009 as a non-profit organization in Pavia, Italy, funded through a public-private partnership with the vision to create a world that is resilient to earthquakes. Participants represent national research, applied science or disaster management institutions, the private sector and international organizations. GEM continues the tradition of the Global Seismic Hazard Assessment Program (GSHAP), which produced the first global seismic hazard map arising from a joint collaboration between scientists and practitioners from 100 countries. GEM's strategy and roadmap to 2030 is underpinned by the global drivers for disaster risk reduction and sustainability - namely the Sendai Framework for Disaster Risk Reduction (SFDRR) and the Sustainable Development Goals. GEM supports these goals by contributing openly accessible products for hazard and risk assessment and capacity development for risk reduction projects. GEM also serves as a baseline or exemplar for the development of a broader multi-hazard framework for risk assessment in support of a holistic and comprehensive approach to disaster risk reduction.

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