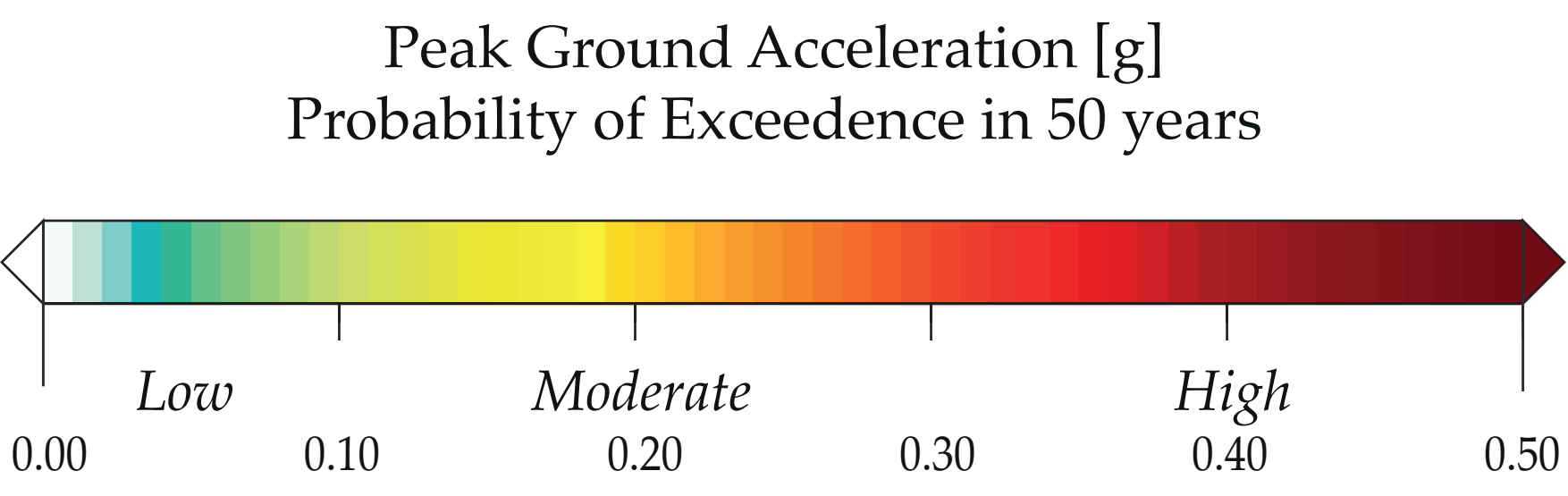
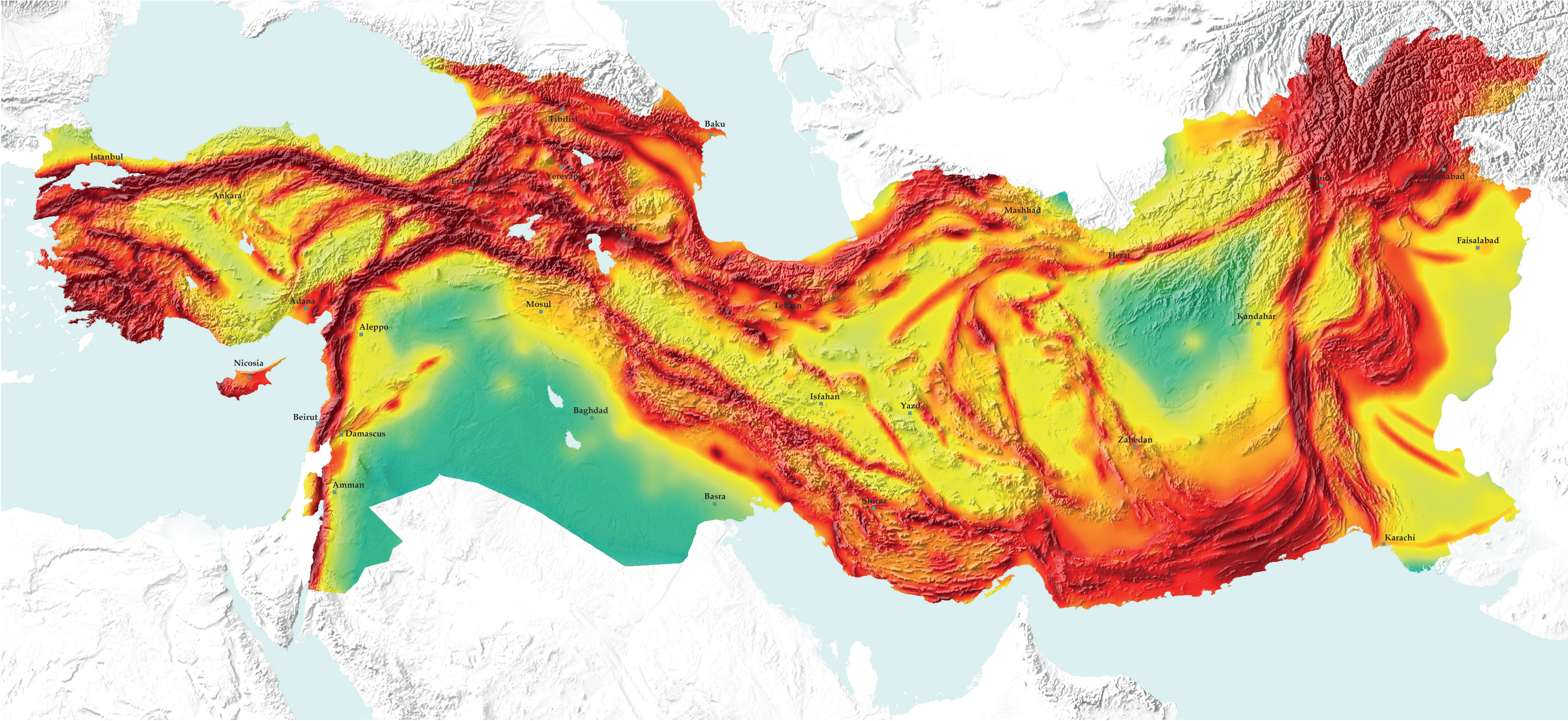




EARTHQUAKE MODEL OF
THE MIDDLE EAST REGION

SEISMIC HAZARD MAP OF THE MIDDLE EAST

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Map Content

The Seismic Hazard Map of the Middle East displays the ground shaking (i.e. Peak Horizontal Ground Acceleration, PGA) to be reached or exceeded with a 10% probability in 50 years. This reference value represents the shaking to be expected during the human lifetime, corresponding to the average recurrence of such ground motions every 475 years, as prescribed by the national building codes for standard buildings in the Middle Eastern countries. Blue to green colors depict comparatively low hazard ($PGA \leq 10\%$ of the gravitational acceleration), yellow to orange colors moderate hazard ($10\% < PGA \leq 30\%$ g) and red to brown colors identify high hazard areas ($PGA > 30\%$ g).

The Earthquake Model of the Middle East project (EMME)

The Middle East region has a long history of destructive earthquakes, and seismic risk can severely affect our modern society, as shown by the tragic events of Izmit (Turkey, 1999), Bam (Iran, 2003), Kashmir (Pakistan, 2005), Van (Turkey, 2011) and Hindu Kush (Afghanistan, 2015). Minimization of the loss of life, property damage, and social and economic disruption due to earthquakes depends on reliable estimates of seismic hazard.

National, state, and local governments, decision makers, engineers, planners, emergency response organizations, builders, universities, and the general public require seismic hazard estimates for land use planning, improved building design and construction, adoption of modern building construction codes, emergency response preparedness plans, economic forecasts, housing and employment decisions, and other measures for risk mitigation.

The collaborative project "Earthquake Model of the Middle East (EMME, 2010-2015)" brought together scientists and engineers from the leading research institutions in the region and delivers state-of-the-art seismic hazard assessment covering Afghanistan, Armenia, Azerbaijan, Cyprus, Georgia, Iran, Iraq, Jordan, Lebanon, Palestine, Pakistan, Syria and Turkey. The project generated new earthquake catalogues, regional maps of active faults and the first ever set of harmonized seismic hazard results and maps for the region, characterizing the seismic activity and its effects.

The EMME seismic hazard results describe the potential shaking associated with future earthquakes in the Middle East and serve as input to develop strategies for seismic risk governance and earthquake resistant design for different applications - ranging from private homes to multi-story public buildings and critical infrastructures such as bridges and dams.

EMME contributes its results to the Global Earthquake Model (GEM), a program initiated by the Organization for Economic Cooperation and Development (OECD).

Main contributors

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Disclaimer

The EMME map does not replace the existing national design regulations and seismic provisions, which are compulsory for today's design and construction of buildings.

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For more information, data and models visit: www.emme-gem.org and www.efehr.org

