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Seismic hazard in the southwestern Hellenic arc based on a newly developed seismogenic source model

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A simplified tectonic scheme for hazard purposes was recently adopted for the southwestern Hellenic arc, introducing large generalized seismogenic areas containing systems of faults with documented seismic activity. In the present application, a different scheme is proposed based on newly developed geophysical information from active seismic observations, high resolution bathymetric mapping and MCS seismic reflection data.
Seismic hazard computations are made using the CRISIS code, where dipping planes can be modeled. Different hypotheses for maximum magnitude, seismic activity rates and for the attenuation model were considered by the logic tree approach, aiming at quantifying the epistemic uncertainties related to the hazard assessment.
The obtained results show a general decrease in the expected ground motion on the southwestern Hellenic coast with respect to results from literature, pointing out the importance of a detailed definition of the seismogenic sources in the study region.
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