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Towards a first time-dependent seismic hazard model for Europe

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To make time-dependent hazard assessment feasible in the European and Mediterranean region, a sustainable and integrated approach to earthquake hazard and forecasting related research in Euro-Med needs to be developed. Seismologists increasingly realize that in order to respond to changing societal needs and emerging capabilities in Earth science, a new system-level, physics-based and increasingly time-dependent approach to hazard assessment is needed. In the framework of the EU funded NERIES project (http://www.orfeus-eu.org/neries/neries.htm), we will create a baseline model that combines the best available stationary model with a simple clustering model, analog to the recently published STEP model for California (http://pasadena.wr.usgs.gov/step/). We will also set up a virtual testing center for regional forecast models in Europe, in close cooperation with the Southern California Earthquake Center (SCEC) initiative CSEP (Collaboratory for the study of Earthquake Predictability) and based on our experience from the California based Regional Earthquake Likelihood Model (RELM) testing center (http://www.testing.ethz.ch/). Based on selected case studies of time-dependent hazard, such as precursory quiescence, STEP, ETAS, ALM or Coulomb model, this presentation will outline the activities planned for the next three years in the EU and other regions, and illustrate how EU researchers can participate.