

The research project on the extended Nankai seismogenic zones towards disaster mitigation of the mega-thrust earthquakes

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The recurrence of Nankai trough mega thrust earthquakes and tsunamis are the very severe problem to Japan. Therefore, MEXT of Japanese government has implemented the research project during a period from FY2008 to 2012 to evaluate seismic linkage around the Nankai trough mega thrust earthquake seismogenic zones. We have obtained many significant scientific results, such as the extended seismogenic zone, in this previous research project. In the 2013 fiscal year, a new project launched aiming mitigation of disaster caused by the Nankai trough earthquakes in the extended seismogenic zone. This new project is composed of three research fields which are the disaster mitigation research field, observational research field and the simulation research field. According to lessons learned from the 2011 East Japan Earthquake, the disaster mitigation research field are progressing 5 sub-themes which are precise seismic hazard estimation, providing research results to local government/community for disaster measures, investigating recovery and revival methodologies based on social environmental changes, and constructing redundant hazard information database. The observational research field reveals structures of crust and plate, seismicity, and historical tsunami events in the Nankai trough. In the simulation research field, investigations will be conducted for recurrence cycle simulation of mega thrust earthquakes, data assimilation method that improves reliability of the simulation, seismic and tsunami wave simulations for disaster mitigation. We must surely progress each sub-theme at the beginning and finally integrate them for disaster mitigation around the extended Nankai trough seismogenic zones. In this talk, we will introduce the outline of new project and the present progress.

Keywords: Nankai trough seismogenic zone, Seismic linkage, Disaster mitigation