

## Methods how to improve Japanese national seismic hazard models

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The national seismic hazard models (NSHM) of Japan has been published since 2005. It took 10 years since we started an effort to make the first Japanese NSHM after the 1995 Kobe earthquake. One of the main reasons why we needed NSHM in Japan was that a scientific knowledge that any area in Japan would experience a strong ground motion should be recognized in public.

As Japan is located in subduction zone, the seismic hazard is high in general but is poorly understood at a specific area and a city. Also there is a large uncertainty in seismic hazard estimate, including epistemic uncertainty in fault and earthquake catalogue and source models, for each region and thus requires significant research. In particular, a testing of the estimate is not well conducted and documented in Japanese NSHM. It is about 20 years since the Japanese NSHM was established and we need to focus on how to test models to improve them.

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