Long-term Evaluation of Active Faults in Japan

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Abstract

After the disaster of the Hyogoken-nanbu (Kobe) earthquake in 1995, the Headquarters for Earthquake Research Promotion (HERP), a special governmental organization attached to the Prime Minister's office (now belongs to the Ministry of Education, Culture, Sports, Science and Technology (MEXT)), was established. The HERP selected 98 (110 in the present) major active fault zones those are longer than 20 kilometers and higher than 0.1 mm/yr in slip rate for fundamental studies. AIST (GSJ) and the local governments carried out geological, geomorphological and paleoseismological surveys on these fault zones from 1995 to 2004. After these surveys for 10 years, the supplementary surveys of major active fault zones have been carried out by AIST sponsored by the MEXT from 2005 up to now. Furthermore, the comprehensive surveys for offshore active faults distributed around the Japanese Islands are undergoing. The Earthquake Research Committee of HERP evaluate the probability of the earthquake occurrence in coming 30, 50 and 100 years on each active fault zone using the result of these studies and opened to public, and published the National Seismic Hazard Maps for Japan as having a high probability for strong ground shaking occurrence. The results of the studies and evaluations are also available to the public as the Active Fault Database of Japan on the Internet by AIST. This database consists of long-term slip data, which includes amount of displacements and age of faulting references, and paleoseismicity data, which includes the excavated geological units and faulting event horizons with age-control.