Detailed Map and Inventory of Active Faults for Prevention and Mitigation of Seismic Hazards

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Detailed data for active faults as inland earthquake generators is one of the basic information for prevention and mitigation of seismic hazards. Active fault data have been used in preparation for the 'National Seismic Hazard Maps for Japan (2005)', and the Subcommittee for Long-term Evaluations of the Earthquake Research Committee evaluated long-term occurrence probabilities for active faults on land and subduction-zone earthquakes. However, those data are mainly composed of various research results different in scale and quality, and the evaluation is not always reliably applied to concrete prediction. For more reliable evaluation, it is essential to prepare better dataset for active faults in detail.

Location, geometry and extent of active faults are closely related to source area and magnitude of future earthquakes as well as location of surface fault ruptures and area of near-fault strong ground motions. Many people eager to know exact location of active faults to protect themselves, and for these reasons Government should undertake to prepare 'Detailed map and inventory of active faults' of the country.

The 'Detailed map and inventory of active faults' should be equipped with the latest information on the following items, and will be revised with newer data.

1. Active fault map of larger than 1:25000 scale
2. GPS data of the faults
3. Evidence for 'Active' such as fault related features, fault outcrops etc.
4. Displacement
5. Activity
6. Zone of deformation
7. Past activities
8. Subsurface features such as trench logs, boring, seismic reflection data etc.
9. Information regarding earthquake prediction
10. Land use issue
11. Other relevant information

In order to prepare 'Detailed map and inventory of active faults', it is recommendable to form a research group composed of limited number of well-trained active fault workers for quality products, and the products should be inspected by outside workers and public.