

## **EARTHQUAKE POTENTIAL OF MAJOR ACTIVE FAULTS IN THE KOBE-OSAKA-KYOTO-NAGOYA REGION, SOUTHWEST JAPAN**

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After the 1995 Kobe earthquake, the Geological Survey of Japan is conducting systematic study of major active faults in the Kinki Triangle, central Japan. The triangle, bounded to the south by the Median Tectonic Line, contains Kobe, Osaka, Kyoto and Nagoya. The population of the area reaches 25 million. We have studied 25 active faults, about 75% faults in the area, by the end of the 1998 fiscal year. We rearranged these faults into 18 seismogenic faults based on the criteria proposed by Matsuda (1990). We next divided the seismogenic faults into 31 behavioral segments, using 2-km distance, difference in rupture history, and a value of 20,000 x displacement per event as criteria for segmentation. Earthquake potential of each segment was assessed based on the elapsed time ratio and probability for rupture in the coming 100 years. It is made clear that the 24-km-long Aibano segment, about 40 to 60 km northeast of Kyoto, has 12 to 38% probability of an  $M=7$  or larger earthquake within the next 100 years. The 44-km-long Uemachi fault traversing Osaka has 5% probability of a big earthquake in the coming 100 years at the maximum. On the other hand, at least 14 behavioral segments including the Hokudan which produced the Kobe earthquake have relatively low earthquake potential. Their probabilities for rerupturing in the next century are less than 0.2%. Most of them proved to be causative faults of disastrous historical earthquakes between the 1300's and 1800's.