

Preface

Geological Survey of Japan (GSJ), AIST is conducting earthquake-related geological and geophysical surveys and researches, which are mainly based on comprehensive and basic policies of the Headquarters for Earthquake Research Promotion of the Japanese government. The present governmental policies will be finished in this fiscal year. The government is now investigating a next 10-year policy and GSJ is also discussing next research targets.

In 2018, there were three strong earthquakes in Japan. One is the M6.1 earthquake in Western Tottori on April 9. This occurred in the zone where distinct active faults are not mapped whereas earthquakes with M larger than 7 occurred sometimes. The other two earthquakes are M6.1 in Northern Osaka on June 18 and M6.7 in Eastern Iburi, Hokkaido on September 6. These two occurred in areas with densely-distributed active faults. Although the earthquakes were not characteristic earthquakes of the active faults with M larger than 7, damages caused by earthquakes were severe, respectively. This indicates importance of the preparedness of our society even to M6 class earthquakes.

The present volume contains ten reports based mainly on activities of the GSJ in 2017. To maintain the paper quality, editorial board consists of group leaders of the Research Institute of Earthquake and Volcano Geology (IEVG) arranged internal peer review for all the reports. Among them, the following four studies of paleoseismic surveys in southwest Hokkaido and Kumamoto prefecture were supported by external funds contracted by the Ministry of Education, Culture, Sports, Science and Technology in Japan (MEXT). Study of dynamic rupture model was conducted with a private corporation. Other five studies on the past shorelines of eastern Hokkaido, events deposits at Kitaibaraki City, 3ka seismic event of Kozu-Matsuda fault zone, in situ stress at the borehole in Niihama, Ehime prefecture, and a spatial relationship between active faults and inland earthquakes were conducted by internal funds of AIST.

We welcome comments from readers on the contents of this report, and the ways to publicize the results of our surveys and researches. Finally, we would like to express our sincere gratitude to land owners, local communities and municipality that allowed us to work on private properties.

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