Preface

The Geological Survey of Japan (GSJ), AIST conducts earthquake related geological and geophysical surveys and researches mainly in line with the comprehensive and basic policies of the Headquarters for Earthquake Research Promotion of the Japanese government. In the new 10-year policy established last May, the government insists on more promotion of social utilization of research results than ever, which is consistent with the AIST's charter "Full Research in Society, for Society". We will keep enhancing the content of this report as one of our missions.

Fortunately, there were no large earthquakes with significant damage in Japan this year and we did not need to conduct urgent investigation for the earthquakes. However, we are steadily advancing our research by reviewing and examining the results from the surveys conducted so far. We hope to contribute to enhancing the disaster response capabilities by providing easy-to-understand information for the general public.

This volume contains following four reports based mainly on the activities of GSJ in 2018: 1) studies on the submarine geological structures of the Sagami Bay, 2) analyses on the relationship between the orientations of permeable fractures and in-situ stress at an AIST observation borehole along the Nankai Trough, 3) case study for estimating the average strike-slip rate of the Hinagu section, the Hinagu fault zone in Kumamoto, which was supported by external funds contracted by the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXT), and 4) results of the airborne LiDAR survey along the Kotanuka fault of the Shibetsu fault zone, eastern Hokkaido. To maintain the paper quality, all the reports are peer-reviewed by the editorial board consisting of the group leaders of the Research Institute of Earthquake and Volcano Geology (IEVG).

We welcome frank comments and opinions from readers on the contents of this report and the ways to release the research results related to active faults and earthquakes. Last but certainly not least, we would like to express our deep appreciation to all the organizations and individuals for their understanding and cooperation for our research activities.

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