

Preface

Active Fault Research Center (AFRC) was launched in April 2001 as one of the major research units of the new Geological Survey of Japan (GSJ), in association with the establishment of the National Institute of Advanced Industrial Science and Technology (AIST). AFRC is one of the responsible organizations for active fault studies in Japan under the Headquarters for Earthquake Research Promotion of the Japanese government (HQERP). AFRC will make efforts to provide innovative and reliable scientific results to help reduce losses from future earthquakes and tsunamis.

This report is the third annual publication of AFRC to present the research results on active faults and paleoearthquakes in the 2002 fiscal year. The geological studies are reported on 7 active faults, that is, the Kuromatsunai fault zone, the Nagamachi-Rifu line fault zone, the Ohchigata fault zone, the Ushikubi fault, the Sakaitoge fault, the Kiso-sanmyaku-seien fault zone, and the Uemachi fault system among the 98 major active faults that have been selected by HQERP for prompt survey. A study on geological structures of the 2000 Tottori-ken Seibu earthquake ($M_J 7.3$) area, preliminary geological study of the Oharako fault zone, and the first examination on composition and structure of the active fault database of AFRC are also included in this report. The 1944 surface ruptures and slip distribution along the North Anatolian fault system in Turkey is reported as the fruit of international cooperation with the General Directorate of Mineral Research and Explanation of Turkey, and the study of surface deformation and related damage during the 2001 Central Kunlun earthquake ($M_w 7.8$) also appears in this publication as the fruit of international cooperation with Chinese geological institutions.

Three papers on the earthquake hazard assessment studies in the Osaka Plain, which comprise three-dimensional subsurface structure modeling, simulation of earthquake rupture process on the Uemachi and Ikoma fault systems appear in the report. Three papers on the paleo-tsunamis including the 17th century event along the eastern coast of Hokkaido are reported for the tsunami and earthquake hazard assessment in the region.

We would like to express our sincere gratitude to land owners, local communities and municipalities that allowed us to work in private properties. We hope that this report will help promote hazard evaluation of fault activity, ground shaking and tsunami, and that our new findings become valuable information to public authorities and general public.

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