



IRIDeS

International Research Institute of Disaster Science

TOHOKU University

Preamble

Having experienced the catastrophic disaster in 2011, Tohoku University has founded the International Research Institute of Disaster Science (IRIDeS).

Together with collaborating organizations from many countries and with broad areas of specializations, the IRIDeS conducts world-leading research on natural disaster science and disaster mitigation.

Based on the lessons from the 2011 Great East Japan (Tohoku) earthquake and tsunami disaster, IRIDeS aims to become a world centre for the study of the disasters and disaster mitigation, learning from and building upon past lessons in disaster management from Japan and around the world.

Throughout, the IRIDeS will contribute to on-going recovery/reconstruction efforts in the affected areas, conducting action-oriented research, and pursuing effective disaster management to build sustainable and resilient societies, the IRIDeS innovates the past paradigm of Japan's and world's disaster management to catastrophic natural disasters, hence to become a foundation stone of disaster mitigation management and sciences.

Summary

Enhancing the cooperation with the local municipalities and governments in the affected areas, and contributing to their recovery and reconstruction efforts, the IRIDeS conducts the action-oriented research. They aim to create the disaster-resilient societies that enable to overcome the complex and diverse processes of forthcoming natural disasters, not only by preventing but also preparing and responding to them, and achieving recovery and renovation, hence to engender the culture of disaster-resiliency incorporating into our social systems.

The action-oriented research of the IRIDeS focus on;

- 1 Investigating the generation mechanisms of mega earthquakes and tsunamis, and innovating early detection technology of them
- 2 Reconstructing disaster response and mitigation technologies based on the lessons of the 2011 Tohoku earthquake and tsunami disaster
- 3 Inventing "Affected Area Supportology" in the aftermath of natural disasters
- 4 Enhancing disaster-resiliency and performance of multiple-fail-safe systems in urban areas in reconstruction process
- 5 Establishing disaster medicine and medical service systems towards catastrophic natural disasters
- 6 Designing disaster-resilient societies and developing the digital archive system to pass the lessons from the disasters

IRIDeS will take the leading role for causing paradigm shift on catastrophic disaster countermeasures and responses by accomplishing 6 missions.



Reconstructing disaster response and mitigation technologies based on the lessons of the 2011 Tohoku earthquake and tsunami disaster

Hazard and Risk Evaluation Research Division



Research field

- Earthquake Engineering
- Tsunami Engineering
- Disaster Potential Study
- Remote Sensing and Geoinformatics for Disaster Management
- Science and technology for low-frequency Risk Evaluation
- Technology for Optimum Mitigation
- Technology for global Disaster Risk

Inventing "Affected Area Supportology" in the aftermath of natural disasters

Human and Social Response Research Division



Research field

- Disaster-Related Cognitive Science
- Affected Area Supportology
- Preservation of Historical Materials
- Social Systems for Disaster Mitigation
- Disaster Legislation
- Japanese Disaster Culture
- Comparative Mitigation Society

Enhancing disaster-resiliency and performance of multiple-fail-safe systems in urban areas in reconstruction process

Regional and Urban Reconstruction Research Division



Research field

- Technology for Urban Resuscitation
- Radiational Decontamination Science
- Regional Safety Engineering
- Disaster Robotics
- International Strategy for Disaster Mitigation

Investigating the generation mechanisms of mega earthquakes and tsunamis, and innovating early detection technology of them

Disaster Science Division



Research field

- Marine Geodesy Research
- Seismic Hazard Research
- Volcanic Hazard Research
- Geologic Hazard Research
- Atmospheric and Oceanic Disaster Research
- Space Environment Disaster Research
- Natural Disaster Research

Establishing disaster medicine and medical service systems towards catastrophic natural disasters

Disaster Medical Science Division



Research field

- International Cooperation for Disaster Medicine
- Disaster-related Infectious Disease
- Radiation Disaster Medicine
- Disaster Psychiatry
- Disaster Obstetrics and Gynecology
- Disaster-related Public Health
- Disaster Medical Informatics

Designing disaster-resilient societies and developing the digital archive system to pass the lessons from the disasters

Disaster Information Management and Public Collaboration Division



Research field

- Disaster Digital Archive
- Disaster Reconstruction design & Management
- International and Regional Cooperation Office

Endowed Research Division

Research field

- Earthquake induced Tsunami Risk Evaluation (Tokyo Marine)