



Invitation to Otsuchi

Our Research after **3.11, 2011**
the Great East Japan Earthquake

Projet Grand Maillet

What happened on March 11, 2011?

The Northwest Pacific is one of the world's major fishing grounds. The Tohoku region in the northeastern area of Japan's main island of Honshu is one of the biggest seafood production areas in Japan. The main industry of the towns and villages on the Pacific coast is fishing. At 2:46 pm on March 11, 2011, an earthquake hit the Pacific coast of Tohoku. The subsequent tsunami seriously damaged fishing villages and towns in the coastal area.



What happened to the Research Center in Otsuchi?

The Center was originally established by the Ocean Research Institute of the University of Tokyo as the Otsuchi Marine Research Center in 1973, and reorganized into the International Coastal Research Center (ICRC) in 2003 for the purpose of conducting cooperative basic research on coastal marine science. Most of the facilities of the ICRC were destroyed by the tsunami that struck in March 2011. Our mission is to rebuild the ICRC and to make Otsuchi town the center of basic research on coastal marine science once again, so that it can continue to contribute to the restoration of the beautiful environment around the Tohoku coastal area.

Tohoku area



What happened to Otsuchi town?

Otsuchi is a small town in Iwate Prefecture with population of 13,000. The fishing industry has always played an important role in the area. Most of the buildings and fishing-related facilities at the heart of the town were destroyed by the disaster. About 10 percent of the population was killed or remain listed as missing. One of the most important tasks today is to find a way to revive the town and rebuild its fishing facilities.



The International Coastal Research Center hit by the tsunami

What is Projet Grand Maillet?

The 2011 off the Pacific coast of Tohoku Earthquake was one of the biggest natural disasters humankind has ever experienced. Our mission is to ascertain the impact that the earthquake and tsunami had on the Tohoku coastal area, and observe the subsequent process of transition over the course of time. Based on this information, we will clarify what is needed to restore the area's fishing industry. In order to execute this mission, the Atmosphere and Ocean Research Institute (AORI) of the University of Tokyo launched Projet Grand Maillet which is based in Otsuchi town.

Otsuchi's name means "big maillet" in English and "grand maillet" in French. Projet Grand Maillet is named after the first new research vessel built for the International Coastal Research Center since the disaster. Projet Grand Maillet is a part of Tohoku Ecosystem-Associated Marine Sciences (TEAMS), funded by the Ministry of Education, Culture, Sports, Science and Technology in Japan (MEXT). AORI will carry out scientific research in close collaboration with Tohoku University and the Japan Agency for Marine-Earth Science and Technology (JAMSTEC).



▶ Projet Grand Maillet



Atmosphere and Ocean Research Institute of the University of Tokyo

Iwate University

Tokyo University of Marine Science and Technology

TASK

Studies on the mechanisms of marine ecosystem change

Otsuchi Bay, Sanriku coastal region (PGM Director Kazuhiro Kogure)

Study on the disaster's impact on the ecology and resources of living organisms in the coastal area, as well as elucidation of the subsequent recovery process. Highlighting the steps needed to restore the fishing industry by means of continuous observation and monitoring.

1 Construction of a monitoring system for the coastal region, and the establishment of the Marine Analysis Center (Principal Investigator: Atsushi Tsuda)

2 Study on the disruption to and the subsequent recovery process of the ecosystem hit by the earthquake and tsunami (Principal Investigator: Tomohiko Kawamura)

3 Study on material circulation process changes accompanying the earthquake (Principal Investigator: Toshi Nagata)

4 Elucidation of the actual status and impact of land-based pollutant inflows (Principal Investigator: Hiroshi Ogawa)

5 Construction of an integrated model combining ecosystem and physical processes (Principal Investigator: Kiyoshi Tanaka)

6 Analysis of the chemical dynamics in water catchment areas, rivers, estuaries, and coastal waters (Commissioned by Iwate University, Principal Investigator: Teruyuki Umita)

7 Monitoring and modeling of river water mixing and diffusion in estuaries, brackish waters and coastal areas (Commissioned by Tokyo University of Marine Science and Technology, Principal Investigator: Hidekatsu Yamazaki)

Tohoku University

(Representative Institution)

Kitasato University

TASK

Elucidation of the environment change process in fishing grounds

Onagawa Bay, Sendai Bay

Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

Tokai University

TASK

Elucidation of the mechanisms of ecosystem change on the seafloor around the coastal area

Environment of the seafloor around the coastal area

TASK

Base for the Tohoku Ecosystem-Associated Marine Sciences. Construction of a database for research information, and making it accessible to fishermen, local people, and other researchers



Tohoku Ecosystem-Associated Marine Sciences

1

We will investigate the sea

What is going on in the sea since the earthquake in March 2011? And what will be the future? We install underwater monitoring equipment and combine observations from research vessels as well as diving operations. We will find the answers by making full use of the latest modern technologies and analytical methods.



2

We will elucidate the mechanisms of increasing fish production

Why are fish abundant in the waters of the Pacific coast of Tohoku? To learn the answer, we have to conduct multidisciplinary research with specialists in the fields of physics, chemistry, and biology. Our research will ascertain the basic mechanism of fish production in the surrounding areas of Otsuchi, which will help support the fishing industry of the local community.



The Goals of 'Projet Grand Maillet'

3

Our research is related to the local community

The year 2013 marks the 40th anniversary of the International Coastal Research Center of AORI in Otsuchi. We strongly hope to restore the Center as quickly as possible. We want to make our research findings beneficial and easily comprehensible to the town's community. The Center will also offer a new public space for local people.



4

From all around Japan and all over the world to Otsuchi

AORI promotes the project by working with more than 160 researchers and graduate students from 16 universities and two Fisheries Technology Centers from all over Japan. Our aim is to restore the International Coastal Research Center as a base for international research that will host researchers from Japan and from all over the world.





Projet Grand Maillet

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東北マリンサイエンス拠点形成事業
—海洋生態系の調査研究—

Tohoku Ecosystem-Associated
Marine Sciences, since FY2011

<http://www.i-teams.jp>



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