

## MR12-E02 Leg3 Cruise Summary

### 1. Cruise Information

- Cruise ID: MR12-E02 Leg3
- Name of vessel: R/V Mirai
- Title of the cruise: Marine Ecosystems Investigation, Impact by the mega-earthquake (the 2011 Earthquake of the Pacific coast of Tōhoku) and Tsunami: For Recovery and Rebuilding of Sanriku Fisheries Activities
- Chief scientist [Affiliation]: Hidetaka Nomaki [BioGeos 3, JAMSTEC]
- Representative of the Science Party [Affiliation]: Katsunori Fujikura [BioGeos, JAMSTEC]
- Cruise period: 23<sup>rd</sup> March to 30<sup>th</sup> March, 2012
- Ports of call: Hachinohe (23<sup>rd</sup> March) to Yokohama (30<sup>th</sup> March)
- Research area: East off Tohoku

### 2. Overview of the Observation

- Overview of the observation

The purpose of this cruise is to understand impacts on marine ecosystems by the 2011 Earthquake of the Pacific coast of Tōhoku and Tsunami, and to contribute for recover and rebuild of Sanriku fisheries activities in terms of marine science. Target areas are continental slope. This cruise is conducted under the TEAMS project, namely Tohoku Ecosystem Array of Marine Sciences. Detailed investigation subjects are topographic surveys, mapping of scattered debris, distribution patterns and diversity of benthic organisms, seawater and sediments geochemistry, and sediments characteristics. Based on these data and samples, we will construct habitat map for ecosystem management in Sanriku areas.

During the Leg3, we mainly investigated on environmental monitoring of water column and the sediments. Some sediment samples and organism samples were also utilized to assess pollutants in the environments and distribution, genetic diversity, and trophic analysis of the benthic organisms. For the water sampling, we used a CTD-Rosetta water sampler and a continuous sea surface water monitoring system. For the sediment samplings, we used a multiple corer with 74 mm inner diameter. We operated 14 CTD casts at 14 stations and 15 Multiple corer samplings at 8 stations. During the cruise, we continuously surveyed the bottom topography, gravity, and geomagnetic field.

- Title of project

Tohoku Ecosystem-Associated Marine Science