

Cruise Summary

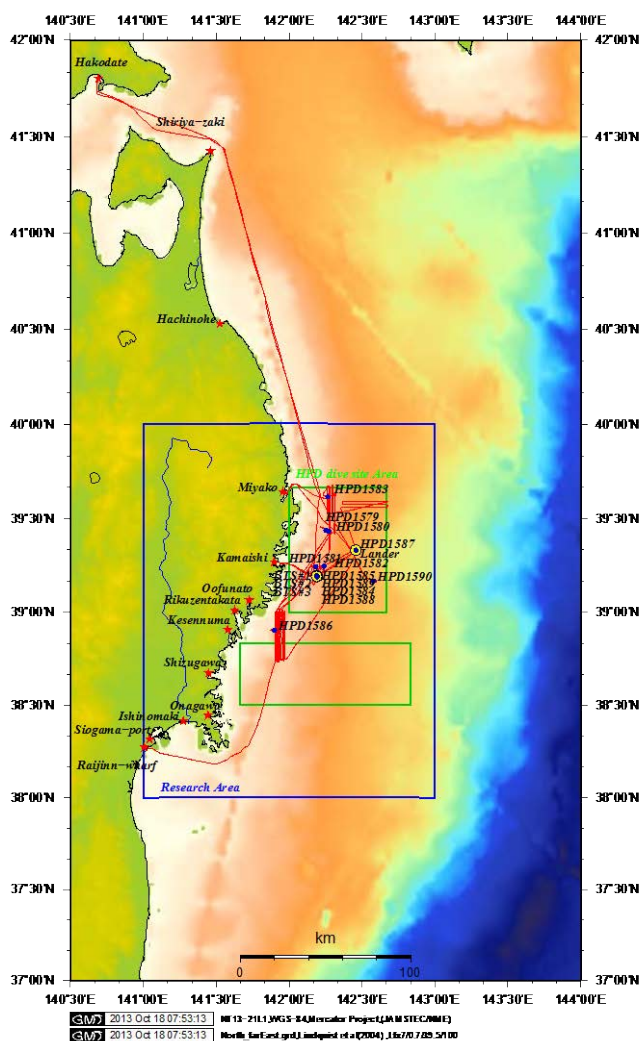
1. Cruise Information

- Cruise ID: NT13-21 LEG1
- Name of vessel: R/V *Natsushima*/ROV *Hyper-Dolphin 3000*
- Title of the cruise: Diving research using ROV *Hyper-Dolphin* off Tohoku after Tsunami
- Chief scientist [Affiliation]: Yoshihiro FUJIWARA [JAMSTEC]
- Representative of the Science Party [Affiliation]: Yoshihiro FUJIWARA [JAMSTEC]
- Title of proposal:

Research on factors controlling open ocean benthopelagic ecosystem dynamics off Tohoku

- Cruise period: October 6, 2013 – October 19, 2013
- Ports of call: from Shiogama Port (Miyagi) to Shiogama Port (Miyagi)
- Research area: Off Sanriku
- Research map

NT13-21Leg1 Cruise track



2. Overview of the Observation

● Overview of the observation

The ROV *Hyper-Dolphin* dives (dive #1579–1590) were conducted off Tohoku from October 6 to 19, 2013 for understanding of influences of the 2011 Tohoku earthquake on the deep-sea ecosystem as a part of the project “Tohoku Ecosystem-Associated Marine Sciences (TEAMS).” The total numbers of marine tsunami debris were much smaller on flat seafloors than in submarine canyons and the numbers were relatively small deeper than 1,000 m. Fishery resources including *Sebastes macrochir*, *Gadus macrocephalus* and *Chionoecetes opilio* were widely distributed in our research areas. Three-dimensional mapping of marine tsunami debris was conducted and the biomass around the debris was measured. Three bio-tracking stations and 10 specimens of snow crabs were deployed on seafloor at a depth of 430 m. A deep-sea lander, which was deployed at a depth of 998 m on August 14, 2012, was safely recovered.