

Cruise Summary

1. Cruise Information

- Cruise ID: YK12-13
- Name of vessel: R/V Yokosuka
- Title of the cruise: Impact by the mega-earthquake on marine ecosystem including environment, chemical, geology and geophysics in the Japan Trench
- Chief scientist [Affiliation]: Katsunori Fujikura (BioGeos, JAMSTEC)

● Science Party [Affiliation]

名前	Name	Position	Affiliation
藤倉克則 (首席研究員)	FUJIKURA, Katsunori	Principal Scientist	Biodiversity Research Program, Institute of Biogeosciences, JAMSTEC
野牧秀隆 (次席研究員)	NOMAKI, Hidetaka	Scientist	BioGeos3, JAMSTEC
新井和乃	ARAI, Kazuno	Ph.D. student	Graduate School of Science, Chiba University
古島靖夫	FURUSHIMA, Yasuo	Research Scientist	Biodiversity Research Program, Institute of Biogeosciences, JAMSTEC
生田哲朗	IKUTA, Tetsuro	Research Scientist	Biodiversity Research Program, Institute of Biogeosciences, JAMSTEC
伊藤雅志	ITO, Masashi	Marine Technician	Nippon Marine Enterprises, Ltd.
今野祐多	KONNO, Yuta	Research Scientist	Extremobiosphere Research Program, Institute of Biogeosciences, JAMSTEC
長井裕季子	NAGAI, Yukiko	Research Technician	Biodiversity Research Program, Institute of Biogeosciences, JAMSTEC
布浦拓郎	NUNOURA, Takuro	Senior Scientist	Extremobiosphere Research Program, Institute of Biogeosciences, JAMSTEC
小栗一将	OGURI, Kazumasa	Scientist	BioGeos3, JAMSTEC
柴田晴佳	SHIBATA, Haruka	Ph.D. student	Graduate School of Fisheries Science, Kitasato University
砂村倫成	SUNAMURA, Michinari	Assistant Professor	Graduated school of Science, University of Tokyo

田角栄二	TASUMI, Eiji	Scientist	Extremobiosphere Research Program, Institute of Biogeosciences, JAMSTEC
土岐知弘	TOKI, Tomohiro	Assistant Professor	Faculty of Science, University of the Ryukyus
辻 健	TSUJI, Takeshi	Associate Professor	WPI-I2CNER, Kyushu University

- Cruise period: August 11, 2012-Aug 24, 2012
- Ports of call: Yokosuka, JAMSTEC August 11, 2012 - Yokosuka, JAMSTEC Aug 24, 2012
- Research area: General survey area, Off Sanriku-Japan Trench

Water depth range : 200m~8,000m

Investigation area surrounded by following 4 points, 37°30'N : 141°40'E, 37°30'N : 144°00'E, 39°45'N : 144°30'E, 39°45'N : 142°07'E.

2. Overview of the Investigation

The purpose of this cruise is to estimate how impact by the mega-earthquake on marine ecosystem in the Japan Trench. The tremendous March 2011 Tohoku earthquake (Mw 9.0) ruptured a wide area along the plate interface off the Pacific coast of Tohoku, Japan. The tsunami induced by earthquake was extremely huge. Earthquake, after shocks and tsunami have been variously affected to not only coastal marine ecosystems but also deep-sea ecosystems. To estimate and make clear for above expected impacts by the earthquake, we conducted deep-sea investigations using the HOV Shinkai 6500 in the Japan Trench from 2011. We could observed several fissures on the seafloor, occurrences of bacterial mats associated with CH₄ and H₂S seepages, other bacterial mats associated with decay of dead benthic organisms aggregations and decreasing of *Calyptogena phaseoliformis* colonies were observed same as the last year. We believe, to describe these impacts by the huge earthquake is our important task. As a part of a long term monitoring of marine environments concerning Tohoku Marine Science project, a lander system was deployed off Sanriku. ADCP, CTD, turbidity and dissolved oxygen sensors and time lapse video camera system with two LED lights (handmade), Acoustic transponder and ARGOS satellite communication system were mounted on the lander