IRCC7-13A

Report on Japan's Response to Disasters

presented by JHOD

at

IHO-IRCC7

Mexico City, Mexico, 01-03 June 2015

JCG 海上保安庁

JAPAN COAST GUARD

Actions against huge earthquake

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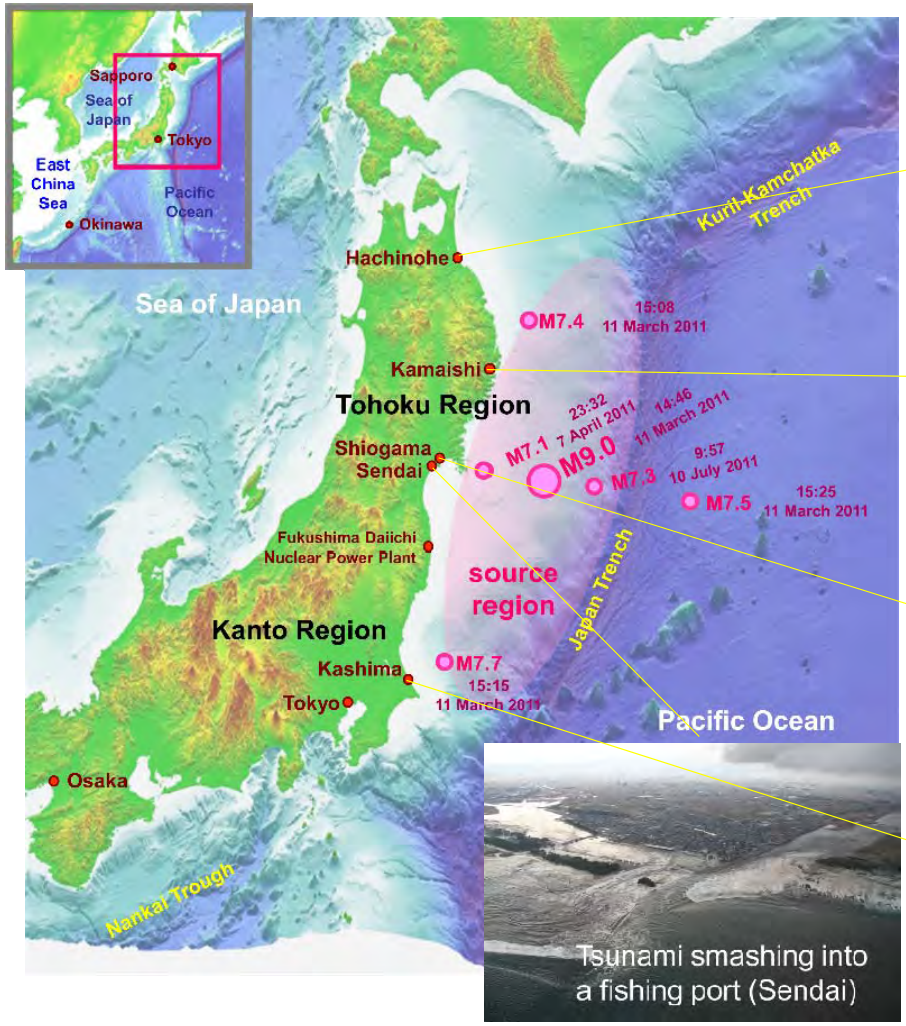
Actions taken by JHOD against the Great East Japan Earthquake in 2011

A huge earthquake of magnitude 9.0, the epicenter of which was located off east coast of northeastern Japan, occurred at **2:46 p.m. on 11 March 2011** and caused strong ground shake in wide area of the Tohoku and the Kanto regions. Many aftershocks, some of which were larger than magnitude 7, also occurred.

The earthquake and the tsunami higher than 10 m caused catastrophic damages in many coastal cities and ports in the Tohoku and the Kanto regions. **15,889 people were killed**, **2,601 people are still missing** and 127,367 houses were completely destroyed, according to a report of National Police Agency as of 11 Sep. 2014.



Damage by Tsunami

Port of Hachinohe

Port of Kamaishi

Port of Shiogama

Port of Kashima

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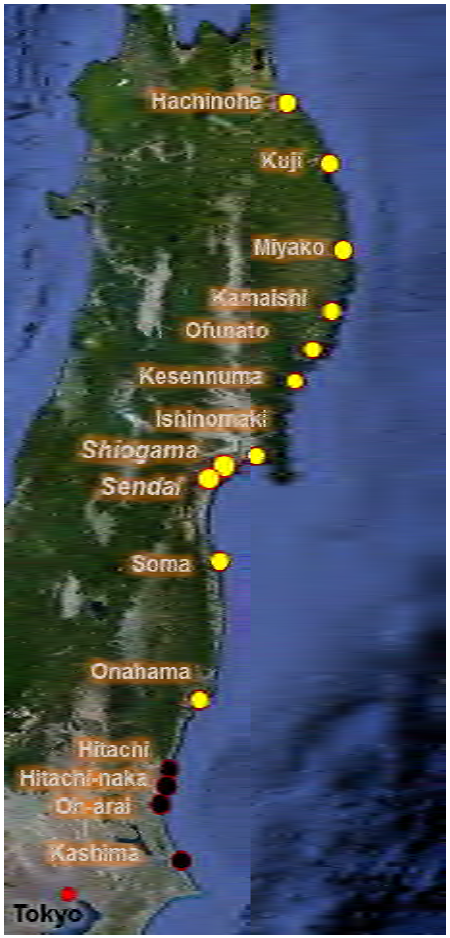
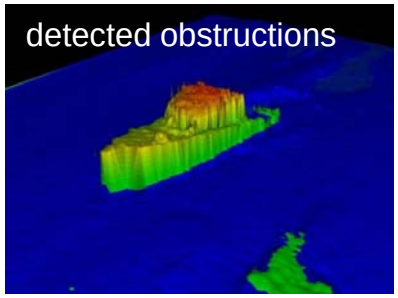


1. **Phase 1 (March - April 2011)**

Obstruction surveys for re-opening damaged ports



All the major ports affected by Tsunami were re-opened **within 15 days** after the earthquake.

2. Phase 2 (May 2011 -)

Re-determination of chart datum levels (CDL-11) by July 2011 and completion of hydrographic surveys by May 2014

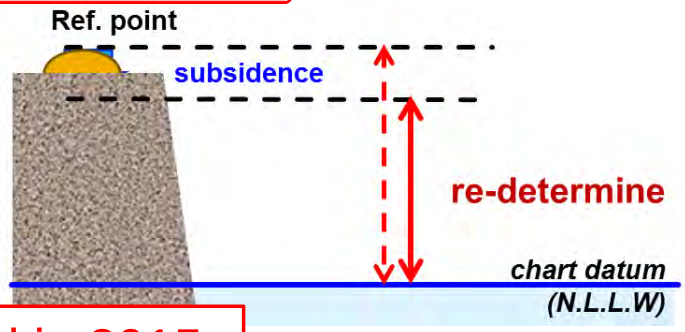


Chart revision will be completed in 2015.

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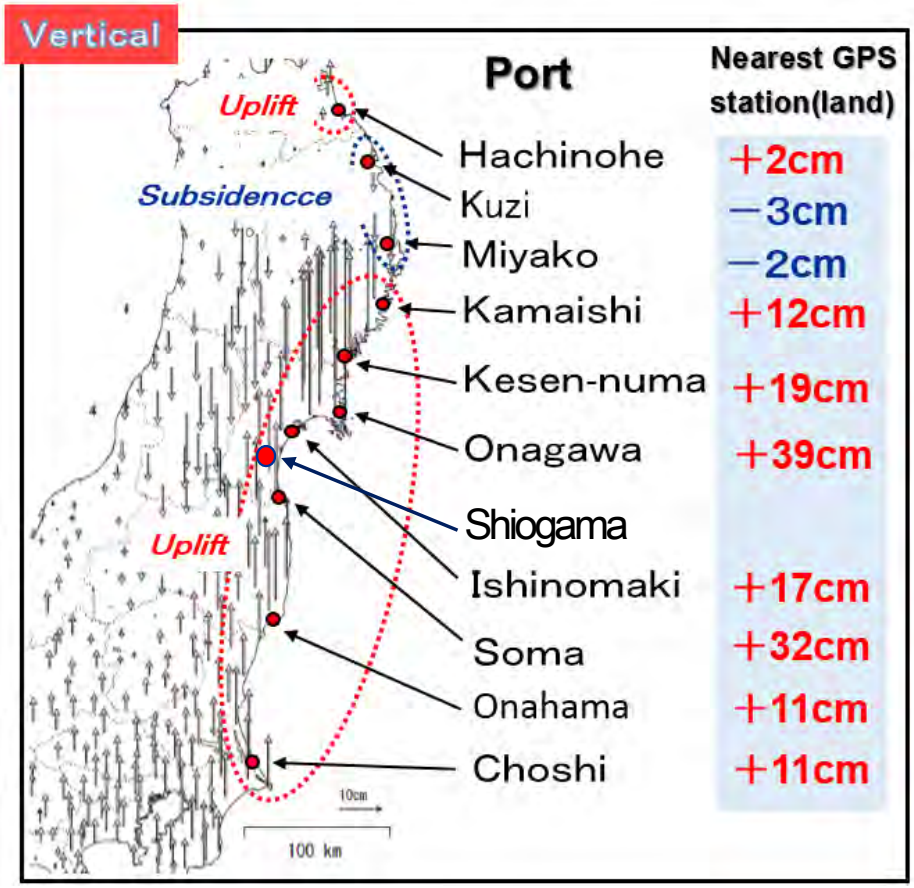
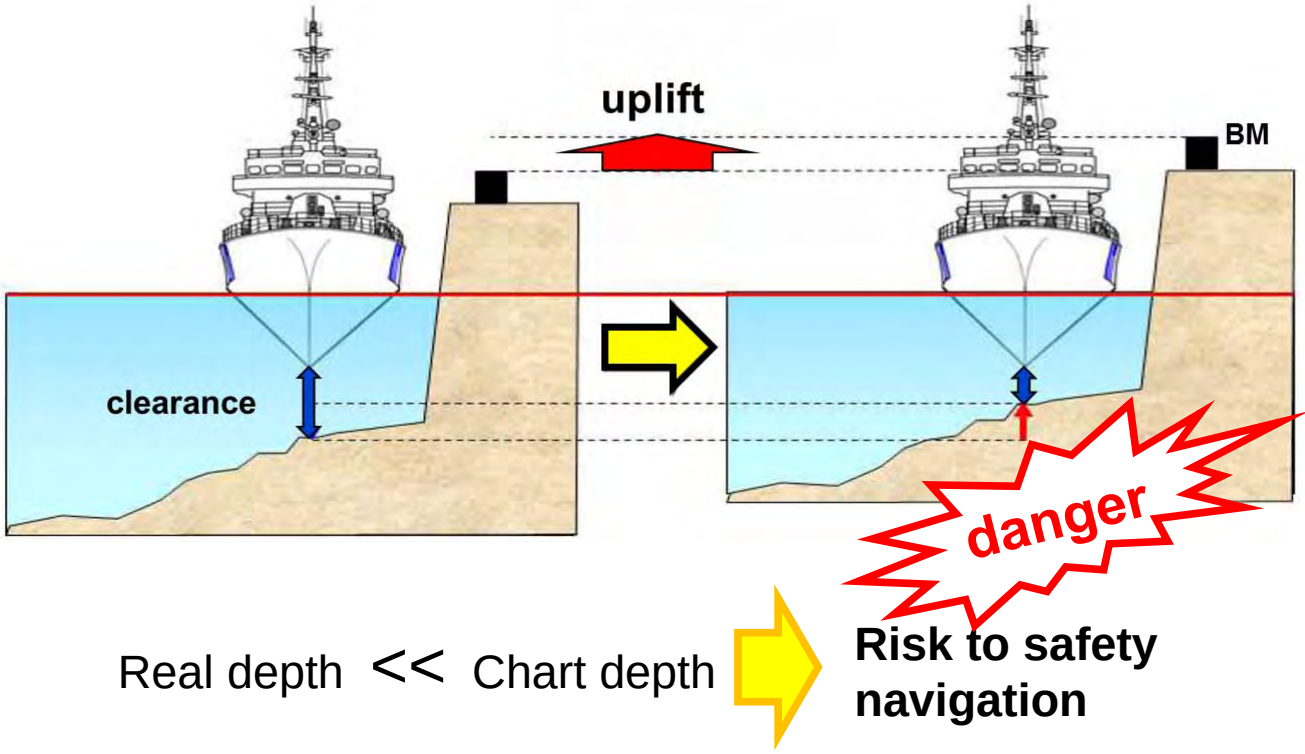
3. Revision of the Charts caused by post-seismic movement



Vertical Displacement (12 Mar. 2011 – 28 Apr. 2015)



Real depth << Chart depth

Risk to safety navigation

Post-seismic movement is anticipated to continue for further several years.

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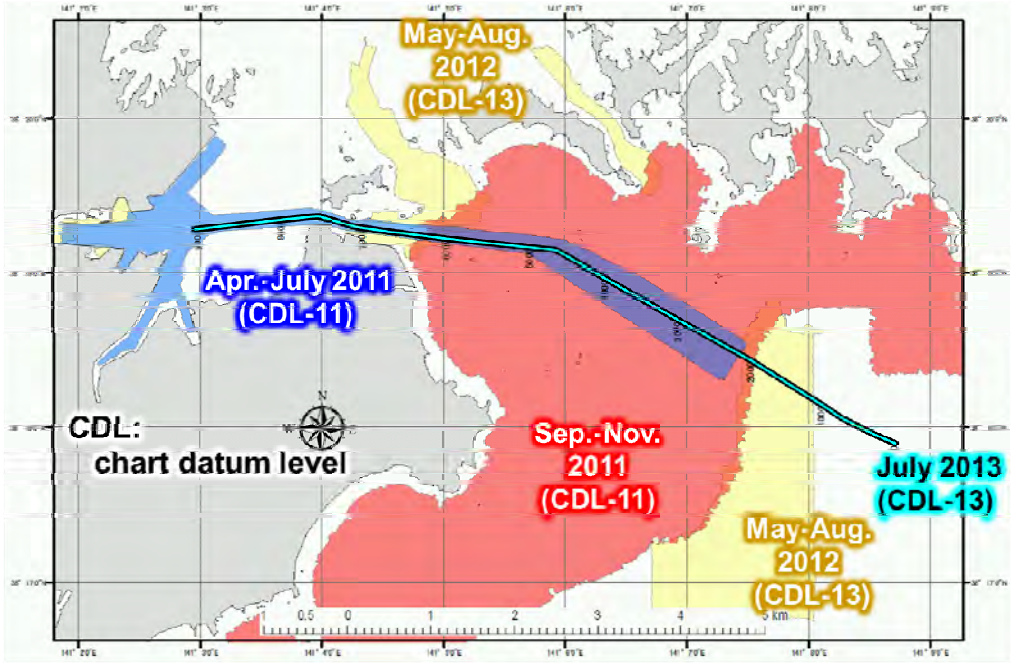
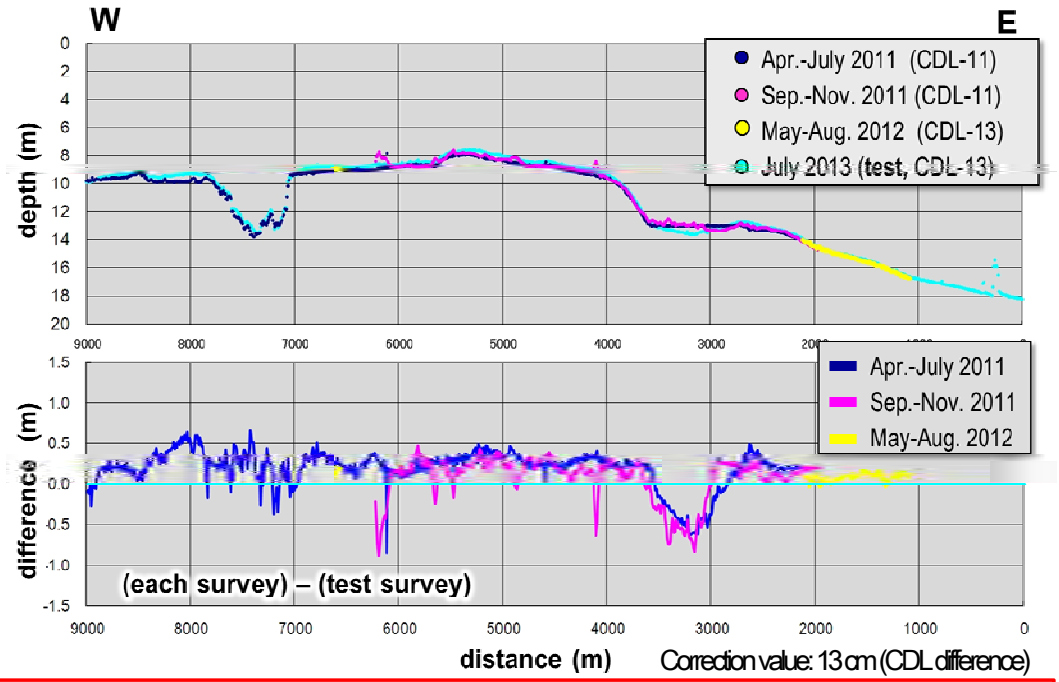
3. Revision of the Charts caused by post-seismic movement

Among the affected ports, Shiogama was the first port the revision of chart was completed in Sep. 2011. JHOD conducted test surveys there for checking if water depth change due to post-seismic movement has occurred over a chart area. We decided that the soundings data of 2011 surveys were converted to new depth based on the Chart Datum Level 2013.





In the near future, similar depth correction may be needed.

Surveys of Volcanoes in Sea Area

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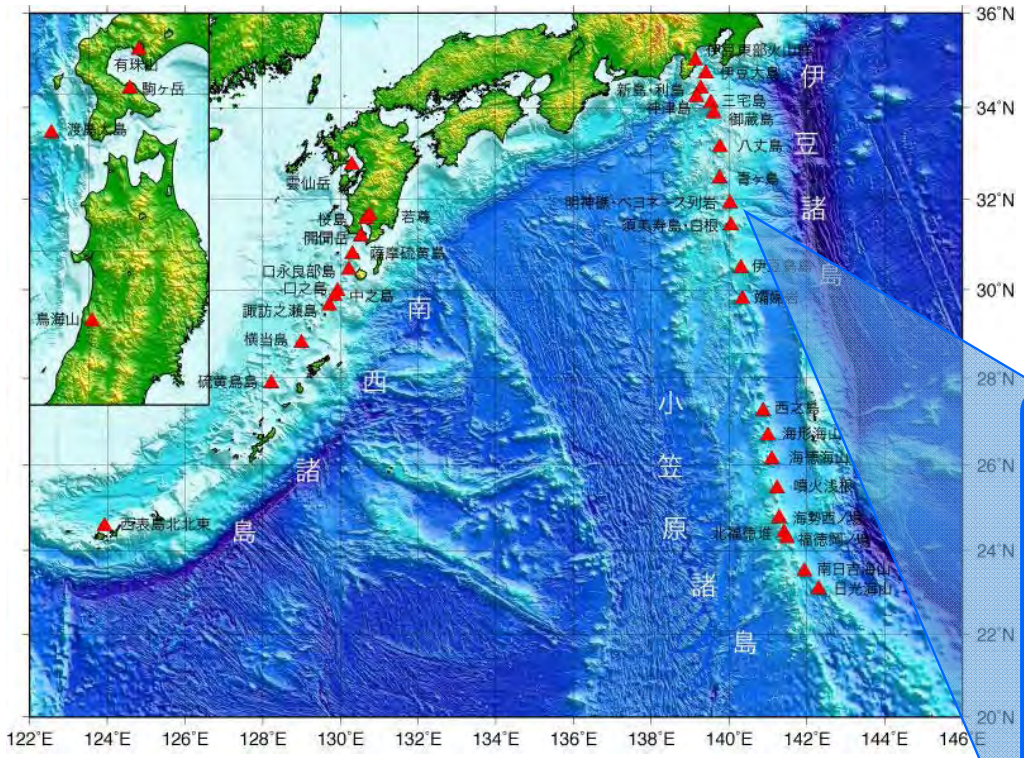
JHOD conducts monitoring and research on the activities of volcanoes in sea area using **aircrafts, survey vessels and high-tech autonomous survey boats**.



▲ **Location map of submarine volcanoes and volcanic islands**

Autonomous survey boat, “Manbo II”

S/V Kaiyo No.5 was in distress during the survey of Myojin-Sho Reef in 1952.

Birth and Growth of New Volcanic Island

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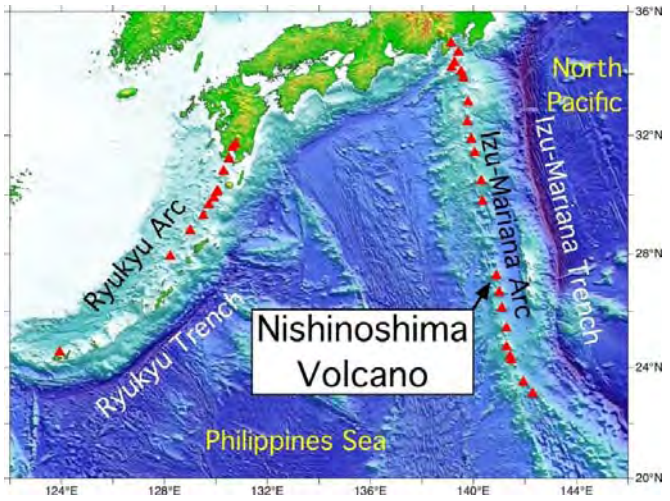
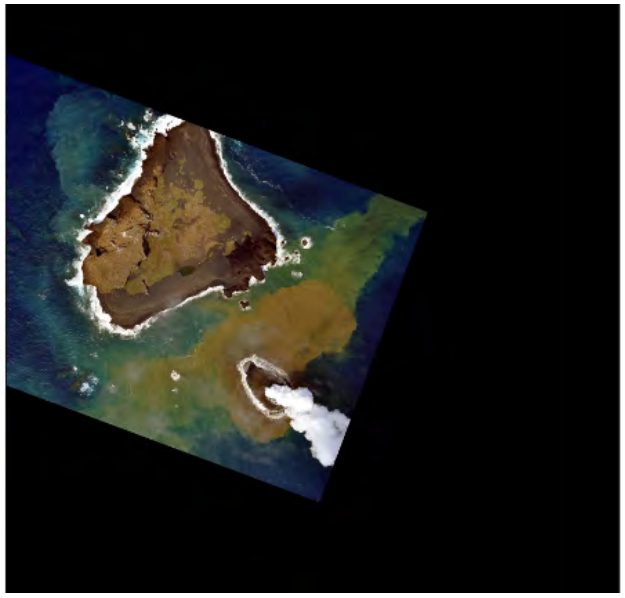
Eruption near the Nishino-shima island was found by JHOD using its aircraft on 20 Nov. 2013.

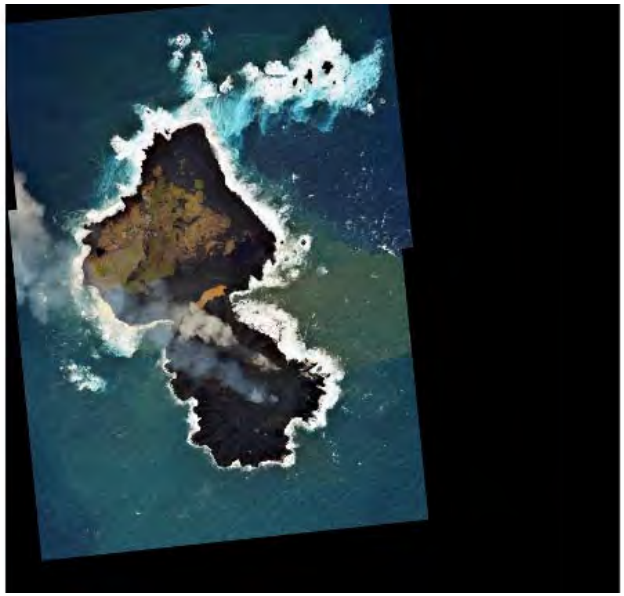
It took the old island into its part and still continues growing with very active eruption.

JHOD regularly monitors the volcano and issues **Navigational Warnings** for safety of navigation.





21 Nov. 2013



26 Dec. 2013

25 Mar. 2015

3rd UN World Conference on Disaster Risk Reduction (WCDRR3)

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Date : 14-18 March 2015

Venue : Sendai, Japan

Participants :

over 6,500 participants including 2,800 government representatives from 187 UN member states

Side Events :

over 143,000 visitors to;

- 150 intergovernmental and multi-stakeholder events,
- over 350 side events in the public forum.

Action by IHO:

Statement of IHO was given by Hideki KIHOSHITA, JHOD as a representative of IHO

Outcomes of WDDRR3

- Sendai Declaration
- Sendai Framework for Disaster Risk Reduction 2015-2030 including priority action of;
  - Understanding disaster risk,
  - Strengthening disaster risk governance,
  - Investigating in disaster risk reduction and,
  - Enhancing disaster preparedness

Draft Plan for Tsunami Inundation Mapping Workshop

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- **Objects**:
  - To understand overview of Tsunami Inundation Map from preparation, data and information collection, compiling and utilization.
  - To discuss minimum roles and possible contribution of HO for TIM and,
  - To discuss a way to improve a capacity of HO for TIM
- **Program Component** :
  - **Keynote lecture** on theory and mechanism of tsunami disaster, lessons learned the past disaster, knowledge and skills to develop tsunami inundation map, and utilization of the inundation map and other information for prevention and mitigation of tsunami disaster.
  - **Reports** by the EAHC members on their activities on development and utilization of the inundation map.
  - **Exchange of views** by the EAHC members on development and utilization of the inundation map.
  - **Study tour** to learn Japanese practice by local municipality
- **Duration** : 3 Days (2days workshop and 1 day study tour)
- **Venue** : Tokyo
- **Date** : around November
- **Budget** : IHO CB Fund