TSCOM report to GC 2015

Preliminary report
8-9 October 2015
Hosted by the Royal Malaysian Navy
Kuala Lumpur, Malaysia

Venue

TSCOM met jointly with SCRUM October 6-7, 2015, at the Royale Chulan Hotel.

We gratefully acknowledge the Royal Malaysian Navy for:

- excellent logistical support
- fine venue
- superb hospitality provided by our hosts

TSCOM Membership

Committee Members

Jenifer Austin – Google Earth, USA
Vicki Ferrini – LDEO, USA
John Hall – Geological Survey of Israel
Timothy Kearns – OneOcean Corporation, USA
Karen Marks – NOAA, USA
Marzia Rovere – Istituto di Scienze Marine, Consiglio Nazional delle Ricerche, Italy
Thierry Schmitt – SHOM, France
Walter Smith – NOAA, USA
Shin Tani – Hydrographic and Oceanographic, Coast Guard, Japan
Pauline Weatherall – British Oceanographic Data Center, UK

Scientific Advisors

Paul Elmore, NRL, USA
Tony Pharoah, IHO, Monaco
Martin Jakobsson, Stockholm University, Sweden
David Sandwell, Scripps Institution of Oceanography, USA

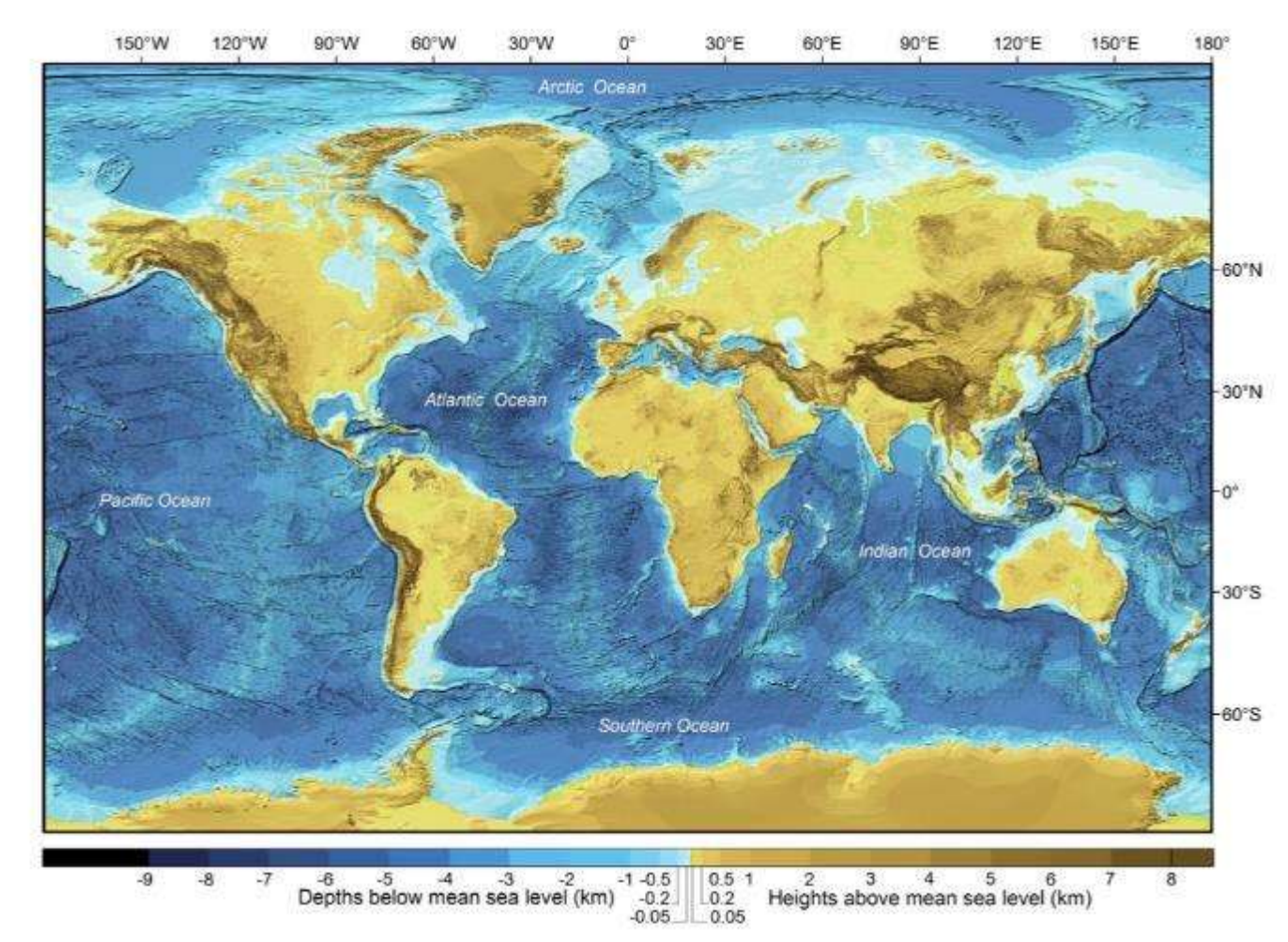
TSCOM Leadership

- Karen Marks appointed Chair at 2013 GEBCO GC Meeting, currently no Vice-Chair
- 10 Members on TSCOM committee, but many more attend meetings and are active in TSCOM/SCRUM
- Should all TSCOM/SCRUM workers be listed on GEBCO website?

TSCOM Activities

- TSCOM tabled reports and plenary on:
  - GEBCO_2014 grid
  - Updating future GEBCO grid
  - Outreach- Plan for Webpages for Students
  - High-Resolution Product
- GEBCO_2014 grid released
- GEBCO_2014 release paper published in AGU's Earth and Space Science
- Successful GEBCO Science Day
- Cook Book used as educational resource

GEBCO_2014



- New global bathymetry model released Dec. 2014
- Download from http://www.gebco.net

Plenary: Update the GEBCO Grid

- GEBCO will actively seek bathymetric compilations from individual member states
- Move from 30 arc second to 15 arc second grid
- Seek use of current version of SRTM15_Plus, without copyright restrictions
- Support drilling down to higher-resolution source bathymetry
- All TSCOM/SCRUM participants attended

GEBCO Hi-Res Product Update

- Technical Components from GMRT ✔
  - Integration with GEBCO_2014
  - Grid Composition
  - Image Creation
  - Attribution
  - Web Services
- Needs of Contributors
  - Attribution
  - Analytics
- Workflow
  - Extent of Coverage
  - Integration with Data Store
  - Editorial Process

Vicki Ferrini, LDEO

GEBCO_2014 Release Paper Published

Weatherall, P., K. M. Marks, M. Jakobsson, T. Schmitt, S. Tani, J. E. Arndt, M. Rovere, D. Chayes, V. Ferrini, and R. Wigley (2015), A new digital bathymetric model of the world's oceans, Earth and Space Science, 2, 331–345, doi:10.1002/2015EA000107.

- Published in AGU's new Earth and Space Science Journal, Aug. 2015
- Obtained DOI
- Open Access – free use and download
- Manuscript documents history, data sources, construction methods and scientific results

Earth and Space Science

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Research Article

A new digital bathymetric model of the world's oceans

Pauline Weatherall, K. M. Marks, Martin Jakobsson, Thierry Schmitt, Shin Tani, Jan Erik Arndt, Marzia Rovere, Dale Chayes, Vicki Ferrini, Rochelle Wigley

First published: 4 August 2015 Full publication history

DOI: 10.1002/2015EA000107 View/save citation

Cited by: 0 articles last updated 06 October 2015

View issue TOC

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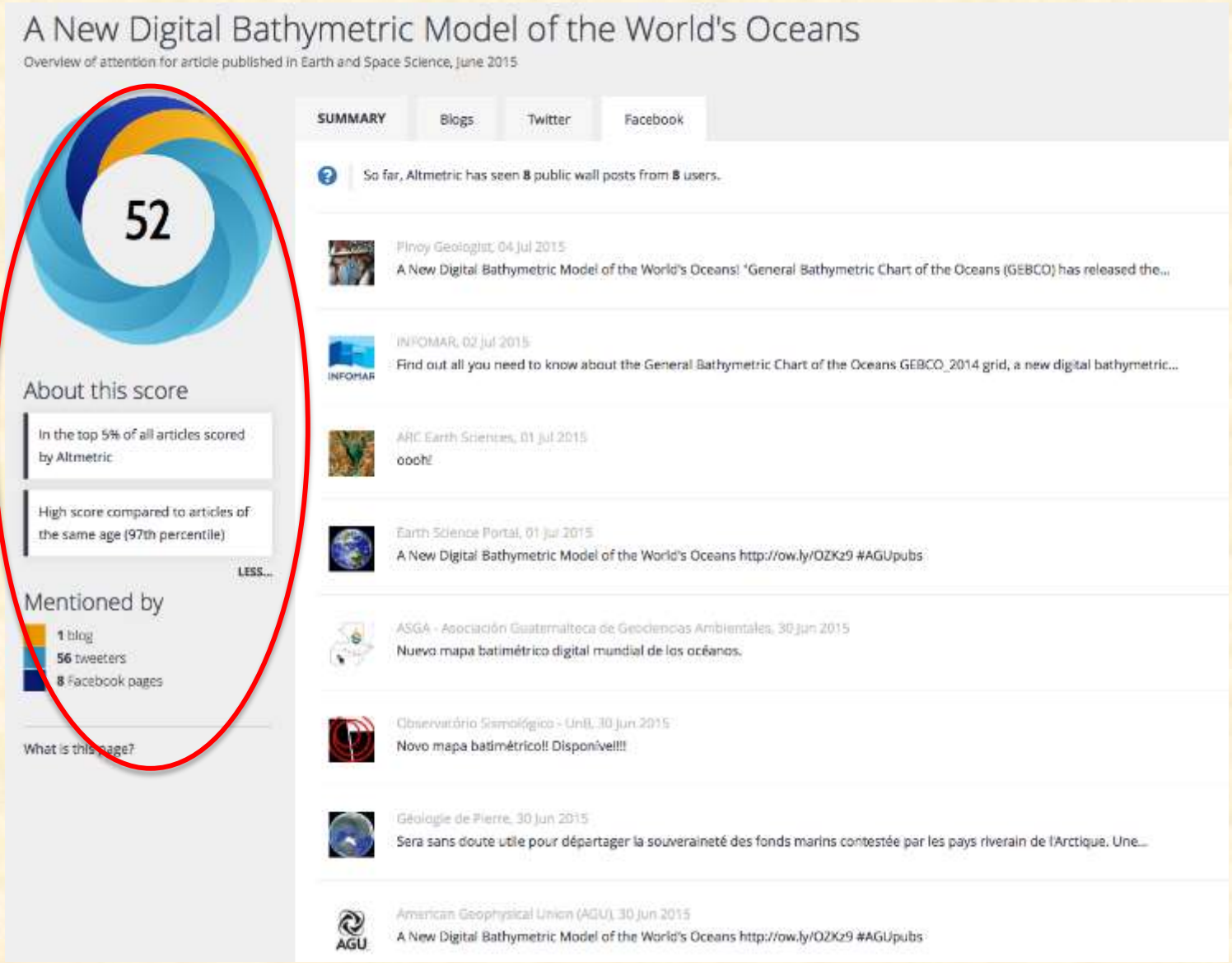
Release Paper Metrics



Attention ranking

Top 5% of articles scored

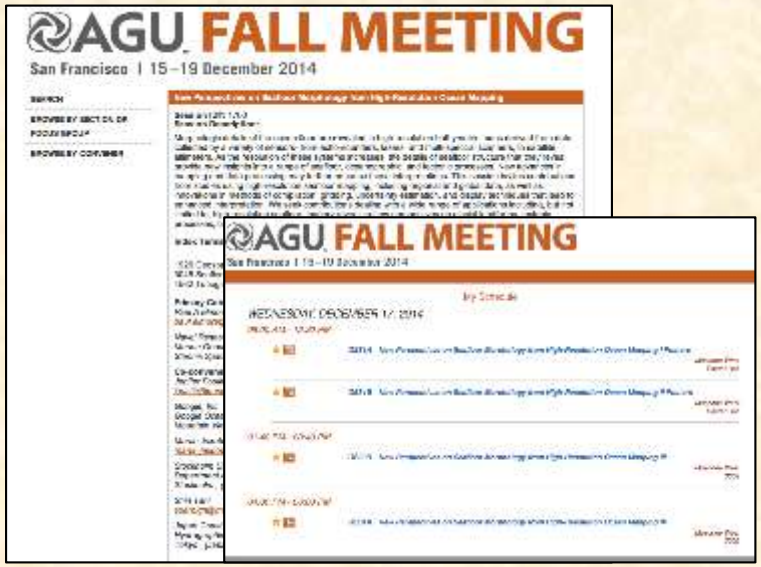
Mentioned by Facebook, Twitter, Blog

2015 Science Day

- 10th Annual GEBCO Bathymetric Science Day was held at the Kuala Lumpur Convention Center
- 15 oral and 34 poster presentations, 10 booths
- ~180 attendees at Science Day
- We were honored by Deputy Minister of Defense of Malaysia - Hon. Dato' Wira Mohd Johari Baharum, speaking at the Opening Ceremony

2014 TSCOM/SCRUM Meeting and GEBCO Science Day

- TSCOM/SCRUM meeting held at Google Headquarters, Mountain View, CA
- Host was Jenifer Austin, Manager of Google Ocean Program
- GEBCO Science Day was at a Fall 2014 AGU Meeting Special Session
- 4 Ocean Sciences sessions
- 16 oral and 29 poster presentations



IHO-IOC GEBCO Cook Book

At the 2009 GEBCO 25th Meeting of TSCOM, the "Cook Book Working Group" was formed to "create a manual that enables users to prepare and grid data for inclusion in GEBCO products," resulting in:

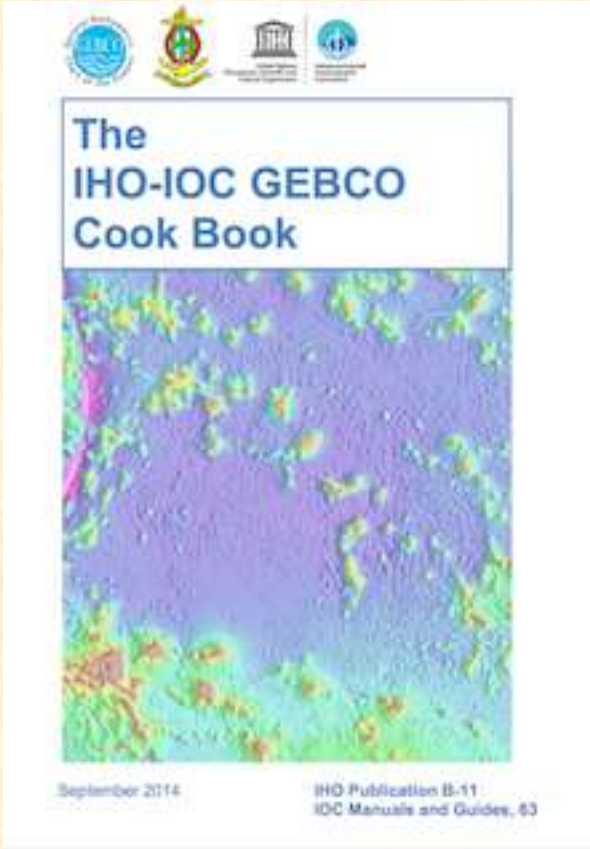
- IHO-IOC GEBCO Cook Book in the press:
  - IHO Publication B-11 (April, 2012)
  - IOC Manuals and Guides, 63 (Oct. 2012)
  - EOS "News Brief" announcing Cook Book was published in EOS Trans. AGU, Feb. 2013
  - Article in Hydro Int'l (April, 2014) highlighted Cook Book

- Used as educational resource, including:
  - UNH CCOM/JHC Ocean Mapping classes
  - Texas A&M University
  - Workshops
  - Used internationally

- Available for Download: http://www.gebco.net

- Citation format is published on GEBCO website

- **New contribution received, another anticipated, update soon**



Nautical Chart Adequacy Workshop

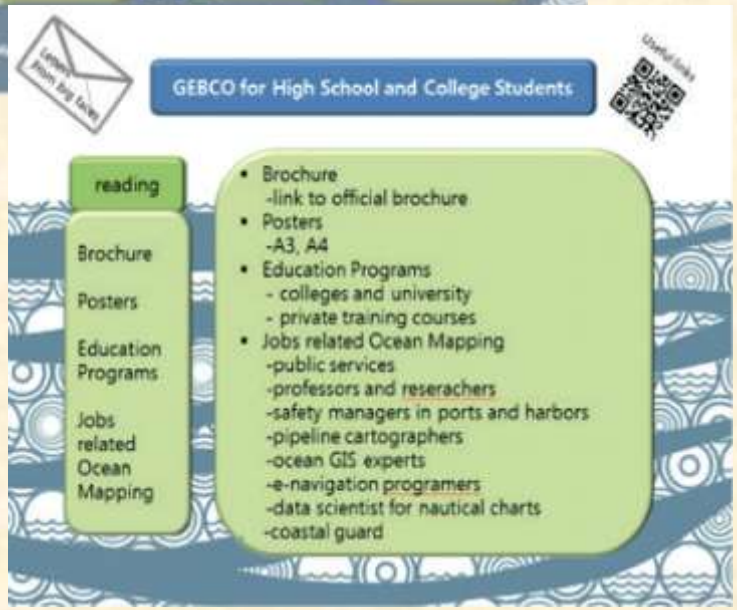
- Workshop developed and hosted by NOAA Coast Survey and UNH/CCOM
- Trained hydrographers on procedures to assess adequacy of nautical charts using public information
- Used Chapter "LANDSAT 8-Satellite-Derived Bathymetry" of Cook Book
- Included visit to NOAA Laboratory for Satellite Altimetry

Workshop- July 2015

Shachak Pe'eri and Rochelle Wigley, UNH/CCOM

Break-out Session: Outreach Working Group

- Break-out had 7 participants
- Discussions on outreach for High School and College students
- Master plan for subpages on GEBCO website
- On-going activity



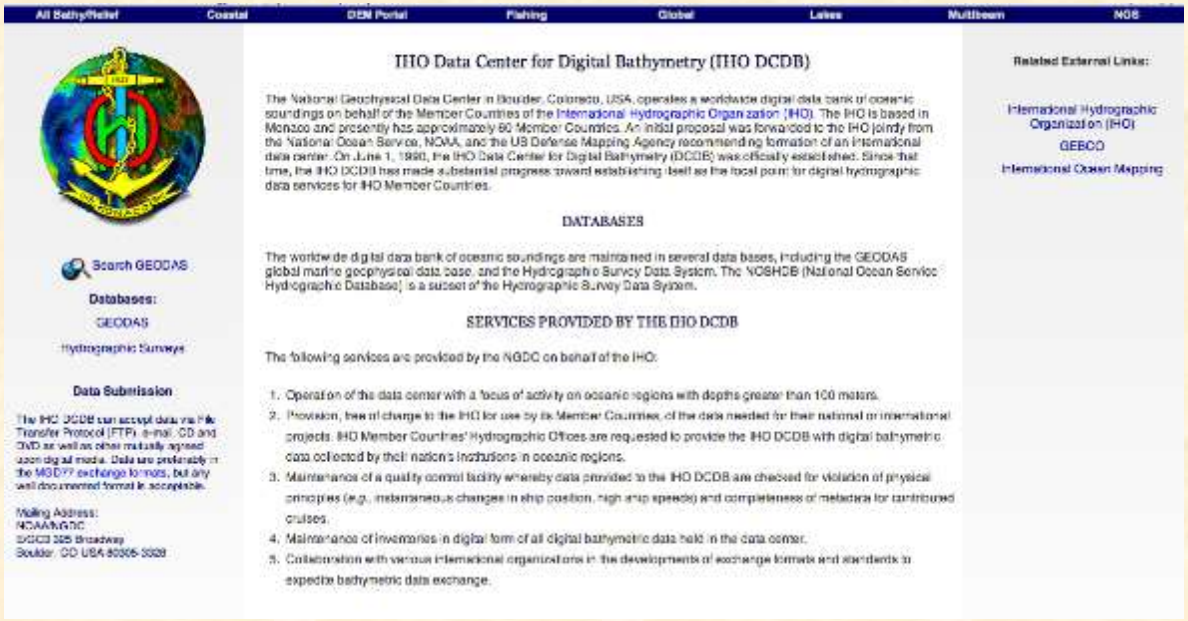
Eunmi Chang, Hyo Hyun Sung, Pauline Weatherall

Break-out on Grid Uncertainties

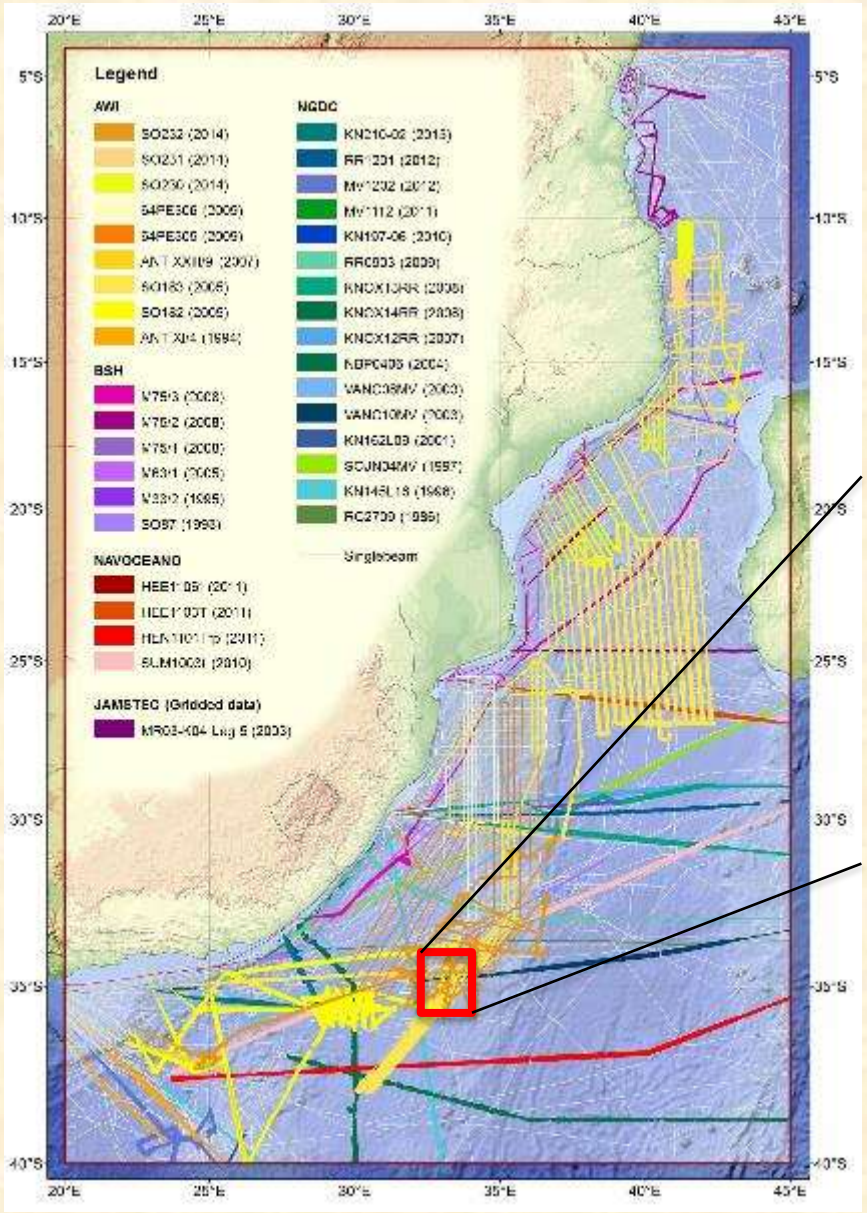
- Led by Paul Elmore
- 9 participants
- Discussed how to determine uncertainties and application to GEBCO grid
- Activity is on-going

GEBCO Data Store

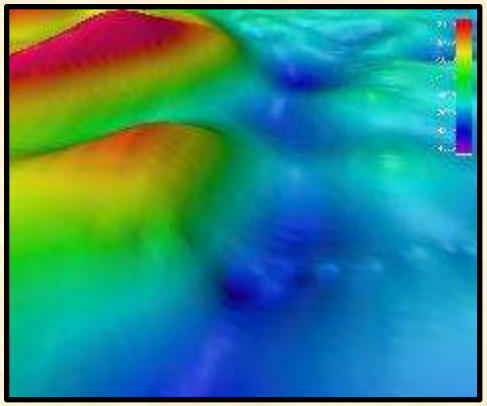
- **On hold until host funding can be allocated**
- A repository for already-processed bathymetric trackline and gridded data used to produce GEBCO grid
- To be part of IHO Data Center for Digital Bathymetry (IHO DCDB)
  - Prototype portal webpages under development
  - Data Store scope and services summary circulated Feb 2015



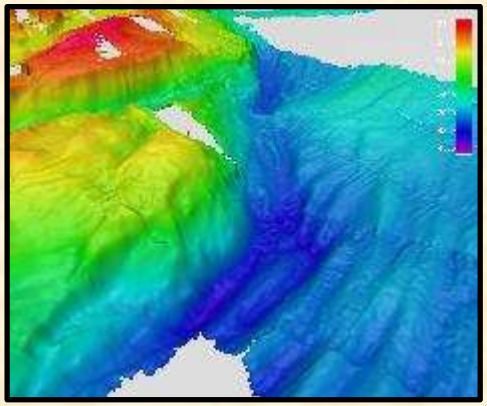
swIOBC using IBCSO gridding



- Database: About 21% high resolution data and 79% GEBCO
- Data from 10 different institutes
- swIOBC is derived at AWI by Laura Jensen, with support by Jan Erik Arndt
- V1.0 is expected to be published in 2016 ► will become part of the IOBC



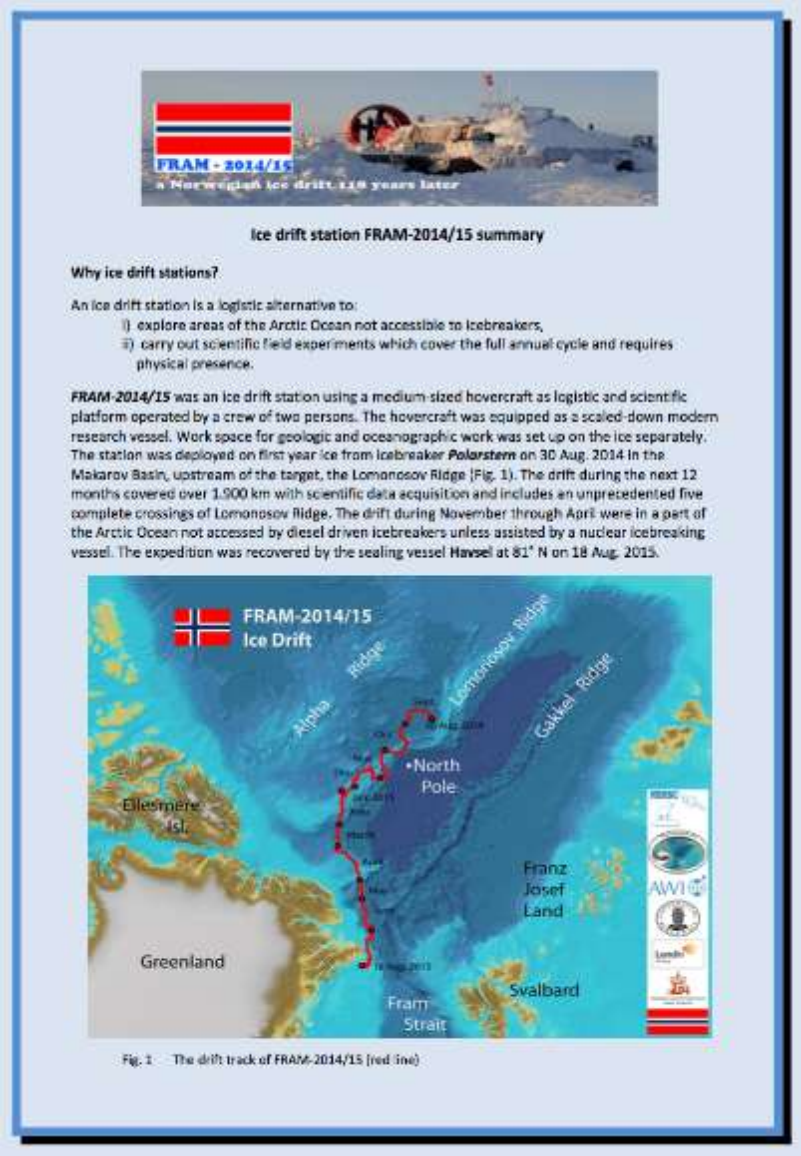
Existing GEBCO data, ~ 1000 m Resolution



Bathymetry data of SO232 (2014), ~ 250 m resolution as the swIOBC will provide.

Jan Erik Arndt, AWI

Fram 2014/15 Ice Drift



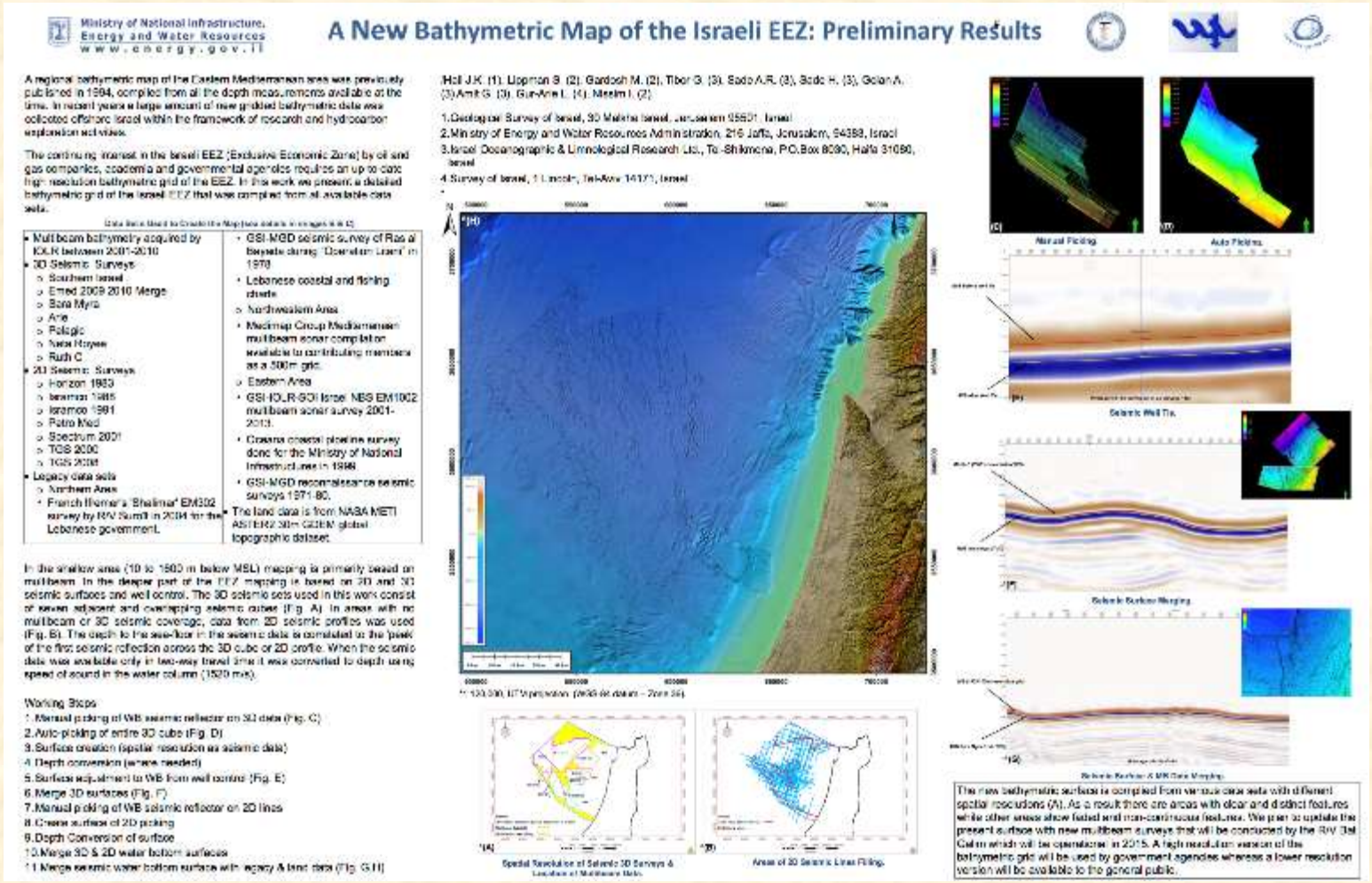
FRAM-2014/15 drift of R/H Sabvabaa in the Arctic Ocean is completed

- Successful mission

- Scientific data were collected:
- Bathymetry
- Seismic reflection
- Current profiles
- Ocean temperature
- Weather
- Atmospheric data

John Hall, Lee Freitag

New Bathymetric Map of Israeli EEZ



- New bathymetric map is compiled from various data sets
- Plan is to update with multibeam surveys

John Hall, Geological Survey of Israel (ret.)

R/V Bat Galim

- Acquired by Israeli Government for marine data collection
- R/V Bat Galim to conduct multibeam surveys of EEZ

John Hall, Geological Survey of Israel (ret.)

END OF PRESENTATION