



# IHO Data Centre for Digital Bathymetry

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Boulder, CO, USA

**GEBCO Guiding Committee**

Busan, Republic of Korea

Oct 16-17, 2017



# Newest DCDB Data Contributor

Over the last three years Fugro Marine GeoServices have acquired 800GB of bathy and water column data during vessel transits.

Fugro has made an initial data delivery to the DCDB (left).

NOAA/DCDB is currently working to identify metadata gaps and offer suggestions for improved data packaging to allow Fugro to provide a more complete product.

This will allow Fugro to quickly identify a workflow and delivery method that promotes consistency across the fleet

The image displays a composite of three elements related to marine data collection and reporting:

- Map (Left):** A map of the Atlantic Ocean showing vessel tracks. The tracks are color-coded: purple for 'FUGRO01 - Bathymetry', green for 'FUGRO01 - Water Column', and red for 'FUGRO01 - Bathymetry'. The map includes a legend and a compass rose.
- Multibeam Report for FA150001 (Middle):** A report interface with the following details:
  - Ship Name: Fugro/Arctec
  - Ship Number: 2144
  - Source Organization: Fugro
  - Start Date: 21 Feb 2011
  - End Date: 23 Feb 2011Below the report is a 'View ESD Variables' section with a 'Download Report All Files' button.
- Bathymetric Map (Right):** A 3D bathymetric map showing the seafloor topography with a yellow track overlaid. It includes a zoom control and a 'Download' button.

At the bottom of the slide, there are logos for the following organizations:

- Global Bathymetry Chart of the Oceans (GBCO)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- Environmental Data Service (EDS)

# IHO DCDB Enhancements for CSB Data

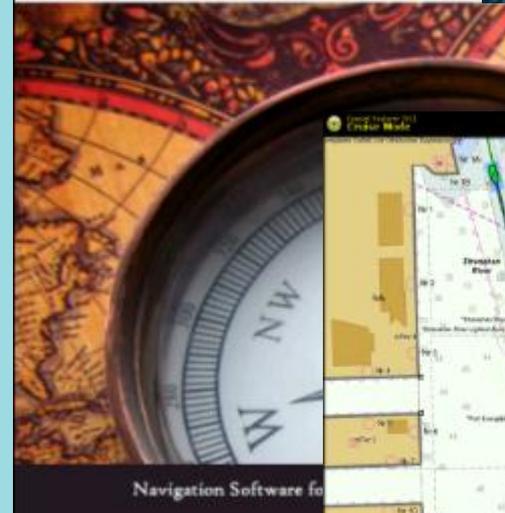
## PILOT PROJECT:

*NOAA and the DCDB have teamed with Rose Point Navigation Systems*

- Mariners are given an option to enable CSB logging allowing a modified electronic charting system log file to record position, depth and time.
- Mariners can choose to be anonymous or to submit metadata about vessel and equipment
- A modified log file gets submitted via HTTP post that contains a JSON metadata string



[www.pcmaritime.com](http://www.pcmaritime.com)

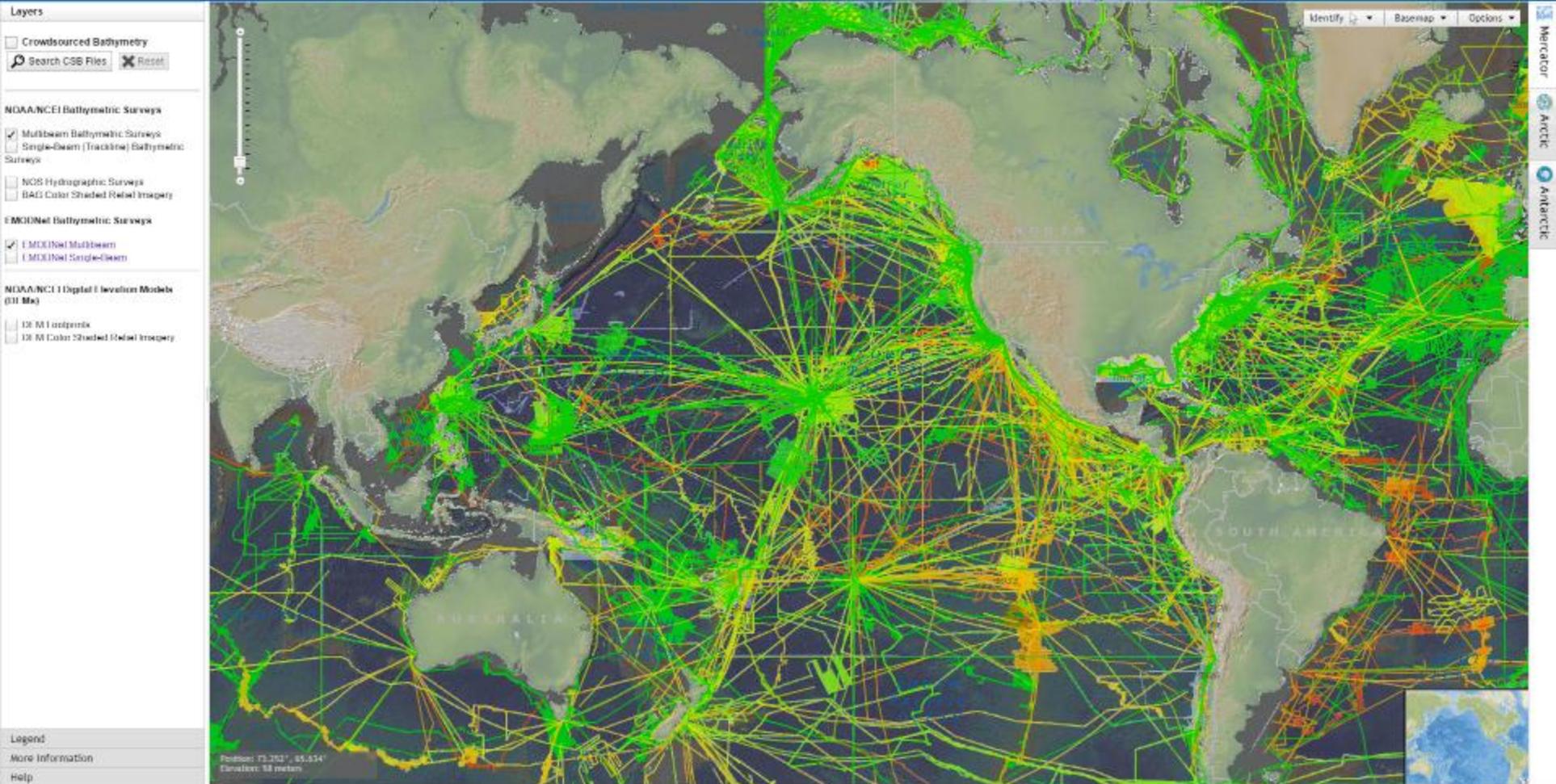


[www.rosepointnav.com](http://www.rosepointnav.com)



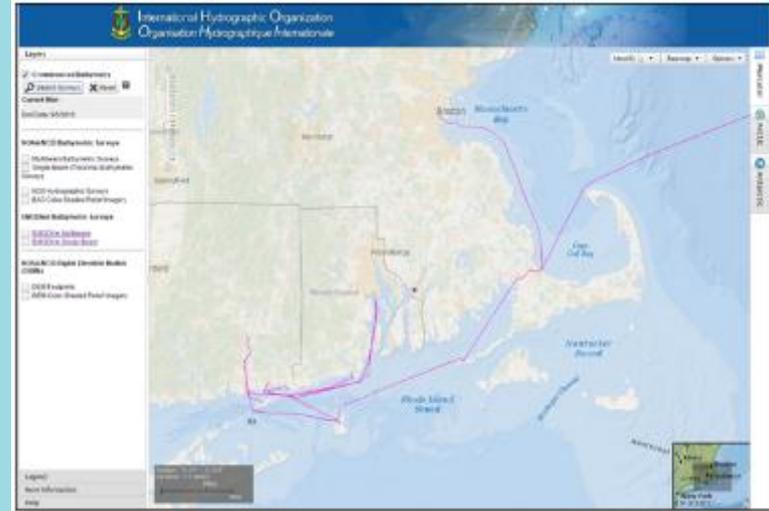
*Past pilot projects have included partnering with SeaID*

# IHO DCBB - IHO DCBB Data Discovery R&A Bathymetry



# IHO DCDB next steps:

- Expand beyond pilot data provider to include more trusted data providers in CSB project
- Continue to improve the upload/download data pipelines at DCDB
- Implement point storage technology to better handle large volumes of data points
- “...the Centre will continue to be the definitive data repository for bathymetric data and as such play a central role in GEBCO activities, in general, and the Seabed 2030 Project, in particular.” - Seabed 2030 Business Plan
  - *We are seeking clarity on what the DCDB role will look like.*



# IHO Crowdsourced Bathymetry WG

*TASK: Prepare an IHO publication on policy for trusted crowdsourced bathymetry to provide guidelines on the collection and assessment of CSB data.*



Guidance on Crowdsourced  
Bathymetry

- Dec 5-6, '17 CSBWG5 meeting (Monaco), consider external input
- Apr/May '18 Prepare Edition 1.0.0 for submission to IRCC10
- Mid- '18 CSBWG6 meeting, commence work on Edition 2.0.0
- Sept '18 Formal submission to IHO Council2
- Oct '18 IHO Council2 approval
- 1 Jan '19 CSBGD Edition 1.0.0 released
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To access the document:

[https://www.iho.int/srv1/index.php?option=com\\_content&view=article&id=635&Itemid=988&lang=en](https://www.iho.int/srv1/index.php?option=com_content&view=article&id=635&Itemid=988&lang=en)



**CWBWG3: 7-8 Nov 2016**  
Warnemunde, Germany

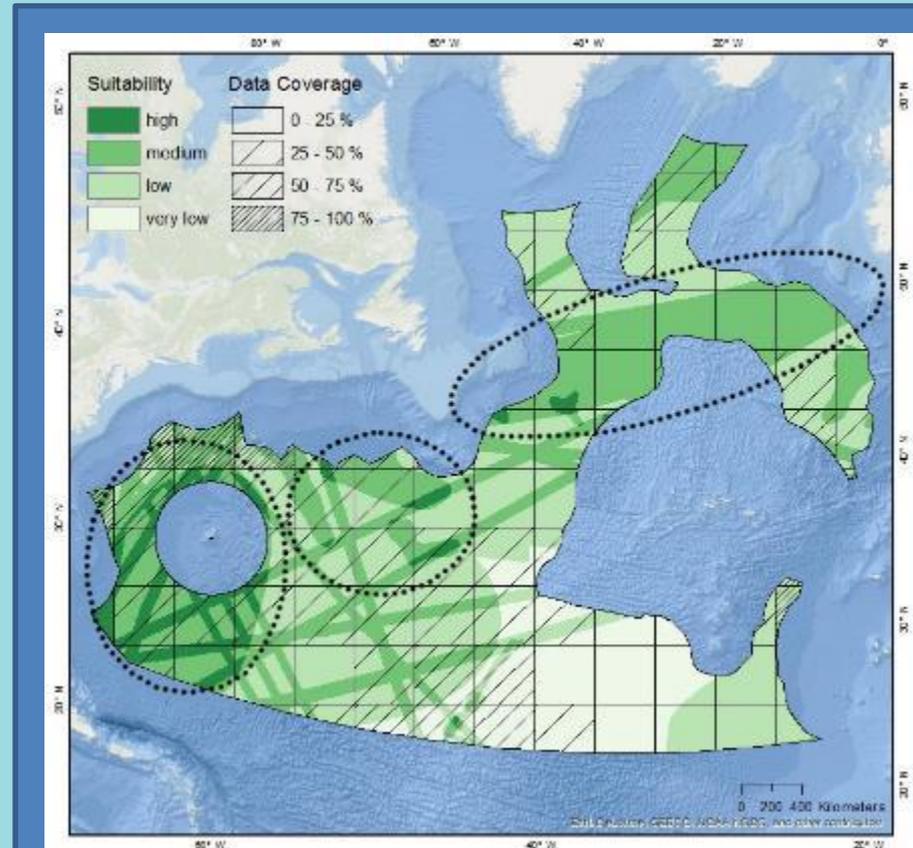


**CWBWG4: 13-14 Feb 2017**  
Durham, New Hampshire, USA

# The Galway Statement on Atlantic Ocean Cooperation

**Task:** ASMIWG to recommend a detailed effort for a Galway Pilot Seabed Mapping Project

- Area 400 km X 400 km = 160,000 km<sup>2</sup>
- Approximately 3 months at sea (100 days)
- Phase I (1 month)
  - Bathymetry entire grid @ 100 m resolution
  - 1 vessel 10 km swath
- Phase II (2 months)
  - Targeted mapping complete with higher resolution, ground-truthing with sampling and video/pictures, more detailed measurement/equipment
  - 2 vessels and extensive use of new technology – AUV, ROV, etc.
- Data availability, analysis and research with outputs of detailed digital maps, standards, research posters, papers, videos, etc.
- Likely 2019-20 timeline
- Estimated cost at \$4-6M US (\$1.3-2M US/per nation)



*Analysis result map showing the suitability of potential target sites and the percentage of multibeam data coverage. This work has been submitted to The Journal of Ocean Technology for the upcoming winter issue, JOT: Mapping the Deep.*



# Thank You!

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