



# The IHO Data Centre for Digital Bathymetry *Brief*

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**IHO**

International  
Hydrographic  
Organization



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*Organisation Hydrographique Internationale*

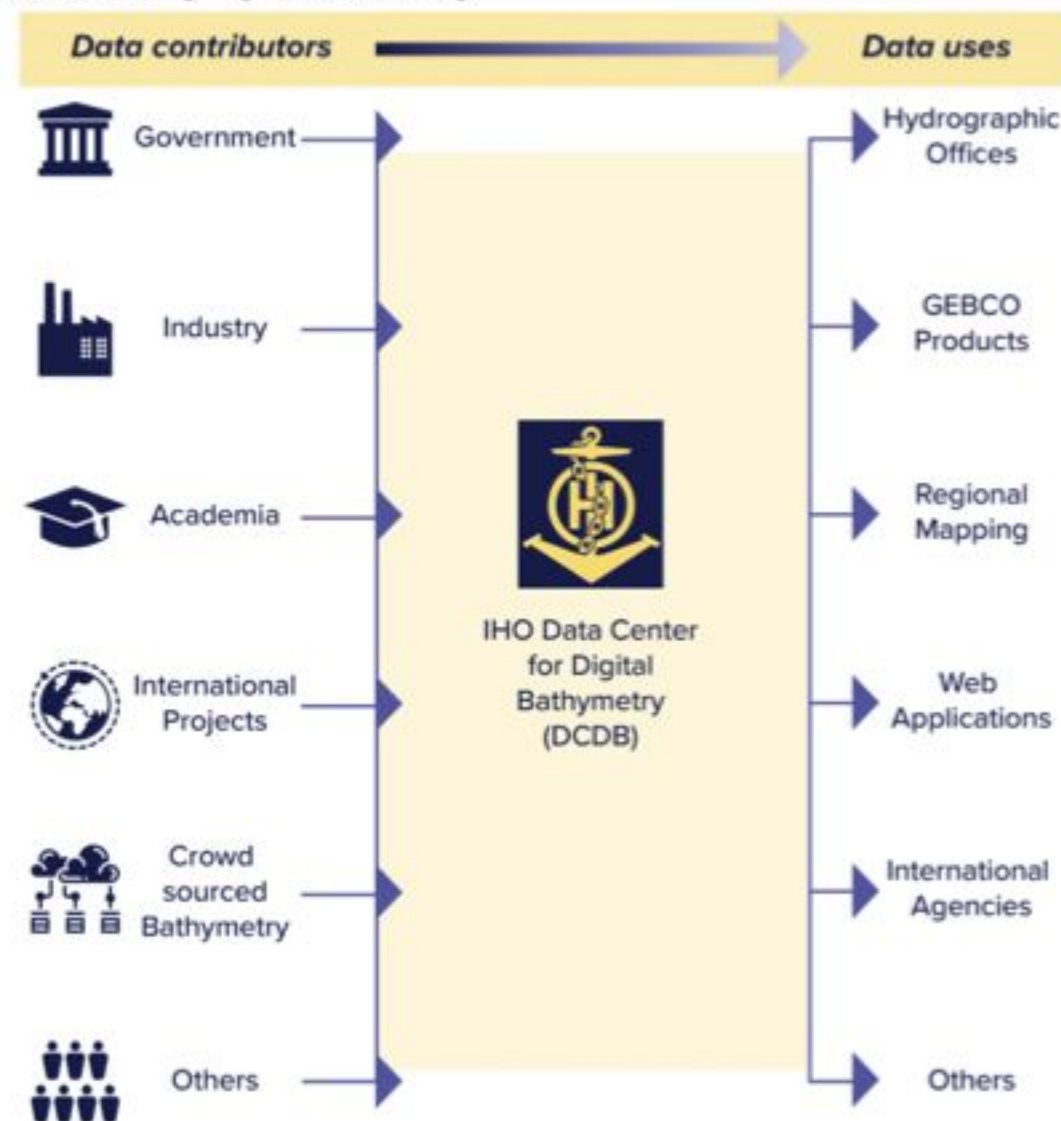


# IHO Data Center for Digital Bathymetry (DCDB)

## Today's Update:

- Recent data contributions
- IHO DCDB enhancements
- Workshop planning

[ngdc.noaa.gov/iho/](https://ngdc.noaa.gov/iho/)



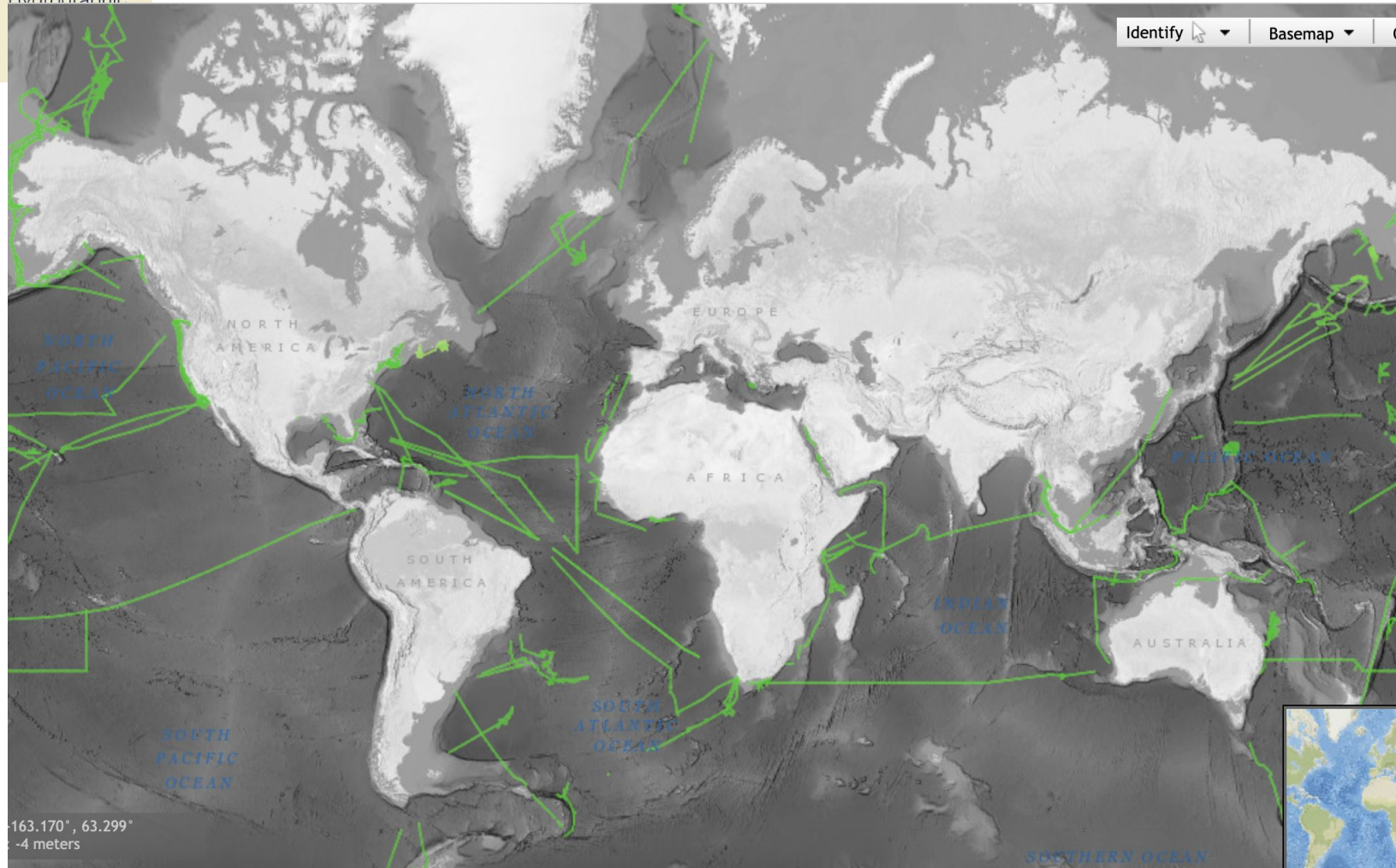




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In the last year, the DCDB has archived multibeam bathymetry data from **206 surveys and 24 sources.**

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**U.S. Academic Research Fleet (ARF): 55 surveys**

**Fugro: 28 surveys**

**NOAA Fleet: 15 surveys**

**LDEO MGDS - 18 surveys**

**Caladan/5 Deeps: 73 surveys/data packages**






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# DCDB Map Viewer

Improvements and updates: Added “Grid Extract”



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## Data Centre for Digital Bathymetry Viewer

Layers

**Grid Extract**


► Help

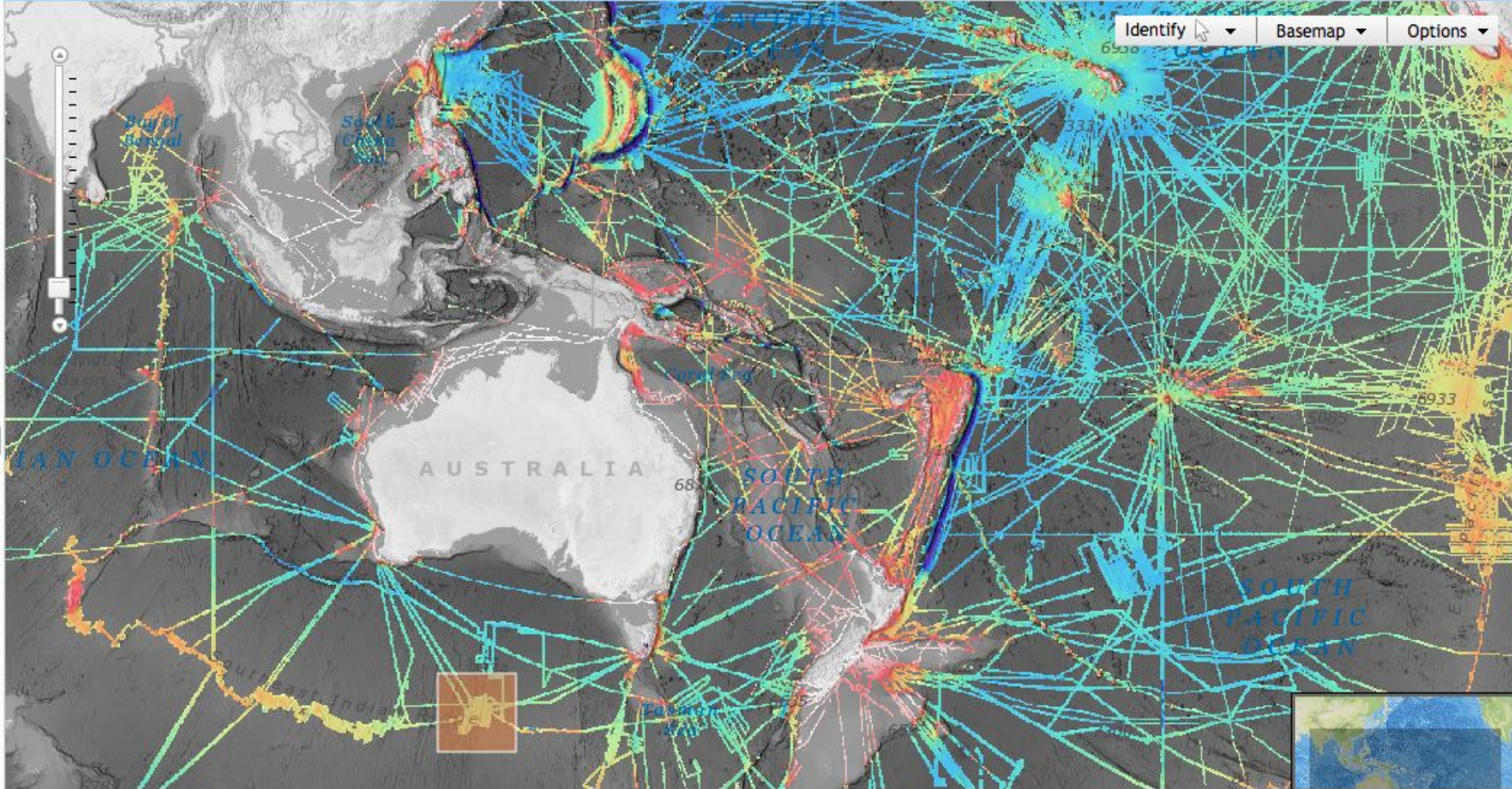
Multibeam Mosaic ▼

Extract a bathymetric grid from the [NCEI Multibeam Bathymetry Mosaic](#). The depth values are in meters, stored as 32-bit floating point values. The cell size is 3 arcseconds (approx. 90m).

Area of Interest: 122.29, -51.74, 131.79, -45.48

Output image dimensions: 11391 x 7518 pixels

[Download Data](#) 



Mercator

Arctic

Antarctic

exportImage.tiff

Show All






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# DCDB Map Viewer

Improvements and updates: Added IHO RHC Boundaries



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## Data Centre for Digital Bathymetry Viewer

**Layers**

▼ IHO DCDB/NOAA NCEI ?

- ☒ Multibeam Surveys ?
- ☐ Multibeam Survey Footprints ?
- ☐ Multibeam Bathymetry Mosaic ?
- ☐ Single-Beam Surveys ?
- ☐ Single-Beam Sounding Density ?
- ☐ NOAA Hydrographic Surveys: ?
  - ☒ All Surveys with Digital Data
  - ☐ Surveys with BAGs
- ☐ BAG Shaded Relief Imagery ?

?

☐ Crowdsourced Bathymetry Files ?

?

☐ U.S. Bathymetry Coverage and Gap Analysis ?

► EMODnet

► Australia

► Canada

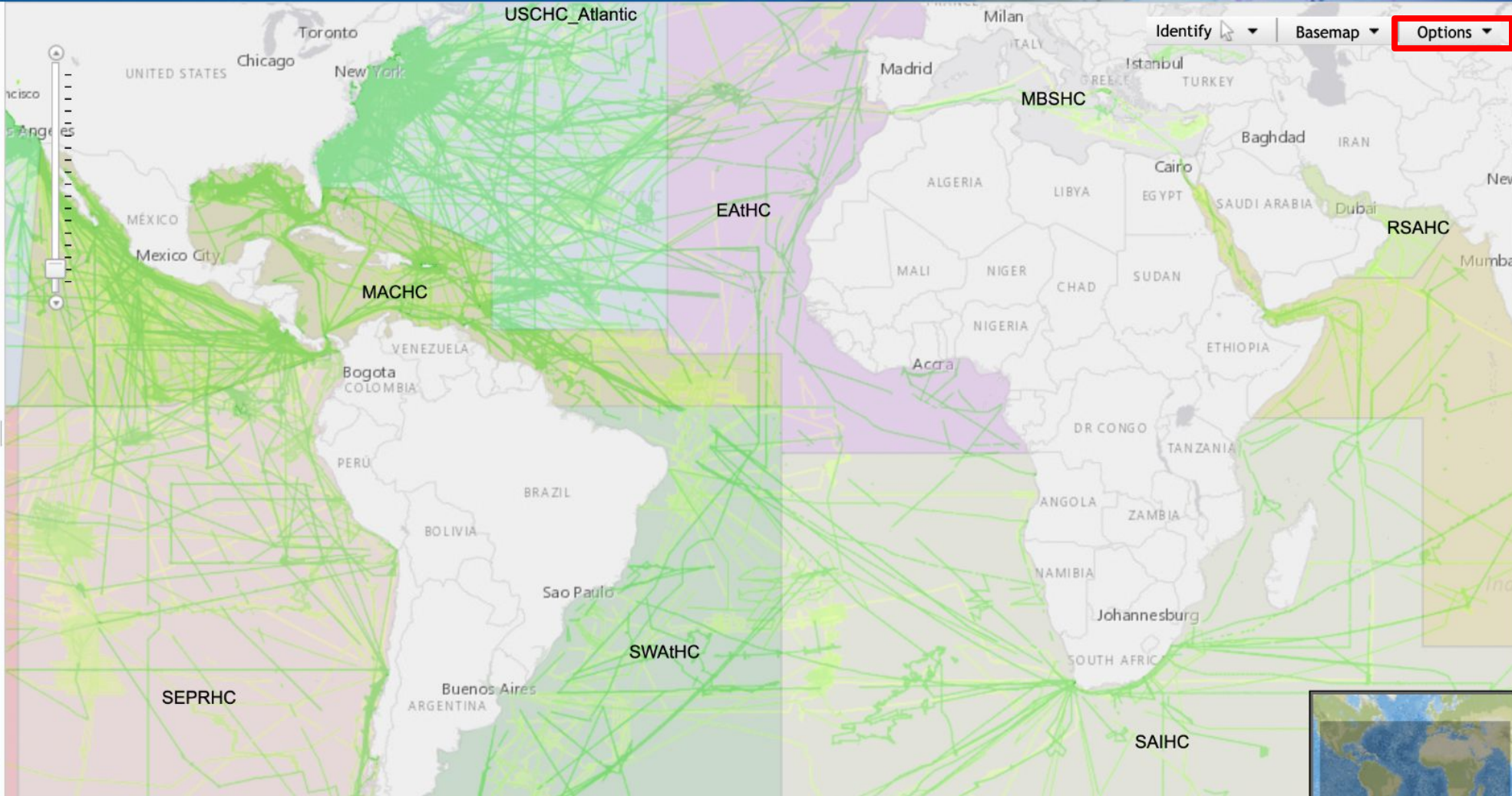
► France

► Germany

► Japan

Grid Extract

More Information



Identify ▼ Basemap ▼ **Options ▼**


Mercator Arctic Antarctic





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# Planned Enhancements - Improving Access & Usefulness



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## Data Centre for Digital Bathymetry Viewer

Layers

▼ IHO DCDB/NOAA NCEI ?

- ☐ Multibeam Surveys ?
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- ☐ Multibeam Bathymetry Mosaic ?
- ☐ Single-Beam Surveys ?
- ☐ Single-Beam Sounding Density ?
- ☐ NOAA Hydrographic Surveys: ?
- ☒ All Surveys with Digital Data
- ☐ Surveys with BAGs
- ☐ BAG Shaded Relief Imagery ?

Search NCEI/DCDB Surveys X Reset ?

☒ Crowdsourced Bathymetry Files ?

Search CSB Files X Reset ?

Identify ▼ Basemap ▼ Options ▼

Identified Features (98)

[-] Crowdsourced Bathymetry Files (98)

- 2099-11-03T11:36 - 2099-11-06T04:57
- 2019-11-25T20:10 - 2080-01-29T09:56
- 2019-11-25T13:11 - 2019-11-25T20:10
- 2019-10-18T11:32 - 2019-10-20T04:42
- 2019-10-13T18:02 - 2019-10-13T21:11
- 2019-10-13T10:30 - 2019-10-13T18:02
- 2019-10-07T15:37 - 2019-10-07T21:20
- 2019-10-07T08:32 - 2019-10-07T14:08
- 2019-09-16T07:01 - 2019-09-16T07:58
- 2019-09-16T00:04 - 2019-09-16T07:01
- 2019-09-14T23:26 - 2019-09-16T23:58
- 2019-09-14T15:29 - 2019-09-14T23:26
- 2019-09-08T18:28 - 2019-09-09T18:48
- 2019-09-08T00:04 - 2019-09-08T00:04

Extract NCEI/DCDB Data ▼

- Extract Multibeam Data
- Extract Single-Beam Data
- Extract CSB Data Files
- Extract CSB Point Store Data**
- Extract NOAA Hydrographic Survey Data

Mercator

Arctic

Antarctic


- Data available in the cloud facilitates their use both for on-prem applications as well as cloud-native processing.
- Created a cloud-hosted scalable point data store to better handle and store CSB data as a seamless collection of points.





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# Planned Enhancements - Improving Access & Usefulness



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## Data Centre for Digital Bathymetry Viewer

Layers

IHO DCDB/NOAA NCEI

☐ Multibeam Surveys

☐ Multibeam Survey Footprints

☐ Multibeam Bathymetry Mosaic

☐ Single-Beam Surveys

☐ Single-Beam Sounding Density

☐ NOAA Hydrographic Surveys:

☒ All Surveys with Digital Data

☐ Surveys with BAGs

☐ BAG Shaded Relief Imagery

Search NCEI/DCDB Surveys

Reset

☒ Crowdsourced Bathymetry Files

Search CSB Files

Reset

Identify

Basemap

Options

Identified Features (98)

Crowdsourced Bathymetry Files (98)

36 - 2099-11-06T04:57

0 - 2080-01-29T09:56

1 - 2019-11-25T20:10

2 - 2019-10-13T21:11

30 - 2019-10-13T18:02

37 - 2019-10-07T21:20

32 - 2019-10-07T14:08

01 - 2019-09-16T07:58

04 - 2019-09-16T07:01

26 - 2019-09-16T23:58

29 - 2019-09-14T23:26

2019-09-08T18:28 - 2019-09-09T18:48

2019-09-08T00:04 - 2019-09-08T00:04

Request Data from CSB Point Store

Please enter your email address to request these data. You will be notified when the file is ready.

Email:

Area of Interest: -74.809,38.289,-70.942,40.463

Create grid? ☐

Grid Cell Size (m) 70

Grid Format NetCDF

This is an experimental feature and may change or be removed in the future.

OK Cancel

Extract NCEI/DCDB Data

France

Japan

Netherlands

More Information

Help

Position: -52.397°, 13.602°

Elevation: -5170 meters

Caribbean Sea

Guiana Basin

1. Generate bathymetric grids of a given area using user-specified resolution (CSB only)

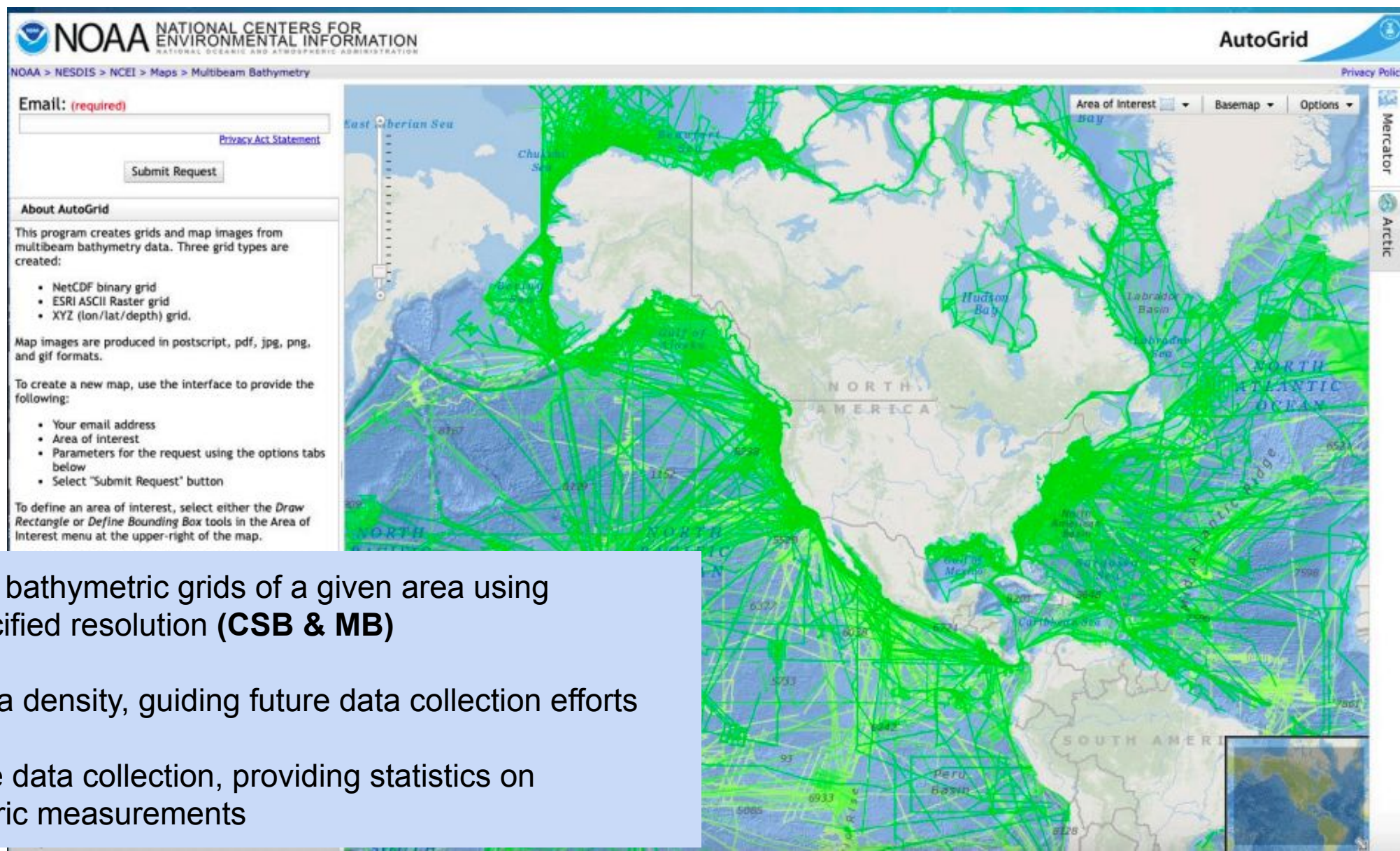




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# Planned Enhancements - Improving Access & Usefulness

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1. Generate bathymetric grids of a given area using user-specified resolution (**CSB & MB**)
2. Show data density, guiding future data collection efforts
3. Query the data collection, providing statistics on bathymetric measurements



# *Invitation to Action* - TSCOM Webinar Series & Workshop

## *Developing a Vision for Improving the Discovery and Access of Bathymetric Data*

- 5 listening sessions based around the following steps of the bathymetric data pipeline life cycle: **Data Stewardship; Data Discovery; Data Access & Dissemination; Data Processing & Transformation; Tools for Opportunistic Mapping.**
- **Webinars** will provide an opportunity for leaders in the field to present on their approaches towards the development and maturation of new and emerging technologies to manage, visualize, discover and access bathymetric data in support of the Nippon Foundation-GEBCO Seabed 2030 Project.
- The objective of these sessions will be to walk away with an agenda to drive a **Spring 2023 “Invitation to Action” Workshop** hosted by Lamont-Doherty Earth Observatory at Columbia University in Palisade, New York.





# Invitation to Action: Developing a Vision for Improving the Discovery and Access of Bathymetric Data

Fall 2022

## Workshop Series

A series of five 1.5-2 hours listening session based around the following steps of the bathymetric data pipeline life cycle

Data Ingest,  
Documentation &  
Archiving

Data Discovery

Data Access &  
Dissemination

Tools for  
Opportunistic  
Mapping

Data Processing  
& Transformation

Winter 2022

## Train the Trainer Workshop

A 2 hour webinar session to review spring session workshop format and prepare facilitators

Spring 2022

## Invitation to Action Workshop

A 3 day onsite meeting hosted by LDEO to discuss themes and topics

Group  
Introductions

Subject Matter  
Driven Facilitated  
Breakout Groups

Moderated Joint  
Session and  
Roadmap  
Generation



# Next Steps

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## *Developing a Vision for Improving the Discovery and Access of Bathymetric Data*

- Finalize initial brainstorming
- Determine dates for Webinar series and Workshop
- Finalize speakers and attendees
- Finalize invitations and send them out!

