

## IHO Crowdsourced Bathymetry Project

An IHO-led initiative was established in 2014 to support and encourage mariners to collect crowdsourced bathymetry (CSB). CSB can be used to supplement the more rigorous and scientific bathymetric data collection done by hydrographic offices, industry, researchers, and others around the world.

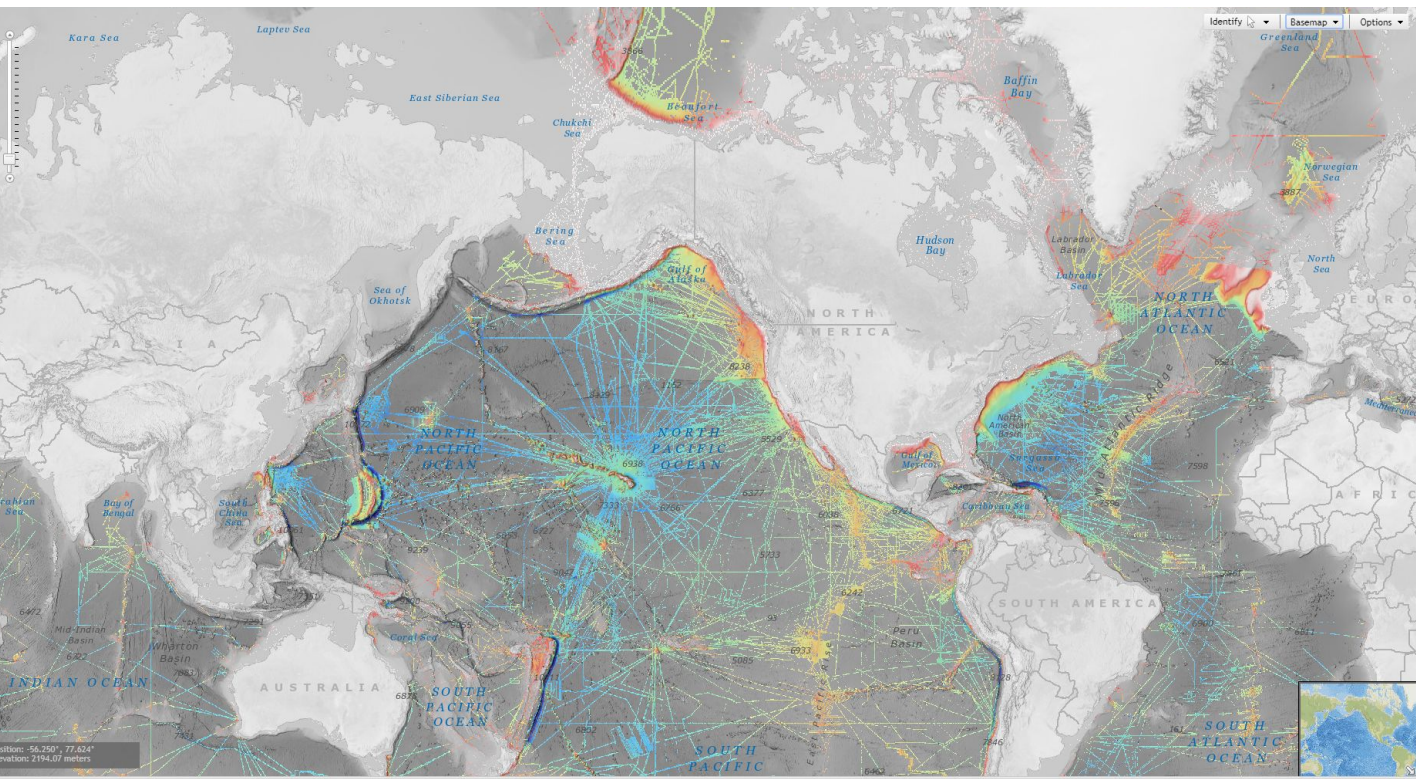


*CSB is the collection of depth measurements from vessels, using standard navigation instruments, while engaged in routine maritime operations.*

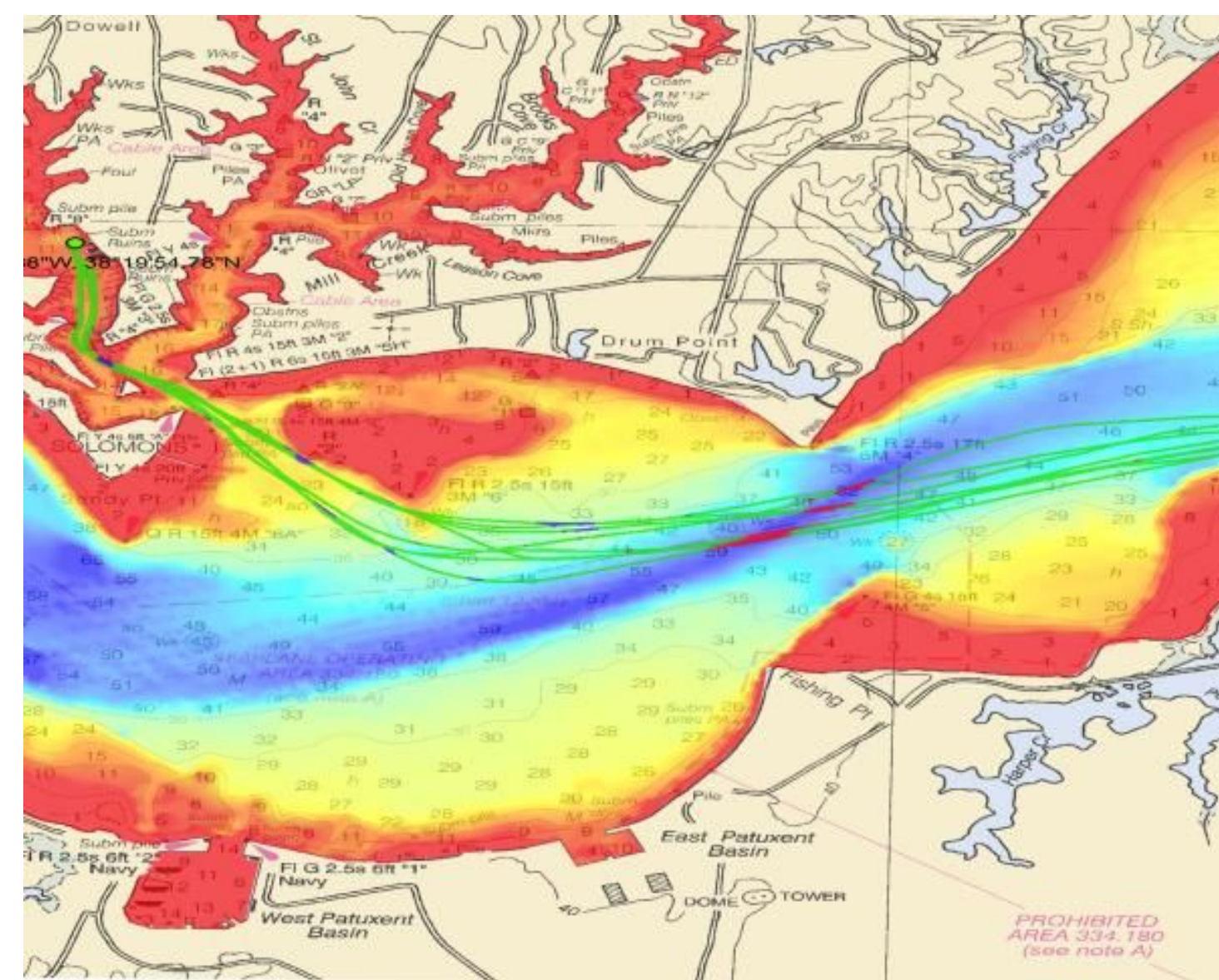
### Motivation

Innovative collection methods play a crucial role in fulfilling the goals of global mapping efforts such as the Nippon Foundation-GEBCO Seabed 2030 and the United Nations Decade for Ocean Science.

*~20% of the deep ocean floor and ~50% of our coastal waters, have been directly mapped & the data shared with the global community.*



Using existing equipment, most ships are capable of measuring and digitally recording depth in coastal waters, while an increasing number of vessels can collect these data in deeper waters



*NOAA's Bay Hydro II CSB test tracks in green overlaid on multibeam survey data demonstrates how changes can be detected. Image courtesy of NOAA.*

While CSB data may not meet accuracy requirements for charting, it can be used to identify uncharted features, assist in verifying charted information, and fill gaps where bathymetric data are scarce.

# MAPPING OUR PLANET

## The Role of Innovative Supplementary Data Gathering

Encouraging Innovative Supplementary Data Gathering  
The International Hydrographic Organization  
Crowdsourced Bathymetry Initiative

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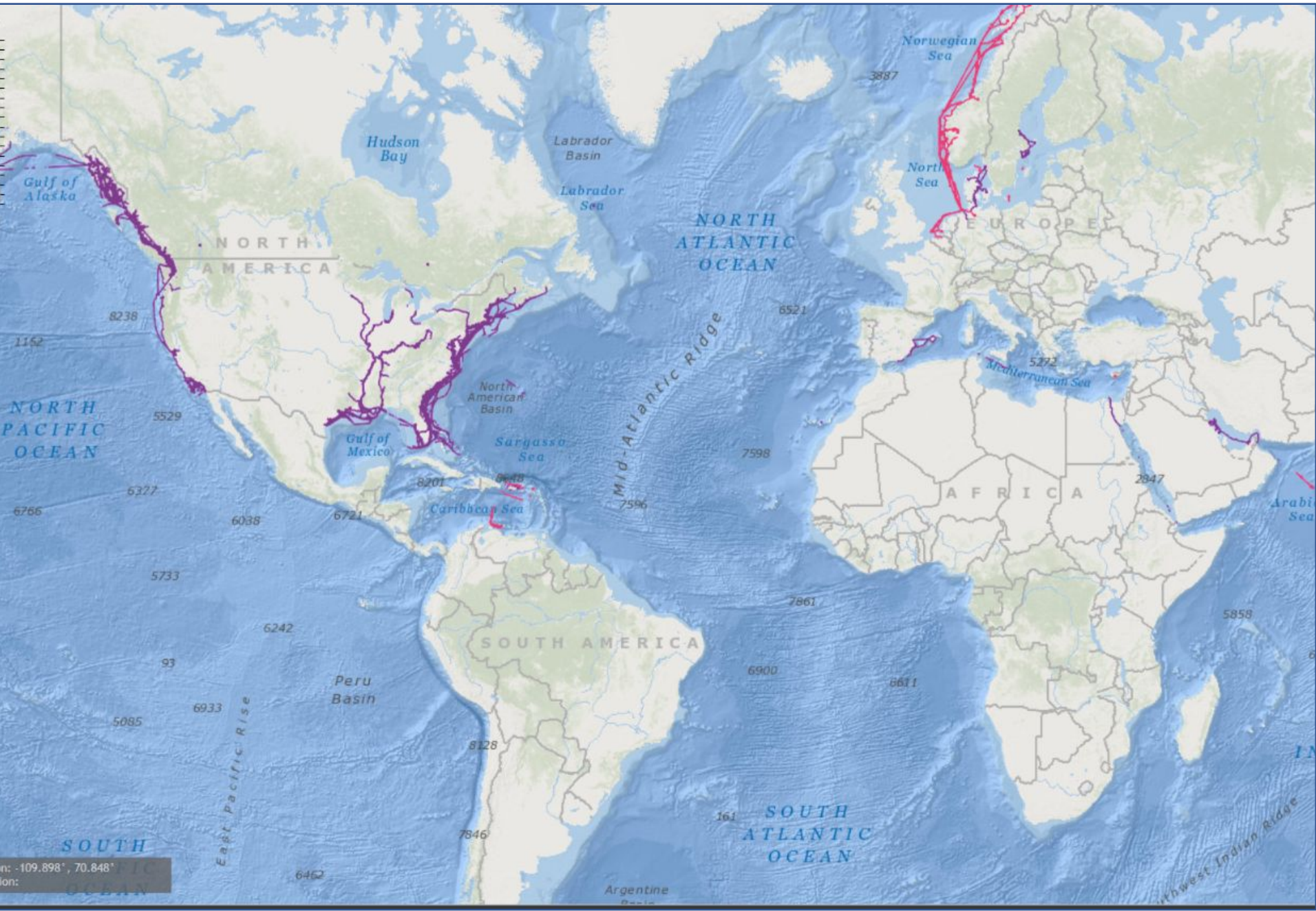
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## The Role of NOAA & the IHO DCDB

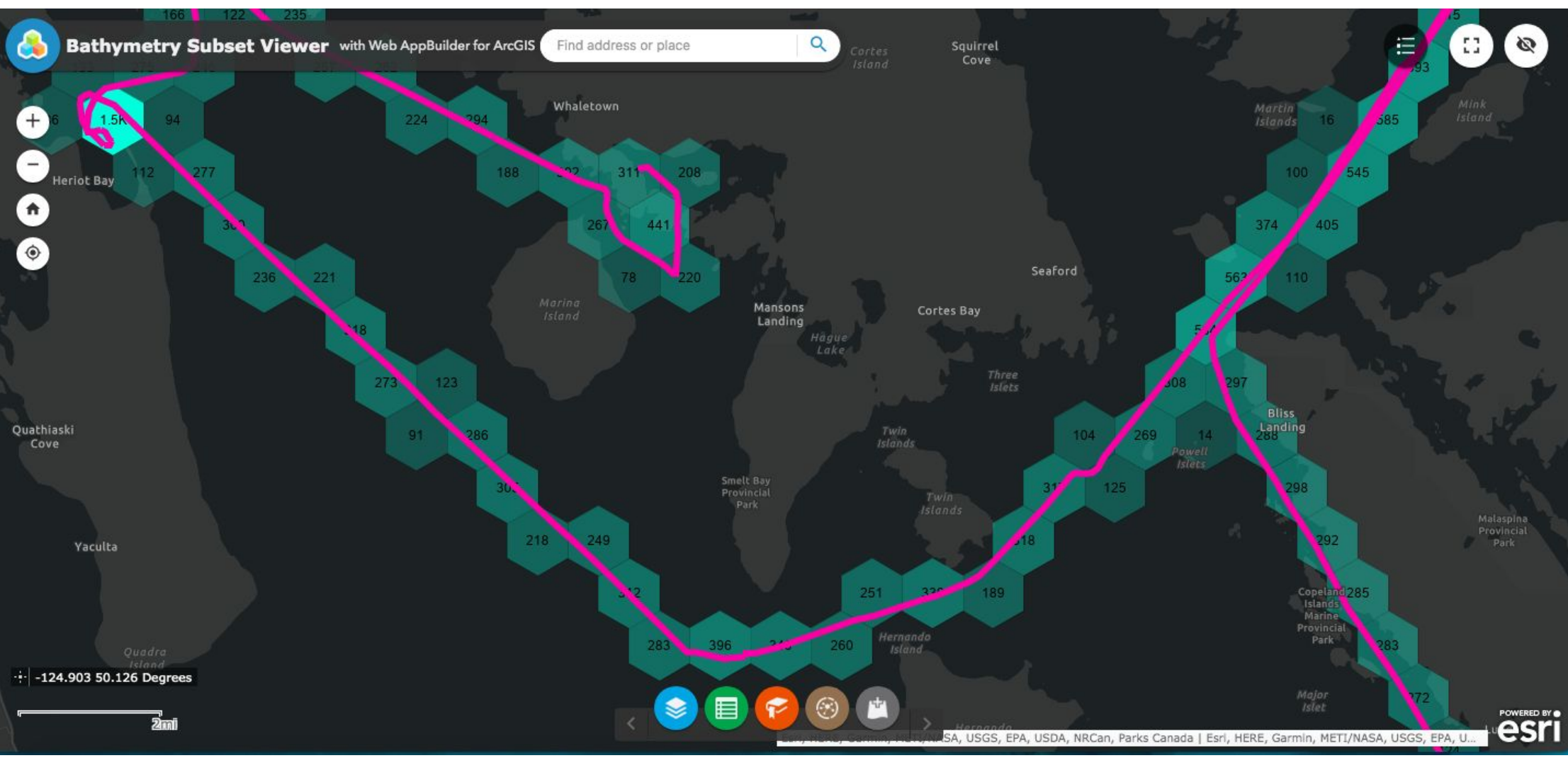
The International Hydrographic Organization (IHO) Data Centre for Digital Bathymetry (DCDB), hosted by NOAA's National Centers for Environmental Information (NCEI), is committed to providing easy, open access to an extensive archive of bathymetric data.



*Location of current CSB data holdings discoverable and accessible via the IHO DCDB Map Viewer.*  
[ncei.noaa.gov/maps/iho\\_dcdb/](https://ncei.noaa.gov/maps/iho_dcdb/)

### Improving Data Discovery

NCEI is working to enhance the DCDB infrastructure to provide improved archiving, discovery, and retrieval of global CSB and has recently stood up a scalable point data store in a cloud environment.



### Encouraging CSB Contributors

The IHO CSB Working Group is currently updating the *IHO Publication B12: CSB Guidance Document* while developing strategies to encourage various maritime sectors (e.g.: cruise lines industry, regional fishing communities), either already equipped with appropriate technology or outfitted with inexpensive data loggers, to collect bathymetric data as part of normal operations.

For more information: [iho.int/en/csbgwg](https://iho.int/en/csbgwg)

*The vision is to tap into the enthusiasm for mapping the ocean floor by enabling trusted mariners to easily contribute data, to fill the gaps in our current bathymetric coverage.*