# CHC-NSC 2018

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## Assessing Sounding Density for a Seabed 2030 Initiative



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# The Nippon Foundation-GEBCO Seabed 2030 Initiative

- Scope of work: Map the entire ocean floor
- Resolution: 100 meter\*
- Target Date: 2030

\*May establish varying resolutions as a function of water depth, **data density**, and quality



# **Basic U.S. Definition of "Mapped"**

- Survey Vintage: 1960 to present
- Data Density:
  - 1-2 measurements per 100 meter cell
  - 3 or more measurements per 100 meter cell



## **Six Principal Layers of Bathymetry**



NOS Hydrography (>1960)



# Processing Framework

4 degrees latitude X 6 degrees longitude









MB-SYSTEM: mbgrid





NOS Hydro XYZ (>1960)

Bathymetric LiDAR 10 m coverage footprints (SHP)





# **Grid Merging and Reclassification Rules**

- AND, not ADD
- Cells with sounding density of 1 or 2 = 1
- Cells with sounding density of 3 or more = 3

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# Geospatial Web Service

#### Legend (bathy\_gap\_analysis)





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Areas "Mapped"

41% of total U.S. waters

3,438,000 sq nm of EEZ + 154,000 sq nm of coastal waters 3,592,000 sq nm of U.S. waters





## **Next Steps**

# Read the technical paper and catch the wave





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Andy Armstrong and Paul Johnson at CCOM/JHC- University of New Hampshire (UNH)

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