



IHO

International  
Hydrographic  
Organization

ARHC12



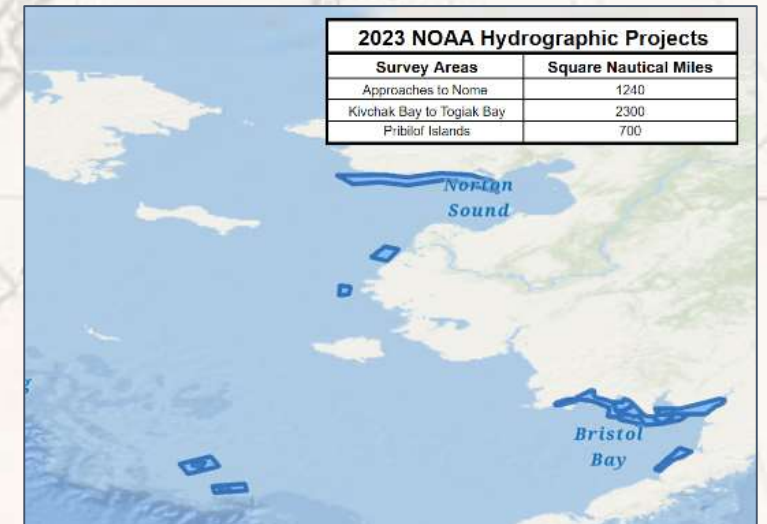
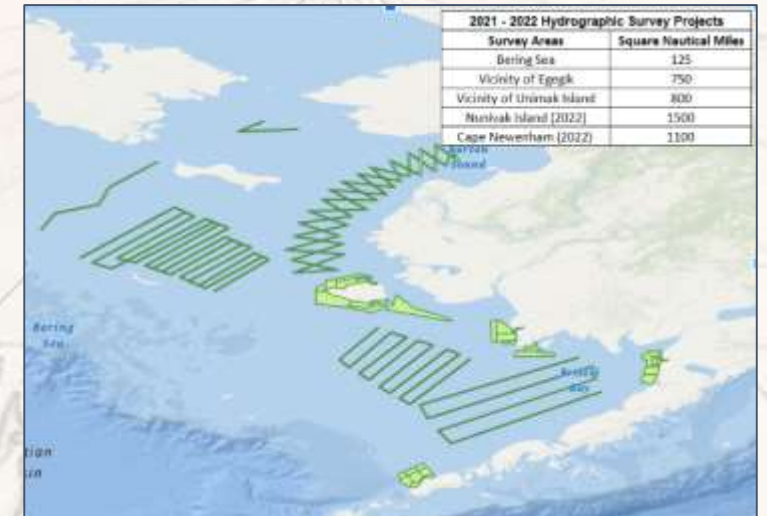
# 12<sup>th</sup> Meeting of the Arctic Regional Hydrographic Commission

National Report by  
United States of America

St. John's Canada | 13-16 September 2022

## Progress on Surveys

- In 2021 and 2022, [NOAA surveyed](#) approximately 4300 square nautical miles (SNM) of Arctic seafloor across five separate projects
- In 2023, three Arctic hydrographic surveys are planned to provide updated bathymetry in over 4200 SNM of Arctic waters
- Continued investigation into operationalizing Uncrewed Systems (UxS) and Autonomous Surface Vehicles (ASVs)



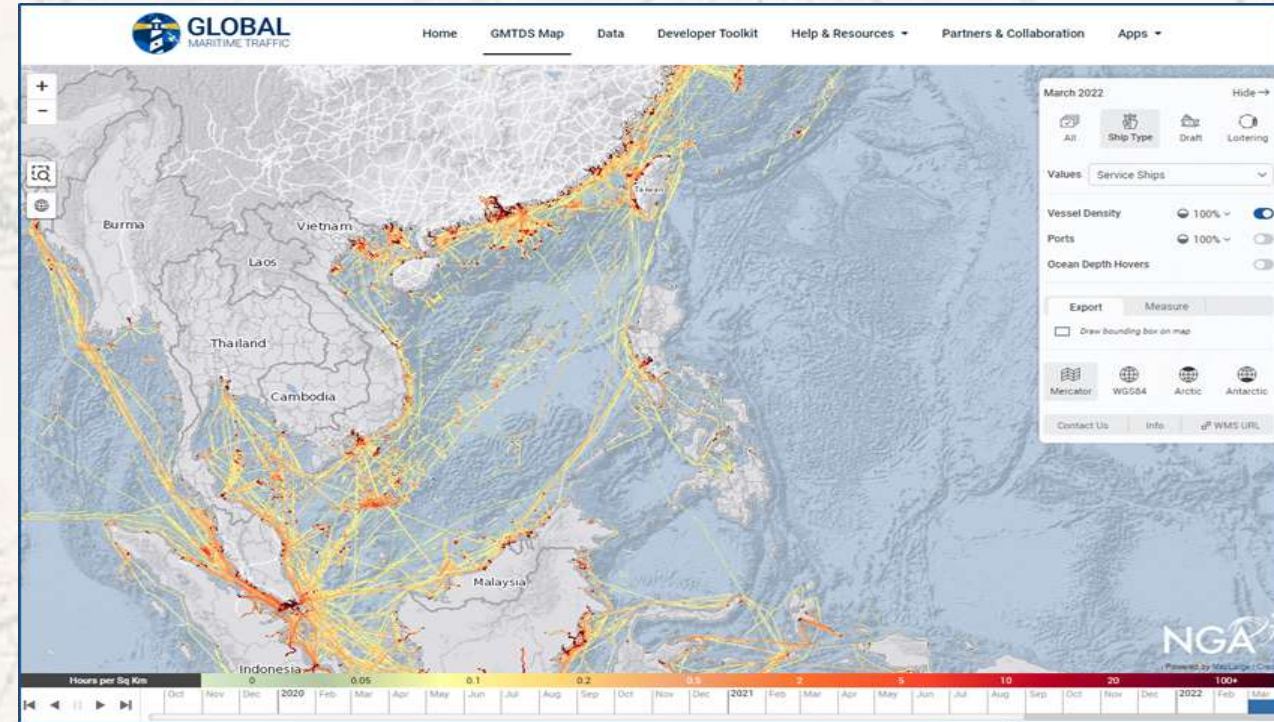


## Progress on Charting

- NOAA rescheming will create 7230 new ENC cells, about 1400 over Alaska
- NOAA has canceled 80 paper charts in Alaska. All NOAA paper charts will be canceled by Jan 2025
- NOAA now maintains 394 ENCs and 168 remaining paper charts over Alaska
- NOAA Custom Chart Tool ver 1.3 will be released soon
- NOAA is starting to refine the details of a high-level S-101 transition plan
- NGA's Maritime Safety Office has begun its transition of Vector Product Format (VPF) Digital Nautical Charts (DNC) to S-57 ENCs
- NGA is creating a Worldwide ENC grid for use in building a future ENC portfolio, and assisting with S-100 transition

## Global Maritime Traffic Density Service (GMTDS)

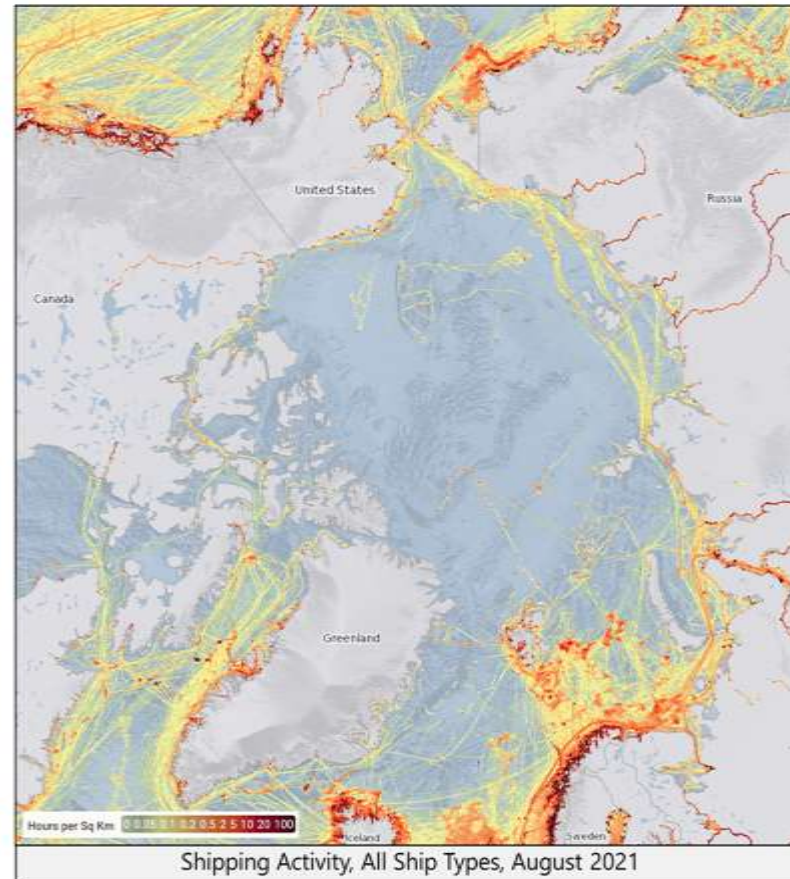
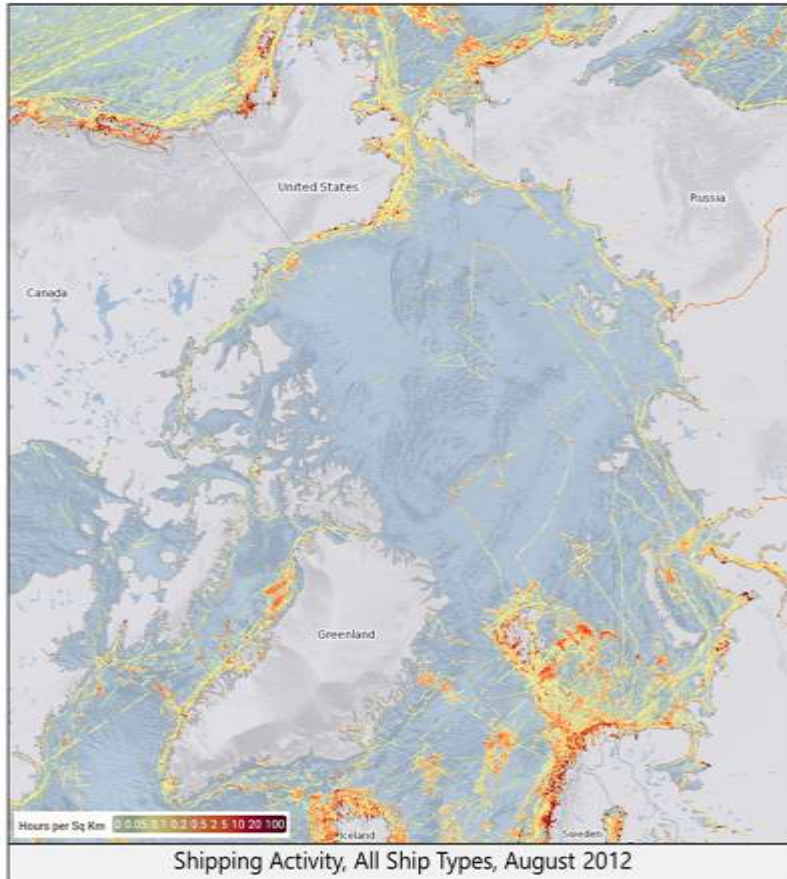
- Provides global data of ship-hours per month at 1km scale going back a decade
- Native polar projections now available (as of 2022)
- Publicly available for view, download, and API access via: <https://msi.nga.mil/MiscProducts>





# Global Maritime Traffic Density Service (GMTDS) Arctic-Projected

## Circumpolar Shipping, All Ship Types, August 2012 & August 2021



Map visualization depicts total ship hours (ShHr) of activity per square kilometer ( $\text{km}^2$ ), not absolute ship numbers or counts. The increase in  $\text{ShHr}/\text{km}^2$ , as well as geographic distribution of ship activity, is clearly identifiable between the circumpolar map from August 2012 compared to August 2021.

## World Port Index

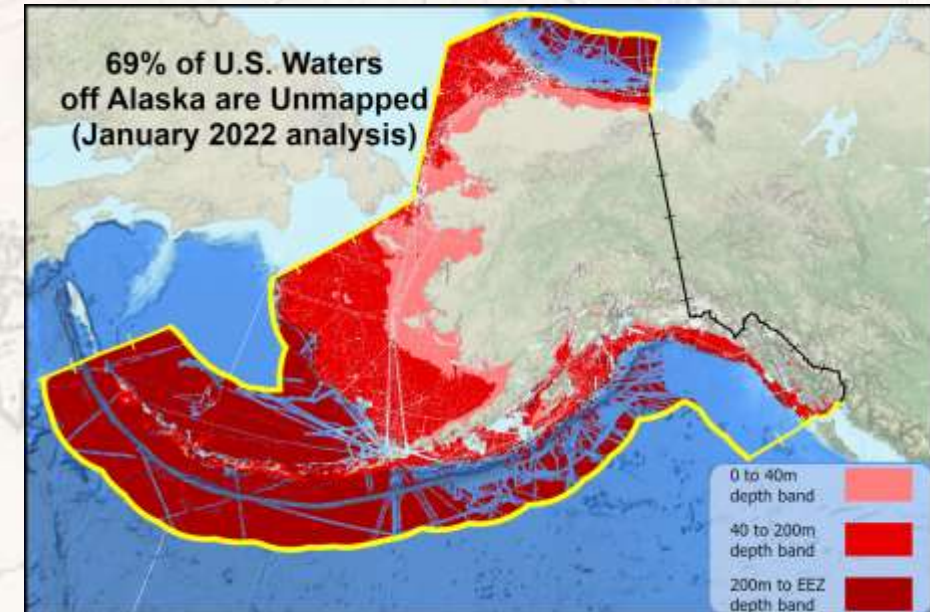
- U.S. released a World Port Index
  - Crowdsourced port physical characteristics, facility and services information
  - Covers major ports and terminals around the world
  - View, download, and API access via:  
<https://msi.nga.mil/Publications/WPI>





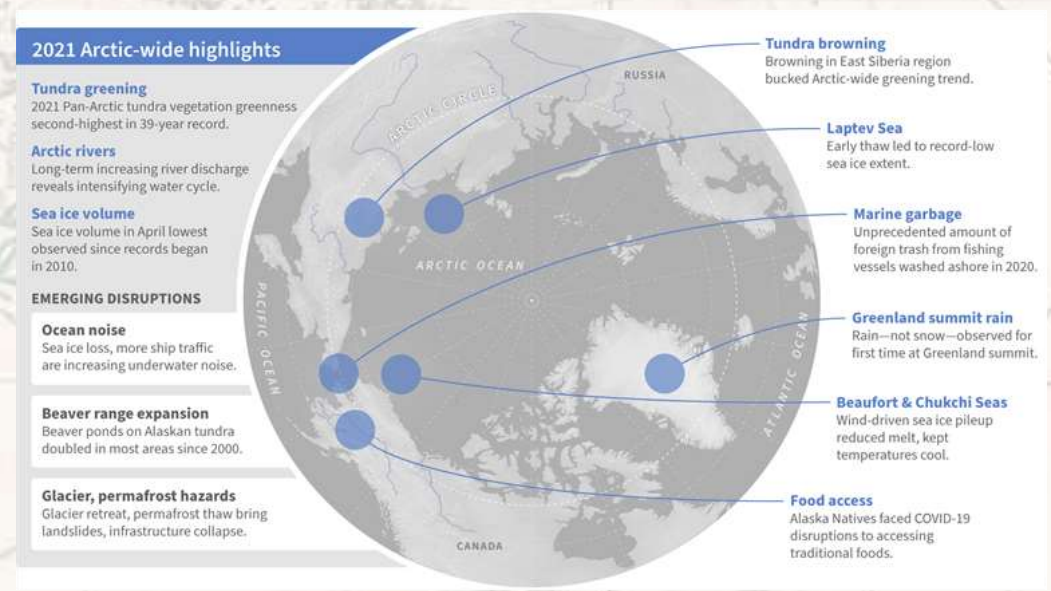
## Mapping Alaska Adjacent Waters

- Seascope Alaska initiative launched in 2021
  - Regional campaign supporting NOMEAC to fully map the U.S. waters off Alaska, focused on accessible, high quality modern seabed data, collaboration focus
- Alaska Coastal and Ocean Mapping Summit (December 2021)
  - Next Summit: November 16-17, 2022
- 69% of coastal and ocean waters adjacent to Alaska are considered unmapped, down from 72% in 2021



## Arctic Report Card

- The 2021 Arctic Report Card shows rapid and pronounced warming continuing to drive the evolution of the Arctic environment
- Arctic Navigation - multi-year ice disappearing, vessel traffic increasing, new concerns
- Arctic Report Card 2022 expected in December



2021 Arctic Wide Highlights (Arctic Report Card)



## Main Challenges and/or Obstructions

- Operational limitations related to COVID 19 persist
- Continued partnership building to increase data availability
- Effective engagement with indigenous communities
- Unique challenges of mapping the Arctic
  - Limited operational window
  - Limited infrastructure
  - Seasonable accessibility





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**Thank you!**