



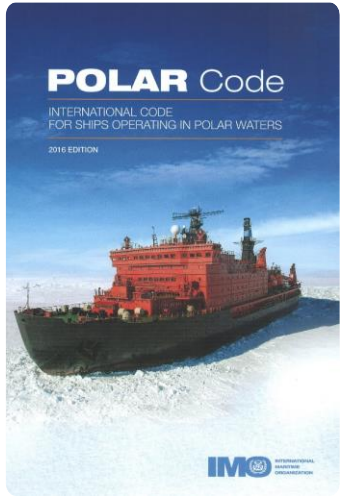
PAME
Protection of the Arctic Marine Environment

SMALL SHIPS IN THE ARCTIC

ARCTIC SHIPPING STATUS REPORT (ASSR) #6

APRIL 2026

- **The purpose of this report is to describe the number and types of small ships, defined in this report as below 500 Gross Tonnage (GT), operating in the Arctic as defined in the IMO Polar Code.***
- **A general understanding of the number and types of such ships and the extent to which they are regulated by IMO is important to Arctic shipping stakeholders.**
- **The most important IMO instrument for purposes of this report is the *International Code for Ships Operating in Polar Waters (Polar Code)*.**
- **The Polar Code is mandatory under both the *International Convention for the Safety of Life at Sea (SOLAS)* and the *International Convention for the Prevention of Pollution from Ships (MARPOL)*.**
- **On 1 January, 2026, Chapters 9-1 (Safety of Navigation) and 11-1 (Voyage Planning) of the Polar Code were made applicable to fishing vessels of 24 metres in length overall and above, pleasure yachts of 300 GT and upwards not engaged in trade, and cargo ships of 300 GT and upwards but below 500 GT.**



The Polar Code covers the full range of design, construction, equipment, operational, training, search and rescue and environmental protection matters relevant to ships operating in Arctic and Antarctic waters.

This report uses the geographic definition of Arctic waters as defined in the IMO Polar Code.

The graphic in this figure depicts the Polar Code area as defined in the Code. For precise coordinates, see SOLAS Chapter XIV, Regulation 1.

[IMO's Polar Code webpage.](#)





Arctic Ship Traffic Data

All data in this report is from PAME's Arctic Ship Traffic Data (ASTD) System (www.astd.is).

Only AIS (Automatic Identification System) signals from ships carrying AIS Class A transponders are included in the ASTD System. Many ships not required to carry AIS still opt to use it and are therefore captured in this report (e.g., fishing vessels, pleasure craft).

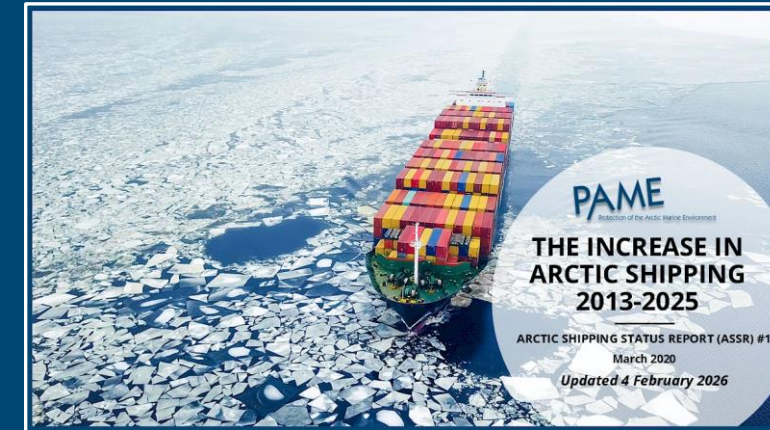
Under SOLAS, Class A transponders are mandatory for: Cargo ships 300GT and upwards engaged on international voyages; Cargo ships 500 GT and upwards not engaged on international voyages; all passenger ships, irrespective of size.

The type of information contained in the ASTD System and its sources are described in the ASTD Data Document, available online [here](#).

OTHER RELEVANT ASSR REPORTS

ASSR #1

**THE INCREASE
IN ARCTIC
SHIPPING**



ASSR #5

**TYPES OF
SHIPS IN THE
ARCTIC**



GROSS TONNAGE

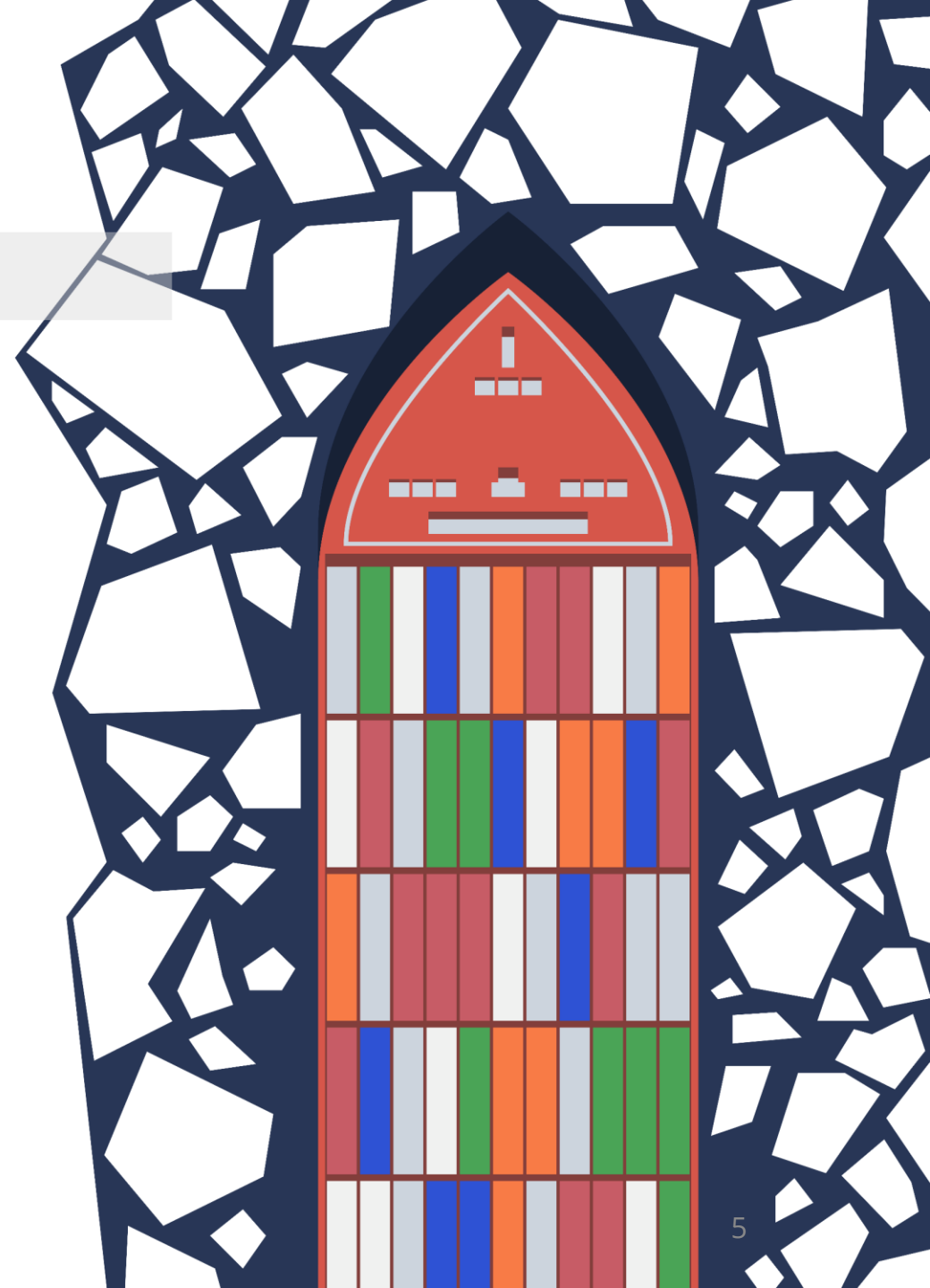
The International Convention on Tonnage Measurement of Ships, adopted by IMO in 1969, established a universal tonnage measurement system.

Gross Tonnage (GT) measures the total internal volume of the ship and applies to the ship only, not its cargo.

The measurement therefore includes spaces like cargo holds, engine rooms, and crew areas.

GT reflects the size of the ship, not its weight.

Often used as the basis for maritime authorities, Port State Control, flag states and classification societies to set manning regulations, safety rules, and registration fees.

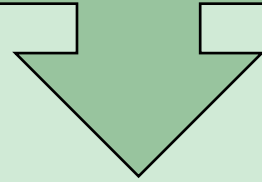


POLAR CODE APPLICABILITY AND GROSS TONNAGE

INITIAL APPLICABILITY (JANUARY 1, 2017)

The Polar Code made mandatory safety (Part I-A) and pollution prevention (Part II-A) measures for:

- Cargo ships of 500 GT and above certified in accordance with SOLAS Chapter I.
- Passenger ships certified in accordance with SOLAS Chapter I.



POLAR CODE AMENDMENTS (JANUARY 1, 2026)

Amendment of the Polar Code, introducing Chapters 9-1 (Safety of Navigation) and 11-1 (Voyage Planning) applicable to following additional groups of smaller vessel:

- fishing vessels of 24 metres in length overall and above;
- pleasure yachts of 300 GT and upwards not engaged in trade; and
- cargo ships of 300 GT and upwards but below 500 GT.

Existing vessels (constructed before January 1, 2026) must meet these requirements by January 1, 2027.



NUMBER AND SIZE OF SHIPS (GT)

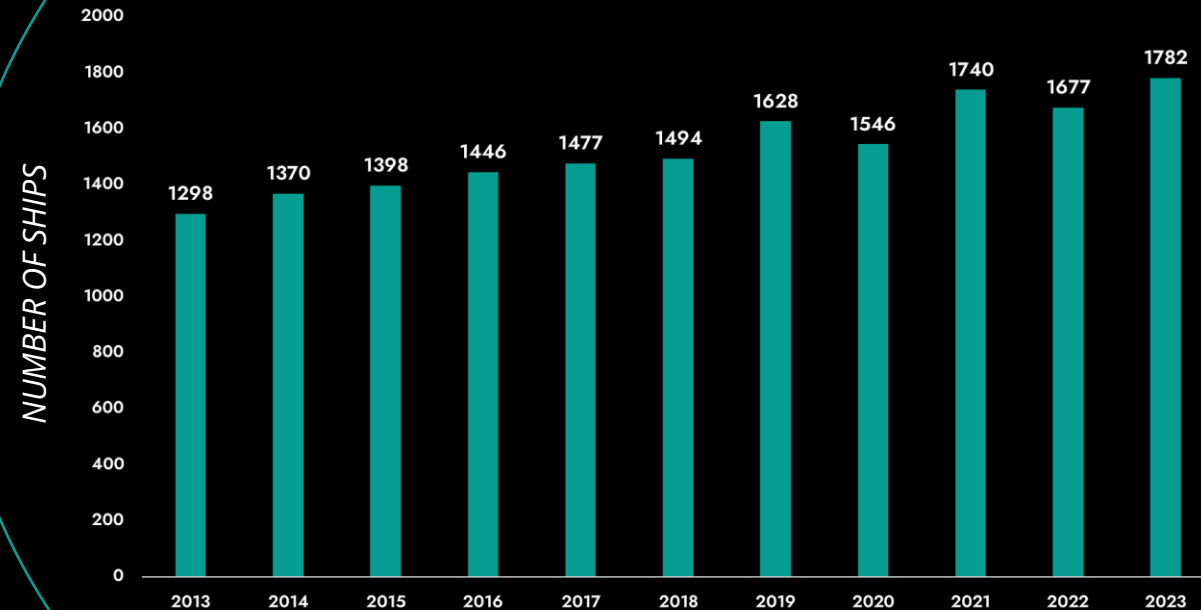
Arctic Polar Code area 2023

- The number of ships operating in the Arctic Polar Code area has been increasing steadily over the last 10 years.
- The graph to the right shows this trend.
- More information on this trend can be found in [*ASSR #1 - The Increase in Arctic Shipping*](#).
- This report reviews the sizes of ships by GT in 2023.
- As the graph shows, there were 1782 unique ships in the Arctic Polar Code area in 2023.
- The ships are only counted once although they might enter the area multiple times.

UNIQUE SHIPS

ARCTIC POLAR CODE AREA

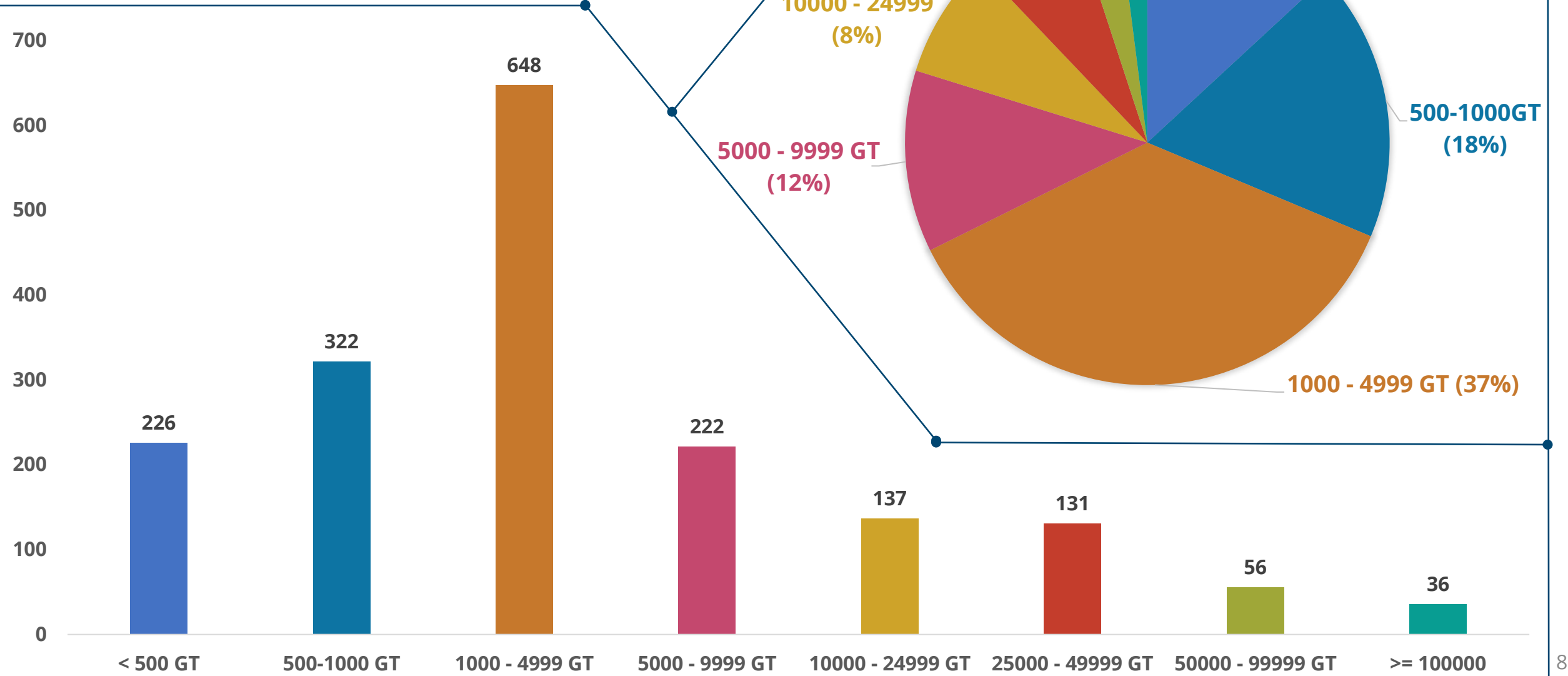
2013 - 2023



FROM ASSR#1 THE INCREASE IN ARCTIC SHIPPING

SIZE OF SHIPS (GT)

Arctic Polar Code Area 2023



SHIP TRACKS OF 100 - < 500 GT SHIPS

ARCTIC POLAR CODE AREA 2023

1778

ALL SHIPS

548

< 1000 GT

226

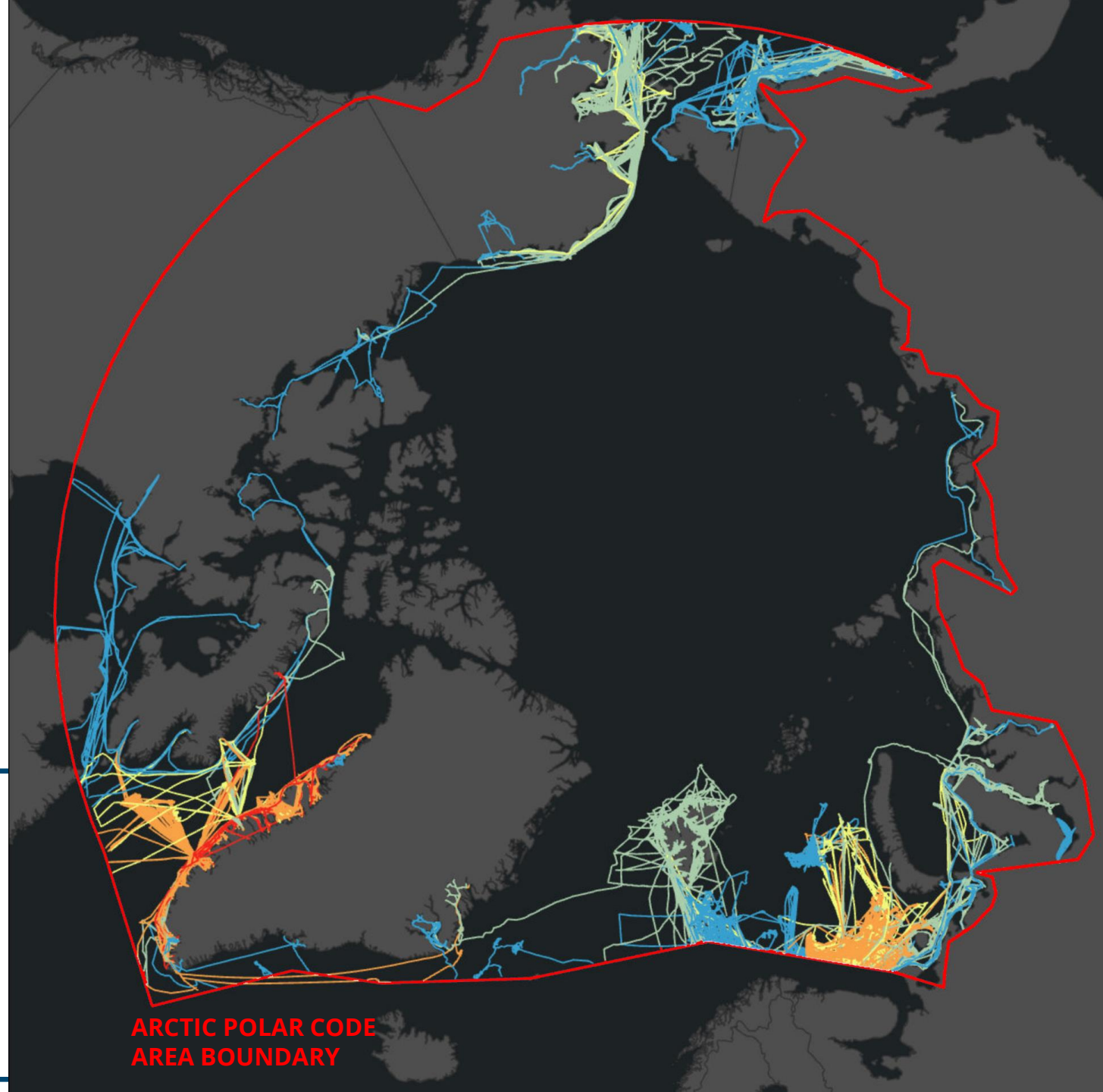
< 500 GT

SIZE	NUMBER OF SHIPS
100-199 GT	69
200-299 GT	41
300-399GT	56
400-499GT	60
TOTAL	226

MAP DESCRIPTION

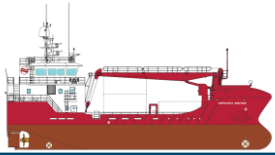
1 kilometer density represents the number of ship tracks in a 1 kilometer buffer zone around each ship track. Therefore, lines with higher densities have more traffic within 1 kilometer than those with lower densities. This shows higher traffic areas compared to lower traffic routes.

1 KM DENSITY



499_{GT}

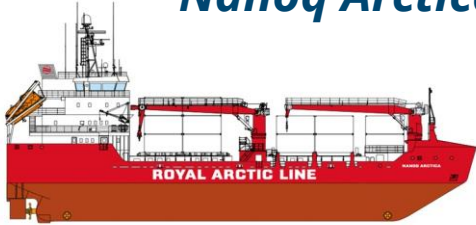
Length: 34m
Type: General
Cargo ship



Arpaarti Arctica

3162_{GT}

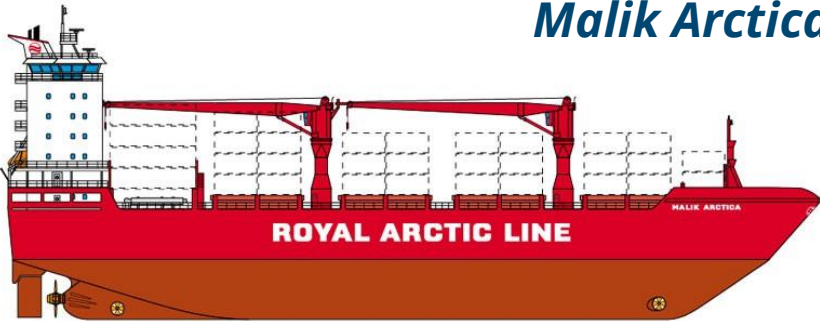
Length: 70m
Type: General
Cargo ship



Nanoq Arctica

10537_{GT}

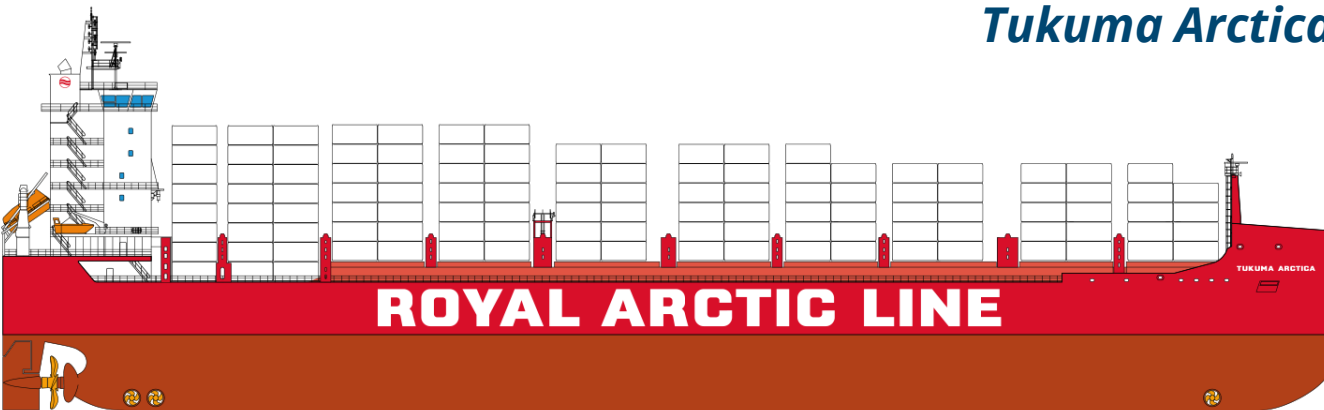
Length: 107m
Type: General
Cargo ship



Malik Arctica

26167_{GT}

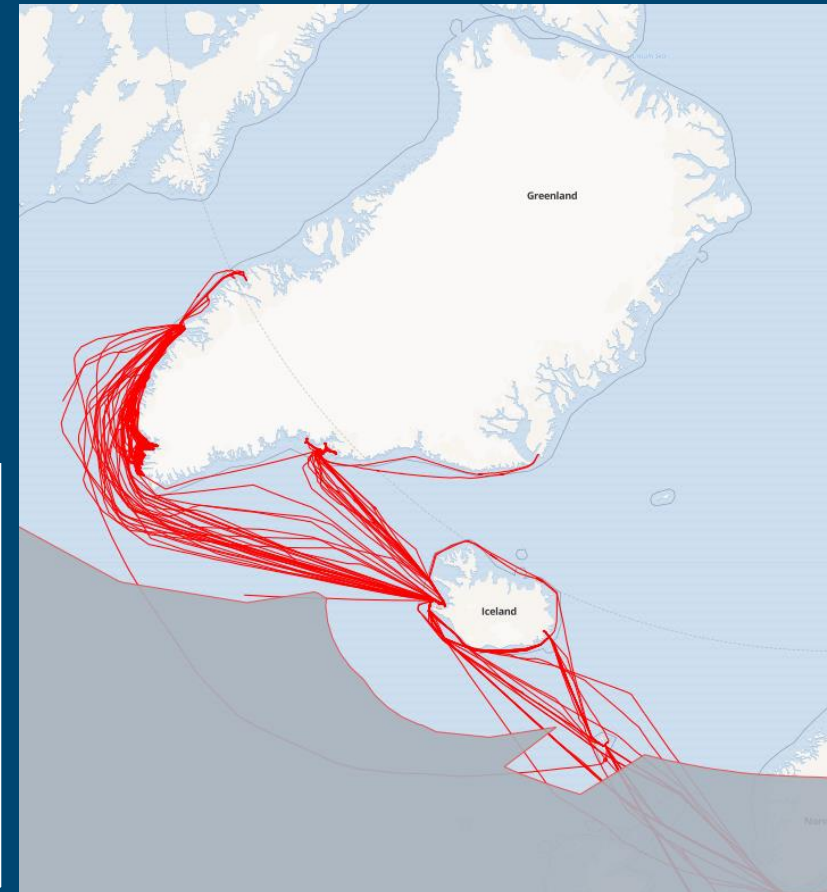
Length: 176m
Type: Container
ship



Tukuma Arctica

GT OF ARCTIC VESSELS

For illustrational purposes, the comparison of the four Royal Arctic Line vessels demonstrates the difference in size by GT. The images are proportional in size. The map below shows their tracks in 2024.



CASE STUDY: THE ARPAARI ARCTICA

- *The Arpaari Arctica* is owned and operated by the Royal Arctic Line A/S.
- Royal Arctic Line A/S is wholly owned by the Government of Greenland.
- The Government of Greenland has given Royal Arctic Line A/S an exclusive concession for the transportation of all sea cargo to and from Greenland and between Greenlandic towns and settlements.
- The company moves containers on its larger ships to Nuuk from various locations, including Bremerhaven (Germany), Aarhus (Denmark), Helsingborg (Sweden), Torshavn (Faroe Islands) and Reykjavik (Iceland). The containers are then shipped to local communities on smaller vessels, such as the *Arpaari Arctica*.
- *The Arpaari Arctica* is registered as a General cargo vessel.
- Its GT is 499.
- The map shows tracks of the ship from 2013-2024 - highlighting how it navigated between communities in Greenland for re-supply.



Arpaari Arctica tracks from 2013-2024. Source: ASTD

CARGO SHIPS

BELOW 500GT - 2023

INCLUDES GENERAL CARGO SHIPS, REFRIGERATED CARGO SHIPS AND RO-RO CARGO SHIPS.

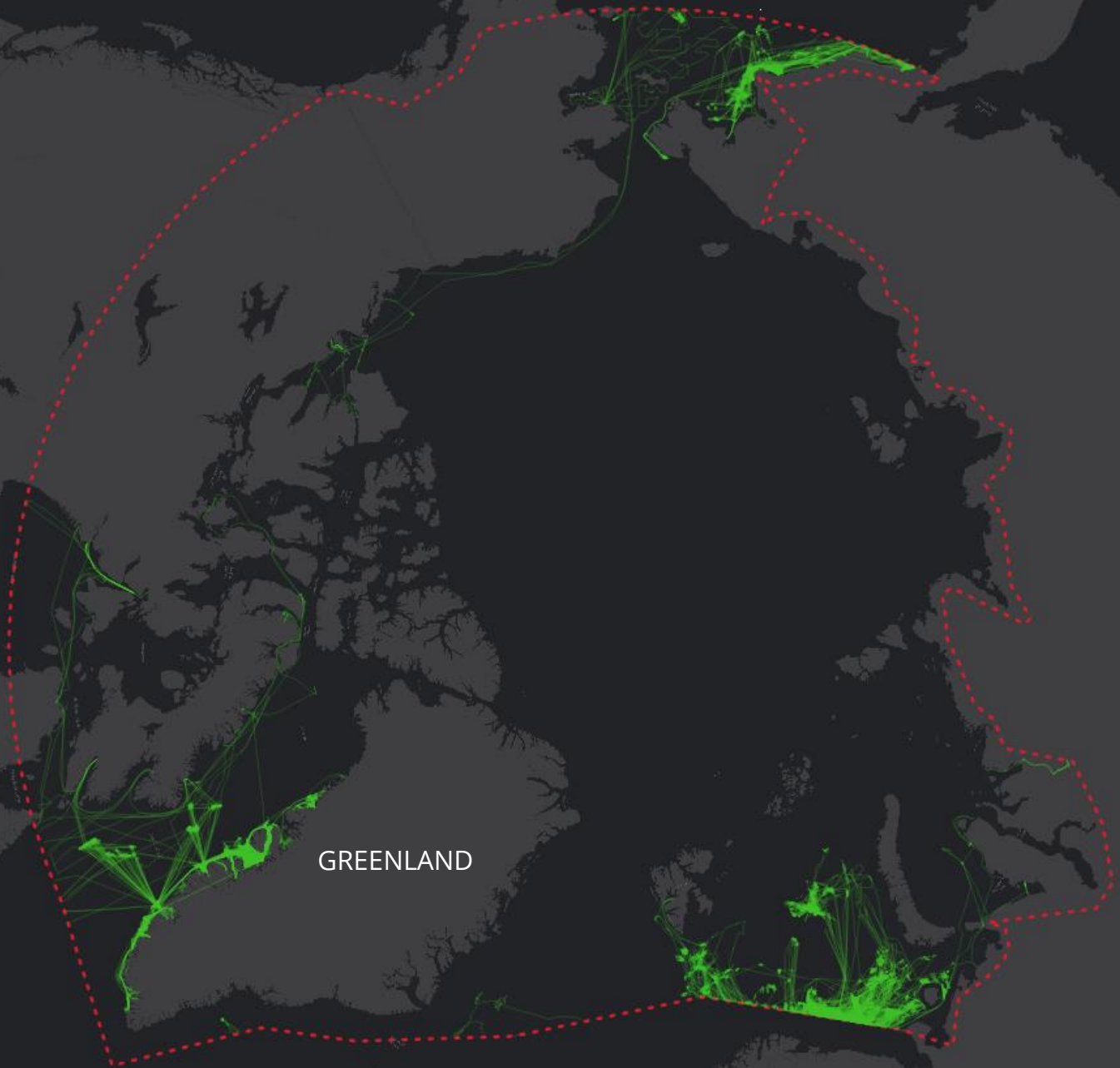
GREENLAND



FISHING VESSELS

BELOW 500GT - 2023

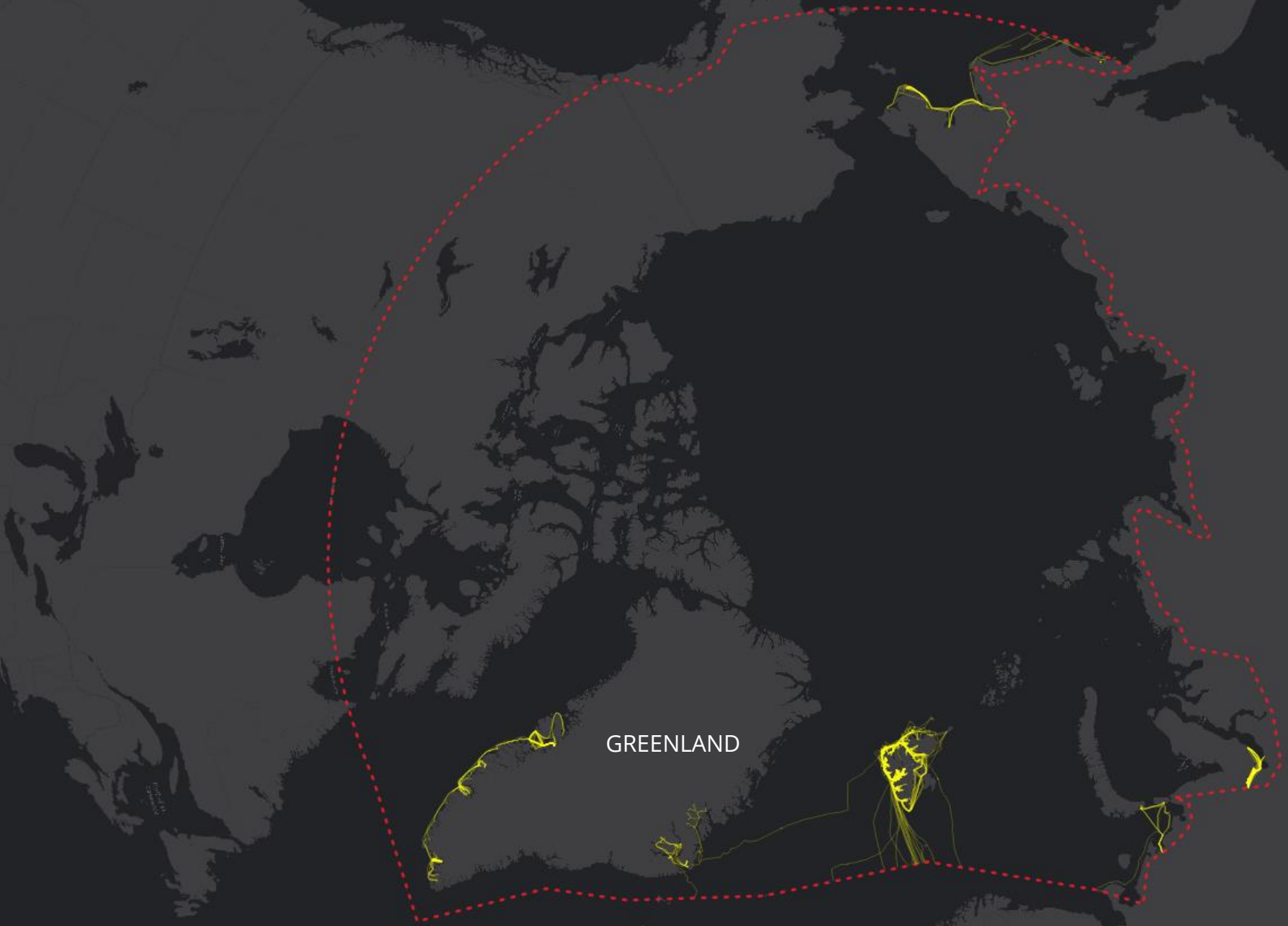
INCLUDES ALL
FISHING
VESSELS,
INCLUDING FISH
CARRIERS AND
TRAWLERS.



GREENLAND

CRUISE SHIPS PASSENGER SHIPS YACHTS

BELOW 500GT - 2023



RESEARCH VESSELS

BELOW 500GT - 2023



GREENLAND

TUG VESSELS

BELOW 500GT - 2023

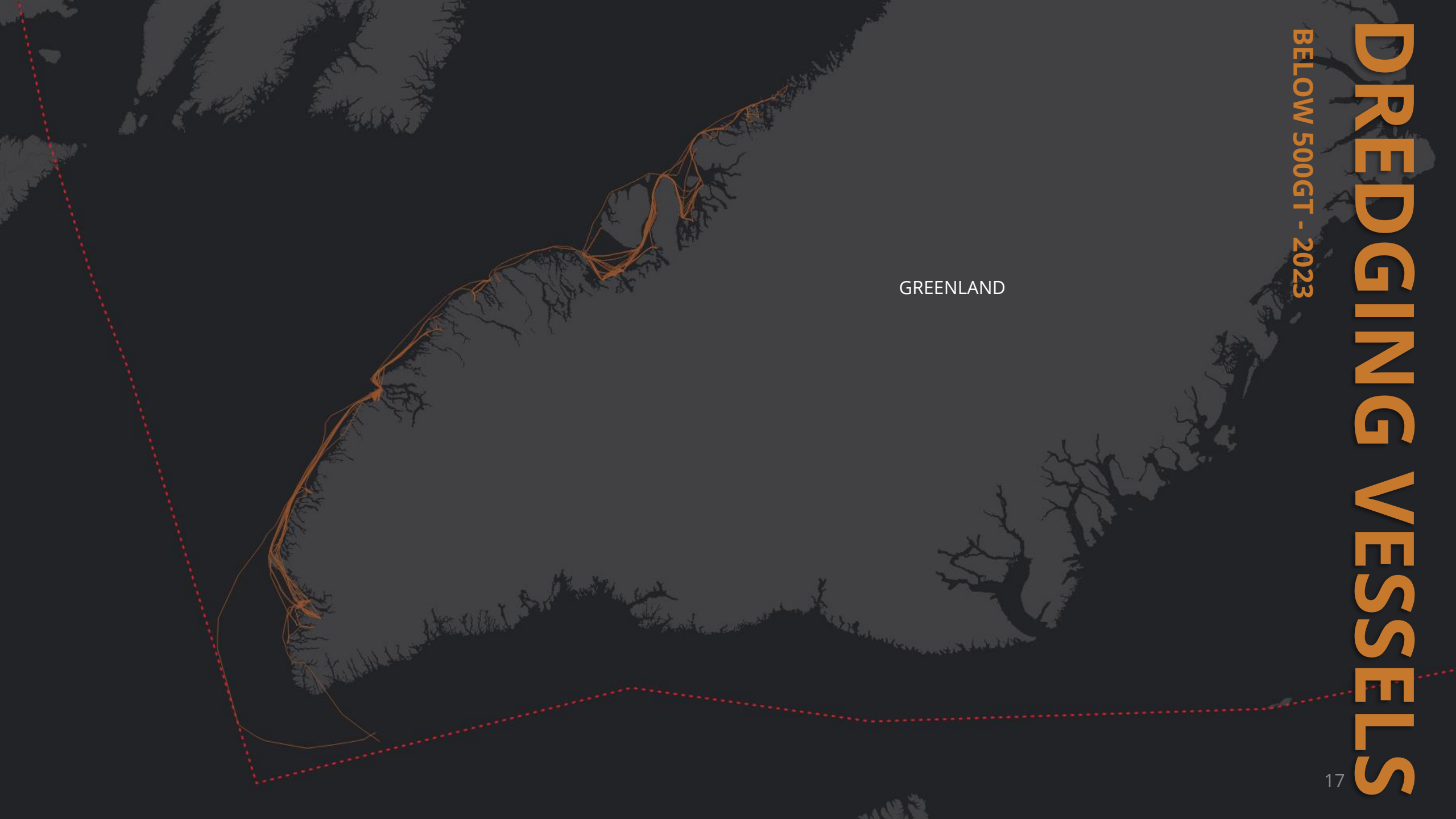


GREENLAND

DREDGING VESSELS

BELOW 500GT - 2023

GREENLAND



ABOUT THIS REPORT

This is the sixth report generated by PAME's Arctic Ship Status Report (ASSR) Project. The goal of the ASSR Project is to use PAME's Arctic Ship Traffic Data (ASTD) System to highlight topical issues related to commercial shipping in the Arctic. Launched in 2019, the ASTD System is PAME's database for Arctic shipping activities.

All use of this report is allowed. Please cite as PAME – Arctic Shipping Status Report #6 and provide a link to this report.

Due to data updates and slight differences in analytical methodologies, the overall number of ships may differ slightly from ASSR to ASSR.

Data analysis and maps by Zach Posnik.

SOURCES

- [ASTD](#) – Arctic Ship Traffic Data
- [IMO - Registration of ships and fraudulent registration matters](#)
- [AMSA 2009 Report](#)
- [IMO - International Convention for the Safety of Life at Sea \(SOLAS\), 1974](#)
- [IMO - International Code for Ships Operating in Polar Waters \(Polar Code\)](#)
- [Safety4Sea - Do you know what GT and DWT measure in a ship?](#)
- [IMO - International Convention on Tonnage Measurement of Ships](#)
- [Royal Arctic Line A/S](#)

GLOSSARY

- *PAME – Protection of the Arctic Marine Environment Working Group of the Arctic Council*
- *Arctic Council - A high-level forum to provide means for promoting cooperation, coordination and interaction among the Arctic States*
- *IMO – International Maritime Organization, the United Nations specialized agency with responsibility for the safety and security of shipping.*
- *Polar Code - International Code for Ships Operating in Polar Waters — A mandatory framework under the SOLAS, MARPOL and STCW Conventions that sets safety, environmental and training requirements for ships operating in the Arctic and the Antarctic.*

Cover photo: GettyImages