



PAME
Protection of the Arctic Marine Environment

FLAG STATES OF SHIPS IN THE ARCTIC

ARCTIC SHIPPING STATUS REPORT (ASSR) #4

OCTOBER, 2023



Ship registration – or the flag under which a ship sails – plays a vital function in maritime safety and security as well as protection and preservation of the marine environment.

By linking a ship to a State, the system of ship registration creates international legal rights and obligations, both for the ship and for the State whose flag the ship flies.

This Arctic Ship Status Report (ASSR) analyzes the number of ships operating in the Arctic in 2022 by their Flag State. It also provides a basic summary of some of the legal rights and obligations of Flag States and ships flying their flags when operating in the Arctic.

A Flag State is the nation State under whose laws a ship is registered and must comply.

This report uses the geographic definition of the Arctic contained in the International Code for Ships Operating in Polar Waters (Polar Code).

The Polar Code defines Arctic waters as the area in the figure.

Most larger ships that operate in this area must comply with the Polar Code.



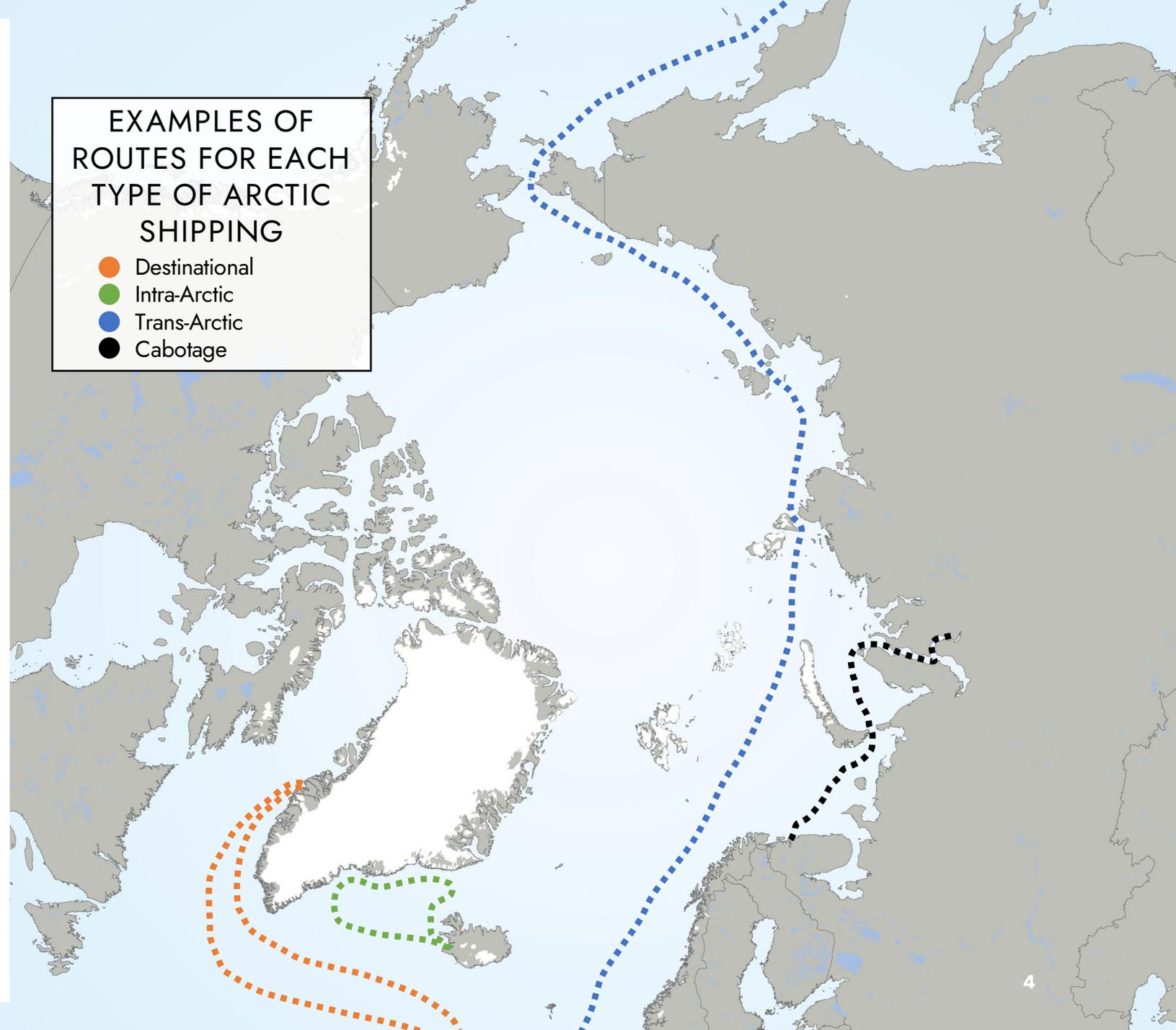
ARCTIC SHIPPING

PAME's 2009 Arctic Marine Shipping Assessment (AMSA) Report identified four types of Arctic Shipping:

- Destinational transport, where a ship sails to the Arctic, performs some activity in the Arctic, and sails south.
- Intra-Arctic transport, a voyage or marine activity that stays within the general Arctic region and links two or more Arctic States.
- Trans-Arctic transport transit voyages which are taken across the Arctic Ocean from the Pacific to Atlantic Oceans or vice versa.
- Cabotage, to conduct trade or engage in marine transport in coastal waters between ports within an Arctic State.

PAME: AMSA 2009 Report. Page 12.

Arctic shipping refers to all shipping activities within the area in question, unless otherwise stated.



Arctic Ship Traffic Data

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

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

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



The High Seas Area of the Arctic Ocean

High seas are defined as:

“all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State.”

UNCLOS

A core principle in public international law is the freedom of the high seas, as laid out in article 87 of [UNCLOS](#). To balance this freedom with the need to avoid disorder and misuse, international law has provided a framework for the regulation of shipping.



FLAG STATES

International law requires that every ship be registered in a country, called its Flag State. A ship and its crew is subject to the laws of its Flag State. Thus, for example an Icelandic registered ship is bound by Icelandic law though the ship may venture well outside waters subject to Icelandic jurisdiction.

Also, every ship is required to comply with Port and Coastal State obligations under applicable international instruments.

An Icelandic ship on the high seas or in waters subject to the jurisdiction of another State enjoys the protection of Iceland, much as an Icelandic citizen does while travelling abroad. A ship's *bona fides* are established by its registration papers just as a passport establishes them for an individual.

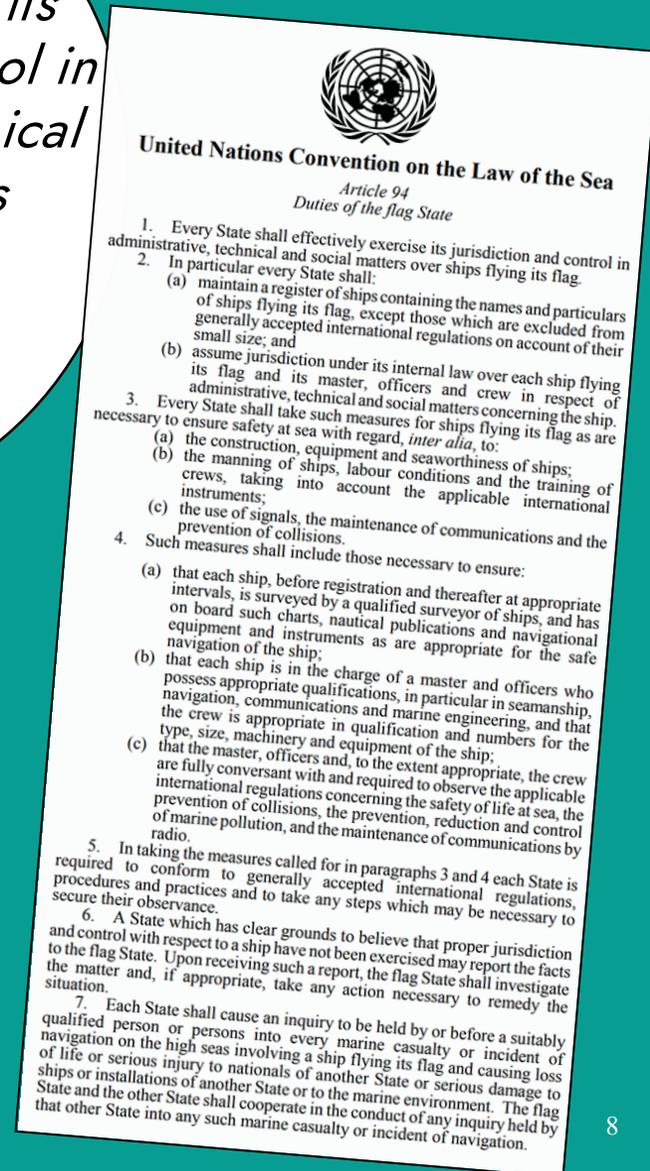
FLAG STATES: AUTHORITY & RESPONSIBILITY

While the primary responsibility of ship owners and operators is the safe, efficient, and environmentally sound operation of their ships and the safety and welfare of their crews, Flag States have both the authority and the responsibility to enforce regulations on ships that fly their flag, including regulations relating to ship safety, security, and environmental performance.

Flag States also have authority and responsibility over the shipboard conduct of the master, officers, and crew of ships that fly their flag.

“Every State shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag.”

[UNCLOS Article 94](#)



The United Nations Convention on the Law of the Sea, also called the Law of the Sea Convention, is an international treaty that establishes a legal framework for all activities that take place in, on, and under the ocean.

S O C I E T Y

IMPORTANT LAW OF THE SEA CONVENTION ARTICLES CONCERNING FLAG STATES

“Every State, whether coastal or land-locked, has the right to sail ships flying its flag on the high seas.”

*Article 90:
Right of navigation*

“Every State shall fix the conditions for the grant of its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag. Ships have the nationality of the State whose flag they are entitled to fly.”

*Article 91:
Nationality of ships*

“There must exist a genuine link between the State and the ship”

*Article 91:
Nationality of ships*

“Ships must sail under the flag of one State only and, with rare exception, are subject to its exclusive jurisdiction on the high seas.”

*Article 92:
Status of ships*

“Every State shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag.”

*Article 94:
Duties of the flag State*

“Every State shall assume jurisdiction under its internal law over each ship flying its flag and its master, officers and crew in respect of administrative, technical and social matters concerning the ship.”

*Article 94:
Duties of the flag State*

“Every State shall take such measures for ships flying its flag as are necessary to ensure safety at sea with regard, inter alia, to:

- (a) the construction, equipment and seaworthiness of ships;
- (b) the manning of ships, labour conditions and the training of crews, taking into account the applicable international instruments;
- (c) the use of signals, the maintenance of communications and the prevention of collisions.”

*Article 94:
Duties of the flag State*

LEGAL FRAMEWORK OF SHIP REGISTRATION

Article 91 of UNCLOS acknowledges the right of every State to "fix the conditions for the grant of nationality and for the right to fly its flag."

The same article provides that there "must exist a genuine link between the State and the ship." The purpose of the "genuine link" requirement in UNCLOS is to secure more effective implementation of the duties of the flag State under article 94 of UNCLOS; *Duties of the flag State*.

There is currently no binding international framework to regulate the registration process itself. The 1986 UN Convention on *Conditions for Registration of Ships* establishes international standards for the registration of vessels in a national registry, including references to the genuine link, ownership, management, registration, accountability and the role of the flag State. However, the Convention has not entered into force.

Each country sets its own laws and regulations on the registration of ships. Some countries only register vessels with ties to the country through ownership or crewing ("closed registries"). Other countries allow foreign-owned or controlled vessels to use their flag through an "open registry." Others just choose not to allow the use of their flag for international trade at all.

Since open registries are now widely used around the world, IMO has focused on a strategic approach to ensuring that flag States adequately assume jurisdiction and control over shipowners and ships that are flying their flags in accordance with article 94 of UNCLOS.

WHO IS RESPONSIBLE IF A MAJOR ACCIDENT OCCURS IN THE HIGH SEAS AREAS OF THE ARCTIC?

IN THE CASE OF A MAJOR ACCIDENT – THE FLAG STATE OF THE SHIP THAT CAUSED THE ACCIDENT IS RESPONSIBLE FOR AN INVESTIGATION.



NUMEROUS FACTORS ARE THEN TAKEN INTO ACCOUNT WHEN DETERMINING RESPONSIBILITY FOR ANY DAMAGES, LIABILITY, AND CLEAN UP.

UNCLOS:

“Each State shall cause an inquiry to be held by or before a suitably qualified person or persons into every marine casualty or incident of navigation on the high seas involving a ship flying its flag and causing loss of life or serious injury to nationals of another State or serious damage to ships or installations of another State or to the marine environment. The flag State and the other State shall co-operate in the conduct of any inquiry held by that other State into any such marine casualty or incident of navigation.”

FLAG STATE DUTIES AND OBLIGATIONS UNDER IMO'S POLAR CODE

Flag States play a key role for ships operating in the Arctic Polar Code area as all SOLAS ships must carry a Polar Ship Certificate issued by its Flag State or its Authorized Representatives that certifies compliance with the safety elements of the Polar Code.

Much of the Polar Code is mandatory under the International Convention for the Safety of Life at Sea (SOLAS).

The main objective of the SOLAS Convention is to specify minimum standards for the construction, equipment, and operation of ships compatible with their safety. Flag States are responsible for ensuring that ships flying their flag comply with both SOLAS requirements, and any other requirements unique to the flag, number of certificates are prescribed in SOLAS as proof that this has been done.

One of these certificates is a Polar Ship Certificate which provides ship-specific design and operational limitations and capabilities in Arctic waters. The Polar Ship Certificate attests that the ship complies with the ship safety requirements of the Polar Code.

To obtain a Polar Ship Certificate, the owner must:

- conduct an operational (risk) assessment of the ship and its intended operations in polar waters;
- prepare a Polar Water Operational Manual (PWOM) specific to the ship, its arrangement, and its intended operation in polar waters;
- have the ship surveyed to verify its compliance with the relevant requirements of the Polar Code; and
- apply to its flag State or authorized representative for the Polar Ship Certificate.

METHODOLOGY

ASTD contains what are called “flag codes” for each ship. The flag code indicates the ship registry where the ship is registered.

A Flag State may have more than one ship registry. This ASSR Report ascribed the name of the Flag State to all ship registries subject to the jurisdiction of that Flag State.

This report’s list of Flag States is drawn from the names of the States which are [members of the UN](#).

Flag Code <i>As shown in ASTD</i>	Ship Registry	Flag State	No. of ships <i>Polar Code area (2022)</i>
CAY	Cayman Islands	United Kingdom	8
CKI	Cook Islands	New Zealand	1
DIS	Danish International Ship Registry	Denmark	17
FAR	Faroe Islands	Denmark	25
FAS	Faroese International Ship Registry	Denmark	6
FIS	France International Ship Registry	France	2
GRN	Greenland	Denmark	12
HKG	Hong Kong	China	15
MAR	Madeira International Ship Registry	Portugal	11
NIS	Norway International Ship Registry	Norway	21

ANALYSIS METHODOLOGY

1. Data was downloaded for each month in 2022. Duplicated MMSI numbers were removed with 1661 unique vessels remaining.
2. Flag code information was not available in the ASTD System for some of the 1661 unique vessels.
3. Where flag code information was missing, the report’s authors found the ship’s registry via various sources, including [MarineTraffic.com](#), [VesselFinder.com](#), and [Vesseltracking.net](#).
4. The name of the ship registry for each ship identified in bullet no. 3 was then added to the flag code information compiled for this report.
5. The name of the ship registry for each unique vessel was determined using the [ASTD Flag Code document](#).

ARCTIC SHIPPING OVERVIEW:

FLAG STATES

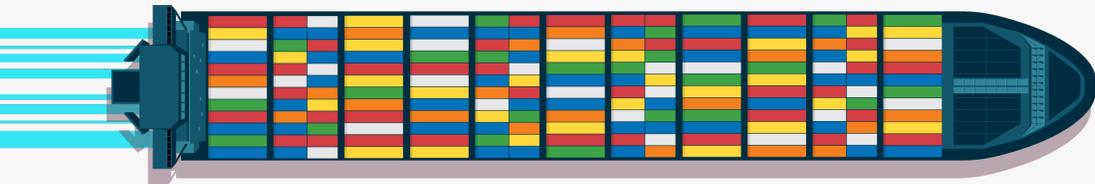
2022

ARCTIC POLAR CODE AREA

NUMBER OF UNIQUE SHIPS

1661

Unique ships refers to counting ships that enter a given geographic area (here the Arctic Polar Code area) over a specific period (here 2022). Each ship is only counted once, although it might enter the area multiple times.



42

FLAG STATES

Number of Flag States represented in the Polar Code area in 2022.

16

MORE THAN 10 SHIPS

Number of Flag States who had 10 or more ships represented in the Polar Code area in 2022.

3

MORE THEN 100 SHIPS

Number of Flag States who had 100 or more ships represented in the Polar Code area in 2022.

1349

SHIPS FROM ARCTIC STATES

Number of ships that were represented by the 8 Arctic States (Canada, The Kingdom of Denmark, Finland, Iceland, Norway, The Russian Federation, Sweden, The United States)

96

SHIPS FROM ARCTIC COUNCIL OBSERVERS

Number of ships that were represented by an Arctic Council Observer State.

SHIPS PER FLAG STATE

2022

ARCTIC POLAR CODE AREA

TOP 20

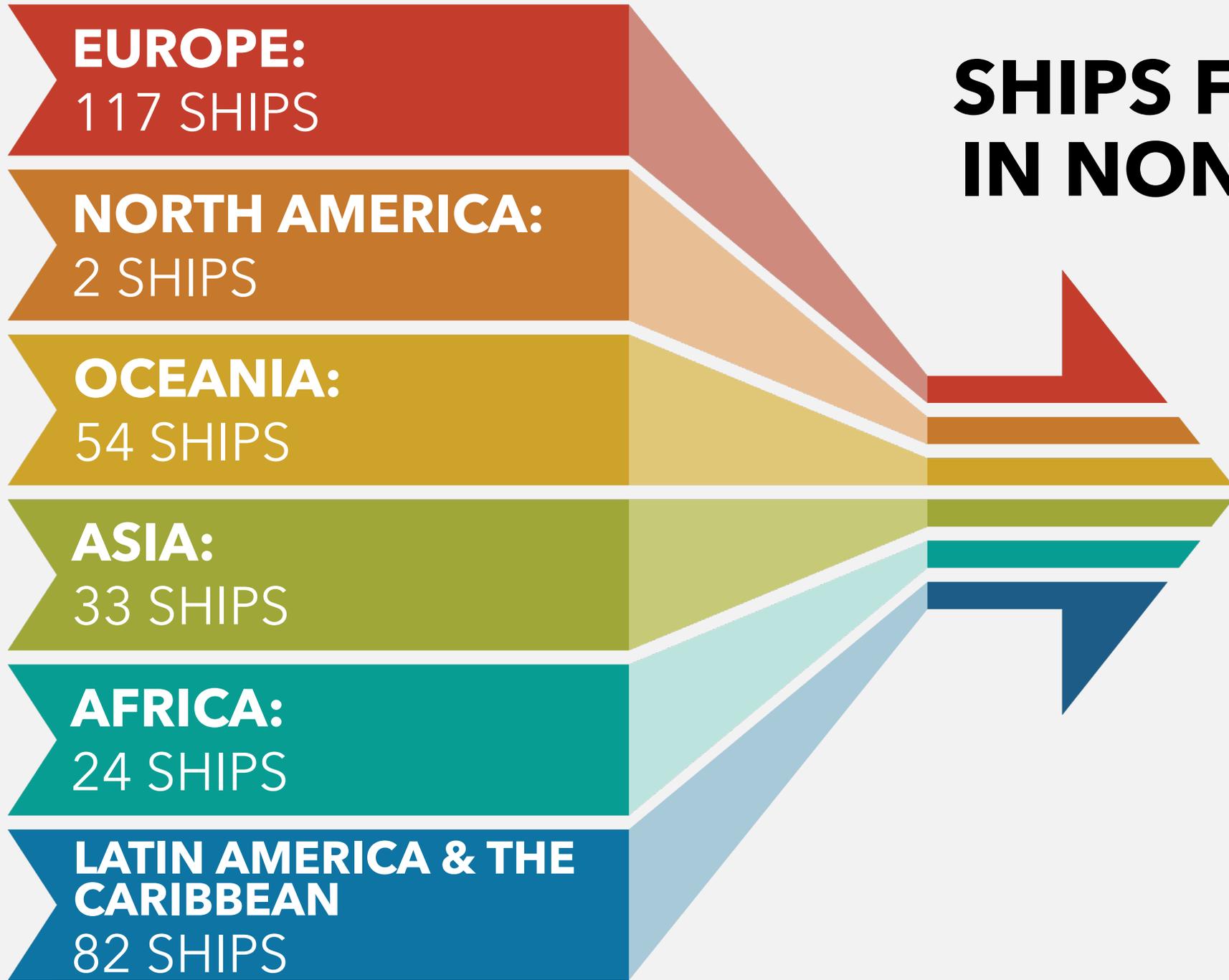
<u>NO.</u>	<u>FLAG STATE</u>	<u>SHIPS</u>	<u>NO.</u>	<u>FLAG STATE</u>	<u>SHIPS</u>
1	Russia	885	11	China	18
2	Norway	180	12	Portugal	16
3	Denmark	122	13	Malta	15
4	United States	88	14	United Kingdom	12
5	Canada	55	15	Cyprus	11
6	Marshall Islands	50	16	France	10
7	Netherlands	34	17	Barbados	9
8	Panama	33	18	Germany	9
9	Bahamas	25	19	Iceland	9
10	Liberia	20	20	Singapore	8

21-42

21	Sweden	8
22	South Korea	6
23	Estonia	5
24	Spain	4
25	Lithuania	3
26	Antigua & Barbuda	2
27	Bermuda	2
28	Finland	2
29	Ireland	2
30	Latvia	2
31	Palau	2
32	Poland	2
33	Sierra Leone	2
34	St. Vincent Grenadines.	2
35	Belize	1
36	Italy	1
37	Japan	1
38	Jamaica	1
39	St Kitts & Nevis	1
40	Togo	1
41	Vanuatu	1
42	New Zealand	1

2022

ARCTIC POLAR CODE AREA



**SHIPS FLAGGED
IN NON-ARCTIC
STATES**

312
SHIPS

ABOUT THIS REPORT

This is the fourth 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 #4 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.

The project gratefully acknowledges funding from the Nordic Council of Ministers.



**Nordic
Co-operation**

PAME
Protection of the Arctic Marine Environment

Sources:

- [ASTD – Arctic Ship Traffic Data](#)
- [AMSA Report \(PAME 2009\)](#)
- [IMO](#)
 - [International Code for Ships Operating in Polar Waters \(Polar Code\)](#)
 - [International Convention for the Safety of Life at Sea \(SOLAS\), 1974](#)
 - [Registration of ships and fraudulent registration matters](#)
- [Law of the Sea Convention](#)
- [Maritime New Zealand: A Guide to Ship Registration](#)
- [DNV: The Polar Code](#)