



PAME
Protection of the Arctic Marine Environment

THE INCREASE IN ARCTIC SHIPPING 2013-2019

ARCTIC SHIPPING STATUS REPORT (ASSR) #1

Shipping in the Arctic has increased in recent years.

This increase coincides with sea ice reduction in the Arctic



HOW IS SHIPPING MEASURED?

There are many ways to measure the volume of shipping in a given geographic area.

One way is to count
the number of unique
ships in a specific area

This method only counts each ship once even if it enters the geographic area multiple times.

THIS REPORT LOOKS AT ARCTIC SHIPPING

So what is the Arctic?

Neither PAME nor the Arctic Council have established a single use definition of the Arctic

Therefore – this report selected an area to look into.



**This is the
Arctic Polar
Code Area as
defined by
the IMO**





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



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 the inhospitable waters in the Arctic.

POLAR Code

INTERNATIONAL CODE
FOR SHIPS OPERATING IN POLAR WATERS

2016 EDITION



The number of unique ships in the Arctic Polar Code Area increased from

1298 ships in 2013

to

1494 ships in 2018

That is an increase of

15% in

5 years

**A majority of these
vessels are fishing
vessels**

*In 2018 of all ships
that entered the
Polar Code area*

42%

were fishing vessels

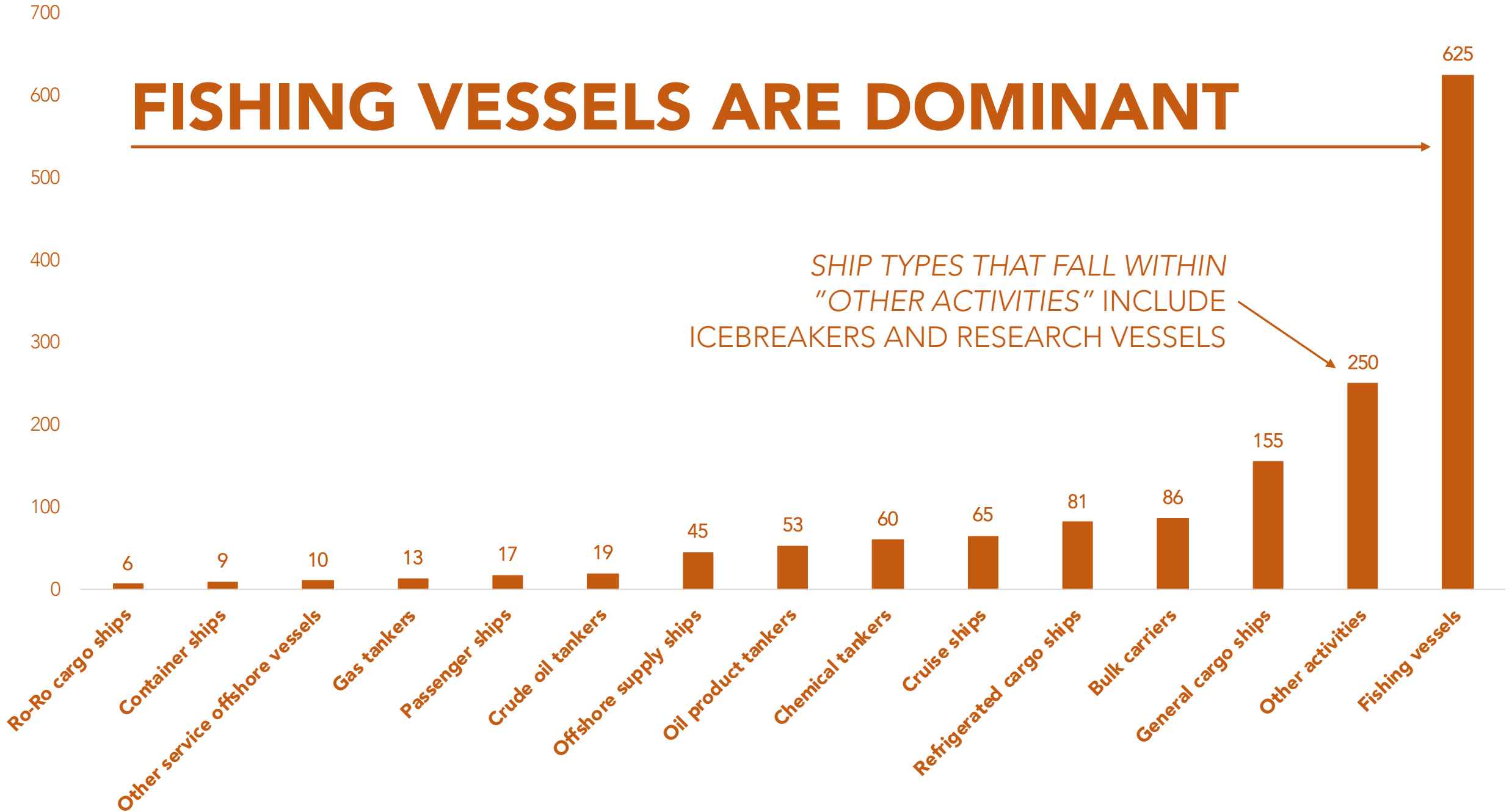


ARCTIC POLAR CODE AREA 2018

UNIQUE SHIPS – CATEGORIZED BY SHIP TYPE



FISHING VESSELS ARE DOMINANT



ANOTHER WAY TO MEASURE THE INCREASE IN ARCTIC SHIPPING IS "DISTANCE SAILED"

Distance sailed is the aggregated nautical miles vessels traveled in a certain period of time in a certain area.

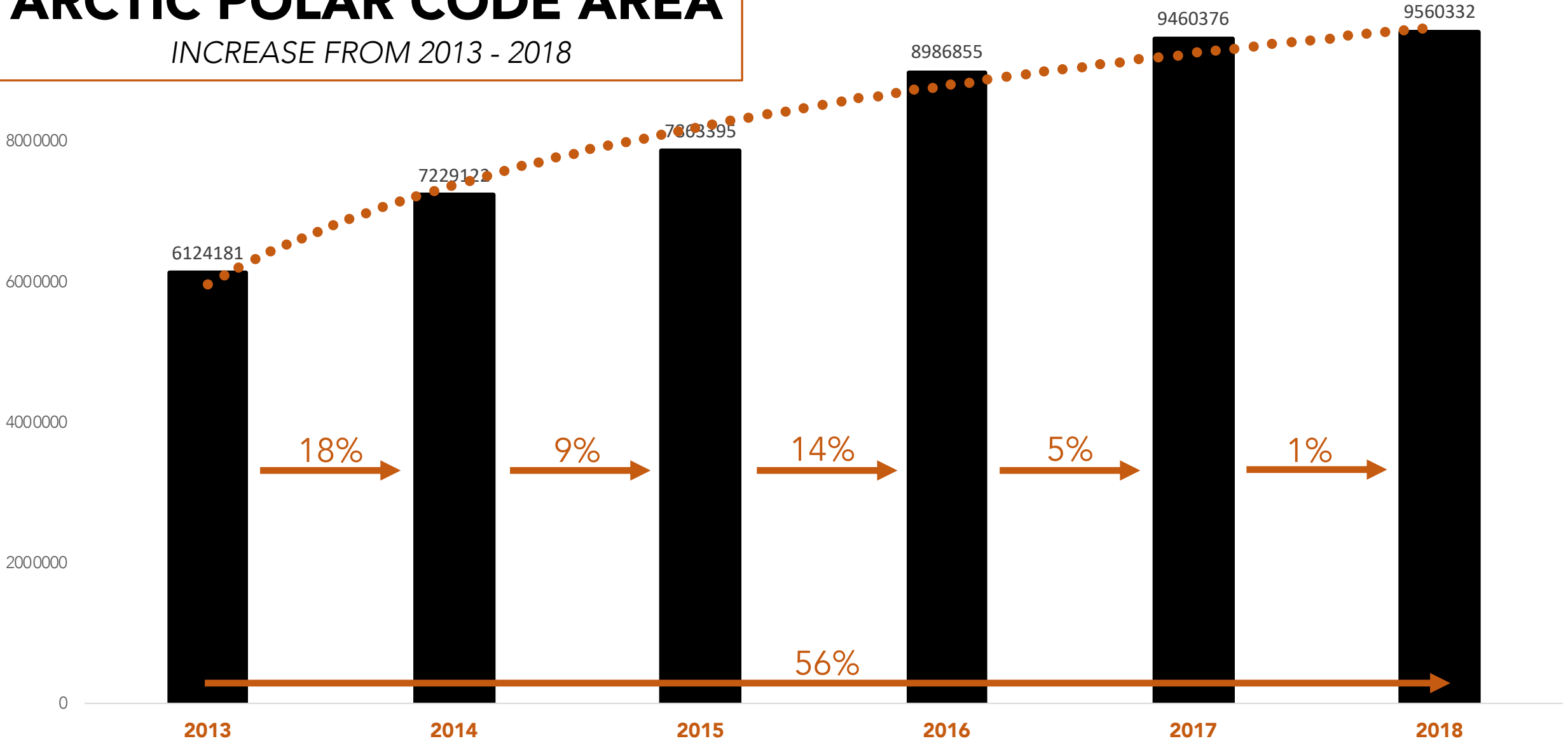
56%

is the total increase in distance sailed by all vessels in the Arctic Polar Code area from 2013 to 2018.

DISTANCE SAILED

ARCTIC POLAR CODE AREA

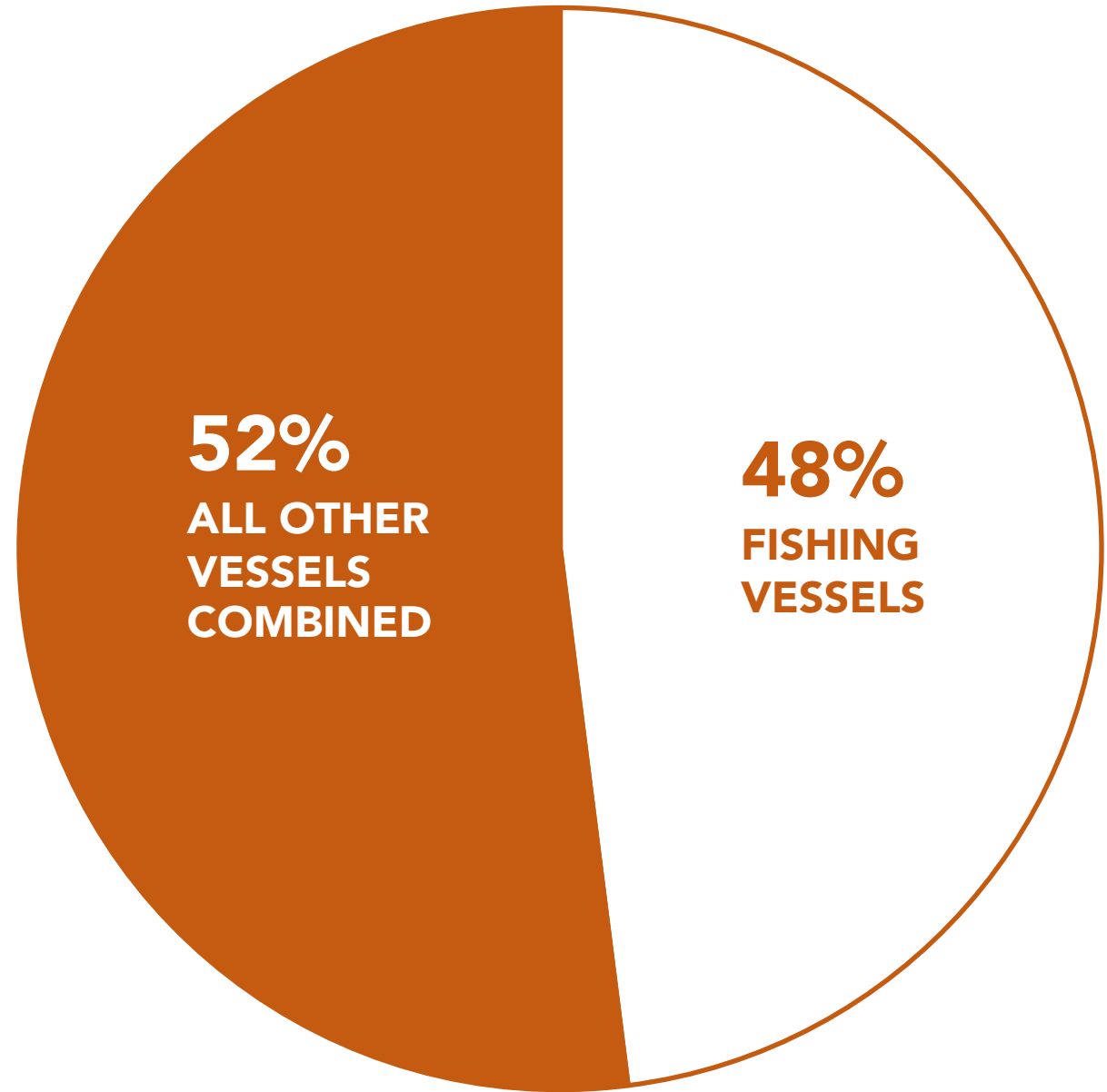
INCREASE FROM 2013 - 2018



The total **2013** distance sailed by all vessels was approximately *6.51 million* nautical miles.

In **2018**, the total aggregated distance sailed had risen to over *9.5 million* nautical miles.

56%



SAILED DISTANCE - ARCTIC
POLAR CODE AREA2018

THE INCREASE IN SHIPPING
COINCIDES WITH DECREASE OF SEA
ICE IN THE ARCTIC

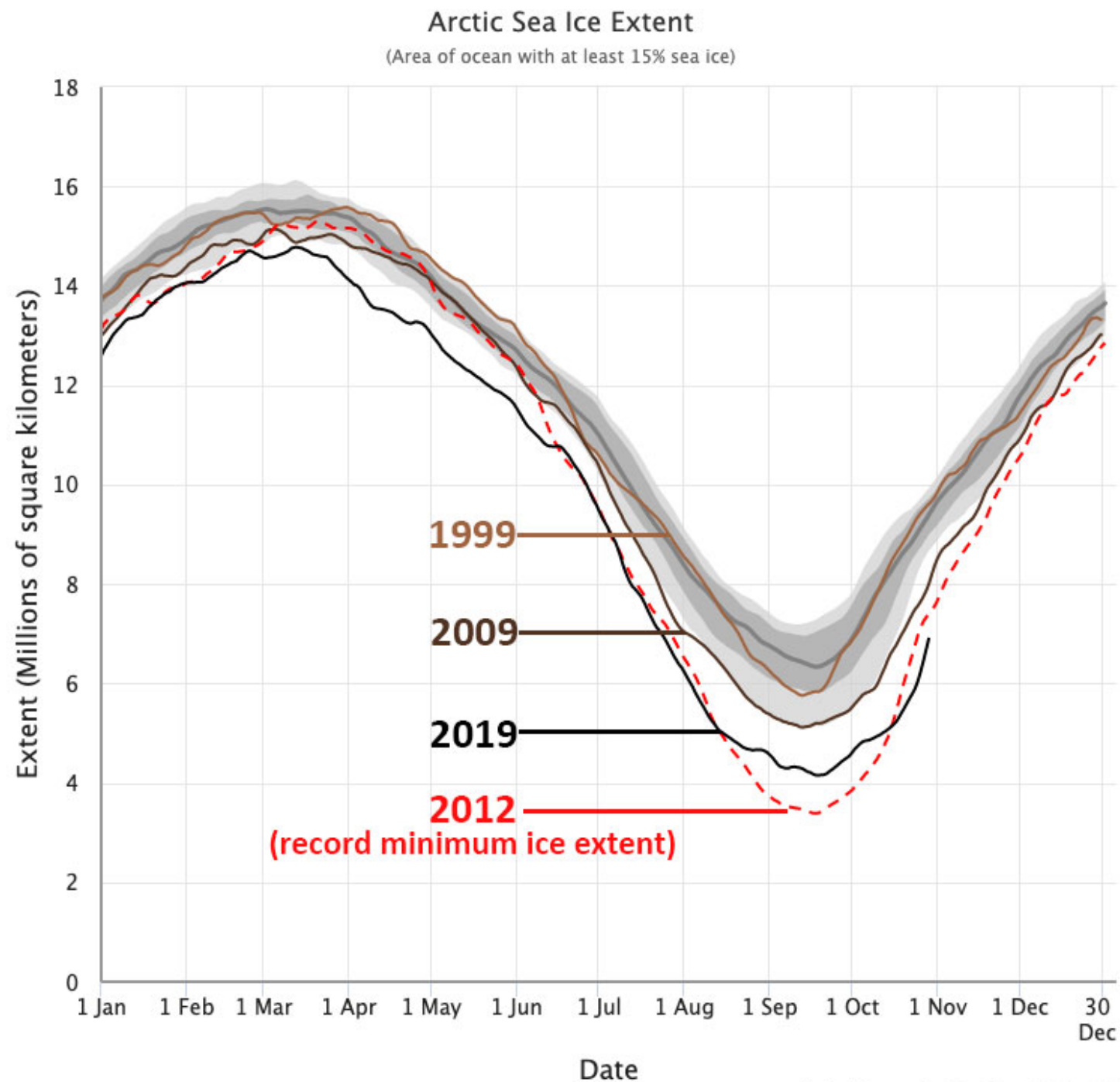
DECREASING SEA ICE

This graph from the U.S. National Snow And Ice Data Center (NSIDC) shows the Arctic sea ice extent in September.

We have added four years to highlight:

- 1999
- 2009
- 2019
- 2012

The graph shows that for each of the last 10 years, average Arctic sea ice extent is decreasing.



Sea Ice Extent, Sep 1999



Total extent = 6.1 million sq km

Sea Ice Extent, Sep 2009



Total extent = 5.3 million sq km

Sea Ice Extent, Sep 2019



Total extent = 4.3 million sq km

AND THEN THERE ARE THE MINERALS

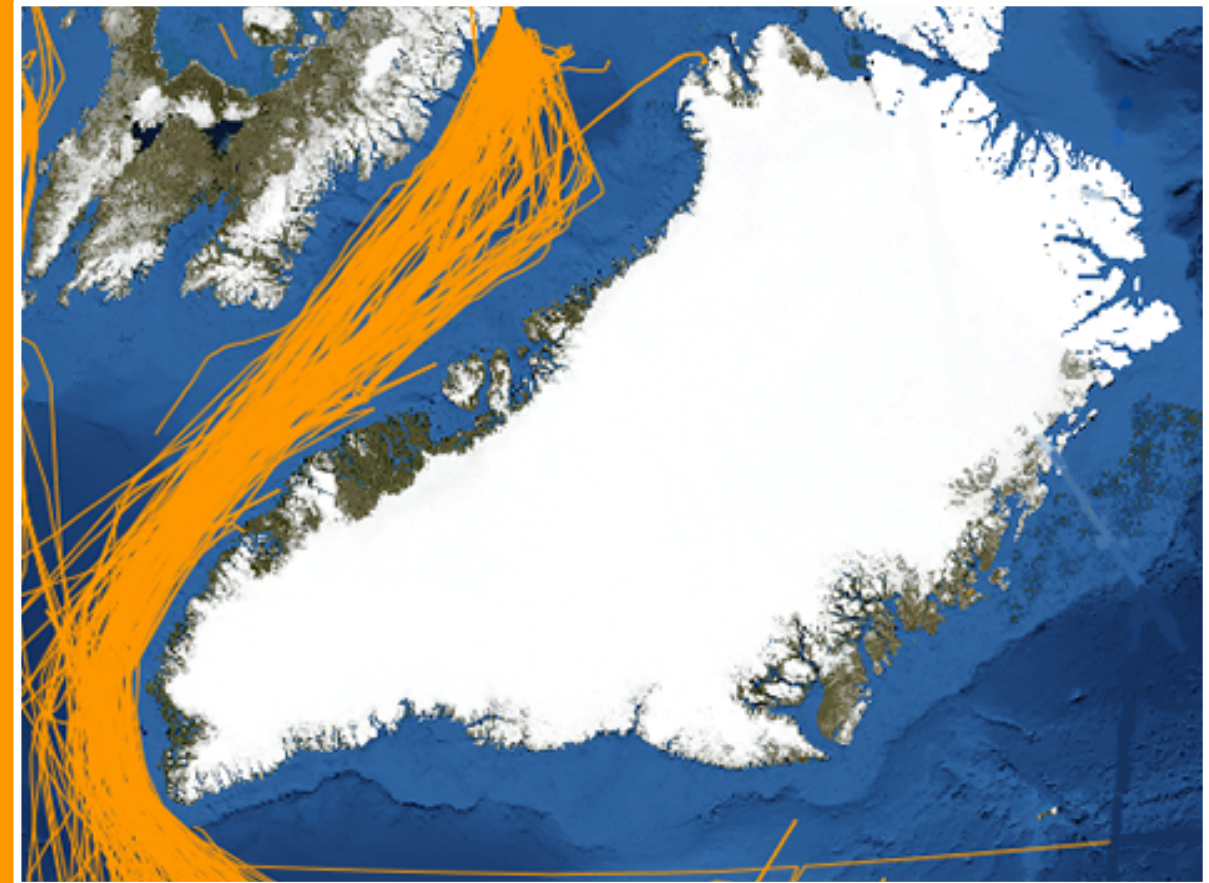
*The following example shows an area within the **Arctic Polar Code Area** - and is one of the reasons ship traffic in the Arctic has increased.*

BULK CARRIERS TRAFFIC

Bulk carriers transports cargoes in bulk quantities like food grains, ores, coal, and cement.

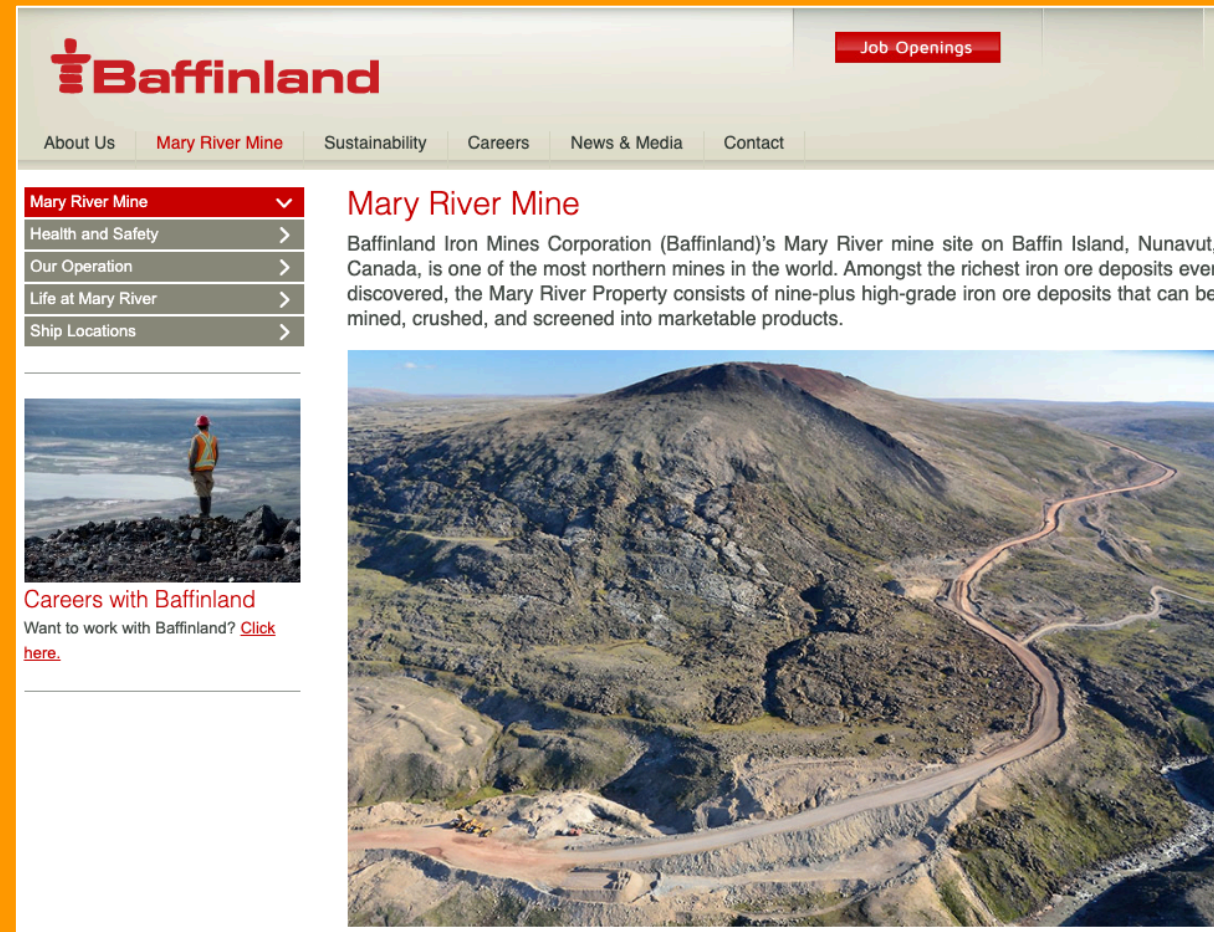
2013

2019



BULK CARRIER TRAFFIC IN 2013 IN THE POLAR CODE AREA WAS VERY LOW. BY 2019, IT HAD INCREASED SUBSTANTIALLY.

The reason is that in 2014, one of the most northern mines in the world opened. It is amongst the richest iron ore deposits ever discovered. The Mary River Project involves the seasonal shipping of 3.5 million tonnes of iron ore during open water season.



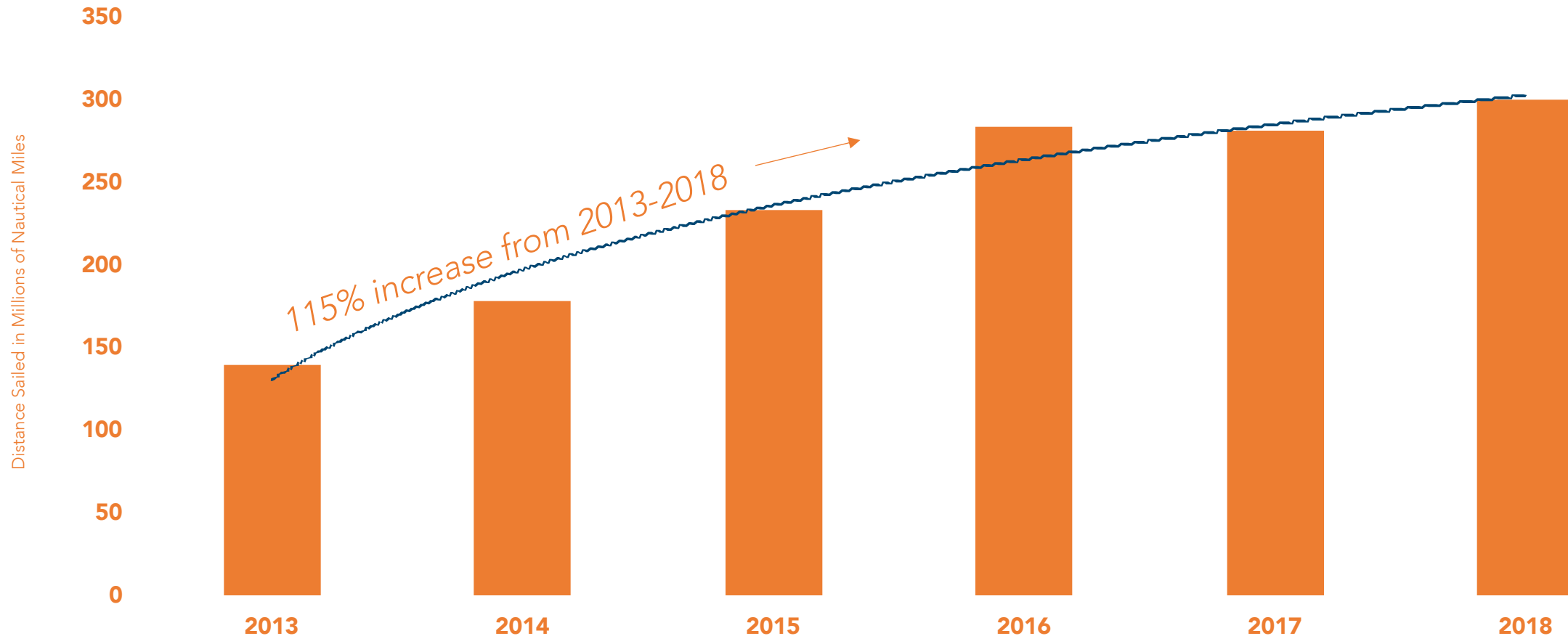
The screenshot shows the Baffinland website interface. At the top left is the Baffinland logo. To the right is a red button labeled "Job Openings". Below the logo is a navigation menu with links for "About Us", "Mary River Mine", "Sustainability", "Careers", "News & Media", and "Contact". A dropdown menu is open under "Mary River Mine", listing "Health and Safety", "Our Operation", "Life at Mary River", and "Ship Locations". The main content area features a heading "Mary River Mine" followed by a paragraph: "Baffinland Iron Mines Corporation (Baffinland)'s Mary River mine site on Baffin Island, Nunavut, Canada, is one of the most northern mines in the world. Amongst the richest iron ore deposits ever discovered, the Mary River Property consists of nine-plus high-grade iron ore deposits that can be mined, crushed, and screened into marketable products." Below the text is a large aerial photograph of the mine site, showing a winding road and a large body of water. To the left of the main image is a smaller photo of a worker in a hard hat and safety vest standing on a rocky outcrop. Below this photo is a "Careers with Baffinland" section with the text "Want to work with Baffinland? [Click here.](#)"

BULK CARRIERS

IN THE ARCTIC POLAR CODE AREA

2013-2018

The distance sailed by **bulk carriers** in the Arctic Polar Code area has risen **115%** between 2013 and 2018.



**MORE VESSEL TYPES
SHOW A *SIMILAR TREND***



ABOUT THIS REPORT

This is the first 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 shipping in the Arctic. Launched in 2019, ASTD is PAME's database for Arctic shipping activities.

More on www.astd.is

All use of this report is allowed. Please cite PAME – Arctic Shipping Status Report#1 and provide a link to this report.

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**Nordic
Co-operation**

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