



Arctic Ship Traffic Data

UPDATE AND NEXT STEPS

PAME-II 2019 meeting

Reykjavík, Iceland

www.astd.is

PAME
Protection of the Arctic Marine Environment

Arctic Ship Traffic Data (ASTD)



- First comprehensive Arctic shipping activity database
- Detailed statistics on multiple aspects, including:
 - Ship emissions
 - Number of ships in the Arctic
 - Types of ships in the Arctic
 - Fuel use and consumption of fuel
 - Traffic in specific areas in the Arctic (EEZ's, LME's, Polar Code Area etc).
 - Number of ships in Arctic Ports
- **Download of data a crucial aspect**

User Administration Status

- 16 applications have been approved to date
 - 11 from Arctic Council member states (4 from USA, 3 from Iceland, 3 from Norway and 1 from Kingdom of Denmark)
 - 3 from Observers (Republic of Korea, WWF, Germany)
 - 1 from a recognized research institute (National Geographic)
 - 1 from an accredited academic institution (University College London)
 - No application has been rejected
- In total, 68 people have been given access
 - (34 on Level 2 and 34 on level 3).
 - Some have never logged in, some have downloaded and used the data.
 - No application for level 1 data has been received.
- In addition, dozens of enquiries have been answered.



THE ARCTIC IS HEATING UP

North of the Arctic Circle, our planet is covered by an implacable frozen mass—a sea, as it turns out—that humans have long struggled to explore, understand, and ultimately subdue. From our pursuit of the Arctic's unique animals to our attempts to sail its icy passages to our obsessive quest to reach its desolate pole, we have found the Arctic irresistible and unyielding. Until now. Scientists say that by the middle of this century, rising temperatures could strip away the Arctic's fortress-like ice each summer, unlocking resources and shipping lanes while increasing political tensions, affecting people and animals, and potentially speeding up climate change. We sent writers and photographers to document how this enigmatic region is changing, who and what will feel the impact, and why it matters.



The melting Arctic is now open for business

 EXPLORE



A thawing Arctic is heating up a new Cold War

 READ



See which nations are claiming parts of the melting Arctic

 EXPLORE

AS ARCTIC WATERS BECOME RELIABLY OPEN, MORE SHIPS ARE VENTURING OUT ON NEW ROUTES

Russia's Yamal Peninsula is thought to have the world's largest natural gas reserves. Ten ice-breaking **tankers** are exporting Russian gas to Europe and Asia, with five more under construction.

Sea ice extent on September 10, 2018

September 2018 oil and gastanker traffic



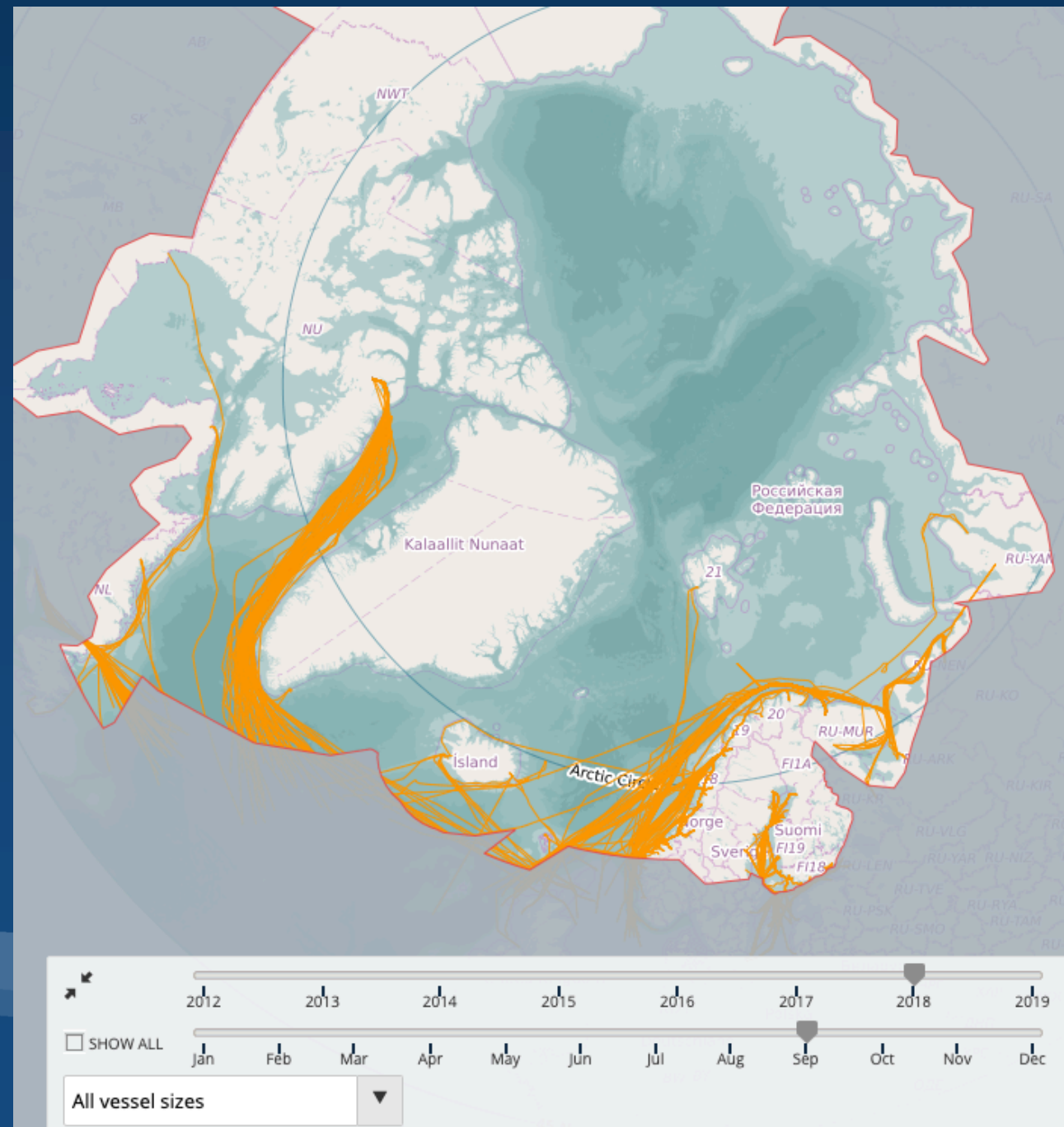
A French icebreaker **cruise ship** is aiming for the North Pole by 2021, and dozens of ships intended for polar cruises are scheduled to launch by 2023.

Sea ice extent on September 10, 2018

September 2018 cruise ship traffic



Bulk carriers transport materials from northern mines, such as zinc from Alaska's Red Dog mine and iron ore from Canada's Mary River Mine. Currently only accessible in summer, the ports serving these mines could be more active for longer periods as sea ice declines.



Today and next steps

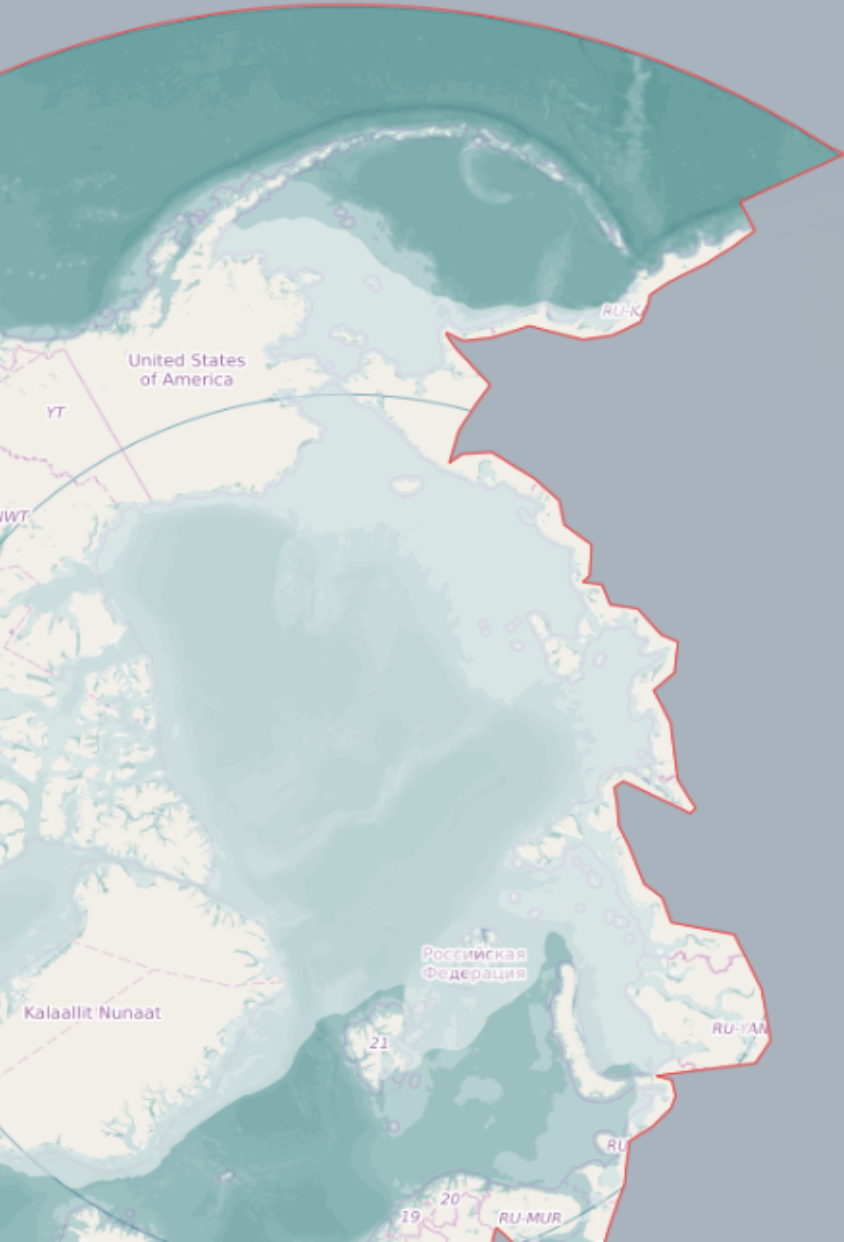
- All functionality has been established according to the project requirements
- ASTD has great potential for incorporating additional functionality into the system
- Ideas for such additions include:
 - Marine litter component
 - Daily Sea Ice maps download directly from ASTD
 - Informational layers addition
 - Spill and accident capability

New #1: Marine litter component

- **IDEA:** Each country to insert yearly information on litter
 - Amount of litter cleaned-up
 - Type, volume, etc.
 - Pictures
 - Will show what countries are doing to clean up marine litter
- **ACTION:** Easy to make maps to show how we are cleaning up the Arctic
- **NEXT STEP:** ASTD Expert Group to introduce to marine litter expert group for input.

New #2: Sea Ice maps

- **IDEA:** Add daily sea ice maps for download
 - Need from users
 - Convenient to add to ASTD and download directly as widely used in analysis on Arctic shipping activities
- **Next step:** ASTD expert group to evaluate information sources (e.g. NSIDC, IIP, NOAA, Norwegian Polar Institute etc.) and report to SEG/PAME



New sea ice
functionality
added here



Layer Manager

ALL LAYERS | VISIBLE LAYERS

Other layers

- Traffic density plot based on data from multiple sourc...
- Ice coverage (NSIDC)

Ice coverage (NSIDC)

Monthly ice coverage processed from data from the NSIDC.

- ASTD ship types
- IHS Fairplay ship types

Opacity:

[Show Dublin Core metadata](#)

New #3: Environmental and resource layers

- **IDEA** Information layers on various shipping-related topics, including from PAME and other Arctic Council working groups, e.g:
- Natural areas
 - Habitats and important conservation areas (CAFF)
 - Protected areas (PAME)
- Valuable areas for humans and industry
 - Mining sites
 - Oil and gas fields (REDEG)
 - Accidents and oil spills (CASA)
 - Main cruise ship areas (PAME tourism information)
- **Next step:** ASTD expert and PAME Secretariat to send out call for information

New #4: Accidents and spill data

- **IDEA:** Each Arctic state register accidents and spills into a registration window in ASTD - Online accident registration scheme
 - Location of incident
 - Type of incident (collision, grounding etc.)
 - Spill (type of substance, volume)
- **ACTION:** Compile information, discuss with EPPR and report to PAME



Hendelser i kart

Skjul >

Filter på år/måned/vaktuke

Velg år:

2018



Velg måned:



Velg vaktuke:



Filtrer på egenskap

Hovedkategori:

Skipshendelser



Skipstyper:



Hazmat:



Aksjonsnivå:



Akuttutslipp:

Alle hendelser



Filtrer på område

Forvaltningsplan område:



Fiskerisone:



Kystregion:



Fylke:



Kommune:



Nullstill skjema

Cooperative agreement

- Article 6 - Paragraph 6.2:
 - *REVIEW: The Participants intend to review this ASTD Framework at each PAME Working Group annual fall meeting (PAME-II), or at any other occasion as decided by consensus of the Participants.*
- Recommendation to agree to do this review at PAME-I 2020

Thank you!