

**Arctic Ship Traffic Data Project (ASTD)**

**About  
The Arctic Ship traffic Data Project** is an initiative in the realm of The Protection of the Arctic Marine Environment (PAME) working group of the Arctic Council. The aim is to collect information about ship traffic in the Arctic and send it to a joint repository.

**Product**A centralized database with selected ship traffic information.

**Motive**To determine trends in Arctic ship traffic for analysis under multiple contexts, including environmental protection and sustainable development within the context of the Arctic Council

**Users**All eight Arctic Council member states and Permanent Participants will have access to the database. Additional usage and access to be determined.

**Expert group**An expert group has been formed under the auspices of PAME. The expert group will be responsible to find solutions to the data collection, data processing and data sharing. The Expert group will decide on a suitable name in Tromsö, but AIS/Ship Traffic Data Expert group used as a tentative name.

**Background**

**The AMSA Database**

The project is based on the database collected for the release of the Arctic Marine Shipping Assessment Report (2009). It will use the same geographical scope where each Arctic state defined its own Arctic waters. The AMSA database was made with electronic questioners distributed to the eight Arctic states. Six member states sent data, all AC member states bar Finland and Sweden who determined not to have Arctic waters as such as they border the Baltic Sea rather then the Arctic Ocean. The data requested through the questionnaire included information such as the number of vessels operating in the states’ waters, the type of vessels, cargo carried, operational routes, fuel used, engine size of the vessels, date of operations, etc.

Seasons were defined for seasonality, winter (December to February) spring (March to May), summer (June to August) and autumn (September to November).

To facilitate analysis of the raw data, vessels were grouped into standardized vessel Categories by the country that reported it and by the season in which the voyage occurred. The categories were Government Vessels and Icebreakers, Container Ships, General Cargo, Bulk Carriers, Tanker Ships, Passenger Ships, Tug/Barge, Fishing Vessels & Oil and Gas Exploration Vessels.

Management of fisheries is outside of the ambit of the Arctic Council but many fishing vessels were reported by member states resulting in fishing vessels constituting a significant portion of all vessel activity in the Arctic for the year 2004. Accordingly, fishing vessels have an impact or footprint beyond the obvious impacts on fish stocks. Fishing vessel activity in the database was categorized according to the Large Marine Ecosystem (LME) in which the activity took place. LME’s are geographical entities defined as ecosystems based on a series of ecological criteria. Each comprises a fairly large sea area, typically 200,000 km2 or larger, with distinct bathymetry, hydrography, productivity and trophically dependent populations. Fishing vessels act differently to other types of marine activity, typically meandering in search of catch rather than following a specific itinerary or route. For this reason vessel data was categorized within the database terms of days at sea per LME.

In order to make the database more usable for most types of analysis, some assumptions were made and post-processing of the data provided was undertaken. For example, where route data was unavailable or contained obvious errors, such as passages across land, the information has been adjusted to follow known shipping routes. In terms of data reporting, there was some inconsistency in how states defined vessel types, for example, some states reported oil carriers as tankers, while others reported similar vessels as bulk carriers or tug and barge. There are also varying levels of certainty regarding the routes traveled, ranging from very complete records of course changes to records that provided only departure and arrival points. Where limited vessel-specific information was provided, information from other data sources, such as ferry and cargo vessel sailing schedules were integrated, to the data set.

**The progress of ASTD**

A draft project plan for the project (formerly known as the Arctic Shipping Data Service – ASDS) was made in 2014. It was introduced at the PAME II 2015 meeting on February. The meetings Record of Decisions (RoD) under AMSA III(B) – Arctic Marine Traffic Systems states:

*PAME welcomes the Secretariat’s submission of the Arctic Shipping Data Service (ASDS) Draft Project Plan and requests that the Secretariat, in consultation with AIS technical experts identified by member governments,* ***further develo9p the draft intercessionally for consideration at PAME II-2015.*** *Member governments are invited to inform the Secretariat of their technical experts no later than 15 March. (*[*PAME I 2015 Working Group Meeting Report*](http://www.pame.is/images/05_Protectec_Area/2015/PAME_1/Meeting_Report/PAME_I_2015_Meeting_Report.pdf)*)*

AMSA III(B) – Arctic Marine Traffic Systems is one of the categories of recommendations from the AMSA Report. Each recommendation has a lead country or co-leads. USA and Norway are designated as co-leas for AMSA III(B) – Arctic Marine Traffic Systems and are therefore co-leads for the ASTD project. Leads are designated at PAME meetings.

The project was agreed to the PAME Work Plan 2015-2017. The Work Plan was accepted by the Senior Arctic Officials (SAO’s) of the Arctic Council member states at the Arctic Council Ministerial meeting in Iqaluit, Canada, in April 2015. The work plan states:

*Continue to pursue opportunities including, as appropriate, through the proposed Arctic Shipping Data Service (ASDS), for updating Arctic ship traffic data contained in the AMSA Report (data collected in 2005) for use in studies, assessments, trend analyses, and the development of recommendations that enhance Arctic marine safety and support protection of Arctic people and the environment etc. (*[*PAME Work Plan 2015-2017*](http://www.pame.is/images/01_PAME/Work_Plan/PAME%20Work%20Plan%202015-2017.pdf)*)*

**Expert group**A call for nomination of experts (then called AIS experts) was sent to the eight Arctic Council member states on March 12th 2015. Nominations from countries came accordingly over the course of a few months. The first teleconference was convened on June 19th and an unofficial face-to-face meeting was held in Malmö in August. The second teleconference took place on the 8th of September 2015 and the first workshop will be held in Tromsö in September. A second workshop will be planned at that venue.

**Nominated experts**

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| Country | Expert | Contact info | Office |
| USA | Brian Page | Robert.B.Page@uscg.mil | US Coast Guard – Office of Communication and Sensors Capabilities(CG-7611) |
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| Kingdom of Denmark | Omar Frits Eriksson | [ofe@dma.dk](mailto:ofe@dma.dk) | Danish Maritime Authority |
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| Canada | Patrice Côté | [Patrice.cote@tc.gc.ca](mailto:Patrice.cote@tc.gc.ca) | Transport Canada |
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| Iceland | Need nomination |  |  |
| Sweden | Need nomination |  |  |

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