

PAME II-2019: Agenda 6.7(a)

Arctic Ship Traffic Data (ASTD)

Status and next steps

PAME's Arctic Ship Traffic Data project has been in development since 2015. Its comprehensive database on Arctic shipping activities was launched in 2019. The database gives PAME, the Arctic Council, recognized Arctic research institutes and accredited academic institutions unique access to detailed data on shipping activities in the Arctic.

ASTD in PAME's 2019-2021 Work Plan:

"To further augment and refine the information contained in the ASTD as well as enhance its analytical and report generating capabilities. The ASTD was publicly launched on 7 February 2019 and the project will continue to strengthen and debug the database in response to empirical experience and user feedback."

Leads: USA, Norway, PAME Secretariat

ASTD applications

Since ASTD was launched, the PAME Secretariat has received 16 applications for access. Of those, 11 came from Arctic Council member states (4 from USA, 3 from Iceland, 3 from Norway and 1 from Kingdom of Denmark), 3 have come from Observers (Republic of Korea, WWF, Germany) 1 from a recognized research institute (National Geographic) and 1 from an accredited academic institution (University College London).

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.

ASTD Costs

The *ASTD Framework - Attachment 1* outlines access to and use of ASTD data. It describes four different access levels to data. Level 1 and Level 2 is exclusive for Arctic States that are current on their annual *pro rata* share financial contributions, but Level 3 access is for:

"Arctic States that are not current on their full annual pro rata share financial contributions; Permanent Participants; Arctic Council Subsidiary Bodies; Arctic Council Observers that have made a financial contribution of an amount decided by PAME member governments to the administration, maintenance and operation of the Network."

The Level 3 access is requested to pay a small fee for the administration, development and maintenance of ASTD, as listed below:

Nr.	Time	Cost (USD)
1.	1 month	500
2.	3 months	800
3.	6 months	1000

4.	12 months	1500
5.	36 months	4000
6.	48 months	5000

**Amounts are subject to change*

In addition, the ASTD Participant countries have agreed to pay an annual fee of 4.000 USD for the development and administration costs of the system.

Next steps

In addition to refine and maintain the ASTD database, administer the system, give access and assist all parties from answering enquiries to help using the system and its data, the ASTD System has great potential for incorporating additional functionality. Such functionality is proposed to be included in 2020, when the system has been tried and tested and “de-bugged”.

Sea ice maps:

- Consider if it is possible to set up a service with daily sea ice maps available for download, including indication of one year and multiple year sea ice if such information is readily available. A free historic sea ice service is widely sought after by industry, scientists, researchers and university students etc.
- Today only “basic” monthly sea ice coverage is available in ASTD. Playing “video” for ice change for each month by incorporating daily ice data is proposed to be incorporated in ASTD if such data is available. Data download as Shape file and Geo database files (gdb) for daily ice coverage data is proposed. Division of sea ice data into multiple year ice and one year ice to be included if possible.

Environmental layers:

It is proposed to establish an expert group that propose layers to be presented in ASTD. The layers should be chosen on the basis of important and vital information for Arctic understanding. It is important not to overflow the system with information (information pollution/overflow) as it will make the system complicated and difficult to use.

Proposed new Arctic information layers:

- Monthly environmental values and distribution maps (fish, birds etc.)
- Natural environment
 - Marine habitat types
 - Marine conservation plan
 - Currents
 - Wind
 - Ice
 - Coral reefs
 - Particular valuable areas
 - Etc.
- Valuable areas for humans and industry
 - Oil fields

- Mining
- Fishing banks
- Etc.

Accidents and spills:

Each Arctic state register accidents and spills into a registration window in ASTD. Accidents and spills will be available as a separate monthly layer in the ASTD system for download and viewing. Data and statistics will be available as monthly datasets or aggregated for the entire year. With time this dataset will become a long time series to be used to investigate trends and changes in spills and accidents in the arctic. It will become an important dataset for analyzing possible risk reduction measures and for possible transboundary safety and accident response corporation in the Arctic.

- Each Arctic state register accidents and spills for EEZ under jurisdiction of country. At the end of the year each country confirm that all data is registered and complete
- Accidents and spills will be available as a separate monthly layer in the ASTD map and it can be shown as aggregated over the year. Data download will be possible.
- Registration window with registration of:
 - Geographic coordinates (by clicking in the map or registering coordinates)
 - Accident type (grounding, collision, fire explosion etc. – list of Accident types to be agreed)
 - Spill volume
 - Substance spilled (drag down substance list – spill type list to be agreed)
 - Spill source (ship, oilrig, landbased etc)

See also:

- [ASTD website](#)
- [ASTD User guide](#)
- [ASTD Access document](#)
- [ASTD Data document](#)
- [ASTD Cooperative Agreement](#)