

Arctic Council status on implementation of the "Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic"

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EPPR

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Status on implementation

Arctic Council
status on implementation of the
“Framework Plan for Cooperation on
Prevention of Oil Pollution from
Petroleum and Maritime Activities in the
Marine Areas of the Arctic”

Draft September 13, 2016

1. Background

In 2015, the Arctic Council Ministers approved the “Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic” (Framework Plan).

In the Framework Plan the Arctic States (referred to as “the Participants”) intended to strengthen cooperation between their competent national authorities in order to facilitate implementation. In addition it was agreed to cooperate with the private sector in order to improve standards and best practices for the prevention of oil pollution in the Arctic marine environment. .

It was also agreed that the competent national authorities should seek to cooperate in the best possible way to implement the Framework Plan. Implementation may be discussed in the relevant bodies of the Arctic Council when appropriate.

The objective of the Framework Plan is to strengthen cooperation, including exchange of information, among the Participants in the field of prevention of marine oil pollution in order to protect the Arctic marine environment.

The Framework Plan applies to petroleum and maritime activities in the marine areas of the Arctic that entail a risk of oil pollution to the Arctic marine environment.

The nature of cooperation was intended to be in accordance with relevant rules of international law and with the national legislation (laws and regulations) and, as appropriate, policies of the respective States.

Regarding information on processes, regulations, policies and practices related to the prevention of pollution of the Arctic marine environment by oil, it was agreed that the Participants may request such information from other Participants.

The Participants may also respond to such requests from other Participants, either directly or through existing fora and in addition share any information of this nature that they consider may be of interest to other Participants.

As an important element of oil pollution prevention, the Framework Plan notes the intention of the Participants to carry out impact assessments – in accordance with their national legislation (laws and regulations) and, as appropriate, policies – including environmental impact and risk assessments of petroleum and maritime activity which may result in the pollution of the Arctic marine environment by oil.

The Participants intend to protect and conserve the Arctic marine environment, including wildlife, vulnerable ecosystems and ecosystem services, while regulating or engaging in petroleum and maritime activities in the marine areas of the Arctic, in accordance with their national legislation (laws and regulations) and, as appropriate, policies.

The Framework Plan is not legally binding and does not create any rights nor obligations for the Participants under international law.

Nothing in the Framework Plan, including the exchange of information provisions, affects the respective positions of the Participants on the Law of the Sea in the marine areas of the Arctic or other marine area.

In the Iqaluit Declaration Ministers “Welcome the Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic,” and decide through Working Groups, expert-level dialogues, and further actions to prevent marine oil pollution, including regular exchanges of knowledge and experience among Arctic offshore petroleum regulators,” Since then, it was agreed between the EPPR and PAME Chairs that EPPR would have the lead on prevention. The SAO Chair and SAOs welcomed this decision at the SAO meeting in Anchorage (October 2015).

2. Status of progress on initiatives related to prevention of oil pollution from Arctic petroleum activity

2.1 Develop an overview of measures for improved safety.

Recommendation

cooperate to develop an overview of the existing and potential technical and operational safety measures specifically designed to prevent oil pollution in the Arctic marine environment from offshore petroleum activity.

Status

EPPR

In December 2015 at the EPPR Working Group Meeting, Norway provided a presentation on a Norwegian led report responding to section 2.1 of the Framework Plan titled, "Overview of Measures Specifically Designed to Prevent Oil Pollution in the Arctic Marine Environment from Offshore Petroleum Activities". Norway sponsored the report, hiring Proactima to gather international input, including from Arctic states. The report is complete and Norway presented it to EPPR for adoption under its Prevention portfolio. EPPR will seek approval by the AC in advance of the SAO meeting in Portland, Maine. Norway has also made the report available to the AORF, and they may independently decide to move forward with the report.

2.2 Promote standardization activities.

Recommendation

- a) promote the development of standards and/or best practices relevant to the prevention of oil pollution in the Arctic, e.g., well design, source control, capping, containment and other technical and operational measures;
- b) assess whether existing and proposed standards for petroleum activity are sufficient to meet Arctic challenges; and
- c) support participation of technical experts in the efforts referred to in this section.

Status

EPPR

In June 2015, EPPR approved the project (co-led by Norway and the U.S.) “International standards for petroleum, offshore-oil and maritime industries.” The aim of the project is to give a brief introduction to how standards for the petroleum-, offshore- and maritime industry are developed, how they are maintained and followed up. A comprehensive report with a description of the processes related to standardization is under development. In addition to this, an easy to understand summary report will be prepared for submission to the Arctic Council Ministerial Meeting in 2017.

The document is intended as an aid to understanding the processes and organizations involved in developing standards that are relevant to the petroleum industry. To increase awareness of the overall standards process, and to establish a dialogue between the Arctic Council and industry regarding how standards are identified, developed and maintained, including future needs for Arctic standards, a joint EPPR-IOGP workshop took place in June 2016 . The agenda addressed the need for standardization, identification and development of standards for the Arctic.

The report “Standardization as a Tool for Prevention of Oil Spills in the Arctic” (Revision No. 04, dated July 30, 2016) was received by Norway as a final deliverable from the contractor (Proactima AS). The report, which describes how engineering and technical standards are identified, developed, established, and maintained, represents an intensive a one-year effort involving Arctic Council member states, with significant review and input by industry. The Arctic Council Co-leads and industry interface occurred through telephone conferences, written communication, and a formal public workshop. The final report includes information on international organizations and their roles in standardization work, national standardization systems and organizations sorted by country, and classification societies. A synopsis of the report will be prepared as a Ministerial deliverable.

CAFF

In relation to part (c) CAFF is currently working to implement recommendation #4 from the Arctic Biodiversity Assessment (ABA) which is focused on the mainstreaming of Arctic biodiversity and requires the incorporation of biodiversity objectives and provisions into all Arctic Council work and encourage the same for on-going and future international standards, agreements, plans, operations and/ or other tools specific to development in the Arctic. Implementation of this recommendation requires establishing a clear framework that defines and develops biodiversity objectives and provisions (biodiversity principles) in the Arctic context; including practical approaches and tools for incorporating biodiversity principles into Arctic Council work and for broader application as outlined in Recommendation #4.

2.3 Strengthen cooperation of national regulators.

Initiative

a) promote cooperation between competent national authorities on issues concerning the prevention of Arctic marine oil pollution from petroleum activities.

Status

General information

With the establishment of Arctic Offshore Regulators Forum, national regulators have a forum to exchange information, collaborate, and promote cooperation in the area of prevention.

Petroleum Safety Authority (PSA), Norway

The Arctic Offshore Regulators Forum (AORF) was created in 2015 to promote cooperation between the national authorities on issues concerning the prevention of Arctic marine oil pollution from petroleum activities. The inaugural meeting was held in Washington D.C. in April 2015. There have been subsequent meetings in October 2015 and April 2016. The next meeting will be in St. John's, Newfoundland in October 2016. The AORF is open for membership from the relevant petroleum authorities within the Arctic nations. The chair of the AORF follows the chair nation of the AC, currently U.S.A. Although there is no AORF website, information is posted on some of the regulators websites, e.g. BSEE/USA and PSA/Norway. The terms of reference for AORF are available at the following site: <https://www.bsee.gov/sites/bsee.gov/files/meeting-minutes/safety/aorf-terms-of-reference-final-may-2015.pdf>

3. Status of progress on initiatives related to measures for prevention of oil pollution from Arctic maritime activity

3.1 Strengthen traffic monitoring and management

3.1.1 Remote and aerial surveillance

Initiative

- a) share lessons learned and best practices from responding to/monitoring pollution incidents and operating in harsh Arctic environments;
- b) develop operational procedures for pollution patrol, ice patrol, etc. in the Arctic;
- c) explore possible exchange of personnel for familiarization tours as part of the crew;
- d) explore the possibility of coordination of earth observation satellites to acquire/share imagery over contiguous waters.

Status

General information

The eight Arctic nations formally established the Arctic Coast Guard Forum which is a venue for operational practitioners to share information and best practices, conduct joint Arctic operations and exercises, and collaborate on tactical Arctic issues.

CAFF

In relation to part (d) CAFF, through its Circumpolar Biodiversity Monitoring Programme (CBMP) is creating a framework to harness remote sensing potential for use in Arctic biodiversity monitoring and assessment activities and to produce a series of satellite-based remote sensing products focussing on the circumpolar Arctic. MODIS satellite products of relevance to Arctic processes are being converted to a more Arctic-friendly projection, facilitating a top-of-the-world analysis perspective organised after marine, coastal, terrestrial and freshwater ecosystems.

Norwegian Coastal Administration (NCA)/Norwegian Oil Spill Associated for Operating Companies (NOFO)

In the project “Oljevern 2015”, conducted by NCA and NOFO, one of the topics examines how to understand satellite images with oil in ice. This is also related to aerial surveillance and observation of oil in ice.

3.1.2 Enhancing cooperation on maritime risk assessments.

Initiative

- a) exchange experience and best practices of data collection and analysis for maritime risk assessments;
- b) exchange maritime traffic and environmental sensitivity data and associated methodologies; and
- c) explore the possibility of developing a common and publicly accessible database of Arctic maritime traffic and environmental sensitivity data.

Status

CAFF

In relation to parts (a), (b), and (c) CAFF has been developing the Arctic Biodiversity Data Service (ABDS – www.abds.is). The ABDS is the data-management framework for CAFF and is an online, interoperable data management system which serves as a focal point and common platform for all CAFF programs and projects as well as a dynamic source for up-to-date circumpolar Arctic biodiversity information and emerging trends. The goal of the ABDS is to facilitate access, archiving, analysis and display of biodiversity information for scientists, practitioners, managers, policy makers and others working to understand, conserve and manage Arctic wildlife and ecosystems. It ensures that biodiversity data generated by CAFF are organised and accessible to guarantee a lasting legacy.

The ABDS serves as the Arctic node for with UNESCO's Ocean Biogeographic Information System (OBIS) and the Global Biodiversity Information Facility (GBIF) ensuring wider access and availability of Arctic marine biodiversity data. Access to the ABDS data framework will be crucial to inform any future environmental risk/sensitivity initiatives.

CAFF produces a range of products focused on the status and trends of biodiversity in the Arctic Marine ecosystems which would inform any risk and sensitivity work in the Arctic. For example, the upcoming State of the Arctic Marine biodiversity report (SAMBR) summarizes the status and trends in key biotic elements of the Arctic marine environment. The results are based on efforts to find, gather, integrate and interpret all available existing Arctic marine biodiversity monitoring datasets to improve the detection and understanding of changes in circumpolar marine biodiversity.

Norway/Norwegian Coastal Administration

Under this recommendation, Norway introduced to EPPR the project “Risk assessment methods and metadata – exchange of experience and best practice”.

Potential topics for discussion and work include, among other things:

- Map completed risk analyses in the Arctic and the methods used, quality and type of indata, comparability and compatibility of data, ownership etc.
- Discuss challenges AC countries have faced when conducting risk analyses in the Arctic and how existing risk analysis have been adapted (if at all) to the particular conditions in the Arctic.
- Discuss pros and cons and suggestions for improvement of the existing tools and methods for risk assessments. Possibly agree on a best method and set of indata to enhance and coordinate future work on Arctic risk assessments. This would make Arctic risk assessments more comparable and compatible, and also enable usage of data from sources across the Arctic countries. This, in turn, would greatly enhance the quality of Arctic risk assessments, and also ease future work with such analyses.
- Discuss and possibly agree on a set of Arctic risk factors that should be included in analyses of the Arctic. This could include a discussion on which causation factors to use for quantitative calculations in risk analyses of the Arctic. The risk matrix developed during the work with the Polar Code in the IMO could be a good basis for such deliberations. The Polar Code risk matrix lists the most important risk factors specific for the Arctic. Based on that, one could look into which factors would be of most relevance for nautical risk analyses in the Arctic.
- Develop an overview of incidents in the Arctic, and the causes thereof. Incidents statistics are an important factor for calculating risk. Because of the scarce traffic in the Arctic, national incidents statistics are likely to be inadequate and uncertain. The better statistics we have, the better the quality of the figures used in risk analyses will be.
- Based on the outcome of the above discussion, consider the need for, and feasibility of, a common database with quality assured data according to the requirements established during the work.

There is currently no funding for this project, therefore it is on hold until funding is in place.

PAME

The Arctic Ship Traffic Data (ASTD) project, led by the United States, will collect historical information about shipping activity in the Arctic for trend analysis and related purposes under the realm of the Arctic Council. The project is based on the database developed in 2005 for the 2009 Arctic Marine Shipping Assessment Report (AMSA 2009). It is therefore an initiative derived from the AMSA 2009 and builds on similar principles, but will be applying a more advanced technology for data collection, extraction, evaluation and presentation. This

project will look to secure sustainability by collecting historical shipping data on an ongoing basis, rather than collecting information a single time as the 2005 AMSA database did.

The objective is to develop a long-term, sustainable collection of Arctic shipping information consisting of a repository with selected ship traffic data provided by Arctic Council Member States and a web application/tool to extract information from the repository, allowing for trend analysis and other related uses.

The ASTD project will allow the Arctic Council Member States and the Arctic Council subsidiary bodies to facilitate trend analyses on ship traffic in the Arctic, including the number of ships in the Arctic, types of ships, routes and other relevant information. The trends can be used by the Arctic States and the Council's subsidiary bodies to inform policymakers, academics and others, as relevant, on shipping trends in the Arctic. Products will benefit a wide-range of audiences, as the data repository will allow for the production of graphics, maps and tables of ship traffic information to be used in reports/analyses and other initiatives.

Norway has developed a ship traffic database named Havbase (meaning: "Oceans database"). Havbase has an Arctic module called "Havbase Arctic" but it was first developed for Norway's ocean area for management plans purposes. Havbase is open for public viewing (www.havbase.no), however much of the functionality in Havbase is reserved for users with a username and password (log in). Today Norwegian governmental institutions, and several scientists with the Arctic as a research area, have access to the data.

The ASTD-EG has noted that Havbase meets most of the identified system requirements in the ASTD project. In addition, it offers additional solutions which could be useful to PAME and other working groups under the Arctic Council, including the calculation of emissions from ships and fuel type used by ships. Havbase is operated by the Norwegian Coastal Administration and is therefore a government-owned and operated system.

A data expert group under PAME recommends to build on Havbase in the ASTD project. The expert group has concluded that Havbase can be customized to meet the purpose and objectives for PAME and other working groups in the Arctic Council. To use Havbase as a platform for development has many advantages:

- Investment and running cost will be lower compared to the alternatives
- Faster development time as we already have a platform to build on
- Several years of high quality data already stored in the database

A formal decision whether the ASTD project will use Havbase as a platform for further development will be taken on a PAME working group meeting in Main in the USA in September 2016.

3.2 Improve maritime services

3.2.1 Navigational charts

Initiative

- a) explore coordination of hydrography and mapping surveys to improve the safety of Arctic shipping; and
- b) exchange experiences and best practices on hydrography and nautical charting in the Arctic.

Status

United States

In the summer of 2016, the US Coast Guard and the Canadian Coast Guard are conducting joint extended continental shelf mapping operations in the Arctic.

3.2.2 Improve meteorological and oceanographic forecasts

Initiative

- a) exchange experience and best practices in the field of forecasting meteorological, oceanographic and ice related conditions and hazards as well as regarding climatological ice and metocean information; and
- b) improve methods, standards and systems for detecting and monitoring metocean and ice related conditions, and distributing this information, when appropriate, in a timely manner between Participants and communities throughout the Arctic.

Status

[Please insert relevant text here, using above format. Bold name of WG/organization, followed by paragraph of running text.]

3.2.3 Broadband and satellite communications

Initiative

Exchange information on relevant systems of broadband and satellite communication to improve safety of navigation in the Arctic.

Status

Norwegian Space Centre

The Task Force Telecom in the Arctic (TFTIA) was formally established in September 2015 and will conclude its work with a report to the SAO meeting in Juneau (February 2017) and the Arctic Council Ministerial Meeting in May 2017.

The TFTIA mandate prescribes the deliverables should include:

- A circumpolar assessment of telecommunications and network infrastructure; and
- Recommendations on public-private partnerships that will enhance telecommunications in the Arctic

TFTIA have also coordinated relevant activities with the Arctic Economic Council.

Several initiatives related to satellite communications systems covering the Arctic have been initiated over the recent years, and a few are under construction. Iridium NEXT (US) will replace its existing system with a first launch from Q3/2016, based on satellites with increased bandwidth (still narrowband) compared to the existing Iridium low earth orbit (LEO) system. Iridium NEXT will include capacity for Global Maritime Distress and Safety System (GMDSS) as well as air traffic management capacity for Automatic Dependent Surveillance –Broadcast (ADS-B). OneWeb (US/UK) is another LEO system planning to provide global broadband to users. The system may be available from around 2020. However, several technical, financial and regulatory challenges remain to be handled before such a megaconstellation can be launched with 648 satellites.

Other systems may also be implemented and operational from 2020-2025, with more targeted coverage of the Arctic areas, either regional or pan-arctic. Both Canada and Norway have concrete plans for polar broadband solutions aimed at governmental and commercial users, be it on land, in the air or at sea. Such systems may provide narrowband and/or broadband communications capacity comparable to what is available through existing geostationary satellites/systems.

The use of VHF for maritime narrowband data communications (ship-ship or ship-shore) may include the addition of VHF Data Exchange (VDE) via satellite. The 2-way data communication will use frequency bands close to the AIS frequencies, and will allow for equipment onboard that may combine both AIS and VDE RX/TX functionality. A Norwegian VDE demonstration satellite, Norsat-2, is under construction and launch is planned for Q1/2017. Provided successful demonstration of the technology and selected services supporting the e-Navigation Maritime Service Portfolio (MSP), the satellite based VDE communication may be fully adopted by the ITU at the World Radio Conference in 2019.

Norwegian Coastal Administration

Maritime Broadband Radio

The Norwegian Coastal Administration has invested in several Maritime Broadband Radios. The radio is used for seamless data communication between vessels, surveillance aircrafts

and land based facilities. The IP connectivity secures seamless exchange and sharing of data between assets with no latency, as well as possibilities to stream live HD video and voice without any further conventional infrastructure. Effective operational range between vessels exceeds 50 km, and between vessels and aircrafts up to 250 km, depending on a/c altitude. The effective bandwidth is 7 Mbit throughout the entire operational range. NCA considers to develop and establish a network of land-based radios connected to the internet. Encrypting the data stream is possible through end – to – end encryption.

[Please insert relevant text here, using above format. Bold name of WG/organization, followed by paragraph of running text.]

3.2.4 Prevention of marine incidents that could result in oil pollution

Initiative

a) develop a catalogue of existing resources (tug boats, tow packages, ship arrestors, mooring buoys, etc.) that may play a role in minimizing the potential for, and the environmental impact of, a marine incident that could result in oil pollution, and to assess the adequacy of such resources.

Status

EPPR

Through a U.S.-led initiative, a searchable database has been developed that includes Arctic specific oil spill response equipment. The database includes traditional oil spill response equipment such as boom, skimmers, dispersants, oil spill response vessels, dispersant application systems, in situ burn equipment – all of which were identified through internet searches, direct contact with oil spill removal organization, and Arctic Council member states' completion of a specific survey to help populate the database. The scope of this initial project and contract did not provide for the types of equipment (tug boats, tow packages, mooring buoys, etc.) envisioned by the members of TFOPP; however, the software system would lend itself, with minor modification, to the addition of any types of equipment once such data was compiled. At this time there is no specific funding, lead country, or pending initiative to pursue the TFOPP catalogue of marine resources and the assessment of their adequacy.

3.2.5 Navigation in ice conditions

Cooperation intentions

a) exchange best practices and any other relevant information on national requirements and, when appropriate, industry standards for navigating in marine areas of the Arctic in ice conditions.

Status

[Please insert relevant text here, using above format. Bold name of WG/organization, followed by paragraph of running text.]

3.2.6 Icebreaking and ice-management services

Initiative

a) exchange best practices and information on existing icebreaking and ice-management services.

Status

Norway/Norwegian Coastal Administration (NCA):

Representatives from NCA are participating in Baltic Icebreaking Management (BIM), which includes representatives from the Scandinavian countries and Baltikum. In these annual meetings, countries exchange knowledge and experiences on ice-management.

United States

The United States has engaged in Polar Icebreaker dialogue with several Arctic nations, and conducted joint icebreaking training with Canada and Finland. In addition, the newly formed Arctic Coast Guard Forum provides a venue for operational information exchange.

3.3 Reduce risks associated with use and transport of heavy fuel oil.

Initiative

a) explore and pursue ways to reduce the environmental risk posed by transportation, storage or use of heavy fuel oil by ships in the Arctic.

Status

CAFF

One way to reduce environmental risk posed by transportation concerns the identification of vulnerable and sensitive areas. CAFF, in partnership with the AMAP and SDWG released the AMSA IIC report on the Identification of Arctic marine areas of heightened ecological and cultural significance. The report identified ecologically and culturally significant marine areas that are vulnerable to marine vessel activities in the Arctic in light of changing climate conditions and increasing multiple marine use. CAFF has also worked to support the identification of Ecologically and Biologically Sensitive Areas (EBSA) in the Arctic by the United Nations Convention on Biological Diversity (CBD). Information collected to inform identification of these areas can be found on the Arctic Biodiversity Data Service (ABDS).

PAME

As a follow on to HFO Project Phase I and II, PAME has begun Phase III a project to develop a compendium of case study information on maritime incidents in the Arctic that resulted in a spill or release of HFO and the environmental impact thereof. This project is co-led by the United States, Norway and Canada.

Norway/Svalbard

There is a ban on heavy fuel oil to prevent spill of HFO in the Svalbard area.

It is prohibited to bring or use heavy fuel oil in:

- Northeast Svalbard Nature Reserve
- Southeast Svalbard Nature Reserve
- Northwest Spitsbergen National Park
- Forlandet National Park
- South Spitsbergen National Park

In addition it is also prohibited to sail with heavy fuel oil to Ny-Ålesund and Magdalenefjorden on the west coast of Svalbard. In total about 80% of the Svalbard area is covered by the ban.