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EPPR ARCSAFE to SAO – January 2019

Suggested contents for an illustrated “ARCSAFE Summary Status Report” to be approved by SAOs and submitted to the May 2019 Ministerial Meeting.

EPPR ARCSAFE Summary Status Report

Arctic council – EPPR cross-country cooperation network(s) to improve emergency prevention, response and the safety of rescue workers in case of a maritime accident involving a potential release of radioactive substances in the Arctic (ARCSAFE)

Introduction

Ship traffic in the Arctic includes nuclear-powered vessels, ships transporting spent nuclear fuel and high-level radioactive waste, and it is foreseen that a floating nuclear power plant will become operational in 2019. The need for generating electric power to support growing Arctic industry activities at remote locations may also include new technologies, such as small modular nuclear reactors for surface or submerged use.

The presence of radiological and nuclear material in the Arctic poses a risk for serious incidents or accidents that may affect Arctic inhabitants and their communities, the Arctic environment, and Arctic industries, including traditional livelihoods such as fisheries and local food sources.

ARCSAFE goal

The goal of the ARCSAFE project is to promote cooperation among the Arctic Council States to strengthen cross-border prevention, preparedness and handling of maritime incidents or accidents which may involve a potential release of radioactive substances to the Arctic environment.

ARCSAFE mandate

- Serve as an arena to promote cooperation and networking activities among Arctic Council Member States and Permanent Participants to strengthen the cross-border prevention, preparedness and handling of maritime emergencies which may involve a potential release of radioactive substances in the Arctic.
- Disseminate information and complement ongoing work in this area undertaken by other relevant international bodies such as the International Atomic Energy Agency (IAEA), the United Nations International Maritime Organization (IMO), and other Arctic Council working groups.

Expected outcome

The ARCSAFE project will serve as an arena to bring together national and international authorities and stakeholders to promote cross-border networking, experience exchange, and promote participation in joint exercises, with the aim of preventing accidents and incidents and improving the preparedness and handling of potential accidents in the best possible way from risk assessment to the elimination of consequences.

ARCSAFE partners

To fulfill the ARCSAFE mandate, the Kingdom of Denmark, Norway, the Russian Federation, Sweden, and the USA are leading work within the Arctic Council Emergency Prevention Preparedness and Response (EPPR) Working Group.

At present, the ARCSAFE partners are:

Norwegian Radiation and Nuclear Safety Authority (DSA, Norway, ARCSAFE lead)

Norwegian Coastal Administration (NCA, Norway)

Joint Rescue Coordination Center North-Norway (JRCC-NN, Norway)

United States Department of Energy (US-DOE, USA)

The State Atomic Energy Corporation ROSATOM (Rosatom, Russian Federation)

Swedish Radiation Safety Authority (SSM, Sweden)

Swedish Civil Contingencies Agency (MSB, Sweden)

Danish Emergency Management Agency (DEMA, Kingdom of Denmark)

ARCSAFE format:

The ARCSAFE project serves as an arena for sharing knowledge and experience between the Arctic States and Permanent Participants, and Arctic Council Observers. Project meetings are held in conjunction with EPPR meetings to facilitate participation by relevant delegates. The project partners meet to undertake specific activities such as technical workshops, joint exercises and intersessional work. Although ARCSAFE is a radiation project, with intended participation from national radiation authorities from all Arctic States, a potential maritime incident involving radiological or nuclear material would call for coordinated handling across sectors. Partnership between the Norwegian Coastal Administration and the Joint Rescue Coordination Center North-Norway (JRCC-NN) facilitate cooperation and sharing of knowledge between radiation authorities and marine environmental response (MER) and search and rescue (SAR) authorities within EPPR and to relevant stakeholders outside the Arctic Council family.

ARCSAFE activities

Emergency prevention, preparedness and response to radiological or nuclear emergencies falls under the authority of relevant national and international regulations and agreements. However, due to the unique challenges posed by potential maritime emergencies in the Arctic, there is a continuous need for cross-border cooperation, information exchange, sharing of expertise, and improving joint response plans to maximize the use of available resources. This includes topics such as possible risks and consequences, emergency response and operational capacities, safety guidelines for emergency workers, and communication and interaction between responding authorities, stakeholders and the public.

ARCSAFE activities include knowledge exchange at annual project meetings in conjunction with the first EPPR Working Group meeting every year, ARCSAFE technical workshops, and intersessional work such as the ARCSAFE sub-project RADSAR and cooperation and dissemination of findings outside of EPPR. Examples of ARCSAFE activities include:

ARCSAFE Technical Workshop in Vologda 2017

The first ARCSAFE Technical Workshop took place in Vologda, Russian Federation in June 2017 on the margins of the EPPR working group meeting. Attendance included MER, SAR and RAD experts from the Arctic States, one Permanent Participant (the Aleut International Association), and the IAEA. The theme of the workshop was “Response to an accident involving a radiological release from a ship”. The goal of the workshop was to exchange information to strengthen the cross-border prevention, preparedness and response to maritime incidents or accidents which may involve a potential release of radioactive substances.

ARCSAFE Project Meeting in Helsinki 2018

As part of EPPR Working Group meeting in June 2018, the ARCSAFE project meeting included country updates and invited presentations on floating reactors, nuclear icebreakers, maritime transport regulations, and updates from EMERCOM and the OSPAR Radioactive Substances Committee. Discussions included presentations by IAEA on the potential establishment of an EPPR radiation expert group and the potential need for an Arctic cooperation agreement on the handling of maritime radiological/nuclear emergencies.

ARCSAFE Intersessional Work: RADSAR

The ARCSAFE sub-project “Sharing of competence within Search and rescue in a maritime radiological/nuclear scenario” (RADSAR) was approved by EPPR in June 2018. The project is funded by the Norwegian Ministry of Climate and the Environment and led by JRCC-NN. The goal of RADSAR is competence building through sharing of knowledge and experience between the Arctic States on issues such as operational handling of SAR/RN emergencies by the Rescue Coordination Centers (RCCs), training, equipment, organization, and information flow between SAR organizations and RN specialists. During the meeting in Helsinki, Finland provided presentations on search and rescue in a radiological/nuclear scenario.

The project also includes a workshop and table-top exercise on RADSAR as part of the EPPR meeting in Bodø, Norway in June 2019. A final project report will be presented for approval at the EPPR meeting in June 2020 and made available in the Arctic Council Open Access Archive.

ARCSAFE Intersessional Work: Outreach

Examples of outreach activities include presentations at international conferences and relevant fora, such as the X- and XII International Nuclear Forum (St. Petersburg, 2015; 2017), the Arctic Council’s EPPR Arctic Spill Response Research and Technology Workshop (Reston, 2017), the OSPAR Radioactive Substances Committee (Geneva, 2017), the Nordic-Russian cooperation on emergency preparedness and response (Novovoronezh, 2017; Oslo, 2017), and the International Conference on Emergency Prevention and Response in the Arctic (Murmansk, 2018).

ARCSAFE key findings:

- The organization of emergency response in case of a radiological accident at sea differs considerably from country to country. Response to such scenarios may be very complex and challenging, and require close cooperation between several authorities.
- Depending on type of response unit, there may be lack of training and necessary protective gear and radiological measuring equipment. Deployment of special response units that normally operate on land may require special arrangements for e.g. transport and communications that need to be exercised.



- There is a risk that emergency response may be compromised due to lack of knowledge and a heightened perceived risk among emergency workers and emergency helpers.
- There is a need for joint exercises and trust building between RN experts and emergency workers / emergency helpers.
- Regarding the transport and deployment of floating nuclear power plants in the Arctic, there is a need for detailed technical information, hazard assessment(s) and development of detailed technical guidance for proper emergency prevention and response, including security and specific features of the area.

ARCSAFE upcoming activities

On the margin of the EPPR Working Group Meeting June 3-6, 2019 in Bodø, Norway the following ARCSAFE and ARCSAFE-related activities will take place:

ARCSAFE Technical Workshop (June 3) and ARCSAFE Project Meeting (June 4)

- ARCSAFE sharing of knowledge - Country updates and Invited presentations
- RADSAR Workshop Session - “SAR in a maritime radiological/nuclear (RN) scenario - Sharing of competence”
- Presentation of work on the possible establishment of an EPPR Radiation Expert Group
- Discussions on the potential need for an Arctic States agreement on the handling of maritime radiological emergencies in the Arctic

RADEX 2019 (June 3)

- Table-top exercise with ARCSAFE/RADSAR-scenario

ARCSAFE Contact Information

EPPR Secretariat and EPPR Chair

EPPR ARCSAFE Project Lead