

**Emergency, Preparedness, Prevention, Response
EPPR Working Group**

Report to the SAO Meeting

November 12 – 13, 2009

Copenhagen, Denmark

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1. Introduction

The mandate of the Emergency Prevention, Preparedness and Response Working Group (EPPR) is to deal with the prevention, preparedness and response to environmental emergencies in the Arctic. Members of the Working Group exchange information on best practices and conduct projects to include development of guidance and risk assessment methodologies, response exercises, and training. The EPPR Work Group mandate is refined biennially through Ministerial Declarations and is further shaped by guidance from Senior Arctic Officials. The goal of the EPPR Working Group is to contribute to the protection of the Arctic environment from the threat or impact that may result from an accidental release of pollutants or radionuclides. In addition, the Working Group considers questions related to the consequences of natural disasters.

The EPPR Working Group is an expert forum designed to:

- Plan and prepare for response to accidents;
- Develop strategies and tasks to prevent accidents;
- Enhance best practices; and
- Focus on the environmental implications of emergencies involving oil, hazardous and noxious substances (HNS), radiation, and natural disasters in the Arctic.

2. Direction from the Tromsø Ministerial Declaration

The 2009 Arctic Council Ministerial Meeting in Tromsø, Norway endorsed activities relevant to EPPR for the timeframe of 2009-2011 as follows:

Arctic Marine Environment

Approve the Arctic Marine Shipping Assessment (AMSA) 2009 Report including its recommendations on enhancing Arctic marine safety, protecting Arctic people and environment and building Arctic marine infrastructure and **request** Senior Arctic Officials (SAOs) to develop appropriate follow up actions,

Note that increased marine access and navigation in the Arctic Ocean calls for development and implementation of suitable national and international regulations, where appropriate, to advance the safety of Arctic marine shipping, including marine pollution prevention, reduce accident risk, and facilitate effective emergency response,

Encourage active cooperation within the International Maritime Organization (IMO) on development of relevant measures to reduce the environmental impacts of shipping in Arctic waters,

Urge that the ongoing work in the IMO to update the Guidelines for Ships Operating in Arctic Ice-Covered Waters be completed, application of its relevant parts be made mandatory, and global IMO ship safety and pollution prevention conventions be augmented with specific

mandatory requirements or other provisions for ship construction, design, equipment, crewing, training, and operations, aimed at safety and protection of the Arctic environment,

Welcome the new Arctic Council project on “Development of safety systems in implementation of economic and infrastructural projects in the Arctic”, noting its comprehensive character and importance in minimizing the risks of increased human activity,

Approve the establishment of a task force to develop and complete negotiation by the next Ministerial meeting in 2011 of an international instrument on cooperation on search and rescue operations in the Arctic,

Approve the revised Arctic Council Offshore Oil and Gas Guidelines and **urge** all States to apply these Guidelines throughout the Arctic as minimum standards in national regulations,

Human Health and Human Development

Recognize that education, outreach, scientific research, traditional knowledge and capacity building are major tools to address challenges in Arctic communities and **recommend** that, where relevant, Arctic Council projects include these elements,

Recognize that the University of the Arctic (UArctic), a network of higher education institutions in the Arctic, is an effective partner to promote the sustainable development of the region, and **welcome** its new mechanisms to further fund activities,

Energy

Approve the findings and recommendations of the assessment of Oil and Gas Activities in the Arctic: Effects and Potential Effects,

Emphasize that while there has been significant progress in technology, management, and regulations that have greatly reduced the impact of oil and gas activities, environmental risk cannot be eliminated,

Decide to strengthen cooperation on prevention of, and response to, accidental spills of oil and hazardous substances in the Arctic,

Urge Member States to apply the precautionary approach and polluter-pays principle as reflected in Principles 15 and 16 of the Rio Declaration, respectively, and conduct risk and environmental impact assessments for the exploration, development, transport and storage of oil, and enact and/or enforce appropriate laws and controls,

Recognize that environmentally sound oil and gas activities may contribute to sustainable development of the Arctic region

Based on the directions and instructions from the Tromsø Ministerial meeting and in accordance with EPPR’s work plan, EPPR has continued working on existing projects and is developing

projects to address new areas, in particular issues identified in the Arctic Marine Shipping Assessment.

3. EPPR Working Group Activities

Meetings

The EPPR working group held its annual meeting in Las Vegas, USA from 17.-19. March 2009. Mr. Johan Marius Ly (Norway) chaired the meeting, and Mr. Igor Veselov (Russia) was Vice Chair. At this meeting, it was agreed that EPPR should meet twice a year: once in a full annual meeting as was conducted in March, and once where heads of delegation are required but other participants can join at their option. Aiming for efficiency, the smaller semiannual meeting was to be in a convenient location and if possible back to back with another Arctic Council meeting. The first semiannual meeting will be held November 10-11 in Copenhagen, just prior to the SAO meeting. Mrs. Ann Heinrich (USA) chairs the work group through the 2011 Ministerial meeting, and Mr. Ole Kristian Bjerkemo (Norway) is vice-chair.

The EPPR annual meeting was held in Las Vegas, Nevada, the home of the U.S. Department of Energy's Nevada Site Office and Remote Sensing Laboratory, where many of DOE's response assets for radiological events are developed and maintained. We exchanged information on capabilities for radiological response, including plume modeling, geographic information systems, specialized radiological search equipment and methodologies. Some of these technologies are incorporated into EPPR projects related to radiological emergency preparedness and response. The working group also visited some of the facilities that support emergency response for radiological and hazardous materials. This exchange of information has led to the development of project proposals for training in radiological response that the U.S. will present at the November EPPR meeting in preparation for a formal submittal.

Strategic Plan

EPPR is in the process of updating its Strategic Plan. An update of the existing plan was needed to position EPPR to respond more effectively to Ministerial Declarations and to the ongoing work of other Work Groups. A draft plan was developed by Norway, Canada, Russia and the US and will be discussed at the November EPPR meeting.

Collaboration with Permanent Participants, other Arctic Council Working Groups, and Other Relevant Bodies

To increase effectiveness and minimize duplication, EPPR works with Arctic Council entities and other organizations with the common goal of addressing the Arctic perspective in emergency preparedness and response. EPPR will cooperate with other organizations by:

- Working together with AMAP and CAFF the Arctic Council Spatial Strategy

- Maintaining liaison with PAME and support relevant PAME projects as a follow up to the AMSA report
- Maintaining liaison with the University of the Arctic
- Maintaining liaison with Nordic Mapping Agencies on their project on Arctic Mapping
- Undertaking activities with the Northern Forum that support the EPPR agenda
- Maintaining liaison with the oil industry and other relevant organizations with the aim to enhance oil spill prevention and preparedness in the Arctic

Activities Within Oil and Gas

Co-operation on oil spill and HNS response in the Arctic

To consider the existing regional agreements in relation to the future challenges in the Arctic based on oil and gas activity and shipping, the project “Co-operation on oil spill and HNS response in the Arctic” was initiated this year. The background for the project is and the gap-analysis prepared by EPPR in 1997.

The November EPPR meeting will open with a workshop, the first activity under this project. The workshop will address recommendations from the AMAP Oil and Gas Assessment (2007) and the Arctic Marine Shipping Assessment which encourages improvement in bilateral and multilateral cooperation for oil and HNS response among Arctic nations. Discussions in this workshop will focus on the current status of response capabilities, existing agreements and arrangements, identified gaps, and planned next steps for EPPR.

Behavior of oil and other hazardous substances in Arctic waters (BoHaSa)

Responding to a request in the Salekhard Declaration to synthesize knowledge and expertise on the behavior of oil and other hazardous substances in Arctic waters and to promote the development and use of technologies and working methods that improve the capability to respond to accidents, Norway developed a proposal that EPPR accepted in 2008. The project was initiated in 2009 and will be finalized before the 2011 Ministerial meeting. Funding for the project has been challenging. An update on progress will be presented at the November EPPR meeting.

Activities Addressing Oil and Gas and Radioactivity

Development of Safety Systems in Implementation of Economic and Infrastructural Projects

The Russian Federation is the lead for Development of Safety Systems in Implementation of Economic and Infrastructural Projects. The significant activity under the project was the conduct of an international exercise, “Barents Rescue 2009,” which was held in the Murmansk region of Russia from September 8-10, 2009. Barents Rescue 2009 was the first large-scale international exercise to have been implemented in the Arctic under existing cooperation between Arctic countries in Barents region. In total, 384 people took part in the exercise, including search and rescue crews, fire teams, police teams, engineer teams, aircraft and helicopter crews. In addition,

47 units of equipment, including fire boats, aircrafts, and helicopters from the Russian Federation were mobilized. Russia, Finland, Norway and Sweden took part in the exercise.

The objectives of “The Barents Rescue 2009” was to test the operational utility of existing cooperation, to improve information exchanges, to test the level of coordination of activities that are required, and to learn from the practical experiences of coordination and rescue services in the Barents region and how these can be used in cases of emergency.

The exercise achieved the following objectives:

- Tested the efficiency of the system of mutual warnings and the interaction and coordination of rescue services in the Barents region in an emergency;
- Evaluated the distribution and exchange of information at all levels;
- Improved the readiness of rescue teams to respond to different emergency cases;
- Checked the accuracy of time the periods which were assumed to be needed by rescue teams to arrive at the scene of the accident;
- Improved the skills of executive officers in directing the group of rescue teams during varying emergency situations;
- Trained on the practical interaction between rescue teams during varying emergency situations;
- Exchanged and summarized practical experiences in developing and implementing international exercises.

The exercises consisted of five stages with various challenging emergency management aspects:

1. Emergency response by Murmansk-based EMERCOM to a radioactive emission resulting from the destruction of a waste container.
2. Joint actions by Murmansk-based EMERCOM and Norway’s Rescue Services in response to an emergency at sea.
3. Joint actions by Murmansk-based EMERCOM and the rescue services of neighboring countries in response to a large traffic accident involving the threat of radioactive contamination.
4. Joint actions by Murmansk-based EMERCOM, and rescue services of Finland and Sweden in response to a large forest fire in the border region.
5. Joint actions by Murmansk-based EMERCOM and rescue services of neighboring countries in response to a fire on board a ship and an oil spill at sea.

The exercise event is now under analysis. Recommendations will be developed for further improve interactions in real emergency situations. A concluding conference where recommendations will be discussed and adopted is planned for November 22, 2009. The recommendations will also be discussed at the next EPPR meeting.

Arctic Rescue

The Russian EPPR project Arctic Rescue continued with the seminar “Prevention and Elimination of Emergency Situations in the Arctic” held in Anadyr, Russian Federation on August 19-20, 2009. The conference was attended by 68 people from 5 countries and one International Organization and afforded participants an opportunity to discuss many issues related to emergencies in the Arctic.

The conference, led by EMERCOM, is an Arctic Rescue initiative conducted to increase domestic and international awareness of emergency response issues in the Arctic and unite efforts to increase global prevention, response, and recovery capabilities. These issues are of great importance due to the likelihood that the number of emergencies and the complexities of emergencies in the Arctic will increase in the near future as a result of continuing climate change and increased development in the Arctic. These incidents will be both natural and technological and will require increased response efforts. Themes discussed during the conference were:

- The need to carefully balance development in the Arctic, including increased industry presence, and the protection of the environment;
- The need to leverage scientific research efforts to mitigate operational challenges in the Arctic; and
- The necessity for multi-use platforms to maximize resource utilization in the Arctic.

Presentations and discussions during the conference focused on three topical areas:

- Prevention and coordinated elimination of emergency situations in the Arctic;
- Development of search and rescue systems in the Arctic;
- Problems in prevention and elimination of radiological emergency situations in the Arctic.

The outcomes of the conference and next steps will be discussed at the November EPPR meeting.

Activities Related to Radiation

Source Control

The source control prevention project will continue with analysis of transportation of radiation hazardous materials at Russia’s Scientific and Research Institute of Atomic Reactors. This next phase of the project will include application of the Risk Assessment methodology, and will be conducted through 2010.

Exercises

An emergency exercise will be conducted in July 2010 at the Nerpa Shipyard in the Murmansk region.

Crisis Center Support

Technical Work will continue through 2009 to enhance radiological technical support to EMERCOM's National Crisis Situation Management Center, including development of databases, manuals, and procedures for interfacing with multiple agencies.

Community Radiation Information

The Community Radiation Information Project is continuing with development of tools to help specialists communicate radiation and emergency information with the public and media.

Portable Analysis Capability

Three additional Rosatom facilities will be outfitted with site specific software to model airborne radiological dispersion and contamination from an accident, providing critical information to decision makers.

Additional technical projects for EPPR to sponsor to improve capabilities to analyze and respond to radiation related incidents or accidents were approved by EPPR at the March 09 meeting. These projects continue the focus on improving emergency response capabilities in the Arctic modeling of airborne radiation dispersion, emergency radiation data collection and analysis, and training.

The projects are:

- Emergency Rescue team Equipment. The aim of the project is to upgrade the equipment of the Emergency Response Team at the Zvezdochka facility and enhance the level of preparedness to radiation accidents following the results of the "Arctic-2008" exercise conducted at the facility.
- Radiation Survey Simulation System. The aim is to develop a site-specific modeling system for training and exercise purposes to simulate a radiological accident at two specific facilities.

Activities within Natural Disasters

Managing the cold conditions – a systematic approach

The project "Managing the cold conditions – a systematic approach" aims to build up the capacity for cold protection as part of the regional and interregional Emergency and Rescue Services in the Barents Region. Lead by Finland, an application for finances was sent to the European Commission in 2009. It is anticipated that the project period would span 2009-2011. Local partners in Sweden and Finland will participate, as well as the Russian Federation. The first steering committee meeting was held in November 2008 at a national level. An international meeting will be arranged in 2009.

Northern Forum Cooperation

EPPR and Northern Forum will continue to share information regarding catastrophic flooding on Northern Rivers.

5. The 6th Ministerial Meeting

EPPR reported the following activities to the 6th meeting:

The Shoreline Cleanup Assessment Technology (SCAT) Manual lead by Canada was translated into Russian.

The Guidelines and Strategies for Oily Waste Management in the Arctic Regions project, led by Canada, was completed.

The Russian project Development of Safety Systems in the Arctic while implementing infrastructural and other Economic Projects has been approved and an exercise at the Varandey terminal was conducted.

The Russian project Arctic Rescue is an ongoing project. As a part of the project an International seminar was conducted in Dudinka, Russia.

As a follow up of the Salekard Declaration, the Norwegian project “Behavior of Oil and other Hazardous Substances in Arctic Waters (BoHaSA) has been approved. The project will start in 2009 and will be finalized in 2010 or early 2011.

The Source Control management projects for the Atomflot facility in Murmansk and the Zvezdochka Shipbuilding Center in Arkhangelsk Region have been completed. The objectives of this phase were to conduct a risk assessment and develop recommendations to reduce risks at the hazardous facilities through the application of the Risk Assessment Methodology (including ISO 14001 Environmental Management Systems principles and training). A full scale exercise was conducted at the Zvezdochka facility in July, 2008 to test the implementation and effectiveness of plans and procedures developed from the risk assessment.

The Community Radiation Information Project is ongoing under leadership of US and the Russian Federation. The main activities in this project included: conduct of an emergency public information exercise and development of recommendations from the resulting findings, and development of a training course on public communications planning. This training course is now included in Rosatom’s management training curricula.

Two brochures have been published in Russian and English: “The Far East Nuclear Technologies and Environment” and “Keeping the Public Informed in Radiological Emergency.” These publications are available on EPPR’s web page.

EPPR sponsors specific technical projects to improve capabilities to analyze and respond to radiation related incidents or accidents. These include:

- Development of portable site-customized systems for analysis, mapping, forecasting, and communicating radiation related information in an emergency. This system has been provided to 5 Russian facilities to date.
- Two software programs to model airborne radiological dispersion and contamination from an accident, providing critical information to decision makers. To date this system has been provided to thirteen radiation-hazardous facilities operated by Rosatom.

EPPR has been involved in the preparation of PAME's Arctic Marine Shipping Assessment and some of the activities related to the report (workshops and other meetings).

The following deliverables were completed by EPPR over the course of the Norwegian Chairmanship of the Council:

- Guidelines and Strategies for Oily Waste Management in the Arctic Regions
- Sponsorship of technical projects to improve capabilities to analyze and respond to radiation related incidents or accidents: portable site-customized systems for analysis, mapping, forecasting, and communicating radiation related information in an emergency have been developed for 5 sites and two software programs to model airborne radiological dispersion and contamination from an accident, providing critical information to decision makers has been developed for 13 sites.
- Brochure in the Risk and Safety series: "The Far East Nuclear Technology and Environment"
- Brochure on "Keeping the Public Informed in Radiological Emergency"
- Final Reports for the Risk Assessments at the Coastal Spent Nuclear Fuel (SNF) Reloading Facility of FSUE "Atomflot" and shipbuilding center "Zvezdochka"
- Report on the full scale emergency exercise conducted at Zvezdochka in 2008
- Revised Arctic Guide for Emergency Prevention, Preparedness and Response.

6. EPPR Working Group Administration

Secretariat

The U.S. provides Secretariat support to the Working Group. Norway provided Secretariat support to the Working Group from January 1st. 2007 and to the 2009 Ministerial meeting.

Web Page

The EPPRs homepage <http://eppr.arctic-council.org/> is currently maintained by Swedish Radiation Safety Authority. It was decided in EPPRs annual meeting in 2009 that Sweden should continue as host. EPPR will look for possibilities to make the web more user friendly. A proposal

to increase the amount of information available on the web site and to highlight more timely information will be discussed at the November EPPR meeting.

The EPPR homepage serves as the main outreach and communication tool. All EPPR-related reports, brochures, posters and other resources are available on the homepage. All of the documents are provided in English and some in Russian.

EPPR Workplan 2009 – 2011

OIL POLLUTION: L – LEAD P- PARTICIPANT

Project	Canada	Denmark/ Greenland	Finland	Iceland	Norway	Russian Federation	Sweden	USA
Ongoing								
Arctic rescue			P		P	L	P	P
Development of Safety Systems in the Arctic while Implementing Infrastructural and Other Economic Projects	P	P	P		P	L	P	P
Behavior of Oil and other Hazardous Substances in Arctic Waters (BoHaSA) (New 2009)	P		P	P	L		P	
Co-operation on oil spill and HNS response in the Arctic (New 2009)					L			

RADIOLOGICAL AND OTHER HAZARDS: L – LEAD P- PARTICIPANT

Project	Canada	Denmark/ Greenland	Finland	Iceland	Norway	Russian Federation	Sweden	USA
Ongoing								
Portable analysis capability (Laptop based)						L		L
IBRAE Technical Crisis Center (TCC) support to the EMERCOM Crisis Situation Management Center.						L		L
Conduct of radiation emergency exercise			P		P	L	P	L
Source Control prevention related to transportation						L		L
Emergency Rescue Team Equipment (New 2009)						L		L
Radiation Survey Simulation System (New 2009)						L		L
Community Radiation Information						L		L

NATURAL DISASTERS L – LEAD P- PARTICIPANT

<i>Project</i>	<i>Canada</i>	<i>Denmark/ Greenland</i>	<i>Finland</i>	<i>Iceland</i>	<i>Norway</i>	<i>Russian Federation</i>	<i>Sweden</i>	<i>USA</i>
Ongoing “Managing the cold conditions – A systematic approach			L		P	P	P	

CO-OPERATION WITH OTHERS AND LIAISON ACTIVITIES

<i>Project</i>	<i>Canada</i>	<i>Denmark/ Greenland</i>	<i>Finland</i>	<i>Iceland</i>	<i>Norway</i>	<i>Russian Federation</i>	<i>Sweden</i>	<i>USA</i>
Ongoing Northern Forum on catastrophic flooding						P		L
Nordic Mapping Agencies on Arctic Mapping					L			
PAME working group (Lead to be determined)								
Oil Industry					L			
University of Arctic (Lead to be determined)								
AMAP and CAFF on Arctic Council Spatial Strategy					L			

OTHER ISSUES L – LEAD P- PARTICIPANT

<i>Project</i>	<i>Canada</i>	<i>Denmark/ Greenland</i>	<i>Finland</i>	<i>Iceland</i>	<i>Norway</i>	<i>Russian Federation</i>	<i>Sweden</i>	<i>USA</i>
Ongoing Host EPPR web site							L	
EPPR secretariat								L
Update the Strategic Plan of EPPR in process with the other EPPR countries	P				P	P		P
Update the Arctic Guide for Emergency Prevention, Preparedness and Response	P	P	P	P	P	P	L (P)	L