EPPR - Working Group
Emergency Prevention, Preparedness and Response
Addressing the impacts of climate change

ONE ARCTIC
THE SIOI INTERNATIONAL YOUTH SIMULATION OF THE ARCTIC COUNCIL
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Introduction of Arctic Council

The Arctic Council is a high-level intergovernmental organization addressing a diversity of issues concerning the Arctic Circle. Its main purposes are to foster sustainable development and environmental protection of the area, together with encouraging education and promoting interest worldwide in Arctic related issues. The establishing treaty of the Arctic Council is the Ottawa Declaration, signed on September 19th, 1996 by the eight funding Arctic States: Canada, Kingdom of Denmark, Finland, Iceland, Norway, Russian Federation, Sweden and the United States of America. Twenty years later, in 2016, the Council was defined as ‘a forum for peace and cooperation’ in a joint declaration by the Member States.

As those States share Arctic territories\(^1\) they came together to pursue on one side a balanced and fair control of the Circle, on the other to ensure its protection under different points of view: environmental sustainability, exploitation control, human presence and social and economic development.

In addition to the Member States, six organizations representing Arctic indigenous peoples have the status of Permanent Participants (PPs) within the Council. These are the following: the Aleut International Association, the Arctic Athabaskan Council, Gwich’in Council International, the Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North and the Saami Council. The PP category was created in order to provide participation of the Arctic indigenous tribes in the political and economic life of the Region\(^2\). Member States and Permanent Participants are fully empowered entities as they are involved at any level of decision taking and policy making of the Council.

Furthermore, the Arctic Council is open to Observers. Observing entities can be non-Arctic States, inter-governmental, inter-parliamentary, global and non-governmental organizations that have submitted admission request and later admitted by the Council according to criteria\(^3\) which have been clarified in 2011\(^4\). To mention the most relevant ones, Observers must entirely recognize Arctic States’ sovereignty, authority and jurisdiction on the Arctic territories; must include in their.

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\(^1\) Greenland is an autonomous constituent country within the Danish Realm

\(^2\) Joint Communique of the Governments of the Arctic Countries on the Establishment of the Arctic Council (Ottawa Declaration, 1996), [https://oaarchive.arctic-council.org/handle/11374/85](https://oaarchive.arctic-council.org/handle/11374/85)

\(^3\) Set out both in Ottawa Declaration and in the Arctic Council’s rules of procedure.

\(^4\) The Nuuk Declaration contains, among other issues, admission criteria for Observers to the Arctic Council, [https://oaarchive.arctic-council.org/bitstream/handle/11374/92/07_nuuk_declaration_2011_signed.pdf?sequence=1&isAllowed=y](https://oaarchive.arctic-council.org/bitstream/handle/11374/92/07_nuuk_declaration_2011_signed.pdf?sequence=1&isAllowed=y)
own legal system the complex of regulations applying to the Arctic Ocean (e.g. Law of the Sea) and of course share the objectives and functioning of the organization. The rationale of having entities which are not involved in first person in Arctic issues is that of giving valuable contribution to the discussion, mainly at the Working Groups’ level. Nowadays, a consistent number of Observers have received official approval of their status by the Council: 12 non-Arctic States, 9 Intergovernmental and Inter-Parliamentary Organizations (included UNDP and UNEP), and 11 non-governmental organization (included WWF)⁵.

The admission of the European Union was requested by the supranational organization in 2013; even though it is still pending, mainly due to the dissenting position of the Russian Federation and Canada, EU was allowed to merely observe Council proceedings.

The Arctic Council’s functioning is organized in three steps: Working Groups, Senior Arctic Official meetings (SAO) and Ministerial meetings.

**Working Groups** are in charge of carrying out the Council’s tasks by developing strategies and researching over the topics at stake. They regularly produce comprehensive environmental, ecological and social assessments and work out the projects in the field of their specialization⁶. Six Working Groups are now actively working:

- Arctic Contaminants Action Program (ACAP)
- Arctic Monitoring and Assessment Programme (AMAP)
- Conservation of Arctic Flora and Fauna (CAFF)
- Emergency Prevention, Preparedness and Response (EPPR)
- Protection of the Arctic Marine Environment (PAME)
- Sustainable Development Working Group (SDWG)

Moreover, the Chairmanship is empowered of establishing subsidiary bodies such as task forces and experts’ groups. Currently, three task forces are operating:

- Task Force on Arctic Marine Cooperation (TFAMC)
- Task Force on Telecommunications Infrastructure in the Arctic (TFTIA)
- Scientific Cooperation Task Force (SCTF)

The SAO meetings are operational meetings wherein Senior Arctic Officials take part to. SAOs are government representatives of the Member States, usually envoys of Ministries of Foreign Affairs.

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⁵ A complete and list of Permanent Participants and Observers can be found on the AC official website, together with links to their respective websites

During their meetings held three or four times in a Chairmanship period, they summarize all the results of the Working Groups’ work and present a report to the Ministers\(^7\). Permanent participants and observers may present at the meetings, and the indigenous peoples’ organizations have the right to express their opinion on the issues on the agenda. Decisions during the SAO are taking by Member States by consensus. The last SAO meeting was held in Juneau, Alaska (US) on March 8\(^{th}\) – 9\(^{th}\), 2017.

**Ministerial meetings** are meant to sum up past accomplishment and the future of the Council’s work. They gather Member States’ Ministers of Foreign Affairs every two years and mark the transition from one chairmanship to the following. The location is chosen within the outgoing chairman’s country, while the meetings’ aim is to overview what was done in the ending two-years period and what has to be done in the next one. The last ministerial meeting took place in Iqaluit, Canada on April 24\(^{th}\) and 25\(^{th}\), 2015.

The Chairmanship of the Arctic Council rotates every two years among Member States\(^8\). From 2015 to 2017 the Chairmanship is hold by the USA. The US Chairmanship of the Arctic Council focuses on four core points supported by the objective to strengthen Council cooperation and its engagement with Observers\(^9\).

Arctic Ocean safety, security and stewardship is the first. It includes exercitations of agreements on search and rescue cooperation and oil pollution preparedness and response, therefore EPPR work is crucial to the full extent.

The second is Arctic Communities’ economic and living conditions, which must be improved by pursuing innovative technologies to fight hardship of life in the Arctic.

The third point is that of addressing the impacts of climate change in the Arctic, which will be later scrutinized.

The last core point of the US Chairmanship is that of raising awareness on the value of the Arctic as a gauge of the Earth’ health, as something that should matter every nation, every person worldwide.

**OVERVIEW OF THE HISTORY AND OBJECTIVES OF EPPR**

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\(^8\) Ottawa Declaration, art. 5

\(^9\) For a full understanding, refer to the Arctic Council US Chairmanship brochure
The Emergency Prevention, Preparedness and Response Working Group was established under the framework of the Arctic Environmental Protection Strategy (AEPS) in 1991. AEPS, result of a Finnish initiative, is a non-binding multilateral agreement among the eight Arctic States and some elements of the Indigenous Peoples of the Arctic meant to address the Cold-War outcomes and impacts on the Arctic environment. In particular, the former Soviet Union played a prominent role in contributing to the birth of the WG.

EPPR meets two times a year to discuss priorities as set in its work plan, which is issued every two years through Ministerial Declarations and is further shaped by guidance from Senior Arctic Officials (SAOs). The EPPR Secretariat is permanently housed at the Arctic Council Secretariat in Tromsø, Norway.

What does EPPR WG members really do? They conduct projects to address gaps, prepare strategies, share information, collect data, and collaborate with relevant partners on capabilities and research needs that exist in the Arctic. Projects and activities include development of guidance and risk assessment methodologies, coordination of response exercises and training, and exchange of information on best practices with regards to the prevention, preparedness and response to accidents and threats from unintentional releases of pollutants and radionuclides, and to consequences of natural disasters.

Chapter 8 of the AEPS clearly defines the framework for the EPPR program of work, however the 2016 strategic plan offers a more up-to-dated overview of the working group’s objectives.

Obj.1: Define the risk potential for emergencies
First, a quantitative determination of the level of risk is needed. Risk may derive from: commercial Arctic activities, use of nuclear/radiological material or possible natural disasters.

Obj.2: Improve prevention measures
Prevention means must be identified, then enforceable and finally effective. This goal is reachable with joint researches and best practices sharing.

Obj.3: Improve EPPR programs
If preventive measures fail, accidents or disasters that may threat human life, environment or properties must be contained and their effects reduced to the minimum extent. EPPR programs must be planned and implemented at local, national, regional and international levels.

10 http://library.arcticportal.org/1542/1/artic_environment.pdf
Obj.4: Information sharing

No result can be achieved without cooperation among inhabitants, industries, and governments. Each actor has knowledge and expertise which the others could benefit from, therefore sharing is crucial to reduce threats to human life, environment and properties. EPPR endeavors to create and improve paths of communication between Arctic communities of interest.

Obj.5: Effectively implement relevant agreements as to advance capabilities

Basically, to analyze the past to get a safer future. EPPR must spread and work on lessons learned and best practices of Arctic Search and Rescue (SAR) incidents and events. The Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (MOSPA) is one of the guiding agreements. Exercises and responses conducted under MOSPA will be reviewed by EPPR to reach continuous improvement.

**Climate change and circumpolar vulnerability**

As previously outlined, the Emergency Prevention, Preparedness and Response Working Group (EPPR) addresses various aspects of prevention, preparedness and response to environmental emergencies in the Arctic.

It is highlighted that the evidence of global warming is in no place more obvious than in the Arctic region. The Arctic has warmed rapidly during the last four decades. The magnitude of temperature increase in the Arctic is twice as large as the global increase. The effect of Arctic climate change will have profound local, regional and global implications.

In 2004 and 2005 the Arctic Council and the International Arctic Science Committee presented the Arctic Climate Impact Assessment (ACIA). Observations since then have confirmed the basic findings of the assessment, although some changes, such as loss of summer sea ice cover, are happening faster and are more significant than foreseen only 5 years ago. Sea ice, snow cover, glaciers and permafrost are all diminishing due to Arctic warming. Vulnerable ecosystems in the Arctic are under threat. Climate change causes rapidly changing living conditions for 4 million Arctic inhabitants. Hunting, fishing and herding activities are threatened by changes in snow and ice conditions. Traditional livelihoods of Indigenous Peoples in the Arctic are at risk. The accelerating loss of ice from the Greenland Ice Sheet contributes to global sea level rise. Recent models project a rise of global sea level of as much as one meter by the end of this century. A rise of that magnitude will have severe consequences for the planet.
Arctic Council’s approach to the problem

The NOAA\(^{11}\) State of the Arctic Report 2006 updates some of the records of the ACIA report. Taken collectively, the observations presented in the NOAA report show convincing evidence of a sustained period of warm temperature anomalies in the Arctic, supported by continued reduction in sea ice extent, observed at both the winter maximum and summer minimum, and widespread changes in Arctic vegetation. The warming trend is tempered somewhat by shifts in the spatial patterns of land temperatures and ocean salinity and temperature. While there are still large region to region and multiyear shifts in the Arctic climate, the large spatial extent of recent changes in air temperature, sea ice, and vegetation is greater than observed in the 20th century. The six years 2005–2010 have been the warmest period ever recorded in the Arctic. Higher surface air temperatures are driving changes in the cryosphere.

There is evidence that two components of the Arctic cryosphere snow and sea ice are interacting with the climate system to accelerate warming. The extent and duration of snow cover and sea ice have decreased across the Arctic. Temperatures in the permafrost have risen by up to 2°C. The Southern limit of permafrost has moved northward in Russia and Canada. The largest and most permanent glaciers, and the Greenland Ice Sheet have all been declining faster since 2000 than they did in the previous decade. The Arctic Ocean is projected to become nearly ice-free in summer within this century, likely within the next thirty to forty years. Changes in the cryosphere cause fundamental changes to the characteristics of Arctic ecosystems and in some cases loss of entire habitats. This has consequences for people who receive benefits from Arctic ecosystems.

The observed changes in the climate and its impact are as follow:

**Arctic ecosystems and supplies of natural resources**

Changes in the Arctic cryosphere causes fundamental changes to the characteristics of Arctic ecosystems and in some cases loss of entire habitats. Changes involve temperature, rain and snowfall, snow, permafrost, lake and river ice, mountain glaciers, ice caps and the Greenland Ice Sheet, and sea ice. The loss of sea ice represents devastating habitat loss for some species, including

\(^{11}\) National Oceanic and Atmospheric Administration, within the United States Department of Commerce focused on the conditions of the oceans and the atmosphere
polar bears, seals and some microbial communities. Previously unknown inflows of warm water have been entering the Arctic Ocean from the Pacific and the Atlantic. These could be linked to the rapid loss of sea ice.

Furthermore, supplies of natural resources from ecosystems, such as timber and commercial fish stocks could change. Uncertainty about how they will change makes it difficult to plan for the future.

In addition, increased glacier melt creates new opportunities and challenges for hydroelectricity generation.

**Human use of the Arctic**

The greatest increase in temperature of the lower atmosphere has happened in autumn, in regions where sea ice has disappeared at the end of summer. This suggests that the absence of sea ice is causing further warming of air, because the sea absorbs more heat during the summer. The number of days with snow cover has changed most in the spring. This implies a feedback effect in which the surface absorbs more energy and warms more once snow has melted.

As summer sea ice declines, the Arctic Ocean opens up to shipping, with benefits for the oil, gas and mining industries, commercial fisheries and tourism. A shorter ice road season creates large costs for Arctic communities and industry, particularly in northern Canada and Russia. Travelling through the Arctic is becoming more dangerous as ice roads melt, sea ice breaks up and hazards from icebergs increase. Thus, risks extend to buildings. Buildings and other infrastructure in the Arctic are therefore at risk from thawing permafrost, heavier snow loads and floods caused by ice-jams in rivers and glacial run-off. Arctic coastlines are becoming more vulnerable to erosion as land-fast sea ice melts earlier and permafrost thaws.

**Movement of contaminants**

The ways that contaminants move into and around the Arctic are altered by cryosphere change. For example, melting snow and ice can release contaminants stored over decades. Expansion of shipping, resource exploitation, industry and tourism in the Arctic will bring risks of additional contaminants entering the Arctic environment. Consequently, living conditions get in danger. The observed and expected future changes in the Arctic cryosphere impact Arctic society on many levels. There are challenges, particularly for local communities and traditional ways of life.

**Recommendations for Arctic States**

Both scholars and the Arctic Council called States to
• incorporate local and traditional knowledge into the decision-making process including the initial studies and disposition of resource use rights. For example, ethnological expert studies are being used in Russia in which scientific and local knowledge are combined;
• pursue regulatory and political structures that allow for participation of indigenous people and other local residents in the decision-making process as well as the public at large;
• urge and, where appropriate, require industry to integrate cultural and environmental protection considerations into planning, design, construction and operational phases of oil and gas activities;
• improve cross-cultural communication methods to ensure full and meaningful participation of indigenous residents including procedures to incorporate local knowledge;
• identify and appropriately manage oil and gas activities in ecologically and culturally sensitive areas;
• identify species, which are resources for human use and their ecological requirements, and identify patterns of their use as resources.

**Fundamental issues to be addressed**

The main issues to addressed by the EPPR working group, as set by the 2015 SAO meeting’s report are listed and outlined below.

**Search and Rescue (SAR) in the Arctic**

The inclusion of SAR in EPPR’s mandate notably increased the Working Group’s role in the fulfilment of the Arctic Council’s objectives.

According to the US legal definition, “Search and rescue (SAR) is the search for by the use of aircraft, surface craft, submarines, specialized rescue teams and equipment and provision of aid to people who are in distress or imminent danger on land or at sea.”

EPPR has a fundamental role in planning, executing and reporting of SAR activities linked to the work of the Arctic Council, such as the follow-up on the legally binding Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic (so called SAR Agreement, 2011).
The focus is to elaborate best practices, recommendations and key elements of the emergency risk assessment system and the system for improving safely of potentially hazardous facilities.

The overall goal of Arctic Rescue is the international promotion of advanced national experience and improvement if emergency preparedness through information exchange. Concrete outcomes include the opening of the first Arctic Complex Search and Rescue Center in Naryan-Mar in 2014 and a series of conferences held under this project.

*How can the EPPR support the AC in implementing SAR in the Arctic? Which are best practices to be spread among Member States? How can Observers and other entities be involved into the discussion? Which are past mistakes to be avoided?*

### Short-lived climate pollutants

The impacts of climate change in the Arctic, a region where people, animals and plants have thrived for thousands of years, threaten communities and their ways of life, as well as the ecosystems upon which these communities depend. The Arctic Council is addressing the impacts of climate change in the Arctic by targeting short-lived climate pollutants through reductions in black carbon, methane and ozone emissions. Arctic Council activities to enhance access to adaptation and resilience tools, and promote the development of climate change indicators and high-resolution mapping, will increase scientists, communities, policymakers and the public’s understanding of the impacts of climate change.

The term short-lived climate pollutants (SLCPs) refers to a group of greenhouse gases and particulates that remain in the atmosphere for a few days to a decade and have warming effects on climate. The Arctic Council has focused its SLCP work on methane, black carbon, and ozone. These three substances in general come from different sources and behave differently in the atmosphere.

<table>
<thead>
<tr>
<th>SLCPs</th>
<th>methane</th>
<th>black carbon</th>
<th>ozone</th>
</tr>
</thead>
<tbody>
<tr>
<td>what</td>
<td>Greenhouse gas. Second most important anthropogenic contributor to current global warming. Airborne</td>
<td>Solid particle that absorbs solar radiation, thereby warming the atmosphere, melting ice when deposited on</td>
<td>Greenhouse gas. Formed through reactions involving other pollutants. Warming is caused by its concentration in the lower</td>
</tr>
</tbody>
</table>

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10
<table>
<thead>
<tr>
<th>Sources</th>
<th>Production and use of fossil fuels and less from waste and agriculture. AC States account for about one fifth of global emissions, mostly from RUS and US.</th>
<th>It has warmed the Arctic by an amount comparable to methane. Emissions from AC States have greater impacts because they are closer to the Arctic.</th>
<th>Ozone precursors come from natural sources as well as from human activity. E and SE Asia and the US emit the most anthropogenic ozone precursors and thus have the largest effects on ozone levels in the Arctic.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on the Arctic</td>
<td>Since pre-industrial times it has increased Arctic temperatures by about half a degree C to date, about twice as much as its impact on global temperature.</td>
<td>It has warmed the Arctic by an amount comparable to methane. Emissions from AC States are responsible for about 1/3 of its warming effects in the Arctic.</td>
<td>Smaller impact than Methane and Black Carbon. Ozone higher up in the troposphere is more relevant for warming.</td>
</tr>
</tbody>
</table>
| What can be done | • Changes in venting and flaring practices at oil and gas fields,  
• Reducing leakage during natural gas production, transportation, and distribution,  
• Separating and treating or re-using biodegradable waste instead of dumping it in landfills, where its decomposition emits methane,  
• Improving coal mining practices to remove or capture rather than release methane. | • Reducing emissions from residential and commercial use of fossil fuels, especially diesel fuel,  
• Reducing emissions from wood-burning in residential heating, agricultural burning, and wildfires, and  
• Changing flaring practices at oil and gas fields, especially in Russia. | Action to reduce the emission of ozone precursors would achieve relatively little in the way of direct climate benefits in the Arctic. Action to reduce Methane and Black carbon would also help reduce ozone levels in Arctic air. |

How can possible actions be implemented within the Arctic life as to reduce SLCPs’ levels? What patterns should be followed? Which are going to be the key-players of emissions’ reduction? How?

**Response to oil spilling**

Oil spilling is one of the most dangerous events tremendously affecting the Arctic environment. Many discussions have been brought on the topic in the past, even though companies’ and often national interests slowed down the preventive action. One of the most significant acts tackling the issue is the Field Guide for Oil Spill Response in Arctic Waters (1998). This field guide was developed to provide circumpolar countries with oil spill response guidance specific to the unique climatic and physiographic features of the Arctic environment.

The Agreement on Marine Oil Pollution Preparedness and Response followed in 2013.
Paragraph 21 states that Operational Guidelines (Field Guide for Oil Spill Response in Arctic Waters) should be developed and maintained. In the SAO meeting in Stockholm, March 2013, EPPR was given the responsibility of maintaining and updating the Operational Guidelines which are annexed to the Agreement. EPPR has and still is taking care of the Field Guide’s follow-up affirming its excellent impact.

*How can response to oil spilling be implemented? Which concrete actions can be taken to go further in the response? To which extent can the Arctic Council help in balancing economic needs causing oil transportation through the Arctic with the latter’s environmental safety?*
References

Declaration on the establishment of the Arctic Council also known as Ottawa Declaration
https://oaarchive.arctic-council.org/bitstream/handle/11374/85/EDOCS-1752-v2-ACMMCA00_Ottawa_1996_Founding_Declaration.PDF?sequence=5&isAllowed=y

Declaration by Member States for the AC 20th anniversary https://oaarchive.arctic-council.org/bitstream/handle/11374/1784/EDOCS-3801-v2-20th-anniversary-declaration-arctic-council-a-forum-for-peace-and-cooperation.pdf?sequence=1&isAllowed=y

The outcome of the 9th Arctic Council Ministerial Meeting by the EU Parliament Directorate-General for external policy


Arctic Environmental Protection Strategy http://library.arcticportal.org/1542/1/artic_environment.pdf


Sustainable Development, Natural Resources extraction, and the Arctic: the road ahead by Edward Canuel
http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1506&context=alr

Oil and Gas Assessments (OGA) http://www.amap.no/oil-and-gas-assessment-oga

Arctic Council – Arctic offshore oil and gas guidelines

Environmental Governance of the Arctic: Law, Effect, Now Implementation by Joseph F.C. DiMento

All the documents listed in the next sections have been taken as references.

Mandatory readings & viewings

- Arctic Council presentation by Canada https://www.youtube.com/watch?v=ryeAbw_hj5E
- One Arctic – EPPR website https://arctic-council.org/eppr About Us (full) and Current Activities & Projects (overview)
- just for a better understanding (issues mentioned in this study guide only):
- SAR in the Arctic by Iceland https://www.youtube.com/watch?v=2FsKs_8qIxc
- Oil Spill Response by US https://www.youtube.com/watch?v=YH0u-yy_YQk
In addition, SIOI One Arctic EPPR Chair strongly encourages Delegates to get involved in AC and EPPR activities before the conference by following the respective social media channels:
https://www.facebook.com/arcticcouncil/
https://twitter.com/ArcticCouncil
https://twitter.com/EPPR_Arctic
https://twitter.com/usarctic