

This draft is prepared by AMAP for submission 28 February 2018; details may be further revised

## **2-page Proposal for Arctic Environment Ministers Meeting focus on Chemical Contaminants**

### **Summary of the main messages you would like to convey**

Environment Ministers can take credit for the considerable progress that has been made over the past 25-years in addressing threats posed to the Arctic by long-range transported environmental pollutants. Recent AMAP assessments, however, have revealed that chemical contamination is not a solved problem. New chemicals introduced into society or now detectable due to advances in analytical chemistry are detected in the Arctic. This implies needs for strengthening existing and possibly introducing new approaches to chemicals management.

### **Main environmental challenges and issues that require common solutions in the Arctic**

Arctic pollution by chemical contaminants and related threats to Arctic ecosystems and human populations has been at the centre of Arctic Council work since the adoption of the Arctic Environmental Protection Strategy in 1991. It is also one of the three areas environmental focus areas of the Finnish Chairmanship program.

Much progress has been made in addressing Arctic pollution problems associated with long-range transported chemical contaminants through, for example, the Stockholm and Minamata Conventions and UN ECE Convention on Long-range Transboundary Air Pollution. Arctic information, compiled in assessments produced by the Arctic Council's Arctic Monitoring and Assessment Programme (AMAP), has contributed significantly to the establishment, implementation and further development of these international agreements.

National actions to regulate harmful chemicals also played a major role in reducing pollution by persistent organic chemicals, such as PCBs and several organochlorine pesticides, often prior to the introduction of international regulation. The effectiveness of both national controls and international regulatory action is reflected in the declining trends of many environmental chemicals in Arctic air, wildlife and humans, as documented by AMAP.

Nevertheless, as documented in recent AMAP assessments, Arctic Indigenous Peoples' continue to have some of the highest dietary exposures globally to mercury and some POPs, and health effects have been measured in some populations. In several Arctic regions, it has been necessary to introduce food advisories for some traditional food items. Furthermore, recent AMAP work assessing the results of environmental screening studies and trends in environmental contaminants in Arctic abiotic media and biota have shown that new classes of chemicals are appearing in the Arctic. This includes chemicals introduced as replacements for banned chemicals and chemicals for which monitoring data have only recently become available. Some of these new 'chemicals of emerging Arctic concern' (CEAC) are exhibiting increasing trends.

Information on toxicological properties of many of these chemicals is lacking or inadequate; thus, implications of the presence in the Arctic of these chemicals for Arctic ecosystems are largely unknown. Some CEAC have characteristics that are similar to those of banned substances. Some, including chemicals used in pharmaceuticals and personal care products, building material, and consumer products may also be associated with local sources within the Arctic, for example entering the environment from municipal waste dumps or inadequately treated wastewater.

Of the estimated 150 000 substances in commerce today, less than 1000 are routinely monitored in the environment. Screening based on theoretical approaches has identified over 1200 chemicals currently used in society that have potential to reach the Arctic and accumulate in food webs. The

potential for long-range transport (to the Arctic) is not as widely used as it might be in the criteria applied for evaluating chemical safety, e.g., prior to licensing.

Past action on regulation of environmental contaminants has been largely retrospective. That is to say, action has been introduced to ban and control polluting chemicals only after they have been released to and widely spread in the environment. European Union chemical legislation (REACH) has introduced a more proactive approach to chemicals management, but such approaches are not applied in all countries/regions. This is particularly relevant as the centres of chemical production (and their incorporation in products) are shifting from traditional industrial regions to the new economic centres of South and Southeast Asia.

The Arctic Environment Ministers Meeting (Rovaniemi, 11-12 October 2018) could include a focus on chemicals, including POPs, CEAC and mercury, with a particular emphasis on how to strengthen, e.g., the Stockholm and Minamata Conventions. This could include strengthening mechanisms for Arctic States to nominate chemicals of emerging Arctic concern that exhibit POPs properties, cooperation with international initiatives such as SAICM to address chemicals that will not meet criteria for inclusion under existing international regulatory mechanisms, or improvement of sewage and waste management technologies in the Arctic.

A strong monitoring network has been established in the Arctic generating new monitoring data and allowing for retrospective analysis and other new techniques that can provide information relevant for international, regional and national regulation.

The chemical pollution topic would link to a number of SD Goals, including:

- Goal 3. Ensure healthy lives and promote well-being for all at all ages (3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination)
- Goal 6. Ensure availability and sustainable management of water and sanitation for all (6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all; 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, ...)
- Goal 12. Ensure sustainable consumption and production patterns (12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment; 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle)
- Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development (14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution)

### ***The Arctic Monitoring and Assessment Programme (AMAP)***

AMAP is the Arctic Council Working Group responsible for "providing reliable and sufficient information on the status of, and threats to, the Arctic environment, and providing scientific advice on actions to be taken in order to support Arctic governments in their efforts to take remedial and preventive actions relating to contaminants and adverse effects of climate change".

Over the past 20-years, AMAP has published a series of assessments addressing chemical pollution issues, and communicated the results of these assessments to both Arctic Council Ministers and stakeholders both within and outside of the Arctic, including their use in international processes addressing chemical pollution at the global scale. This work has been instrumental in the establishment and development of a number of international agreements, and supported actions within the Arctic to reduce threats to Arctic ecosystems and its human populations.

AMAP has established expert groups on mercury (and heavy metals), persistent organic pollutants, and human health effects of environmental contaminants to support production of periodic update assessments of these important Arctic issues of concern. The AMAP work also contributes to ongoing work to support international processes including the global agreements under UN-Environment (Stockholm and Minamata Conventions), and UN ECE (Convention on Long-range Transboundary Air Pollution), etc.

The future work under AMAP emphasises the continued need to address environmental contamination, in particular with respect to tracking developments in chemicals that have been subject to regulation, and screening for new threats.