Press Release

Issued by: Arctic Monitoring and Assessment Programme (AMAP)

Release of *Arctic Pollution Issues 2015* Policy-Makers Summary

The *Arctic Pollution Issues 2015 Summary for Policy-makers* was delivered to Ministers at the ninth Arctic Council Ministerial meeting that took place in Iqaluit, Nunavut, Canada on 24 April 2015. It presents the key results of three AMAP assessments that update information on (1) human health in the Arctic in relation to environmental contaminants and other stressors; (2) trends in persistent organic pollutants (POPs) in Arctic air, biota, and humans; and (3) radioactivity in the Arctic, including handling of radioactive waste and accidental releases.

Assessment Findings

AMAP has previously documented how contaminants including POPs and mercury can be transported long distances to the Arctic, and accumulate and bio-magnify in food-chains - raising concerns about ecosystem and human health effects. Human health concerns are greatest for Arctic indigenous populations that consume certain marine mammals as part of their traditional diet and therefore receive contaminant exposures from otherwise very healthy and culturally important foods. New AMAP assessments report the latest information regarding these issues as well as synthesizing current knowledge about levels and sources of radioactive substances in the Arctic and potential pollution risks. *[see page 2 for additional background information]*

Progress made but concerns remain

Despite the considerable progress achieved in reducing Arctic environmental contamination, there is no case for complacency. A large number of new chemicals are being developed and put onto the market each year, often with limited documentation and testing. Several decades can pass between the beginning of commercial use of a new chemical, understanding and awareness of any harmful effects, and agreement to ban or restrict its use. Elevated levels of exposure to POPs and mercury remain a concern in some populations in the Arctic, as do sources and potential sources of both naturally-occurring and anthropogenic radioactivity.

Next Steps

Arctic countries have a good track record in promoting the international pollution control agenda; however, not all have ratified the Stockholm Convention on POPs, and few have yet adopted all of its provisions as they relate to newly controlled substances. Most Arctic countries also have yet to ratify the Minamata Convention on mercury.

References

The full text PDF of the *Arctic Pollution Issues 2015 Summary for Policy-makers* is available at: http://www.amap.no/documents/18/policy-makers-summary/308

The comprehensive scientific background assessment reports that are the basis for the Policy-makers summary are being finalised for publication and will be made available through the AMAP Secretariat and published on the AMAP website shortly.

Media Contacts

General enquiries: Lars-Otto Reiersen (AMAP Executive Secretary) +46 900 46 476 amap@amap.no

A list of additional media contacts can be found at http://www.amap.no/documents/download/2224

Additional background

Temporal trends in levels of POPs in air, biota and humans: A large number of time-series of POPs levels in Arctic air and biota spanning more than two decades are now available and have been evaluated. They reveal a consistent pattern of decreasing levels of most of the 'legacy' POPs that were a focus of early AMAP assessments. Many of these POPs were subject to regulation, nationally and later internationally under, for example, the Stockholm Convention. Results for 'newer' POPs, including brominated flame retardants and fluorinated compounds show a more mixed pattern, including some increasing trends. These tendencies are also reflected in human bio-monitoring studies where, in addition to declining environmental contamination, changing diets, including changes resulting from advice on food intake may be playing a part.

Human health: Health risks to ecosystems and humans from POPs include disruptions to immune, hormone and reproductive systems. Like POPs, mercury (especially methylmercury - an organic form) accumulates in animals at the top of Arctic food-chains, posing dietary risks to humans. Methylmercury and many POPs can be transferred to the fetus and to breast-fed children. New studies of children exposed to methylmercury during fetal development show adverse and apparently permanent effects on neurodevelopment. The new assessment reviews the results of cohort studies that track the health status of groups of people over time, providing new insights into the complex factors that determine human health (not only contaminants but also other stressors and genetic factors). It also addresses the complicated issue of risk communication in relation to contaminants and Arctic human health concerns.

Radioactivity: Levels of anthropogenic radioactivity measured in the Arctic that are attributable to already identified sources, such as historical nuclear weapons testing, are generally very low and also declining, partly due to the natural decay of radionuclides previously released into the environment.

Earlier AMAP work was instrumental in drawing attention to the risks posed by radionuclide sources in Arctic Russia. Since the last AMAP radioactivity assessment in 2009, progress has been made in addressing poorly stored nuclear waste, removing and decommissioning radioisotope thermal generators (RTGs), dismantling nuclear submarines and handling their spent nuclear fuel, and cleaning up the temporary storage sites at Gremhika and Andreeva Bay in the Russian Federation.

The radioactive impact on the Arctic from the accident at the Fukushima Daiichi facility in 2011 has so far proved minimal and is of no concern to human health in the Arctic. However, the resulting Arctic contamination is measurable and the accident serves as a reminder that the Arctic is not isolated from the rest of the world – and that a nuclear accident thousands of miles away can pose a risk to the region.

Policy-relevance: The Arctic faces continuing threats from global and regional pollution, which are only likely to become more intense under the related pressures of climate change and increasing economic development.

The new AMAP assessments demonstrate that controls on pollutants have proven effective in reducing levels of some contaminants in the Arctic, but continued efforts are required. Long-range transport is still the most significant source of Arctic contamination. Therefore, international agreements to control pollution offer the most effective means of reducing contamination in the region.

Effective risk communication can help reduce contaminant exposure; however, it needs to take account of the importance of traditional foods for indigenous peoples' cultural identity. Poor risk communication can lead to confusion and undesirable changes in diet that may have negative impacts on health. Risk communication provides a short-term strategy for mitigating the effects of Arctic contamination on human health and well-being – full mitigation can only be achieved by reducing the sources of contamination.

Arctic Monitoring and Assessment Programme

AMAP is a Working Group of the Arctic Council. AMAP's mandate is to monitor and assess the status of the Arctic region with respect to pollution and climate change, documenting levels and trends, pathways and processes, and effects on ecosystems and humans. AMAP produces scientific assessments that address a range of Arctic pollution and climate change issues, including effects on health of Arctic human populations, as well as public outreach products containing science-based policy-relevant recommendations to inform decision-making processes.

www.amap.no