

# Chemicals of Emerging Arctic Concern

Arctic Monitoring and Assessment Programme (AMAP)

Since 1998, the Arctic Monitoring and Assessment Programme (AMAP) has produced a series of comprehensive scientific assessments of Persistent Organic Pollutants in the Arctic. These assessments provide important information for policy-making in relation to chemical management, including further development of the Stockholm Convention.

A new AMAP assessment of **Chemicals of Emerging Arctic Concern** will be published during the second half of 2016, with policy findings communicated to the Arctic Council in 2017.

The assessment has been prepared by the AMAP POPs Expert Group under the leadership of Cynthia de Wit (Stockholm University, Sweden), Derek Muir (Environment and Climate Change Canada), Katrin Vorkamp (University of Aarhus, Denmark) and Jennifer Balmer (USA). Its main focus is Arctic occurrence of 17 main groups of chemicals/substances of emerging Arctic concern:

- Per- and polyfluoroalkyl substances (PFAS)
- Brominated flame retardants (BFRs)
- Chlorinated flame retardants (CFRs)
- Organophosphate-based flame retardants and plasticizers (PFRs)
- Phthalates
- Short-chain chlorinated paraffins (SCCPs)
- Siloxanes

- Pharmaceuticals and personal care products (PPCPs)
- Polychlorinated naphthalenes (PCNs)
- Hexachlorobutadiene (HCBD)
- Current-use pesticides (CUPs)
- Pentachlorophenol (PCP) and pentachloroanisole (PCA)
- Organotins
- Polycyclic aromatic hydrocarbons (PAHs)
- New unintentionally generated PCBs
- Halogenated natural products (HNPs)
- Marine Plastics and Microplastics

Additional sections of the assessment address Toxicology, Contaminants of potential concern, Screening and Chemical properties, Policy-relevant Conclusions and Recommendations

Presentations of some of the key scientific results of this work will be made at the **DIOXIN2016** conference (see overpage)



**Presentations at DIOXIN2016 (36<sup>th</sup> International Symposium on Halogenated Persistent Organic Pollutants. Palazzo Dei Congressi, Firenze, Italy) associated with the new AMAP assessment of Chemicals of Emerging Arctic Concern include:**

**Session: “POPs Transport, Distribution and Bioaccumulation in Remote Areas”**

*Chairs: Cynthia de Wit and Simonetta Corsolini*

**Thursday, September 1<sup>st</sup>, Leonardo Room**

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- 11:15 – 11:30**      **“Novel brominated and chlorinated flame retardants – a review and assessment of their occurrence in the Arctic”**  
*Katrin Vorkamp, Department of Environmental Science, Aarhus University, Roskilde, Denmark*
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- 11:45 – 12:00**      **“Contaminants of emerging concern in the Arctic: An assessment of halogenated natural products”**  
*Terry Bidleman, Umeå University, Sweden*
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- 12:00 – 12:15**      **“Screening Known Arctic Contaminants for the Next Generation of Persistent Organic Pollutants”**  
*Efstathios Reppas-Chrysovitsinos. Department of Environmental Science and Analytical Chemistry, Stockholm University, Sweden*
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- 15:00 – 15:15**      **“Organophosphate Esters: Current Knowledge on Properties and Environmental Behaviour, Fate and Contamination from a Multi-Media Perspective in the Arctic”**  
*Robert Letcher, Environment and Climate Change Canada, National Wildlife Research Centre, Ottawa, Canada*
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- 15:15 – 15:30**      **“Environmental behaviour of cyclic volatile methylsiloxanes in a high latitude lake: A modelled and measured approach”**  
*Nicholas Warner, Norwegian Institute for Air Research, Tromsø, Norway*
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- 16:30 – 16:45**      **“Influence of Climate Change on Transport, Levels, and Effects of Contaminants in Northern Areas”**  
*Pernilla Carlsson, Norwegian Institute for Water Research, Tromsø, Norway*
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- 16:45 – 17:00**      **“Trends and patterns of polybrominated diphenyl ethers in thick-billed murre eggs from the Canadian Arctic”**  
*Birgit Braune, Environment and Climate Change Canada, National Wildlife Research Centre, Ottawa, Canada*
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- 17:15 – 17:30**      **“Biological factors regulate the uptake of airborne POPs in “plants” and the deposition of POPs to remote terrestrial ecosystems”**  
*Henrik Kylin, Linköping University, Sweden*

**Poster presentations at DIOXIN2016 associated with the new AMAP assessment:**

- **Highlights from the new AMAP Assessment report on Chemicals of Emerging Arctic Concern.**  
*Cynthia de Wit, Sweden*
- **Marine plastics and microplastics in the Arctic: A review.**  
*Dorte Herzke, Norway*
- **The Transcontinental distribution of pentachlorophenol and pentachloroanisole indicate separate sources.**  
*Henrik Kylin, Sweden*
- **Bioaccumulation of perfluoroalkyl acids and precursor metabolism in East Greenland ringed seals and polar bears.**  
*Robert Letcher, Canada*

The full report will be available for public download (fall 2016) at [www.amap.no](http://www.amap.no)