



Task Force on Hemispheric Transport of Air Pollution

Workshop on Mercury Trends and Source Attribution

Co-Chairs

Heather Morrison (Canada)

Terry Keating (U.S.)

Vice Chairs

Tim Butler (Germany)

Jacek Kaminski (Poland)

13 April 2021

Spring 2021 TF HTAP Workshops

March 17: Regional & Extra-regional Trends of O₃
(& PM) for Gothenburg Protocol Review

April 13: Regional & Extra-Regional Trends of Hg
Oleg Travnikov, Ashu Dastoor, Jerry Lin

April 15: Regional & Extra-Regional Trends of
POPs/Chemicals of Emerging Concern

1998 Heavy Metals Protocol (Amended 2012)

The protocol seeks to decrease emissions of Cd, Pb, and Hg.

1998 Protocol has 35 Parties and entered into force in 2003. 2012 Amendments have been accepted by 19 Parties, and will enter into force when accepted by 24.

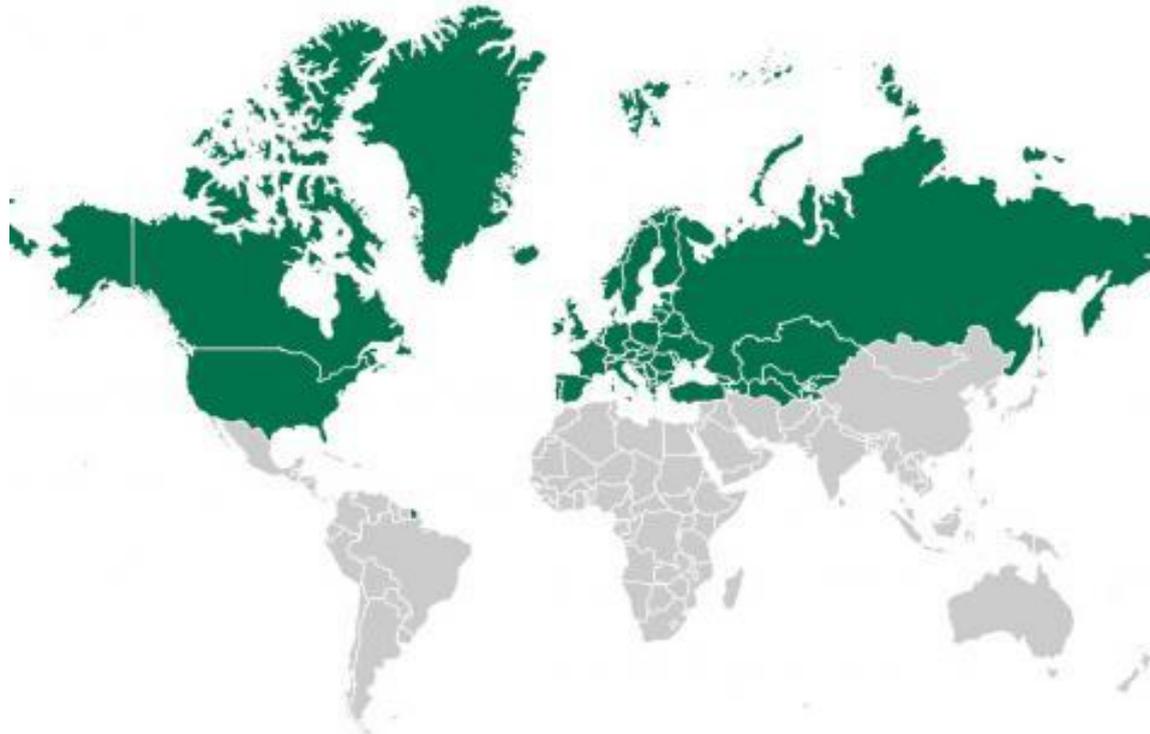
Article 10 of the Protocol commits Parties, at sessions of the Executive Body, to keep under review:

- the progress made towards meeting the obligations set out in the Protocol, and
- the sufficiency and effectiveness of the obligations

We expect that the Executive Body will initiate a formal review of the HM Protocol in the next 2-5 years.

TF HTAP's Mandate

- TF HTAP's mandate is to understand the extra-regional contribution to air pollutants and their impacts in the UNECE region (Europe and North America).



- Cd and Pb are primarily regional pollutants, whereas Hg is a global pollutant, influenced by both regional and extra-regional sources. To understand the sources, impacts, and mitigation potential for Hg, we need to take a global perspective.

7 Policy-Relevant Science Questions

1. What are the observed and modelled trends in air concentration and deposition of mercury in the UNECE region and other regions of the globe?
2. To what extent are these trends associated with emission changes in the regions or dependent on intercontinental transport of mercury and other environmental factors?
3. What are the relative contributions and their changes of anthropogenic, geogenic, and legacy emission sources to mercury air concentration and deposition in various regions?

7 Policy-Relevant Science Questions

4. How may mercury air concentration and deposition levels and the contribution of various sources change in future due to changes in emissions and climate change?
5. How do the historical and projected changes in mercury air concentration and deposition relate to changes in mercury levels in other environmental compartments and biota?
6. How well can we represent the processes that affect the long-term changes of mercury levels and fluxes in quantitative models?
7. What efforts are needed to develop a system of observations, emissions, and models to better understand and track these changes?

Objectives for Today's Workshop

1. Make sure that we are addressing the most appropriate policy-relevant science questions.
2. Begin to organize cooperative research to improve our capability to address the policy-relevant science questions.
 - What can we accomplish in 2 years? (Questions 1-3?)
 - What can we accomplish in 5 years? (Questions 4-7?)

In the next 4 hours, we want to develop a list of topics and tasks around which we can organize follow-up meetings and activities.

3. Identify research activities that
 - connect to other work under TF HTAP and the LRTAP Convention
 - build on work that has been completed other cooperative forums (including Minamata, AMAP, ...) and
 - contribute to meeting the needs of those forums to the extent practicable.