



Task Force on Hemispheric Transport of Air Pollution

TF HTAP Goals & Meeting Objectives

Co-Chairs

Heather Morrison (Canada)

Terry Keating (U.S.)

Vice Chairs

Tim Butler (Germany)

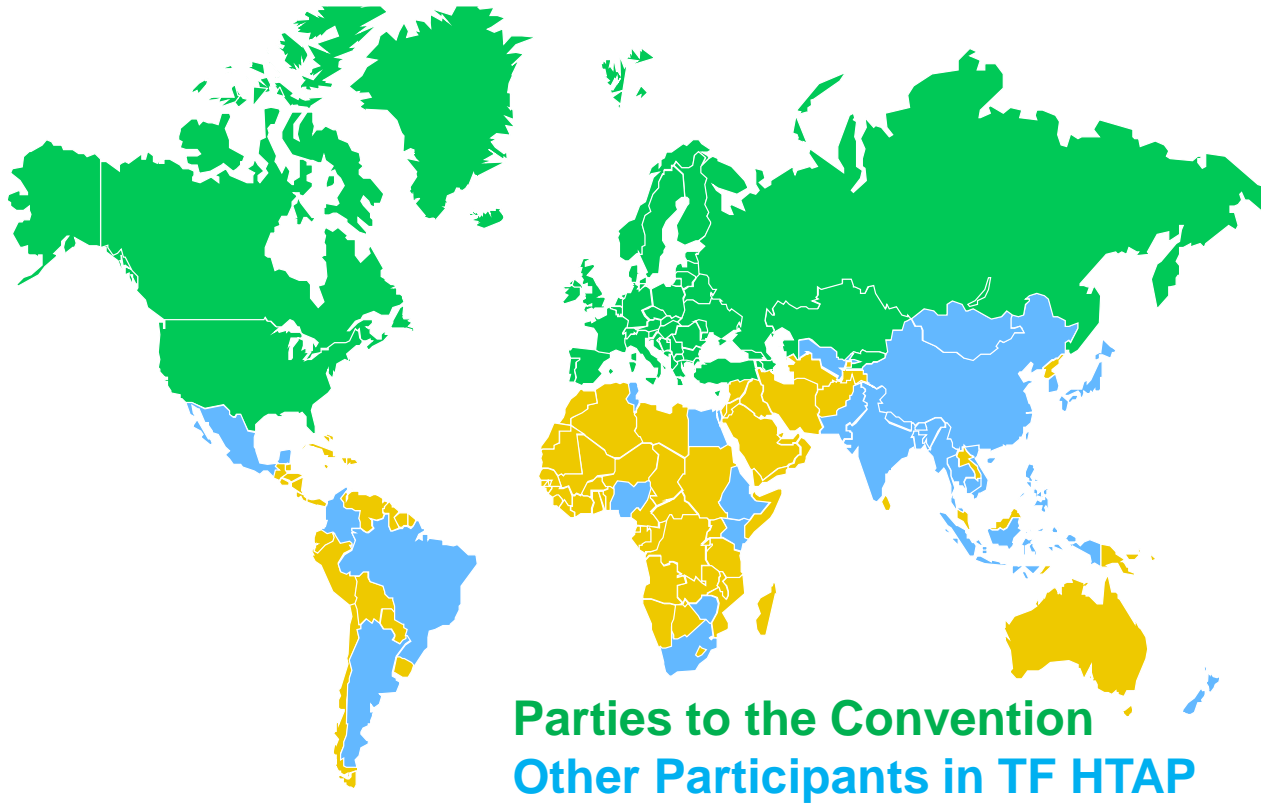
Jacek Kaminski (Poland)

22 April 2020

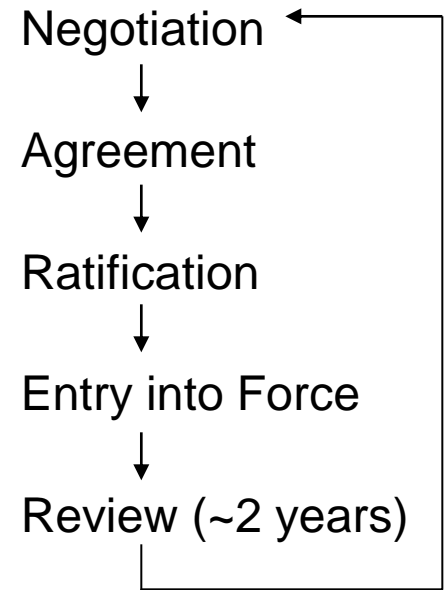
Task Force Goals:

- Foster international scientific cooperation to improve understanding of intercontinental transport of air pollution across the Northern Hemisphere
 - How do changes in emissions in one part of the world affect air quality in other parts of the world?
 - How do extra-regional emissions affect human health, ecosystems, and climate within a given region?
- Provide relevant science to inform policy discussions in the LRTAP Convention and other related international and national contexts.

1979 LRTAP Convention



Iterative & Incremental:



1999, 2012 Gothenburg Protocol (Acidification, Eutrophication, Ground Level Ozone, and Fine Particles)

Entered into Force
October 2019

1998, 2012 Heavy Metals Protocol (Hg, Cd, Pb)

Expected to Enter into
Force in 2020/2021

1998, 2009 POPs Protocol

What can TF HTAP contribute to the GP Review and the next iteration of negotiations?

- Since the original GP was agreed in 1999 and amended in 2012, how have changes in sources outside the UNECE region influenced air pollution within the UNECE region?
 - How have emissions of GP pollutants changed outside of the UNECE region?
 - How have these changes outside the UNECE region affected concentrations and deposition within the UNECE region?
- What additional actions should be considered to meet the overall objectives of protecting ecosystems and human health?

Black Carbon & SOA	Mostly Regional, Addressed by TFMM, TFEIP, TFIAM
Agriculture & NH ₃	Mostly Regional, Addressed by TFRN, TFMM, TFEIP, TFIAM
Shipping	Recent Regional Analysis by MSCW, CIAM Some Global-Scale Questions Remain
Methane as an O ₃ Precursor	A Global Issue, Consistent Finding of HTAP1 and HTAP2

2020-2021 TF HTAP Work Plan Elements

Work Plan Projects:

- Update Global Emissions Mosaic (HTAPv3) (1.1.4.5)
We will discuss later today
- Improve Assessment of Methane Mitigation and Ozone Impacts on Health & Ecosystems (1.1.4.7)
The focus of this meeting
- Continued Development of the openFASST Tool (1.1.4.6, 1.1.4.1)
A tool for exploring implications of different S/R relationships and emissions scenarios.
Virtual meeting of FASST code users (Nov 2019), Cloud installation (April 2020)

Topics for Discussion within the Task Force & Community:

- Extra-Regional Attribution of O₃, PM Trends for GP Review (1.1.3.2)
What is the contribution of extra-regional sources to observed trends?
- Impacts of Shipping (1.1.4.4)
Treatment of Ship Plumes, Refining S/R to Distinguish ECAs
- Extra-Regional Attribution of Hg and POPs Trends (1.1.4.3)
Possible virtual meeting in Fall 2020 to take stock of activities in other forums and engage others in cooperation with MSCE

<http://www.unece.org/env/lrtap/welcome>

Continuing Interests for TF HTAP

- Evaluation of Global and Regional Atmospheric Chemistry Models
- Estimation and Evaluation of Source-Receptor Relationships Across Global and Regional Scales
- Impacts of Long Range Transport of Pollutants to the Arctic
- Outreach and Support for the Science-Policy Community for Air Quality Management in Regions Outside the LRTAP Convention
- Linkages between Air Quality, Climate, and Biogeochemical Cycles

Methane, Ozone, Health, and Ecosystems



Wednesday 22 April

Introduction and Input from LRTAP/WGSR

Ozone and Methane: Scenarios and Mitigation

HTAPv3 Emissions Mosaic

Links to Ozone Observational Analyses

Thursday 23 April

Ozone and Methane: Emissions and Atmospheric Response

Ozone Impacts on Vegetation

Friday 24 April

Ozone Impacts on Human Health

Links to Other Model Intercomparisons and Activities

Overarching Questions for Each Session

Speakers:


- What is “state of the art”?
- What can be improved in the next 2 years?
- What can be improved as part of a longer research effort?



Meeting
Presentations

Participants:

- Where should we focus our effort?
- What would you be interested in doing?
- What are we missing?



Homework
Via Google Forms

Link to Form: <https://tinyurl.com/yd6cjmh4>

Methane, Ozone, Health, and Ecosystems



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Thursday 30 April

Next Steps, Details of Agenda to be Decided

Your Input

