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Federal Department of the Environment,
Transport, Energy and Communications DETEC

**Federal Office for the Environment FOEN**
Division on Air Pollution Control and Chemicals

# The UNECE Convention on Long Range Transboundary Air Pollution (CLRTAP)

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LRTAP
Long-range Transboundary Air Pollution

# Agenda

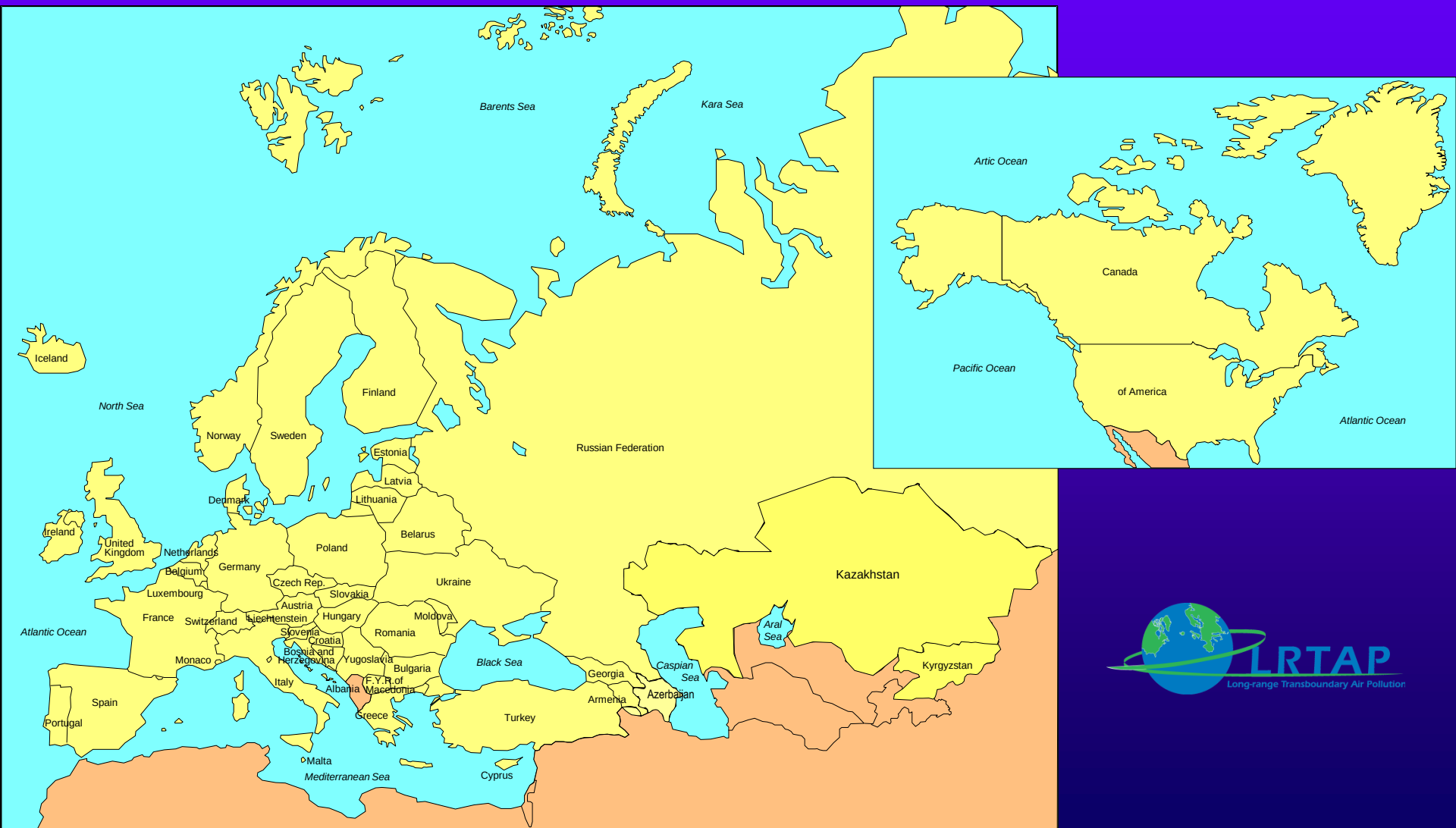
- What was the common interest to establish a Convention?
- Which type of commitments were stepwise included?
- How to achieve the goals? The way to the target

- How to continue at the regional level and beyond 2020?

# The Convention LRTAP

- signed in 1979 as a result of scientific findings relating to the ‘acid rain’ problem;
- responsible for the decline in fish stocks, damage to forests and vegetation and other adverse environmental effects first reported by Scandinavian scientists in the early 1970s.
- the pollutants causing this damage were being transported many hundreds of kilometres, indeed over the whole of the European continent.
- Acid rain problems were also being reported in USA and Canada.

# 51 Parties in Europe, North America and Central Asia

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# Additional Protocols to the Convention: stepwise approach

- dealt with specific pollutants;
- Protocols reducing emissions of sulphur, nitrogen oxides and volatile organic compounds were agreed in 1985, 1988 and 1991;
- Flat-rate reduction 30% for each country;
- followed by a second sulphur protocol in 1994 (first effects-oriented approach).

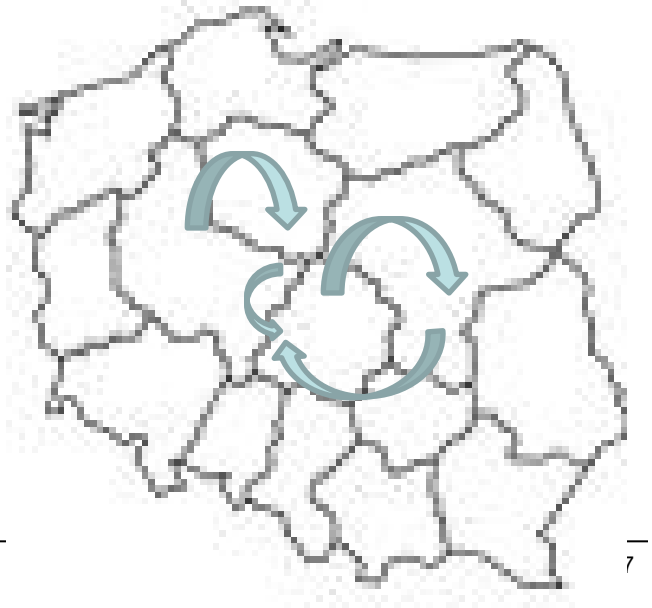
# Subsequent Protocols

- extended the scientific coverage of the Convention
- with Heavy Metals (priority on mercury, cadmium and lead) Protocol in 1998

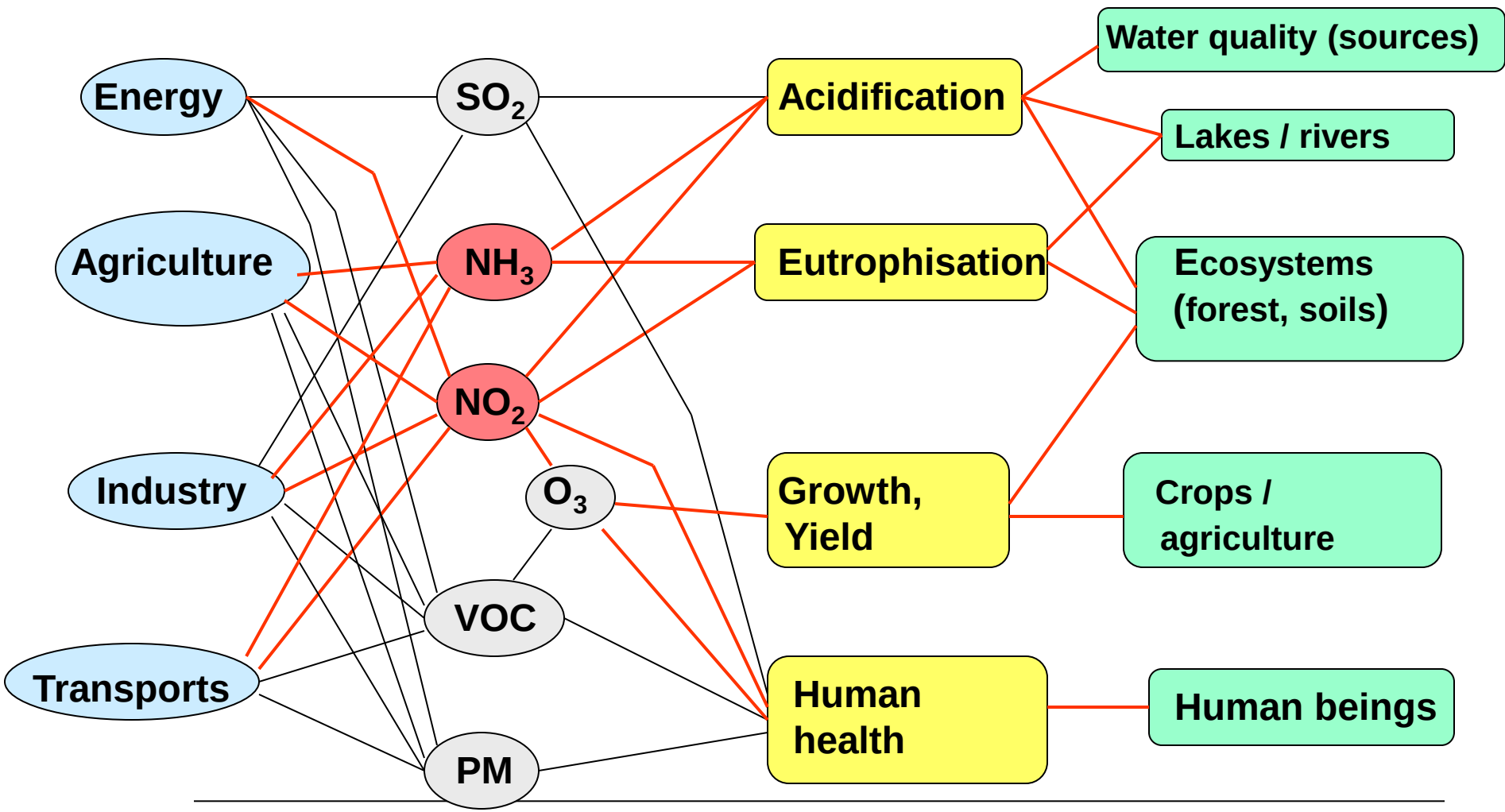
- and Protocol 1998 on Persistent Organic Pollutants – toxic compounds such as some pesticides which live for a long time in the environment and can be transported over large distances, in many cases around the globe.

# Effects based approach

- Atmospheric modelling of the transport of pollutants from emitting countries to the receiving areas in sensitive ecosystems.
- To establish the ‘blame’ for the adverse impacts which could be allocated to the source regions most responsible, so that emission reduction targets would focus on these areas.



# Air pollution on local, regional and long-range scale



# Multi-pollutants / multi-effects Strategy

Integrated assessment models with a database of technologies and costs used in conjunction with the atmospheric model to determine the least cost strategies for achieving a given environmental target.

High degree of ‘environmental justice’ and equity

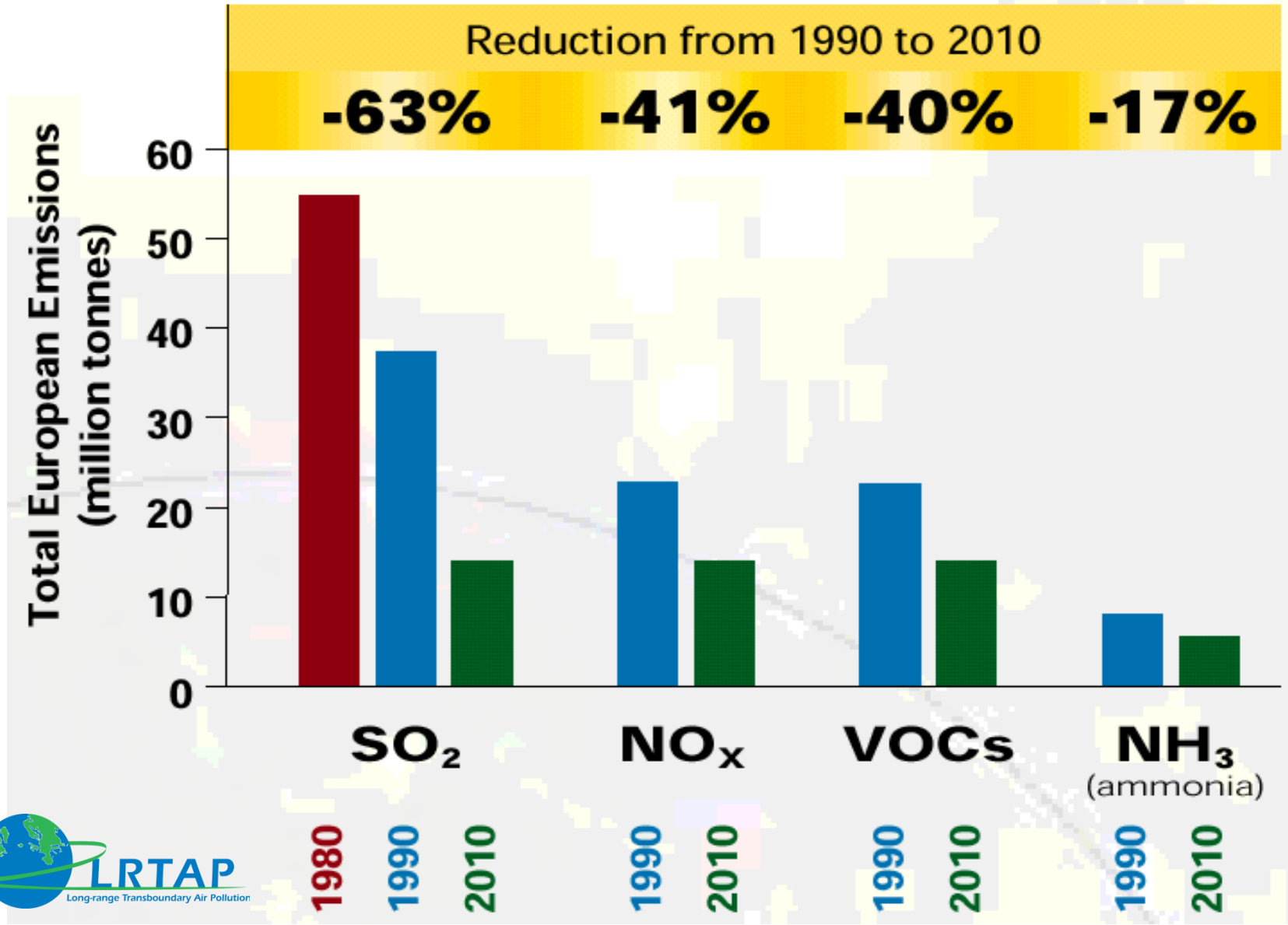
http://gains.iiasa.ac.at/index.php/gains-asia


A scientific model designed to identify the most viable and cost-effective methods of jointly reducing emissions of air pollution and greenhouse gases in Asia, without compromising economic development.

# The 1999 Protocol of Gothenburg

- incorporated the 4 main pollutants ($SO_2$, $NO_x$, VOC and $NH_3$) responsible for acidification, eutrophication (excess of nutrients in an ecosystem) and ground level ozone.
- Not only target but also ways to achieve the national emission ceilings;
- 6 technical annexes containing emission limit values for stationary sources, fuels quality and mobile sources as well as agricultural sources;

# EMISSION REDUCTIONS FOR EUROPE

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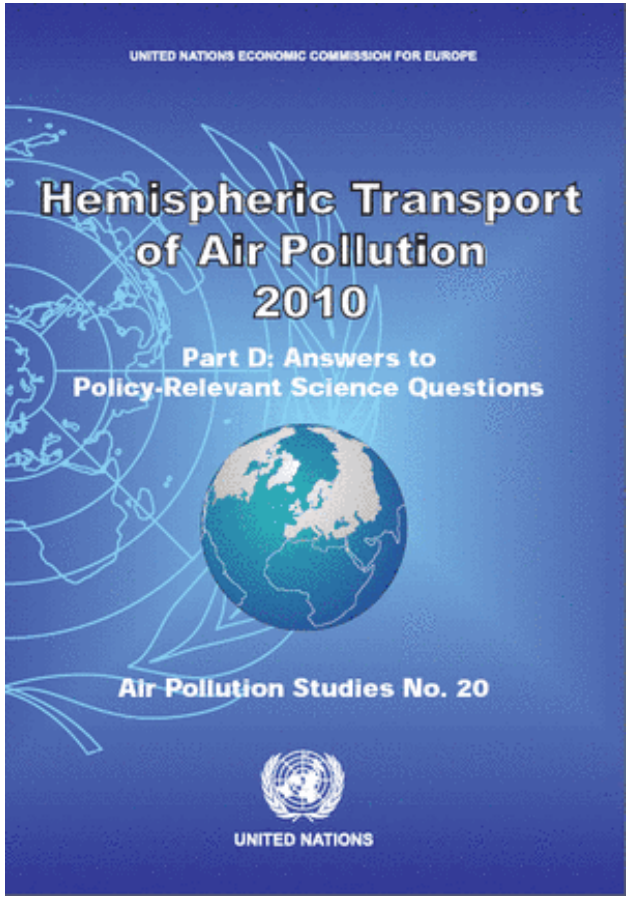
# Amended Gothenburg Protocol adopted on 4 May 2012

- New emission reduction commitments for 2020 and beyond versus 2005 as reference year with updated Emission Limit Values in technical annexes;
- Include commitment to reduce emissions of PM, considered to be the most important air pollutant affecting human health.
- Stronger requirements on emission inventories, air quality and effects monitoring.

# The amendments to the Gothenburg protocol

- recognised the role of some important air pollutants in climate change, notably Black Carbon and tropospheric ozone,
- And made recommendations for their reduction,
- becoming the first international legal instrument to attempt to bridge the gap between air pollution and climate change
- and to attempt to maximise the co-benefits to be obtained from policies which address both issues.

# Hemispheric and intercontinental transport of air pollutants




especially ozone and PM, mercury and POPs has been established as important factor in air quality management.

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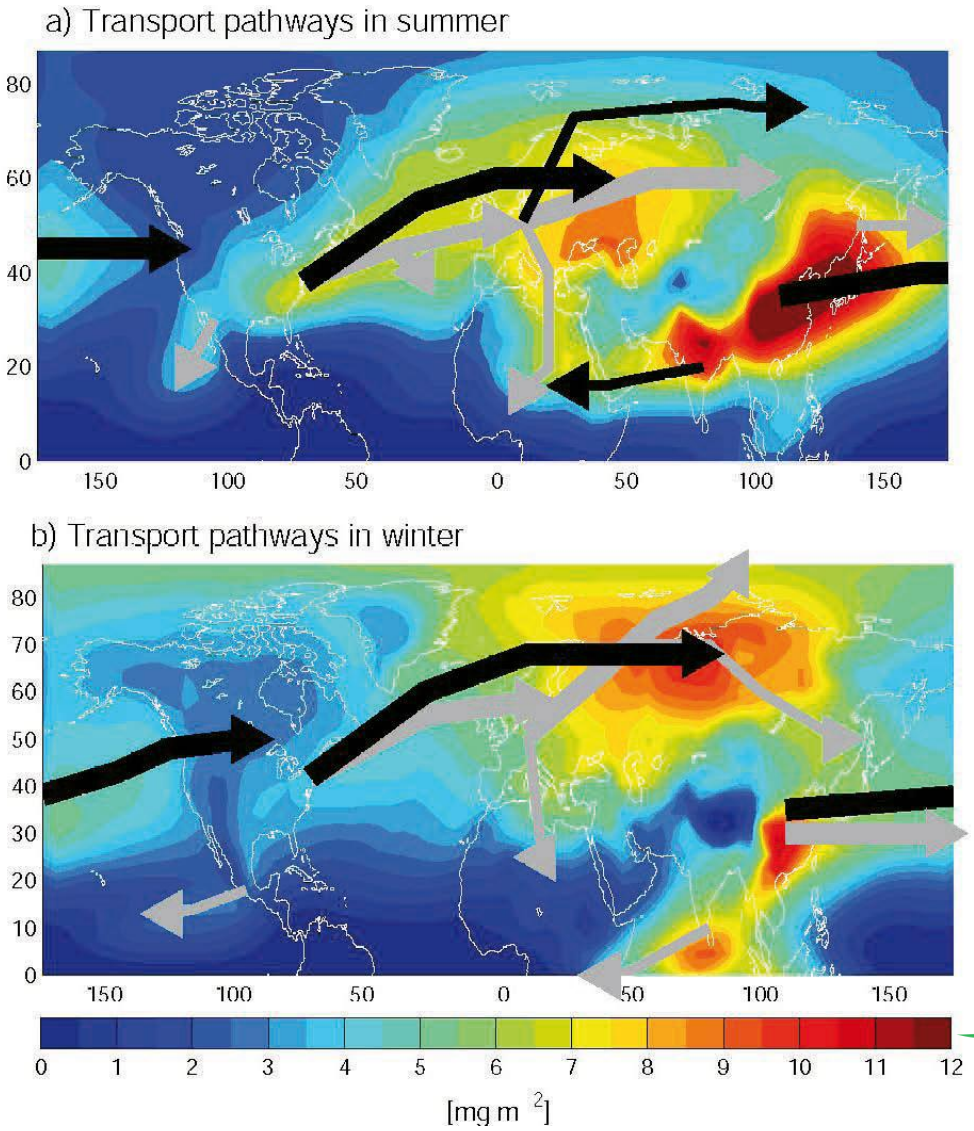
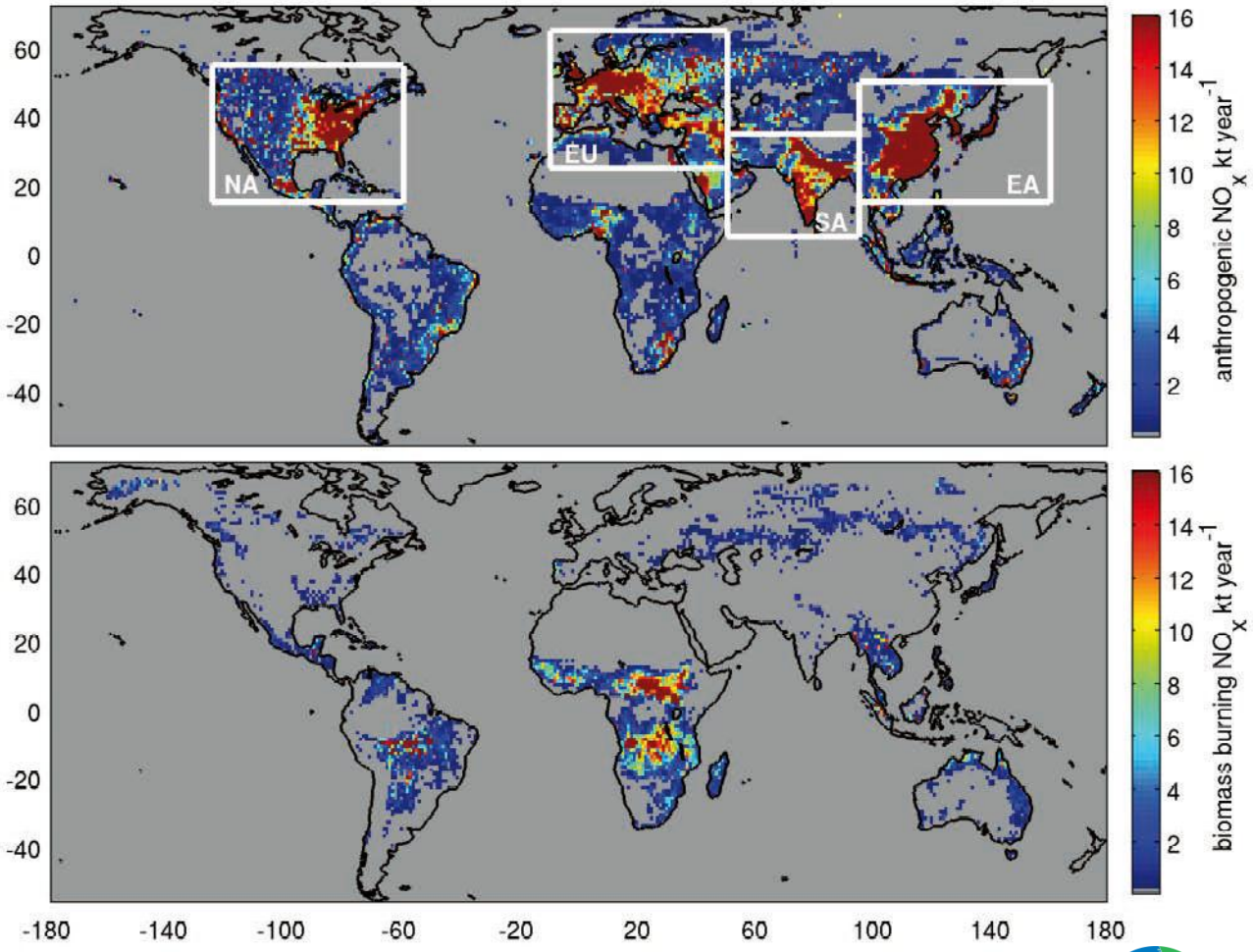
http://www.unece.org/env/lrtap/welcome.html

**Figure 1.4. Pathways of intercontinental pollution transport in the Northern Hemisphere**
**(shading indicates location of a passive anthropogenic CO tracer released over the Northern Hemisphere continents after 8-10 days of transport)**



# Distribution of global anthropogenic-NOx emissions (top), and biomass burning

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# The Executive Body of CLRTAP (equivalent to a 'Conference of Parties')

- agreed in 2010 a Long Term Strategy to guide the work of the Convention over the coming years.
- science will remained at the heart of the Convention's work.
- welcomed the cooperation with the UNESCAP and the developments conducive to furthering cooperation with North-East Asia in addressing transboundary air pollution

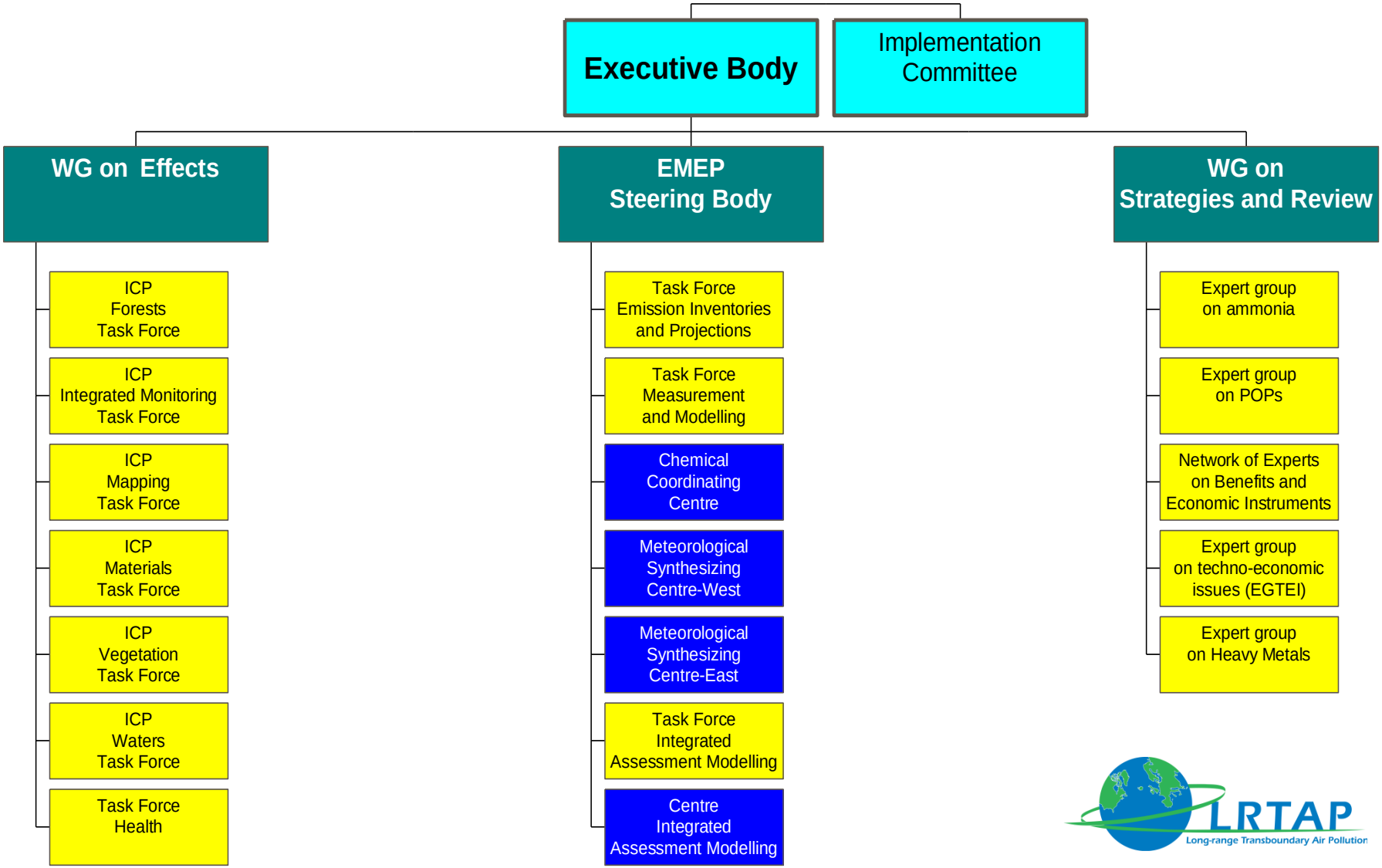
# More information on the UNECE Convention on Long-range Transboundary Air Pollution (CLRTAP) available on:

- http://www.unece.org/env/lrtap/welcome.html

- The 2010 Conventions' long-term strategy: http://www.unece.org/fileadmin/DAM/env/lrtap/conv/long-term_strategy.pdf

- Science magazine 2012 article by Dr Stefan Reis (UK) and colleagues from 6 countries: How science and policy address air pollution effects on human health and ecosystems, and climate change in Europe:
- http://www.sciencemag.org/content/338/6111/1153

# Intergovernmental bodies, expert groups and scientific centres under the Convention

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