

## **CONVENTION ON LONG RANGE TRANSBOUNDARY AIR POLLUTION**

### **Proposal from the United Kingdom and the Netherlands to establish a Task Force on Reactive Nitrogen**

**Informal Note: In room document nr 1.**

This document is for presentation to the twenty-fifth session of the Executive Body (10-13 December 2007)

#### **Background**

1. Over the last decade the Convention on Long-range Transboundary Air Pollution has achieved major progress in developing multi-pollutant strategies for controlling transboundary air pollution. The 1999 Gothenburg Protocol establishes limits for nitrogen oxides and ammonia emissions in relation to their effects on acidification, eutrophication and ground level ozone. In the preamble to the 1999 Gothenburg Protocol it is noted "*that measures taken to reduce the emissions of nitrogen oxides and ammonia should involve consideration of the full biogeochemical nitrogen cycle and, so far as possible, not increase emissions of reactive nitrogen including nitrous oxide which could aggravate other nitrogen-related problems.*"
2. Following the success of the existing protocols, it is recognized that excess nitrogen compounds represent a key challenge for multi-pollutant integration in the future. In particular, there is a need to develop a holistic approach to managing *reactive nitrogen*. This includes the need to manage each of the key sources of component compounds (nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), nitrous oxide (N<sub>2</sub>O), nitrate (NO<sub>3</sub>) leaching), addressing overall reactive nitrogen budgets, and considering the interactions with other environmental threats (e.g. biodiversity, climate change, particulate matter, photochemical oxidants, water quality, air quality).
3. Recognizing the intimately linked nature of the nitrogen cycle, and its importance for many transboundary environmental problems, the recent workshop "*Air pollution and its relations to climate change and sustainable development*" ("Saltsjobaden 3", held in Gothenburg, Sweden, on 12-14 March 2007) addressed the possibility of developing an integrated approach to nitrogen management. It was concluded that the multi-pollutant methods developed by the Convention made it an ideal framework to develop such an integrated approach (<http://asta.ivl.se/>).
4. The findings of the Saltsjobaden 3 Workshop were presented at the thirty-ninth session of the Working Group on Strategies and Review, where the United Kingdom and the Netherlands, as current co-leading countries for the Expert Group on Ammonia Abatement, made a proposal for a Task Force on Reactive Nitrogen. The Working Group "invited them to further explore the options and propose terms of reference at its fortieth session in September 2007, after consultation with the Working Group on Effects and the EMEP Steering Body".
5. This paper has been updated to take into account comments made by the Working Group on Effects at its twenty-sixth session, the EMEP Steering Body at its thirty-first session and by WGSR at its fortieth session.

6. This document supports the draft terms of reference and provides additional detail and background on the proposal to establish a Task Force on Reactive Nitrogen.

### **Proposed objectives of a Task Force on Reactive Nitrogen**

7. The Task Force will work towards developing an integrated approach to managing nitrogen . The long-term goal of this Task Force will be to try to influence strategies across the UNECE region (including the European Community) to ensure alignment of effect-based policies on reactive nitrogen compounds in relation to air pollution, biodiversity, climate change and water quality.
8. To take this forward, the Task Force will need to effectively use existing information and tools, address gaps, and improve the alignment of nitrogen related policies between the Convention and other international processes (including those of the EU) and numerous European Initiatives (see Annex A). For example, outputs from the Workshop on Integrated Assessment Modelling of Nitrogen by the Task Force on Integrated Assessment Modelling (28-30 November 2007) could provide a useful starting point for discussions.
9. It should be noted that key sources of excess reactive nitrogen include energy, industry, transport and agricultural activities. Of these, nitrogen oxide emissions from energy, industry and transport sources are addressed with the aim of minimizing these unintended emissions. By contrast, agriculture represents a key source of reactive nitrogen where the use is intentional and reactive nitrogen needs to be optimized. For this reason, the Task Force will need to give special attention to this sector, while developing an integrated perspective on all reactive nitrogen sources and sinks.
10. The Task Force will also continue the work of the Expert Group on Ammonia including as required, updates to the Guidance documents on BAT, updating the Code of Good Agricultural Practice and improving emission inventories.

### **Organizational Issues**

11. Noting the strategic nature of the work of the of the Task Force, as well as the need for coordinating closely with international activities outside of the Convention, it is proposed that a new Task Force on Reactive Nitrogen should work closely together with the Task Force on Integrated Assessment Modelling and be established under the Working Group on Strategies and Review. The Task Force will also, however, report to the Working Group on Effects and the EMEP Steering Body.
12. The new Task Force will also encompass the Ammonia Expert Group's work in the agricultural sector and would therefore, take on any follow-on future work.
13. The United Kingdom and the Netherlands are prepared to act as lead Parties, and would appoint co-chairs for the Task Force. The lead Parties will assume principal responsibility for coordinating the work of the Task Force, for organizing its meetings, for communications with participating experts, and for other organizational arrangements in accordance with the workplan.

14. It is proposed that the Task Force will be composed of experts from the Parties to the Convention. Each Party will nominate a focal point to the secretariat. Meetings of the Task Force will be open to designated representatives of intergovernmental or accredited non-governmental organizations. The Chairs will be encouraged to invite individuals with expertise relevant to the work of the Task Force and actively liaise with the chairs of other groups under the Convention.
15. The Task Force will produce a full report on the progress to and possibilities for an integral approach to manage reactive nitrogen compounds to the September session of the Working Group on Strategies and Review in 2010 at the latest. The work of the Task Force will be reviewed at the twenty-eighth session of the Executive Body Session in 2010.

### **Task Force Functions**

16. Formally the functions of the Task Force may be identified as:
  - (a) In cooperation with other bodies under the Convention, plan and conduct the technical work necessary to develop a full understanding of the integrated, multi-pollutant nature of reactive nitrogen, particularly in relation to air pollution and its interactions with biodiversity, water quality and climate change, for consideration in the reviews and revisions of protocols to the Convention;
  - (b) In cooperation with other bodies under the Convention, coordinate, plan and conduct, when necessary, technical work for estimating the emissions, budgets, inputs and effects of nitrogen for the use in reviews and revisions of protocols to the Convention and prepare , technical reviews and other papers as required for submission to the Working Group on Strategies and Review;
  - (c) To keep under review how the work developing an integrated approach to nitrogen within the Convention complements the activities of other bodies under the Convention, in particular, the Task Force on Integrated Assessment Modelling (responsible for scenario modelling), Task Force on Emission Inventories and Projections and the Task Force on Modelling and Mapping (effect-based modelling and mapping) as well as other international activities. The Task Force will need to make maximum use of such considerations to foster an understanding and make best use of the synergies.
  - (d) Continue the work of the Ammonia Expert Group including updates to Guidance document on BAT, Code of Good agricultural Practice and improvements to emission inventories and other activities as required.
  - (e) Carry out such other tasks related to the above work as the Executive Body may assign to it in the annual workplan.

## **ANNEX A: Relevant Political and Scientific Forums and Activities related to the possible development of an integrated approach towards the management of reactive nitrogen compounds**

Key **international conventions** with which the Task Force on Nitrogen will need to relate include:

- the UNECE Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention),
- the UN Framework Convention on Climate Change (UNFCCC),
- the UN Convention on Biological Diversity (CBD),
- the UNECE Espoo Convention on Environmental Impact Assessment in a Transboundary Context (TEIA Convention),
- the Marine Conventions, including the Oslo and Paris Commission (OSPARCOM), the Helsinki Commission (HELCOM) and the Barcelona Commission.

**European Initiatives** the Task Force will need to link with include:

- The activities of the European Centre of the International Nitrogen Initiative (INI).
- The European Nitrogen Assessment (ENA), which represents a three year activity (2007-2009) coordinated through the Nitrogen in Europe (NinE) framework programme of the European Science Foundation ([www.nine-esf.org](http://www.nine-esf.org)).
- The COST Action 729 “Assessing and managing nitrogen fluxes in the atmosphere-biosphere system in Europe”, which includes developing integrated assessment approaches for nitrogen ([www.cost729.org](http://www.cost729.org)).
- The NitroEurope Integrated Project ([www.nitroeuropa.eu](http://www.nitroeuropa.eu)) .
- The ACCENT network of excellence.
- Other underpinning research activities.