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Task Force on Reactive Nitrogen

Special session on agriculture and air pollution

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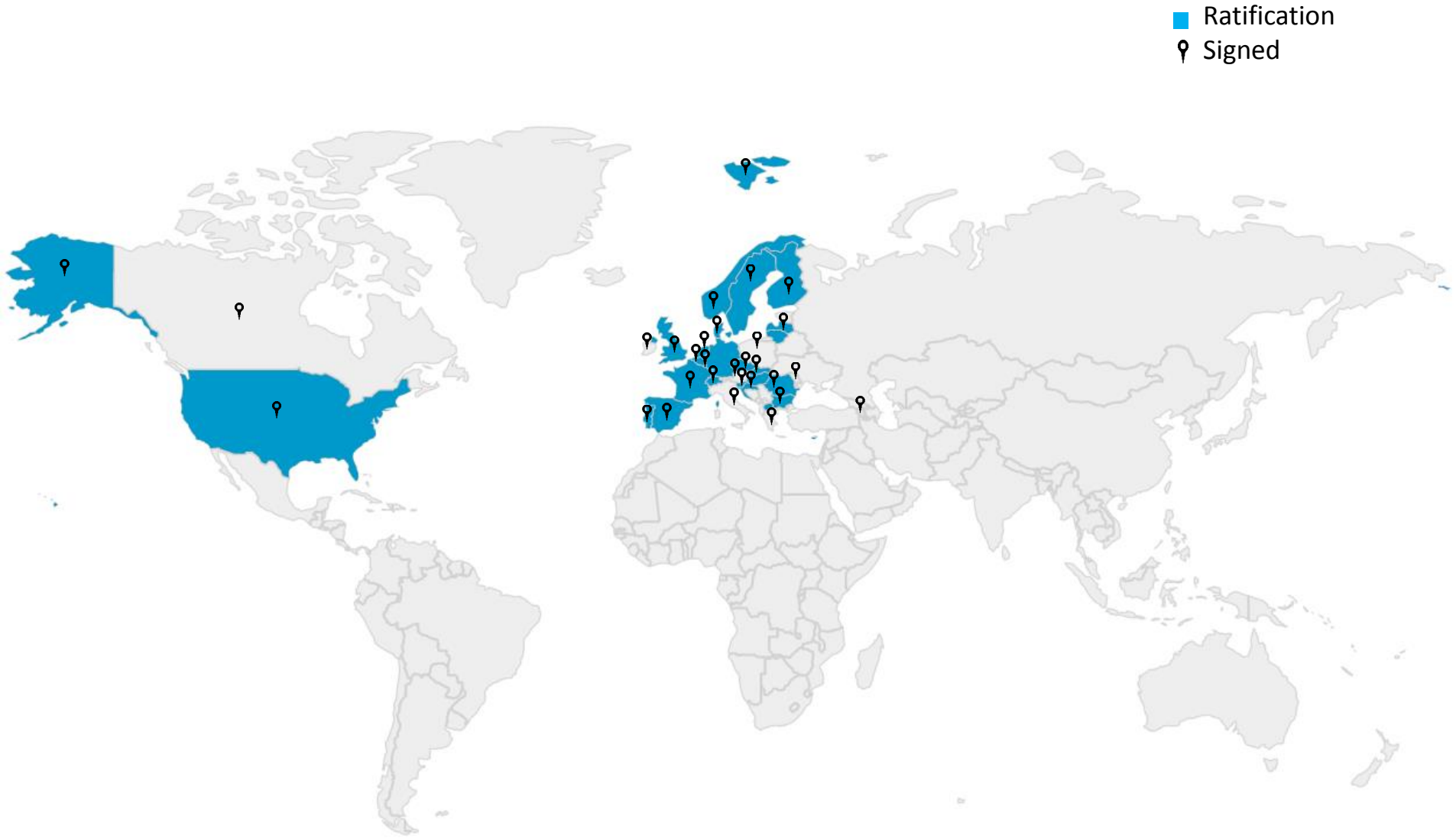
Lead country: Denmark

WGSR, Geneva, 1st June 2017


Ratification
Signed

NAC
National ammonia code

- *Nitrogen management, taking account of the whole nitrogen cycle;*
- *- Livestock feeding strategies;*
- *- Low-emission manure spreading techniques;*
- *- Low-emission manure storage systems;*
- *- Low-emission animal housing systems; and*
- *- Possibilities for limiting ammonia emissions from the use of mineral fertilizers.*

Questionnaire

To assess the status of progress in implementing the NACs, the TFRN in cooperation with the Convention secretariat, kindly requested all the Parties to the Gothenburg Protocol to answer a short questionnaire concerning the status of implementation.

Ratification

NAC

9+1

With NAC 2017

- Belgium, Czech Republic, Denmark, Germany, Hungary, Poland, Romania, Slovenia, Sweden, Switzerland, and the United Kingdom

Conclusions

- Some countries do not have specifically established a NAC,
- Some have established Codes of good practice and/or other related guidelines.
- Several countries indicated ongoing developments and future plans with regard to the development of NACs.
- Some countries stating not to have a NAC in fact already have a (CGAP) code of good agricultural practice

Agriculture and Air Pollution

Elements of the Co-chairs Summary of the Special Session

Fifty-fifth session of the Working Group on Strategies and Review

1 June 2017, Geneva

Highlights

- NH_3 emissions from livestock excreta and fertilizers contribute to fine particulate matter, which causes risks for human health and elevated NH_3 concentrations and nitrogen deposition threatening biodiversity;
- NO_x emissions from agricultural soils add to NO_x pollution from combustion sources;
- Agricultural activities cause air pollution and are at the same time threatened by it, e.g. ozone impacts;
- Measures to reduce N emissions can contribute to improving nitrogen use efficiency, food production and farmer profits.

Ammonia

- Around 80-90% of NH_3 emissions in Europe from agricultural activities;
- Reducing NH_3 emissions allows increased Nitrogen Use Efficiency
- Low NH_3 emission manure spreading helps reduce phosphorus run-off
- Reducing NH_3 the most effective strategy to reduce PM in Europe

- Commitments under the Gothenburg Protocol to reduce NH_3 emissions from agriculture include: national ceilings (annex II) + technical requirements (annex IX);
- Establishment of national advisory codes of good agricultural practice to control ammonia emissions is an *obligation* for Parties within the geographical scope of EMEP;
- TFRN survey: 10 of 26 Parties within the geographical scope of EMEP have established their National Ammonia Codes (NACs), of them – only 5 are specific dedicated codes.

Ammonia: conclusions

- Parties need to increase their efforts on air pollution abatement in agriculture with focus on cost-effective NH_3 abatement measures
- Two tasks for National Ammonia Codes (NACs):
  - Each Party within the geographical scope of EMEP "*shall establish, publish and disseminate*" a clearly titled NAC;
  - It is recommended that each Party support wider dissemination and integration of its NAC by **also** embedding its provisions in a wider guidance on good agricultural practice;
- TFRN to continue to support Parties in establishing their NACs and to review progress
- Parties can use the UNECE Framework Code as a NAC starting point
- Extra: need to collect farm activity data on low-emission practices and incorporate outcomes in emission inventories

NO_x emissions from soil

- Not part of most national NO_x emissions inventories
- Not in revised Gothenburg Protocol

- Emissions of NO_x from agricultural soils result from the same agricultural practices that give rise to NH_3 emissions
- NO_x emissions from semi-natural ecosystems are also increased by atmospheric nitrogen deposition from anthropogenic sources
- Controlling agricultural NO_x emission is a win-win with NH_3 and offers countries additional flexibility to meet goals for cleaner air
- Invite TFEIP to revise guidance on national reporting of soil NO_x emissions, preparing the way for future Gothenburg Protocol review

Integrating Nitrogen Management

- Growing recognition of the need to take an integrated approach in managing nitrogen air pollution within the nitrogen cycle.
- Improving nitrogen use efficiency offers profit potential for farmers
- Take note of the integrated perspective on nitrogen from the INI 2016 *Melbourne Declaration*.
- Current fragmentation of responsibilities for different parts of the nitrogen cycle leads to a lack of policy coordination: food, energy, traffic; air, water, climate, soils and biodiversity.
- An approach building on the multipollutant multi-effect approach pioneered by the Air Convention in its Protocols could have major benefits for air pollution abatement.

Integrating Nitrogen Management

- Note the recent establishment of the International Nitrogen Management System (INMS): close partnership with TFRN, including the demonstration study in Eastern Europe;
- TFRN - key contributor to the INMS process.
- INMS is an opportunity for the Air Convention to further its perspective on multi-pollutant multi-effect approaches
- INMS should estimate how agricultural air pollution mitigation would offer quantified co-benefits for water pollution, greenhouse gas balance, biodiversity and soil quality, as well as food and energy security.

Building international partnerships

- Agriculture and air pollution is a global concern
- Nitrogen is a special challenge: **"*One of the greatest environmental problems of our time*"** Environment Minster Hendricks (31 May 2017).

- Working with regional partners such as SACEP can make an important contribution to meeting the objectives of the Geneva Air Convention
- Consolidation of previously-fragmented policy response to the nitrogen cycle will bring major benefits
- UNEA-3
  - A key opportunity (Sessions and Resolutions)
  - Make clear that agriculture and air pollution is a major challenge
  - It could agree to start coordinating across the Nitrogen Policy Arena
  - WGSR delegates encouraged to contact their counterparts preparing UNEA-3