

Task Force Reactive Nitrogen, 21st meeting (TFRN-21)

Thursday 8th – Friday 9th October 2026

Venue: The Hague/Den Haag, The Netherlands and online (hybrid)

Agenda

Thursday 8th October.

0930 CEST. **Session 1: Strategic Overview in relation to revision of the Gothenburg Protocol.**

0930-0935. **Opening** of the meeting by the TFRN lead country: **Tommy Dalgaard**, University of Aarhus Denmark (TFRN co-chair).

0935-0950. **Welcome: ‘Stickstofcrisis’ and Netherlands experience in reducing ammonia emissions** (**Marije Schouwstra**, TBC, Ministry of Infrastructure and Water Management, The Netherlands).

0950-1010. **Status of Gothenburg Protocol Revision Process.** Emerging messages from the Leiden Heads of Delegation Meeting (**Anna Gran**, Acting Chair, Working Group on Strategies and Review, WGSR).

1010-1030 **General discussion** on emerging issues for Gothenburg Protocol revision process (Facilitated by **Mark Sutton**, Co-chair TFRN)

Key themes for discussion:

- a) Ambition for ammonia mitigation in the context resilience and the fertilizer crisis.
- b) Relationship between advisory and mandatory actions related to ammonia (Ammonia Guidance Document, Framework Code, Annex IX, National Ammonia Codes, National Nitrogen Budgets).
- c) How can a perspective on the circular economy and wider economic benefits help mobilize action on ammonia mitigation in the context of the wider N cycle.
- d) Key issues faced by Parties in reaching agreement to reduce the adverse effects on human health and ecosystems from transboundary nitrogen pollution?

1030-1100. Tea/Coffee Break.

1100 CEST. Session 2: Towards a revision of Annex IX that contributes to economic resilience, cost effectiveness & environmental protection.

1100-1105. **Introduction** to the key issues (**Mark Sutton**)

1105-1110. **Experience from Türkiye** in exclusion of the smallest farms from requirements for nitrogen policy (**Canan Esin Köksal**, Senior Environmental Expert, Republic of Türkiye Ministry of Environment Urbanization and Climate Change).

1110-1120. **How could flexibility in excluding the smallest farms from mandatory requirements support a cost-effective approach** (**Rasmus Einarsson**, Swedish University of Agricultural Sciences, Uppsala). *Background document: “Consideration of farm-size differences as an aid to cost-effective ammonia emission reduction.”*

1120-1140. **Discussion** about flexibilities to exclude small farms from requirements.

1140-1200. **Overview of current options for revision of Annex IX** (**Mark Sutton**). *Background document: “Options for the Options for revision of Annex IX of the Gothenburg Protocol.”*

1200-1230. **General discussion** of options for Annex IX.

1230-1330. Lunch

1330 CEST. Session 3: Status of the UNECE Ammonia Guidance Document, Framework Code and National Ammonia Codes (NACs)

1330-1335. **Opening** remarks: **Shabtai Bittman** (Co-chair EPMAN, Agriculture Canada).

1335-1345. **Overview on finalizing the revised UNECE Ammonia Guidance Document** (**Rasmus Einarsson**, Swedish University of Agricultural Sciences). [Note: *there is more time in the agenda for later, on specific discussions as needed*].

1345-1355. **Relationship between UNECE documents on ammonia (AGD) and the EU Industrial Emission Directive (IED) with the Uniform Conditions for Operating Rules in Livestock Farming (UCOL)** (**Gabrielle Borghardt**, German Environment Agency (UBA)).

1355-1405. **Status of National Ammonia Codes (NACs) and relationship to the UNECE Ammonia Framework Code** (**Claudia Marques dos Santos**, Co-chair TFRN and Instituto Superior de Agronomia, University of Lisbon).

1405-1410. **Discussion** and identification of next steps on ammonia guidance & codes.

1410 CEST. **Session 4: National and international experiences on ammonia and wider nitrogen mitigation, including costs & benefits**

1410-1425. **Experiences from Ireland in reducing ammonia, nitrate and nitrous oxide emissions. Can we identify coherent ‘packages of measures’?** (Dominika Krol, Teagasc, Ireland).

1425-1440. **Opportunities from robotics and other technical innovations for reducing ammonia emissions** (Shabtai Bittman, co-chair EPMAN, Agriculture Canada and Robin Walvoort, De Marke Experimental Farm, The Netherlands).

1440-1455. **What are the most cost-effective measures to reduce ammonia emissions from cattle, pig and poultry houses and manure storage?** (Helmut Döhler, Döhler Agrar, Germany).

1455-1510. **Improving coherency of measures to increase resilience and reduce nitrogen losses from Spanish agriculture** (Odón Sobrino, Ministerio de Agricultura Pesca y Alimentación, Spain).

1510-1520. **Development of national and regional boundaries for reactive nitrogen** (Markus Geupel, German Environment Agency (UBA), Germany).

1520-1530. **Newest insights in ammonia emission reduction researched at practical farms** (Karin Groenestein, Wageningen University & Research, The Netherlands and Robin Walvoort, De Marke Experimental Farm, The Netherlands).

1530-1540. **Latest insight on reduction ammonia by pig housing** (Paria Sefeedpari, Wageningen University & Research, The Netherlands).

1540-1600. Tea/Coffee Break.

1600 CEST. **Session 5: Strategic approaches to Sustainable Nitrogen Management**

1600-1610. **Integrated Assessment. Cost and benefits assessment for ammonia, nitrogen oxides and nitrous oxide in the GAINS model** (Wilfried Winiwarter, Co-chair EPNB and Centre for Integrated Assessment Modelling, CIAM, IIASA).

1610-1630. **Status and progress in mobilizing National Nitrogen Budgets across the UNECE** (Markus Geupel, Co-chair EPNB, Umweltbundesamt, Germany).

1630-1635. Discussion on how farm-scale nitrogen budgets have helped to reduce nitrogen pollution.

1635-1645. Discussion on strategic approaches

- How could action through National Nitrogen Budgets be strengthened under a revised Gothenburg Protocol?
- How could action on farm scale nitrogen budgets be stimulated through a revised Gothenburg Protocol?
- What actions need more investment?

1645-1650. **Building on our appetite for change: Mobilizing non-technical and technical action by linking nitrogen to the bioeconomy** (Adrian Leip, co-chair, Expert Panel on Nitrogen and Food, EPNF).

1650-1700. Wrap up for the day and setting of evening tasks!

1800. Joint dinner at Litte V, The Hague. *A set-course menu has been kindly arranged, with support from the Irish Presidency.*

- **Question for Dinner:** How could revision of Annex IX help to mobilize more resilient, cost-effective farming with lower ammonia emissions?

Friday 9th October.

0900 CEST. **Session 6: Strategic Overview in relation to revision of the Gothenburg Protocol.**

0900-0930. **Finalizing the UNECE Ammonia Guidance Document.**

(Discussion facilitated by **Rasmus Einarsson and Alberto Sanz Cobeña**)

- Identification of remaining issues to be resolved
- Technical considerations; How to embrace ranges of views
- Timescales to achieve the translation deadline.
- Pathway through WGSR to EB (including relationship to Annex IX).

0930-1030. **Detailed consideration of the draft options for Annex IX.**

(Discussion facilitated by Mark Sutton, with on-screen annotation)

- Please read and discuss the background document in advance
- Line by line consideration of the options document, and capturing of suggestions.
- Distinguishing, a) updating of technical evidence, b) consideration of gaps in the document (e.g. sewage sludge and anaerobic digestion), and c) varying levels of ambition by Parties.

1030-1100. Tea/Coffee Break.

1100-1130. **Detailed consideration of the draft options for Annex IX** (continued).

- Wrap up of the Annex IX discussion and next steps in advance of the Executive Body (EB-42, December 2026).

1130 CEST. **Session 7: Future Activities and other business**

1130-1230. **Review of TFRN contributions to the Convention Workplan** (Tommy Dalgaard, co-chair TFRN).

1230-1250. Other business items (Please inform TFRN co-chairs in advance of any proposed items.)

1250-1300. Closing statements from key stakeholders

- **Anna Gran**, Acting Chair, Working Group on Strategies and Review

1300-1400. Lunch.

1400-1500. Space for additional discussions if necessary.

1500. Close of TFRN-21.
