

German Environment Agency

21. March 2022

Expert Workshop on Ammonia

28.-29. March 2022

To be held in hybrid from: German Environment Agency, Dessau / webex

All times are given in CEST

For last minute registration, please fill in the [registration form](#) and send it to
anne-katrin.steiner@uba.de

More than ten years after the recommendation of updated CLRTAP critical levels for ammonia ([Mapping Manual](#)), new findings on the effects of ammonia on vegetation will be discussed on a workshop prepared by the CCE and Germany as a lead. The workshop will offer the opportunity to exchange information on national or regional programs which have been set up for the monitoring of ammonia in sensitive habitats.

Scientists dealing with research on effects of ammonia on vegetation and ecosystems and those involved in the monitoring of ammonia in the environment are encouraged to present their research.

The expert workshop will be held on 28/29 March 2022 as a hybrid meeting. The option for a physical attendance is in Dessau, Germany, where the German Environment Agency (UBA) is situated. In parallel, online participation will be offered. The workshop is part of the current work plan for the year 2022-2023 of CLRTAP ([1.1.1.22](#)) and will be organized in the framework of a R&D Project financed by the German Environment Agency (UBA).

FINAL DRAFT AGENDA

Day 1 (Monday 28 March 2022)

12.30-13.50 Session 1: Introduction (Background document, Current Review, models and future trends of NH₃ Concentrations across Europe)

- 1. Introduction to the workshop and the review process (Geupel, UBA, Germany)**
- 2. 15 years after: Rationale and approach used in the 2006 Edinburgh review workshop (Sutton, CEH, United Kingdom)**
- 3. Literature review on the effects of ammonia (Franzaring and Kösler, University of Hohenheim, Germany)**
- 4. Modelling ammonia concentrations, trends and scenarios in Europe (Fagerli, MSC-West, Norway)**

13.50 - 15.10 Session 2: Ammonia monitoring networks (national, regional, in conservation areas)

- 5. NH₃ concentration measurements (Bleeker, RIVM, The Netherlands)**

6. Real-time monitoring of ammonia concentrations with Cavity Ring-Down Spectroscopy' (Hofmann, Picarro, The Netherlands)
7. Ammonia monitoring at long-term and temporary sites in Flanders (Staelens, Flanders Environment Agency, Belgium)
8. Monitoring atmospheric ammonia on Natura 2000 sites in the Republic of Ireland (Kelleghan, University College Dublin, Ireland)

15.10 -15.40 Break

15.40 - 17.30 Session 2 continued

9. UK Ammonia Network: Present and Future (Aazem, JNCC, United Kingdom)
10. Ammonia concentration measurements in Germany - an overview (Moravek & Geupel, UBA, Germany)
11. Metrological aspects to support environmental ammonia monitoring (Pogany, PTB, Germany)
12. Long-term NH₃ measurements at the TROPOS research station Melpitz using a MARGA (Poulain, TROPOS, Germany)
13. Long-term measurements to support deposition and critical loads assessments in the US (Gay, University of Wisconsin Madison & Puchalski, EPA, USA)

17.30-18.00 Discussion 1: Current set-up and future perspectives on ammonia monitoring (Moderation: Markus Geupel)

Some ideas / questions for the discussions can be found in the Background document (Chapter 4).

Day 2 (Tuesday 29 March 2022)

9.00 – 10.40 Session 3: Recent research on different scales (fumigation chamber, field exposure, gradient studies with bioindicators, transplants and vegetation on site)

- 14. Relationships between ambient NH₃ concentrations and epiphytic lichens in an urban environment (Manninen, University of Finland, Finland)**
- 15. A fumigation and a gradient experiment using higher plants (Kösler and Franzaring, University of Hohenheim, Germany)**
- 16. Towards understanding shorter-term critical levels with monthly resolution measurements (Dragosits, CEH, United Kingdom)**
- 17. Biomonitoring of ammonia with the epiphytic lichen *Hypogymnia physodes* (Mohr, LWK Lower Saxony, Germany)**
- 18. How can we assess the impact of project contributions of ammonia on Natura 2000 sites? (Uhl, FÖA, Germany)**

10.40 – 11.00 Coffee Break

11.00-11.40 Session 4: Interrelations of critical levels and critical loads

- 19. Development of a trophic assessment and management system for habitat types (Directive 92/43/EWG) considering interrelations between critical levels and critical loads (Prüef, LUBW Baden-Württemberg, Germany)**
- 20. Ammonia concentrations in Switzerland compared to critical levels and loads (Meier, BAFU, Switzerland)**

11.40 - 13.00 Discussion 2: New findings with potential relevance to NH₃ critical levels: Future directions / next steps
(Moderation: Jürgen Franzaring)

Some ideas / questions for the discussions can be found in the Background document (Chapter 4).