

Planned Revision of the UNECE Ammonia Guidance Document: Questions and possible outline of contents of the revised document

Submitted by the Co-chairs of the Task Force on Reactive Nitrogen

1. The UNECE Guidance Document on preventing and abating ammonia emissions from agricultural sources (ECE/EB.AIR/120) was adopted at the 31st session of the Executive Body of the UNECE Convention on Long Range Transboundary Air Pollution ('Air Convention') in 11-13 December 2012. The document was subsequently published for dissemination as Bittman et al. (2014)¹. Approximately ten years later, the Task Force on Reactive Nitrogen, with the support of its Expert Panel on Mitigation of Agricultural Nitrogen (EPMAN), is now looking to prepare the next major revision of this document.
2. It is noted that the current Guidance Document is around 46000 words. It is an authoritative document, which provides the necessary detail to inform both UNECE and global audiences on ammonia abatement methods. The prime tasks for revision are:
 - a. To update individual chapters with new information from the last ten years,
 - b. To restructure certain chapters with new areas of information which were not previously considered (e.g. anaerobic digestion, ammonia recovery),²
 - c. To ensure that government, expert and wider stakeholder views are considered in the process.
3. Given that this is a substantial document, we note that it is longer than normal UNECE word limits (10,000 words). Therefore, we invite Parties to guide on possible approaches to address this, e.g.:
 - i. **Option 1:** Allow a full revision as this is an existing document that exceeds the usual word-limits. The document would be prepared in two forms: a) an informal document for official adoption³, and b) a published version of the document for dissemination, including authorship attributions and pictures.
 - ii. **Option 2:** Prepare three versions of the text: a) a document that specifies the revisions made (target within 10,000 words, to be reviewed), b) a consolidated version that would combine the revisions and existing text for publication, c) a published version for dissemination of the consolidated version, with authorship attribution and pictures.

¹ Bittman S., Dedina M., Howard C.M., Oenema O. and Sutton M.A. (2014) (eds.) Options for ammonia mitigation: Guidance from the UNECE Task Force on Reactive Nitrogen. TFRN-CLRTAP, Centre for Ecology and Hydrology, UK. [ISBN: 978-1-906698-46-1] <https://unece.org/gothenburg-protocol>

² A proposal of Table of Contents is shown in Annex 1.

³ Note by the secretariat: Parties will have to translate and edit the document using their own resources in view of the word limit set by the UNOG Documents Management Section.

iii. **Option 3:** A fully restructured document that is c. ¼ of the length of the the existing Ammonia Guidance Document.

4. The preference of the Task Force is for Option 1, which would allow the most flexibility and mobilize the international scientific community for a new edition of this document. If this is not possible, Option 2 is preferred to Option 3. Option 2 implies significant additional costs to the Task Force compared with Option 1 to ensure exact tracking and reporting of version differences, including of updated scientific literature citations. Option 3 also implies additional work to the Task Force, while producing a new document that lacks the authoritative detail of the existing Guidance Document.

5. The Task Force here invites Parties to review the existing Ammonia Guidance Document (ECE/EB.AIR/120) and to provide comments to the Task Force in person during WGSR-61 and within 2 weeks after this meeting (Please email written comments to the UNECE Secretariat). In particular, the Task Force asks:

- a. What is most helpful about the existing Ammonia Guidance Document?
- b. What is least helpful about the existing document?
- c. Are there some things that are currently missing that need to be considered?

6. The Task Force notes that the Ammonia Guidance Document forms the basis for the UNECE Framework Code for Good Agricultural Practice for Reducing Ammonia Emissions (ECE/EB.AIR/129). It is proposed to start revision on the Framework Code, once the revision of the Ammonia Guidance Document is complete. However, it may already be useful to consider the documents together:

- a. Are there any messages for revision of the Ammonia Guidance Document that emerge from experience with the Ammonia Framework Code?

7. In Annex 1 to this document, we include a draft Table of Contents of the proposed revision of the Ammonia Guidance Document:

- a. Do Parties have specific questions concerning this proposed Table of Contents?
- b. Are any sections missing or surplus? (For example, the existing section on Ammonia from stationary and mobile sources might be considered in a separate document given the emergence of 'Green Ammonia' as a future fuel.)
- c. Any other points?

8. Finally, the Task Force notes that much of its work is conducted on a voluntary basis by the international scientific community, and therefore financial support would be helpful for the work, including support for necessary workshops.

Annex 1. Table of Contents. Revised version of the Ammonia Abatement GD

Updated: 30th June 2023

Preface

Executive Summary

Chapter 1: Introduction

Chapter 2: Nitrogen management, considering of the whole nitrogen cycle & N/C interactions (inc. mention to different system boundaries)

Chapter 3: Livestock feeding strategies (note: direct link with the CH₄-NH₃ GD, see annex below). NOTE: nutrition experts needed here.

Chapter 4: Livestock housing (note: Synergies with animal welfare in a context of EU increasing targets on welfare. This is link to new technologies in terms of housings)

Chapter 5: Manure management systems & processing (inc. AD, composting, separation...)

Sub-chapter 5.1. Anaerobic digestion & potential for recovery

Sub-chapter 5.2. Manure storage techniques & use of additives

Chapter 6: Manure application techniques

Chapter 7: Synthetic fertilizer application (inc. slow-release fertilizers & inhibitors)

Chapter 8: Non-agricultural stationary and mobile sources: production of fertilizers...

Annex A: 'The special case of emission from organic livestock and crop farms'

Annex B: Methods for measurements & Quality Criteria (very important for e.g. additives to manures) of publications (trustable sources of information).

Annex C: Ammonia and interactions with (all) GHG (with a focus on methane)