

Joint meeting to discuss guidebook methodologies and mitigation techniques, Berlin, Germany, 28th September 2012

Workshop venue: Freie Universität Berlin, Department of Veterinary Medicine
Oertzenweg 19 b, 14163 Berlin
Weiterbildungszentrum "Veterinarium Progressum"

A) SUMMARY

A suggestion had been made at the TFRN meeting in St Petersburg in February 2012 that there be a Joint Meeting of the Ag and Nature Panel of TFEIP and the Expert Panel on Mitigation of Agricultural Nitrogen (EPMAN) and Expert Panel on Nitrogen Budgets (EPNB) of TFRN.

The main objective of this meeting would be to discuss the relationship between the Guidebook methodologies for reporting ammonia emissions in emission inventories and the TFRN guidance provided concerning mitigation measures. In particular, it would be useful if there were some guidance on how to account for the use of mitigation measures in inventory.

At the meeting, 33 participants from 12 European countries, Russia and Canada were present. The morning was dedicated to introductions to the expert panels and their current activities as well as to an overview on the current status of the Guidebook revision.

The afternoon discussed the future collaboration between the Ag and Nat panel and EPMAN / EPNB. The necessity of future collaboration was acknowledged. Consistency, harmony, clarity and communication between the groups were considered important. Collaboration should comprise the following topics: Revision/updating of emission factors, developments in inventory methodologies, quality control criteria for review of emission inventories. Collaboration shall be ensured by further joint meetings and by holding an Agriculture and Nature Panel session in EPMAN meetings.

In addition to the collaboration a need was seen to coordinate TFEIP and TFRN work with the Industrial Emissions Directive. Under this directive, best available techniques for intensive pig and poultry husbandry are proposed. The current status of the update of the Best Available Technique Reference Documents was presented and the overlap between the economic calculations needed for BREF and those needed for the EPMAN guidance was pointed out. The draft BREF document shall be discussed at the next EPMAN meeting and interactions between EPMAN and the BREF process shall be strengthened.

B) MINUTES

MORNING

Moderation: B. Amon

Introduction to the Ag and Nat Panel (N. Hutchings)

- Main role is to manage content of the EMEP/EEA Air Pollutant Emission Inventory Guidebook
- Guidebook is mainly targeted at novice emission inventory compilers but is sometimes a useful reference for others.
- The Panel needs to communicate with researchers on a regular basis, to keep up to date with developments related to emissions and emission inventory methods.

Introduction to EPNB (W. Winiwarter)

- EPNB guidance document on national N budgets is now available as an official document.
- Annex to the document (description of pools within the overall N budget) still has to be written – the official acknowledgement should support resources to be made available for national experts to contribute.
- EPNB has been requested to extend guidance to farm level – current membership does not really reflect the expertise needed.
- The role of N budgets - used for policymaking (targeting measures, trade-offs). Can also be used to check emission inventories (are flows reasonable? is the budget closed?).

Introduction to TFRN (O. Oenema)

- The Annex IX version of the revised Gothenburg Protocol is similar to the Annex IX version in the original Gothenburg Protocol. The revised Gothenburg Protocol will be discussed (and likely approved) by the EB of the UNECE-CLRTAP in December 2012
- Some EU member states are uncomfortable with the Annex IX version proposed by TFRN, because of the requirements for additional measures and the deviations from EU-legislations (targets in revised National Emissions Ceilings Directive).
- Annex IX is considered too complicated by some EU member states - need for simplification (but still need to provide details....).

- Suggestions were made for a new format for the Framework Code on Good Agricultural Practice - more digestible format with pictures, diagrams etc.

Introduction to EPMAN (S. Bittman)

- The guidance document now includes costs per unit of ammonia reduction. This requires absolute not just relative values of ammonia emissions/ reduction so has new relevance for emission inventories.
- The next task EPMAN task is - to update the Framework Code on Good Agricultural Practice. Steps have been taken during the previous EPMAN meeting in St. Petersburg and on Sept 27 informal meeting in Berlin.
- Ammonia abatement measures may be adopted by producers , even when there is no regulatory requirement to do so - driven by other factors (e.g. reduction in odour or reducing feed costs).

Presentation of the guidebook update project (S. Gyldenkærne)

Non-Methane Volatile Organic Compounds (NMVOCs)

- NMVOCs play a role in the formation of ground-level ozone formation.
- Currently, emissions must be reported as unspciated mass but in the longer term, there is a need to take account of the relative driving force effect of each compound on ozone formation (i.e. as with the Relative Organic Gas, used in USA).
- Guidebook update will not recommend including a climatic effect in NMVOC emission.
- Emission factors will be based on average values from a comprehensive US study for cattle farming. Values for livestock other than cattle will be obtained through scaling by intake.
- Emissions from silage could be important for biogas plants but there are currently no data available to allow for an estimation of emissions from silage in storage.
- Inclusion of agricultural NMVOC emissions on total for Denmark - would substantially increase the national emissions.

NH₃ emission from fertiliser

- Despite chemical theory indicating that ammonia emissions rise with increasing temperature, no such relationship was evident when examining the data from published experiments.

- The current suggestion is to continue using the current methodology.

Overview on the NH₃ emission factor project (S Wulf)

- The project noted possible errors in N excretion.
- There is a EUROSTAT-funded project to prepare livestock N excretion estimates for EU countries (Alterra, Netherlands are leading the project).
- A summary report from this project is available and will be uploaded to the TFRN and TFEIP websites.

Overview EAGER and outcome of the EAGER meeting (H. Menzi)

- Focus of EAGER is on Tier 3 methods for estimating ammonia emissions.
- A limited number of countries participate.
- Each country finds its own funding.
- Results are reported back to various organisations (e.g. EPMAM).

Short statements from participating countries

France (T Eglin and E Martin)

- Have jumped from Tier 1 to Tier 3 approach.
- Have reverted to 2006 Guidebook for fertiliser emissions.
- Significant input of resources to research, education and decision support.

Canada (S Bittman)

- Focus is on atmospheric pollution, so need high temporal resolution agricultural activity data.
- Data are gathered informally (i.e. no funds for this purpose).
- Finding estimation of baseline emissions most difficult part of guidance doc preparation.
- They have a standardised database for greenhouse gas and NH₃ emissions.

UK (J Webb)

- A series of measurements of NH₃ emissions from livestock buildings has begun.
- Focus on poultry and new types of cattle housing (very open structures).

Brief introduction to the afternoon discussion (N. Hutchings)

(For information only)

LUNCH

AFTERNOON

Moderation: O. Oenema and N. Hutchings

Collaboration between Ag and Nature and EPMAN

- Quality control of the inventory would be good but need to avoid being too restrictive concerning the nature of the information used to support emission factors etc (this can be a problem within the UNFCCC regime).
- Good to have an independent check of validity. N budgets can be useful here. Need to help countries to move to Tier 3 reporting.
- Making scientists aware of the contents of the Informative Inventory Reports from different countries would allow them to understand the difficulties being experienced. It would be useful to exchange information on farm activity data.

The first round of discussion may be summarised as follows: The necessity of future collaboration was acknowledged. Consistency, harmony, clarity and communication between the groups were considered important.

Priority topics for collaboration:

- Revision/updating of emission factors
- Developments in inventory methodologies
- Quality control criteria for review of emission inventories.

How to collaborate:

- Joint meetings where there are substantial matters to discuss.
- Have an Agriculture and Nature Panel session in EPMAN meetings (as was done with the Expert Group on Ammonia Abatement).
- Share email details of participants, so information about activities can be disseminated more widely.

Initiation of collaboration:

- Agriculture and Nature will propose to the TFEIP that information concerning the existence and location the EPMAN guidance and framework code documents should be included in the Emission Inventory Guidebook.
- EPMAN and Agriculture and Nature Panel co-chairs will coordinate concerning an Agriculture and Nature Panel session as part of the next EPMAN meeting.

Economics and coordination with IPPC (Helmut Döhler)

- IPPC now revised and in a new form; Industrial Emissions Directive (IED).
- Deadline for BREF documents is the end of 2013.
- Aiming for second version in March 2013 (ambitious, given the volume of material).
- EIPPC documents are intended to form the basis of regulation of farmers and are not targeted at policymakers.
- Germany will be supporting the Technical Working Group (TWG) with agricultural expertise.
- The BREF documentation will be larger than the EPMAN guidance (details of measures + need to consider other pollutants, energy use and side effects).
- There is an overlap between the economic calculations needed for BREF and those needed for the EPMAN guidance.
- Background information on Gothenburg revision. 2005 now base year, target 2020, percentage reductions. Low ambition level for NH₃ and Annex IX not changed. New legal procedure to allow revision of annexes of protocol (faster), including Annex IX but not Annex II (ceilings). Identification of areas for new revision (in two years after comes into force) for black C and NH₃ (ie about 2016) is in Protocol text.
- EU internal policies - NECD undergoing pre-negotiation process now. Commission plans revision proposal with new target date 2030 or 2025 by mid to end next year.
- There is no decision yet about the inclusion of cattle or of emissions during/after field application. Art. 73 of the EU Industrial Emissions Directive (IED) tasks the European

Commission to review information on the relevance of emissions from these sources and (if positive) to propose legislation until the end of 2012.

- There is a need to discuss the draft BREF document at the next EPMAN meeting.
- There is a need for interactions between EPMAN and the TWG. A similar situation occurred last time and there was coordination on essentials.
- How to collaborate? Four people each from EIPPCB and EPMAN.
- There is some overlap in membership between EPMAN and the TWG (Gabrielle Wechsung, Martin Dedina, Laura Valli, Carlos Piniero), so this gives an opportunity for some coordination.