

# Task Force on Emission Inventories and Projections

## Agriculture and Nature Expert Panel 2026

Bernard Hyde, EPA Ireland

Barbara Amon, ATB and UZG

<https://tfeip-secretariat.org/expert-panels/expert-panels-agriculture-nature/>

# Some Practicalities

- This afternoon we are only discussing agriculture emission sources
- Online meeting
  - Bernard and Barbara co-chairs
  - Number of participants and presentations online
- For those online please use chat function to raise a question
- Please state name and affiliation when raising a question
- Presenters – please keep to time
- Tea/coffee break as per agenda

# Role of Agriculture and Nature Panel

- Update the EMEP/EEA air pollutant emission inventory guidebook
- New processes, sources and technologies
- Identify need for new or updated methodologies and emission factors
- Coordinate development of relevant chapters
- Gather feedback and answer queries from inventory compilers
- Encourage exchange of information
  - Special relation to Task Force on Reactive Nitrogen (TFRN)
  - TFRN deals with measurements of N losses and abatement

<https://tfeip-secretariat.org/assets/Other-Documents/SectorpanelmandateAug2010.pdf>

NFR	Pollutant									
	NH <sub>3</sub>	NO <sub>x</sub>	NMVOC	PM/TSP	HCB	CO	SO <sub>2</sub>	BC	HM	POPs
3B Manure management	X	X	X	X						
3D Agricultural Soils	X	X	X	X						
3Df-3I Ag other incl. pesticides	X				X					
3F Field burning of Ag residues	X	X	X	X		X	X	X		
5B1 Composting	X									
5B2 Biogas	X	X								
5C2 Open burning of ag wastes	X	X	X	X		X	X	X	X	X

# Agenda

		Speaker
13:00 – 13:05	Introduction	Bernard Hyde
	<b><i>In parallel: round table update (method tbc)</i></b>	Bernard Hyde
	<b><i>REPORTS from Parties, science updates</i></b> 10 min presentation, 5 min discussion	
13:05 – 13:20	Experience in Lombardy in local ammonia emission factors and seasonal variation	Allessandro Marongiu
13:20– 13:35	Higher tier methods for ammonia emission from mineral fertilisers	Nick Hutchings & Andreas Pacholski
13:35– 13:50	Field efficacy of urease inhibitors for mitigation of ammonia emissions in agricultural field settings: a systematic review	Themba Matse
13:50– 14:05	An update of emission factors for nitric oxide emissions from croplands and grasslands	Gokul Prasad Mathivanan
14:05 – 14:20	UCOL – latest updates ( <i>tbc</i> )	Gabriele Borchardt
14:20 – 14:50	<b><i>Break</i></b>	
	<b><i>Reports related to the EMEP/EEA Guidebook</i></b>	
14:50 – 15:00	IPCC methodology report on Short-Lived Climate Forcers	Barbara Amon
15:00– 15:10	TFRN Ammonia Guidance Document Incl. TFRN update	Barbara Amon
15:10 – 15:35	GB update: status and next steps (incl. 10 min discussion)	Richard German
15:35– 15:55	Update of Tier 2 emission factors with the DATAMAN database (incl. 10 min discussion)	Federico Dragoni
15:55 – 16:15	overview of regional emission factor investigation (incl. 10 min discussion)	Liam Rock & Becky Jenkins
16:15 – 16:45	Sum up (incl. workplan)	Bernard Hyde
16:45 – 17:00	Agri EE tool – an update on the inclusion of additional abatement measures for ammonia	Manjola Banja

# *In parallel: round table update*

- Menti - <https://www.menti.com/als3uccroc1a>
  1. Name/organisation
  2. Are you aware of any data sources/information on emissions factor from regions where data are currently scarce?
  3. Are you aware of any recent research/work from your institution that might be relevant for the Guidebook update?

## Instructions

Go to  
[www.menti.com](https://www.menti.com)

Enter the code

1275 6604



Or use QR code

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# Workshop overview

- Alessandro
  - BAT-Tool Plus – estimation of NH<sub>3</sub> and GHG emissions from intensive agriculture in the PO basin in Italy across the different phases of manure management
  - Results from livestock and fertilisation - ~33% of total N excreted emitted as NH<sub>3</sub>. For fertilisers ~ 10%
  - Reporting from ~ 700 intensive ag farms using the BAT-Tool software
  - Dynamic emission inventory using machine learning
- Nick & Andreas
  - New research paper on higher tier methods for NH<sub>3</sub> emission from N fertilisers
  - Data collation, measurement methods, location, pH status etc
  - Statistical approach and results
  - Revised Tier 2 emission factors
  - Raised some important questions with respect to Tier3 approaches and need for additional variable information

# Workshop overview contd.

- Themba
  - Field efficacy of inhibitors – review of in field studies across the globe of the main inhibitors used.
- Gokul
  - Update of NO emission factors for croplands and grassland
  - 692 obs over 128 studies across 6 climate zones covering grasslands, croplands, tea and rice
  - GLMM statistical approach
  - Emission factor development
  - Key results – significantly lower than current GB EF
- Barbara - TFRN
  - Continued collaboration
  - Annex IX of Gothenburg Protocol
  - Co-mitigation of CH<sub>4</sub> and NH<sub>3</sub>
  - Update of Ammonia Guidance Document
  - To be discussed at EB meeting in Dec 2026

# Workshop overview contd.


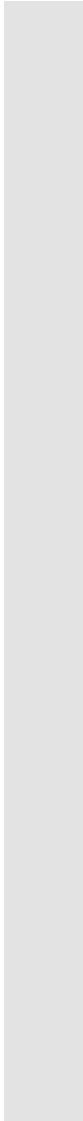
- Barbara – SLCF methodology report
  - NO<sub>x</sub>, CO, NMVOC, SO<sub>2</sub>, NH<sub>3</sub>, BC and OC as well as PM
  - Workplan 2<sup>nd</sup> order draft starts Sept 2026
  - Methodology needs to globally applicable
  - Little knowledge of NMVOC's, NO<sub>x</sub> and PM
  - Harmonisation with GHG reporting
- Richard
  - Update of GB chapters
  - Overview of process
  - Status of updates per chapter including N-flow tool
  - Discussion points
  - Nox from soils – satellite data and modellers

# Workshop overview contd.

- Federico
  - Analysis of data from DATAMAN
  - MELS project aims and data acceptance criteria
  - Statistical analysis
  - EF analysis – comparison to GB values
  - Remaining analysis – how to update GB with the above
- Liam and Becky from Ricardo
  - Overview of regional emission factor investigation
  - What is possible and not possible given current data availability and range of coverage of livestock types, housing, storage and field
  - Next steps
- Manjola
  - Update on the additional abatement measures for ammonia in AgrEE tool

# Workplan

- Continue with remaining currently unaddressed GB update actions
- Continue collaboration with TFRN and SLCF
- Comments on proposed ef's as mentioned by Barbara

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- Thanks to Annie Thornton (Aether) for leading on organisation of meeting and making sure everything works in the background