

EPNB-23, online, Jan 28, 2026

9:00 – 12:00 a.m. and 1:00 – 4:15 p.m. (CET)

Participants

Markus Geupel (co-chair, MG)
Wilfried Winiwarter (co-chair, WW)
Paulo Braz
Audric Vigier
Kazuya Nishina
Filip Moldan
Sabine Schindlbacher
Harald Loishandl-Weisz
Laurence Loyon
Jonathan Hercule
Karin Groenestein,
Jihane el Mahdi
Kentaro Hayashi

Azusa Oita
Elisabeth Gautefall Hiis
Anja Røyne
Monika Suchowska
Natalia Nadolna
Inga Grinfelde
Bettina Schäppi
Ulli Dragosits
Bill Bealey
Natalia Alonso Sopeña
Nicholas Hutchings
Bruna Grizzetti
Monica Iatan
Noëmi Elmiger
Grégoire Meylan

1. Welcome and updates from TFRN and EB (Markus Geupel and Wilfried Winiwarter)
MG welcomes participants, WW introduces the recent developments of National Nitrogen Budgets (NNBs) as a “package approach” – see <https://www.clrtap-tfrn.org/eptnb> for details. The achievements (Updated Guidance Document and Call-for-data officially adopted by the Executive Board) also determine the agenda of the current meeting.
2. Very short introduction round
All participants individually briefly declare their work experience and interest in relation to NNBs.
3. Country reports
 - New developments on the Japanese nitrogen budget (Kazuya Nishina, NIES)
Dr. Nishina presents recent updates in Japanese Nitrogen Budgets, covering the period 1990 – 2023. Balances are checked in each pool, and uncertainty in N flows is estimated. For compatibility, he also reorganizes the flows from the original CHANS approach to become compatible with the UNECE of the EPNB.
Plans in this ongoing project are to finalize the budget, perform a cost and benefits analysis and prepare a manuscript for scientific publication of the updated Japanese Nitrogen Budget
 - Where does Sweden’s nitrogen go? Building a comprehensive national nitrogen budget (Filip Moldan, IVL)
The Swedish N budget has been organized in small (pool-wise) projects between 2015 – 2025, before compiling into a single scientific publication in ERL (see link at EPNB web site). Specifically, pools have been reorganized to account for useful nitrogen, nitrogen pollution, nitrogen loss.
Decision of Sweden for ongoing Call for Data is unclear, funding yet unknown. New data and new Guidance provide good reasons for a new Swedish NNB.

- General experience from country reports (discussion):
 - * Formation of N₂ is a challenge (few data, though relevant for budget)
 - * Inactive N (such as in fuels) make up a considerable share, yet no direct environmental harm. For consistency reasons cannot be ignored
 - * Natural processes seem relevant in Sweden, which (by area) is very large

4. Methodological and institutional developments

- Eurostat's activities on N budgets (Paulo Braz, Eurostat)
Eurostat collects data from national statistical agencies on agricultural nutrient balances, in order to calculate gross nutrient budgets. Data are currently being extended under the SAIO regulation – an EU legislation that also covers some other countries (Norway, Türkiye). A draft documentation is available (https://circabc.europa.eu/ui/group/a9c5638c-8940-4e25-b6de-02ace3e161e7/library/2a1925cd-214f-44bf-bec6-18631e1f13aa?p=1&n=10&sort=modified_DESC). SAIO requests mineral fertilizer information for 2027 (year 2026), other data on nutrients, animal production and crop production will be requested for 2029 (years 2026, 2027 and 2028) and many countries will continue annual data collection.
Observed data jumps in Eurostat data (e.g., BNF) may derive from different data sources (up to 2015, direct reporting from countries; subsequently, calculations were done by Eurostat) may be improved if national statistical offices follow the request to provide their basic information back to 1990.
- Updates on the visualization tool (Audric Vigier, CEH)
The visualization tool allows to present national information in a comparable form, whether using the CHANS (Japan) or the UNECE (Germany) approach. It is available as a web link and has been developed under the INMS project, with considerable input from budget experts. A test version will be made available to anybody interested in February still (Audric will contact people), with the draft final version, with an ability to read in from EPNB data export sheet, by March 31. Long-term maintenance of the tool still requires stable funding.

--- Lunch break

5. CEIP as host institution for NNB data (Sabine Schindlbacher, CEIP)
The Center for Emission Inventories and Projection, situated at the Environment Agency Austria in Vienna, for many years has collected and shared air pollution inventory data under the UNECE. This task includes quality checks and gap filling. For the NNBs also under the UNECE, CEIP is willing to host data, with all quality issues in the responsibility of EPNB. According to the “open data” policy discussed at the EB, CEIP may wish to move to a CC-BY 4 license in the future – EPNB to consider following suit.
6. Implementing NNBs in European countries (all participants)
 - NNB activities in Austria (Harald Loishandl-Weisz, Environment Agency Austria)
Having completed and published an NNB, Austria currently develops integrated N indicators (following the German example).
For a call for data possibilities for funding are being explored – the idea is to perform an

update to the new guidance rather than to develop new Austrian data, again with TU Wien as partners.

- Process to develop NNBs for the Netherlands (Jihane el Mahdi, WUR)
There is agreement in the Netherlands that the project can be done this year, with CBS, WUR and RIVM involved. First task is to explore which data is available, and where there are white spots (with a tier 1 approach to fill in). project end mid-2027 is realistic.
- Tour de table: status of interest in individual countries
 - Norway (Anja Røyne and Elisabeth Gautefall Hiis) have a good concept, will use university resources to develop a national budget. Aquaculture is an important source (also in Sweden, Scotland) to be considered
 - Ulli Dragosits: Scotland will routinely provide a budget, but (except for a small pilot study funded by WWF) no UK budget is in sight.
 - Markus Geupel: Germany recently completed 2015-2020 budgets, but these still need to be transferred to the new Excel template. Decision to be done by June.
 - Laurence Loyon / Jonathan Hercule: France considers SAIO an opportunity to launch an NNB. As funding is limited, available data collection can provide the first step.
 - Wilfried Winiwarter, together with Monika Suchowska-Kisielewicz and Natalia Nadolna have a national project to work on NNBs from Poland (focusing on N stocks), which they will be able to use for establishing a Polish NNB.
 - Natalia Alonso Sopena (Spain) reports on funding difficulties, it is too early to know if an NNB can be established.
 - Nick Hutchings sees realistic implementation in Denmark, based on his earlier work and again done by Aarhus University, but this time Tommy Dalgaard would be first contact.
 - Inga Grinfelde is in contact with ministries in Latvia and Lithuania, with positive response, decision to be taken by September.
 - Bettina Schäppi is not aware of further interest in Switzerland – and if so, rather looking for consistency to the old studies (up to 2020) than to the European level.
 - Grégoire Meylan and Noëmi Elmiger are partners in a Horizon Europe project, NITROSCOPE (<https://nitroscope.eu/>), where they will develop agricultural N budgets for 20 countries. While the project is coordinated by the University of Ghent, they are responsible for the N budget Work Package. They are keenly interested to deepen collaboration.
 - Bruna Grizzetti refers to earlier work of JRC under the INMAP study for European water bodies. This study is available at <https://publications.jrc.ec.europa.eu/repository/handle/JRC129059>
- Content of call for data (timelines, submission, evaluation)
Markus Geupel presents the text of the call for data, including the timeline, and the detailed

instructions, as they have shared before the meeting. In brief, countries are requested to provide information of their interest to participate in the call for data by July 2026, with data provided in June 2027. EPNB established a dedicated e-mail address to be used for this communication. EPNB (coordinated by its chairs) will have the responsibility of data checking before forwarding to CEIP for publishing.

EPNB members endorse this text, requesting to draw a clearer connection to expected policy impacts. They task the co-chairs to provide the editorial changes required, and to contact the Tommy Dalgaard as the TFRN Chair for signature, and send the call through the LRTAP secretariat to the national contact points.

- Support mechanisms: training program
There is agreement that training will make sense once decisions on participation have been made – in September 2026. An online meeting as a first training session will be called. Early 2027, further training and exchange will be made possible at a EPNB meeting to be held in Zielona Góra, Poland (situated between Poznan, Wroclaw and Berlin).
Bilateral exchange will be offered to countries who wish need support earlier (specifically, Norway).
- Support mechanisms: peer-2-peer network
EPNB chairs will collect names of participants who wish to join and distribute a mailing list (to be updated as a consequence of the training programme)

7. AOB

Next meetings (see above):

September 2026 – online

February (?) 2027 – Zielona Góra, Poland

Presentation slides have been shared with meeting participants only – please contact authors for further details

Text of call for data and detailed instructions attached

Notes by Wilfried Winiwarter (Laxenburg, Feb. 10, 2026)