EANET Seminar for

Sustainable Nitrogen Management Seminar 2025 – Accumulation of Nitrogen Data in EANET –

22 December 2025
13:00-15:00
in Bangkok time (UTC+7)

Webex Meeting Pre-registration required. Register here.
https://japanenvironmentalsanitationcenter.my.webex.com/weblink/register/rea8b63c7c4ee5d4d92c0df72c645c8e0

Background

- Reactive nitrogen (Nr) including ammonia (NH3) and nitrogen oxides (NOx) have been produced by anthropogenic activities. Release of Nr to the environment is thought to pose substantial threats to human and ecosystem health. Therefore, to achieve sustainable nitrogen utilization, it is necessary to reduce Nr loss to the environment (Hayashi et al. 2021, Environmental Pollution).
- To tackle the above issue, the resolution "Sustainable Nitrogen Management (UNEA 5.2)," which was adopted at the Fifth Session of the United Nations Environment Assembly, encouraged countries to develop national action plans for sustainable nitrogen management and to accelerate actions to significantly reduce nitrogen waste globally by 2030 and beyond.
- NOx from fuel/waste combustion are precursors of photochemical oxidants and PM2.5, with adverse effects on human health and terrestrial ecosystems. NH3 emitted into the atmosphere from agricultural activities also contributes to the formation of PM (e.g., NH4NO3, (NH4)2SO4). Excessive nitrogen input from the atmosphere has adverse effects on terrestrial ecosystems and inland waters, including acidification and eutrophication (Yamashita et al. 2022, Science of the Total Environment). Thus, the Nr problem is also an atmospheric environmental problem.
- EANET has been monitoring atmospheric deposition of these Nr species, because they are also important as acid deposition. EANET has the potential to contribute to the understanding of nitrogen flows from the atmosphere to ecosystems and to the discussion on sustainable nitrogen management.

Objectives

- This seminar aims to foster a shared understanding of sustainable nitrogen management within the EANET community and to facilitate discussions on how EANET data can contribute to addressing global nitrogen challenges, as well as identifying which aspects of EANET's monitoring activities should be prioritized to support this goal.

For further inquiries, contact the Network Center for EANET(NC) at eanet@acap.asia

Acid Deposition Monitoring Network in East Asia (EANET)

EANET Project Activity 2025-04

Program

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13:00 – 13:05
Opening of the seminar
- **Dr. Hiroyuki Sase**, Asia Center for Air Pollution Research, ACAP (facilitator)

13:05 - 13:10
Opening greetings
- **Dr. Toshimasa Ohara,** Director General of ACAP

13:10 - 13:25
Introductory remarks: EANET's potential for contributing to sustainable nitrogen management
- **Dr. Hiroyuki Sase**

Q & A (5 minutes)

13:30 - 14:00
Regional assessment of atmospheric nitrogen deposition using EANET monitoring data
- **Prof. Kazuhide Matsuda,** Tokyo University of Agriculture and Technology, Japan

Q & A (10 minutes)

14:10 - 14:30
Spatio-temporal distribution of ammonia over Korea using CrIS satellite: Validation with in-situ measurements and bias correction
- **Dr. Yongjoo Choi,** Hankuk University of Foreign Studies, Korea

Q & A (10 minutes)

14:40 - 14:55
General discussion: How to promote nitrogen deposition monitoring in EANET, constrains and possible solutions
- **Prof. Matsuda, Dr. Choi, and Dr. Sase**

14:55 - 15:00
Closing remarks
- **Dr. Fan Meng,** Deputy Director General of ACAP