

## Acid Deposition Monitoring Network in East Asia (EANET)

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### DATE LAUNCHED

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1998



An EMB technical staff collects a wet deposition sample at the monitoring site in the University of the Philippines Los Baños in 2016. Samples are collected weekly. [EMB]

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The bulk of acid deposition happens when fossil fuels are burned and pollutants such as sulfur dioxide and nitrogen oxide are released into the atmosphere and fall to the ground in wet or dry forms. Aside from contributing to air pollution, these make soils, lakes and other water bodies become acidic. In order to address these concerns, the Acid Deposition Monitoring Network in East Asia (EANET) was organized in 1998 as an intergovernmental initiative.

The rules of procedure for the network were adopted at the Third Session of the Intergovernmental Meeting (IG3) held in November 2001 in Chiang Mai, Thailand. Thirteen countries participate in EANET namely, Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand, and Vietnam. UN Environment acts as the EANET Secretariat while the Asia Center for Air Pollution Research (ACAP) in Niigata, Japan serves as the Network Center.

The objectives of the EANET are to:

1. Create a common understanding of the state of the acid deposition problems in East Asia;
2. Provide useful inputs for decision-making at the local, national and regional levels aimed at preventing or reducing adverse impacts on the environment caused by acid deposition; and
3. Contribute to cooperation on the issues related to acid deposition among participating countries.

EANET's activities include (1) acid deposition monitoring, evaluation and quality control; (2) technical support, research and capacity building; (3) awareness raising and; (4) cooperation and information exchange.

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## **COMMITMENTS**

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Activities under the EANET are all voluntary in nature. The Philippines, through EMB, participates in regular EANET activities such as:

1. Inter-Laboratory Comparison Projects on Filter pack for Dry Deposition (DD), Wet Deposition (WD), Inland Aquatic Environment (IAE), and Soil;
2. Submission of annual monitoring data on DD, WD, IAE, Catchment-Scale (CS), and Soil and Vegetation (S&V) to the ACAP;
3. Preparation of National Periodic Assessment Report;
4. Participation in various EANET meetings;
5. Participation in technical support, research and capacity building activities;
6. Technical missions by the ACAP; and

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## UPDATES

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The EMB currently undertakes the following monitoring activities in the established EANET sites covering urban, rural and remote areas:

- Deposition (WD and DD) monitoring done weekly at the Metro Manila (MM) site located at the Manila Observatory in Ateneo de Manila University; and at Mt. Sto. Tomas (MST) site located in Mt. Sto. Tomas in Tuba, Benguet;
- IAE monitoring conducted quarterly at Pandin Lake in San Pablo, Laguna; and at Lake Ambulalakao in Kabayan, Benguet;
- CS monthly monitoring in La Mesa Watershed, Quezon City;
- S&V monitoring every three years in Mt. Makiling Forest Reserve in UPLB; Quezon-Laguna Land Grant in Siniloan, Quezon; La Mesa Watershed in Quezon City; and Boneco Long Term Ecological Research Station in Itogon, Benguet;
- Continuous Particulate Matter ( $PM_{2.5}$ ) concentration monitoring at the MM site started in November 2018.

Laboratories of EMB Central Office and EMB-CAR participated in the Annual Inter-laboratory Comparison Projects of ACAP. These projects included analyses of synthetic dry, wet, lakewater and soil samples to check the proficiency of both laboratories to analyze EANET samples.

The Third Periodic Report on the State of Acid Deposition in East Asia dated December 2016 contains a national assessment from the Philippines for the period 2010–2014.

The wet-only sampler (wet deposition) and filter pack sampler (dry deposition) were re-installed and weekly monitoring was resumed at the Metro Manila site located at the Manila Observatory Grounds, Ateneo de Manila University on 27 February 2019. The samplers in the monitoring site located at the PAGASA AGROMET-University of the Philippines, Los Baños will be re-installed once the procurement of the samplers and required spare parts are completed.

The Philippines participated in the annual ACAP Inter-laboratory Comparison Project (Filter Pack, Wet Deposition, Inland Aquatic Environment and Soil) from 2016 to 2018.

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## NEXT STEPS

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- The wet-only sampler (for WD) and filter pack sampler (for DD) at LB site (rural site) located at the PAGASA-AGROMET Station in the University of

the Philippines, Los Baños College, Laguna will be re-installed as soon as the replacements of both samplers are acquired. DD and WD monitoring activities at LB site will then resume on a weekly basis.

- Revive the participation of EMB-DENR in regular EANET meetings and trainings abroad in order to obtain guidance and gain technological updates not only on acid deposition monitoring but also on other air pollutants (e.g. ozone, PM<sub>2.5</sub>).
- Fabrication of a weir and its installation at the Catchment-Scale stream site for water flux measurement.

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## **FOCAL OFFICE**

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### ***Air Quality Management Section***

DENR - Environmental Management Bureau

Tel No. - (632) 928 4430

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## **MEETINGS ATTENDED**

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- 18th Session of Scientific Advisory Committee (SAC), 9–11 October 2018; Hanoi, Vietnam – Dr. Wilfredo M. Carandang (UPLB)
- 19th Session of the Senior Technical Managers (STM) Meeting on the EANET, 4–5 September 2018; Niigata, Japan – Engr. Arcely C. Viernes (EMB) online participation through Skype
- 19th Session of the Intergovernmental Meeting on the EANET, 13–14 November 2017; Siem Reap, Cambodia – Engr. Jean N. Rosete (EMB)
- 17th Session of the SAC on the EANET, 26–28 September 2017; Pathumthani, Thailand – Dr. Wilfredo M. Carandang (UPLB) and Engr. Arcely C. Viernes (EMB)
- 18th Senior Technical Managers’ Meeting of the Acid Deposition Monitoring Network in East Asia, 24–25 August 2017; Ha Long, Vietnam – Engr. Teresita A. Peralta (EMB)
- 18th Session of the Intergovernmental Meeting on the Acid Deposition Monitoring Network in East Asia (EANET), 22–23 November 2016; Bangkok, Thailand – Engr. Jean N. Rosete (EMB) and Ms. Noemi A. Paranada (EMB Reg. 4A)
- 16th Session of the Scientific Advisory Committee (SAC) on the EANET, 24–26 October 2016; Pathumthani, Thailand – Dr. Wilfredo M. Carandang (UPLB) and Engr. Jean N. Rosete (EMB)
- 17th Session of the Senior Technical Managers’ (STM) Meeting on the EANET, 21–22 September 2016; Listvyanka, Russia – Engr. Teresita A. Peralta

- 2nd and 3rd Meetings of the Drafting Committee for the Third Periodic Report on the State of Acid Deposition in East Asia, April 2016 and August 2016; Niigata, Japan – Engr. Teresita A. Peralta (EMB)
- Acid Deposition Monitoring Network in East Asia (EANET) Working Group on Framework (WGF), 15–16 June 2016; Bangkok, Thailand – Engr. Jean N. sete and Ms. Perseveranda-Fe J. Otico (EMB)

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### **SOURCES/RELEVANT LINKS**

<http://www.eanet.asia/>