

The Sixth Workshop on Public Awareness for Acid Deposition Problems  
21-22 February 2006, Niigata, Japan

## **CHAIRPERSON'S SUMMARY**

1. The Sixth Workshop on Public Awareness for Acid Deposition Problems was held in Niigata, Japan on 21 and 22 February 2006. It was organized by the Network Center for the Acid Deposition Monitoring Network in East Asia (EANET), in collaboration with the Niigata Prefectural Environmental Conservation Corporation (NPECC) of Japan.

### Attendance

2. The workshop was attended by approximately thirty participants and observers from EANET participating countries, namely Cambodia, China, Indonesia, Japan, Lao P.D.R., Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand and Viet Nam. The list of the participants is attached as Annex.

### Background and Purpose

3. The Acid Deposition and Oxidant Research Center (ADORC), as the Interim Network Center/the Network Center (INC/NC) for the Acid Deposition Monitoring Network in East Asia (EANET), has developed brochures and videotapes on acid deposition problems since 1998, and has implemented the joint brochure projects with some of the EANET participating countries, namely, Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Philippines, Russia, Thailand and Viet Nam to develop their own brochures/videotape for public awareness since 1999.
4. Together with awareness of public the involvement of policy makers is necessary to strengthen the basis of EANET activities toward development of an appropriate instrument. The policy makers have also an important role in rendering their leadership support for coordination among the concerned agencies, creation of awareness and promotion of national and regional initiatives to take appropriate measures for acid deposition. The Secretariat of EANET in cooperation with NC has been developing a Report for Policy Makers (RPM) on EANET "Goals, Achievements and Way Forward". It was pointed out at the Seventh Session of the Intergovernmental Meeting (IG7) held in Niigata, Japan in November 2005 that future RPM should include achievements at national and regional levels relating to acid deposition, progress in each participating country on pollution control and other hot spot description.

5. To further encourage and promote such activities, NC is undertaking the Sixth Workshop on Public Awareness for Acid Deposition Problems (WSPA6). Major objectives of the Workshop were: (1) to introduce the progress of EANET activities in order to promote clear common understanding on acid deposition problems; (2) to exchange information and share experiences on achievements at the national and regional levels relating to acid deposition problems; (3) to overview the progress on pollution control in the participating countries and transboundary pollution issues in order to develop more appropriate EANET materials for policy makers and general public, etc; (4) to exchange information on recent progress of public awareness activities in the participating countries in order to promote public awareness activities of EANET as a whole.

#### Opening and Election of Chairperson

6. The Workshop commenced with the opening address by Dr. Jiang Wei, Coordinator, the Secretariat for EANET.
7. Dr. Hiromasa Ueda, Director General of ADORC, introduced the objectives of the Workshop in his opening speech.
8. Mr. Chrin Sokha from Cambodia and Dr. Veronika Alexandrovna Ginzburg from Russia were elected as the Co-chairpersons of the Workshop.

#### Introduction of the progress of EANET activities including the latest version of Report for Policy Makers (RPM)

9. Dr. Jiang Wei, the Secretariat for EANET made a presentation on the latest version of RPM. RPM was developed by the Secretariat in cooperation with NC in 2005 and submitted to IG7 for endorsement. This version of RPM was presented after revision based on comments at IG7.
10. Mr. Jiro Sato, NC presented the progress of EANET activities. It covered the background, short history and institutional arrangements of the EANET, overview of monitoring with some results and previous activities devoted to enhance public awareness on acid deposition problems. Mr. Sato further introduced the discussions on RPM as well as the 5 Year Medium Term Plan (MTP) and a feasibility study on an appropriate instrument on acid deposition to provide a sound basis for financial contribution prepared for consideration by IG7.

#### Presentations on country experience

11. Mr. Chrin Sokha, Cambodia, made a presentation on recognition of acid rain, activities for

controlling atmospheric pollution and wet deposition, and promotion of public awareness on acid deposition in Cambodia. Cambodian people are not sufficiently aware of acid deposition. Atmospheric pollution control has been implemented in major areas of Phnom Penh Municipality and Siem Reap Province. The monitoring results indicate that air quality is still good at sampling comparing to the national standards. Wet deposition control and project of reducing of ozone have been also implemented by the Ministry of Environment, Cambodia.

12. Ms. Zhao Yinhui, China, made a presentation on the atmospheric pollution and its control in China. The presentation includes report on state of national acid rain monitoring, measures and actions of pollution control and prevention, activities on environmental public awareness and major issues of environmental protection. “ Tenth Five-Year Plan for Prevention and Control of Acid Rain and Sulfur Dioxide Pollution in the Two Control Areas” and “Technologies and policies for Prevention and Control of pollution caused by Sulfur dioxide emission from coal combustion” were formulated by State Environmental Protection Administration (SEPA) in order to control sulfur dioxide pollution and acid rain. Facing dual tasks of economic development and environmental protection was emphasized.
13. Ms. Astutie Widyarissantie, Indonesia, introduced achievements in control activities on air pollution and acid deposition in Indonesia. Her explanation covers national policies related to air pollution control, organizations and activities of air pollution control and acid deposition monitoring. Air pollution control has been regulated by Government Decree that contains restriction, punishment, role of local government and public awareness. Authorization of environment management has been given to local governments, therefore they can develop policy and regulations for environmental management in their regions. She pointed out that integrated activity needs to restrain and control air pollution, and the role of public for guarding environment is very important.
14. Ms. Keiko Segawa, Japan, made a presentation on acid deposition issues and air pollution control including an overview of acid deposition monitoring and state of air quality in Japan. An intensive research has been conducted for investigation of Ijira Lake in Gifu prefecture in the middle of Japan because acid deposition was suspected as the cause of changes in physics and chemical properties observed in river waters feeding the lake as well as in soil of the vicinity. She also introduced polices and regulatory measure for air quality management including controlling of stationary sources and mobile sources. A policy mix of regulation and voluntary agreements of enterprises on some pollutants such as NO<sub>x</sub>, SO<sub>x</sub>, dust, VOC and so on has been enforced as a policy on air pollution. Outline of the pollution-related health damage compensation system included in the Basic Low for pollution control was also introduced. There are “tightening emission standards”, “ban of old vehicle to be registered in metropolitan area by

automobile NO<sub>x</sub> and PM law” and “promoting low emission vehicles such as hybrid, CNG, FCV” implemented regarding regulatory measures for mobile sources.

15. Ms. Setouvanh Phanthavongsa, Lao P.D.R., presented public awareness activities in Lao P.D.R. The activities include workshop for public awareness held in October 2005 and Joint Project for compiling brochure on acid deposition control implemented under the cooperation with NPECC and ADORC as NC supported by Japan Fund for Global Environment, and others. The brochure has been developing for general public without special knowledge on acid deposition problems and school children. Major contents of the brochure are suitable description of feature and mechanism, survey of methods for acid deposition research and monitoring and action to be taken against acidification.
16. Mr. Ahmad Rizal Khalit, Malaysia, made a presentation on role of government and private sector related to public awareness on acid deposition problems in Malaysia. He introduced trends of ambient air quality based on SO<sub>2</sub> and NO<sub>2</sub> data in environmental quality report, government commitment regarding environmental pollution, involvement of private sector, public voice, role of mass media and transboundary pollution issues. The current Environmental Quality Act (EQA) and regulations have been enacted since 1974 to enforce the law pertaining to environment. Ministry of National Resources and Environment reviews the law from time to time and amends the act, if necessary, in line with the commitment to the international environmental treaties.
17. Ms. Bulgan Tumendemberel, Mongolia, presented information on air quality monitoring, state of air quality and atmospheric pollution control in Mongolia. Urban air pollution problems have become serious because population is considerable concentrated in large cities, especially Ulaanbaatar. Mongolia made legal framework of several laws that closely related to the air quality and pollution control. The regulations and procedure that are issued in conformity with the Law on Air provide procedure for emission source inventory, monitoring, impact studies and so on. Urban air quality in the country seems to get worse without strict pollution control measures. Therefore, regulatory actions are still needed for strengthening of legislation enforcement, updating of environmental quality monitoring and emission control system, implementation of emission inventory/estimation program as well as raising public awareness.
18. Mr. Htay Oo Kyi, Myanmar, made a presentation on strengthening of public awareness related activities of acid deposition. It covered state of air quality, monitoring system, transportation of pollutants, and introduction of brochure. Sampling of wet deposition has been implemented since 2003 and pH was analyzed by Department of Meteorology and Hydrology (DMH). According to measurement during 2005, pH below 5.6 was detected at 4 sites. Air pollution

monitoring in urban centers in Myanmar was also implemented with Japan International cooperation Agency (JICA) from 1999 to 2000 and the results were introduced. Mr. Htay Oo Kyi also introduced a pamphlet, brochure and books for environmental awareness developed by several ministries and departments of Myanmar.

19. Ms. Jean Nilo Rosete, Philippines, made presentation on general information and role of the Environmental Management Bureau (EMB) in acid deposition activities, air pollution problems and control strategies/programs in Philippines. EMB being in charge of acid deposition problems implements relevant monitoring and activities on public awareness. Control of mobile and stationary sources, improved fuel quality and other programs/ activities are implemented by Department of Environment and Natural Resources (DENR) through EMB in coordination with other agencies.
20. Dr. Jeong-Ki Yoon, Republic of Korea, made a presentation on current status of air quality management in Republic of Korea. Current state of air quality was introduced together with major causes of atmospheric pollution, national air quality monitoring network and control measurement for air quality improvement. SO<sub>2</sub> and CO concentrations in ambient air are under the Air Quality Standards, and concentrations of PM<sub>10</sub>, NO<sub>2</sub> and O<sub>3</sub> indicate steady increase. Major emission sources of NO<sub>x</sub> and PM<sub>10</sub> are on-road vehicles while the one of SO<sub>x</sub> is industrial fuel combustion. He introduced an increasing number of death caused by PM pollution. Cerebral infraction caused by air pollution may have aggravated the death rate 6%. The rate of early death caused by air pollution is recorded as 3 times higher than the rate caused by traffic accidents. The use of low-sulfur and clean fuels, establishment of air pollution control area, low emissions of constructing vehicles and so on are implemented to control air quality in Republic of Korea.
21. Dr. Veronika Ginzburg, Russia, delivered a presentation on Russian experiences on achievements at the national and regional levels relating to acid deposition, the progress on pollution control and transboundary pollution issues. Organizations responsible for environmental issues were introduced. During the explanation of approach to regulatory measures, the maximum permitted concentration (MPC) was introduced to be defined as concentration of a pollutant in the atmosphere which acting periodically or permanently is not dangerous for people's health and does not cause an addiction. The MPC for elements related with acid deposition were also introduced as well as application of emission norms. Due to extensive territory Russia participates international environmental programs such as Co-operative Programme for Monitoring and Evaluation of the Long-Range Transmission of Air Pollutants in Europe (EMEP), Arctic Monitoring and Assessment Programme (AMAP) and EANET. Russia has also monitoring sites operated under national monitoring networks and

international monitoring programs. All data from monitoring sites are compiled together in Review of the environment pollution in Russian Federation, which includes data from Russia EANET and EMEP monitoring sites.

22. Mr. Pichaid Atipakya, Thailand, introduced the public awareness program relating to acid deposition and pollution control, state of air quality and control of emission from mobile and stationary sources in Thailand. State of air quality in Thailand was presented in more detail including ambient air quality in metropolitan area, trend of air quality, source of air pollution in Bangkok and control of emission from mobile sources. With regard to air pollution, major pollutants are particular matter and ozone, the others are not considered as serious pollutants due to its well control. Since major causes are emissions from mobile sources, a number of measures have been adopted to mitigate air pollution problems, particularly those caused by the transport sector. They are aimed not only to exhaust gas emission controls but also on the improvement of fuel quality and engines, particularly by the implementation of an in-use vehicle inspection and maintenance program, improvement of public transport through mass transit systems, and the improvement of traffic conditions to a better traffic management.
23. Mr. Bao Thanh, Viet Nam, made a presentation on activities on acid deposition problems in Viet Nam. Some observation results of acid deposition were introduced and demonstrated that the number of rainwater samples with pH value under 5.5 has an increasing trend, especially in big cities such as Ha Noi, Da Nang etc. Regarding air pollution in the big cities, average dust concentrations are 2-3 times higher than permitted levels while concentrations of SO<sub>2</sub>, CO, NO<sub>2</sub> and Pb are still lower than correspondent permitted levels. Sources of air pollution are power plants, cement plant, vehicle, forest fire and transboundary pollution from neighboring areas such as dust and ash from a volcano and violet rains. Proposal on new monitoring plan was also introduced. It was expected to revise national monitoring plan.

#### Introduction of e-learning course in English

24. Ms. Ayako Kawauchi, NC, made a presentation on the English version of the e-learning course on acid deposition issues. The e-learning course has been developed to raise awareness on acid deposition problems and in order to serve as a guide for teachers to enhance their capacity to teach acid deposition problems at schools. The e-learning course in Japanese has been completed and offered in the website in 2004. The English version will be completed and open to public in March 2006.

Update of relevant information

25. Dr. Hajime Akimoto, Program Director of Japan Agency for Marine-Earth Science and Technology made a presentation on Hemispherical Transport of Tropospheric Ozone – Recent International Policy Trend on Air Pollution Control. Convention on Long Range Transport of Air Pollution (CLRTAP) organized new Task Force on Hemispheric Transport of Air Pollutants that treats ozone among the global pollutants. An attention has been paid to ozone because ozone has a long-enough lifetime for hemispheric transportation in the atmosphere. Also surface ozone has been increased to high enough to exceed air quality standards not only in urban area but regionally including rural areas. Since hemispherical background value is substantially high due to trans-continental transport, an international agreement to control hemispherical transport may be more advantageous to attain air quality standards.

Wrap-up of the workshop

26. Dr. Sergey Arkadyevich Gromov, NC, presented the summary of the views provided by the participants in the presentations and during subsequent discussions on environment protection and public awareness for acid deposition problems in EANET countries. Some common approaches and suggestions were taken into consideration. A comment was raised on contents of next workshop on public awareness by Japanese participant.

Closing

27. The Workshop was closed by the co-Chairperson. The participants and observers expressed their gratitude and appreciation for the efforts made by the organizers and the host country in the arrangement for the Workshop.

22 February 2006

Niigata, Japan

Chrin Sokha

Veronika Ginzburg

Co-Chairpersons of  
the Sixth Workshop on Public Awareness for Acid Deposition Problems

## *Participants*

### **CAMBODIA**

Mr. Chrin Sokha  
Deputy Director General  
Technical General Directorate  
Ministry of Environment

### **CHINA**

Ms. Zhao Yinhui  
Senior Engineer  
Comprehensive Department  
China National Environmental Monitoring Centre

### **INDONESIA**

Ms. Astutie Widyarissantie  
Staff  
Assistant Deputy for Climate Change Impact  
Control  
Ministry of Environment

### **JAPAN**

Ms. Keiko Segawa  
Deputy Director  
Global Environment Issues Division  
Global Environment Bureau  
Ministry of the Environment

Ms. Motoko Egashira  
Director  
Japan Environmental Education Society

Dr. Haruo Fukuhara  
Professor  
Faculty of Education and Human Sciences  
Niigata University

Dr. Hiroshi Hara  
Professor  
Field Science Center  
Tokyo University of Agriculture and Technology

Dr. Munetsugu Kawashima  
Professor  
Faculty of Education  
Shiga University

Mr. Ryo Mori  
Director  
Eco Communication Center

### **LAO People's Democratic Republic**

Ms. Setouvanh Phanthavongsa  
Technical Staff  
Environment Research Institute  
Science Technology and Environment Agency

Mr. Vannasin Simmavong  
Deputy Head  
Mass-media Management Division  
Mass-media Department  
Ministry of Information and Culture

### **MALAYSIA**

Mr. Ahmad Rizal Khalit  
Principal Assistant Secretary  
Conservation and Environmental Management  
Division  
Ministry of Natural Resources and Environment

### **MONGOLIA**

Ms. Bulgan Tumendemberel  
Chief Engineer  
Central Laboratory of Environmental Monitoring

### **MYANMAR**

Mr. Htay Oo Kyi  
Assistant Director  
Department of Meteorology and Hydrology  
Ministry of Transport

### **PHILIPPINES**

Ms. Jean Nilo Rosete  
Engineer IV  
Air Quality Management Section  
Environmental Quality Division  
Environmental Management Bureau  
Department of Environment and Natural  
Resources

### **Republic of KOREA**

Dr. Jeong-Ki Yoon  
Researcher  
Soil and Groundwater Division  
Department of Environment Diagnostics Research  
National Institute of Environmental Research  
(NIER)

**RUSSIA**

Dr. Veronika Alexandrovna Ginzburg  
Researcher  
Background Monitoring Division  
Institute of Global Climate and Ecology  
Roshydromet and RAS

**THAILAND**

Mr. Pichaid Atipakya  
Environment Officer  
Ambient Air Quality Division  
Air Quality and Noise Management Bureau  
Pollution Control Department

**VIET NAM**

Mr. Bao Thanh  
Director  
Sub-Institute of Hydrometeorology and  
Environment of South Vietnam

*Resource Persons*

**ERCA**

Ms. Asuka Hirata  
Grant Division  
Department of the Japan Fund for Global  
Environment  
Environmental Restoration and Conservation  
Agency of Japan (ERCA)

**JAMSTEC**

Dr. Hajime Akimoto  
Program Director  
Japan Agency for Marine-Earth Science and  
Technology (JAMSTEC)

**Niigata Prefecture**

Environmental Management Division  
Department of Civic and Environmental Affairs  
Niigata Prefectural Government

Mr. Ken Yamashita  
Assistant Counselor

Mr. Hironori Suwa  
Staff

**Niigata City**

Mr. Tsuyoshi Kanda  
Assistant Counsellor  
Environmental Pollution Control Division

*Observers*

**Japan Environmental Technology Association  
(JETA)**

Mr. Yasuo Toyazaki  
Director  
Kimoto Electric Co., Ltd.

**Niigata Prefectural Institute of Public Health  
and Environmental Sciences**

Mr. Takao Maruyama  
Senior Research Scientist  
Information and Investigation Section  
Research Development Department

Mr. Hiroaki Yagoh  
Senior Research Scientist  
Atmospheric Science Section  
Research Development Department

Mr. Kazuaki Sakai  
Senior Research Scientist  
Water Science Section  
Research Development Department

**Niigata University**

Dr. Kiyomichi Aoyama  
Professor  
Research Institute for Hazards in Snowy Areas

Dr. Naoki Kano  
Associate Professor  
Faculty of Engineering

*Secretariat for EANET*

Dr. Jiang Wei  
Coordinator  
EANET Secretariat  
UNEP Regional Resource Centre for Asia and the

## *Secretariat of Workshop*

### Network Center

Acid Deposition and Oxidant Research Center  
(ADORC)  
1182 Sowa, Niigata 950-2144  
Japan

Dr. Hiromasa Ueda  
Director General

Dr. Sergey Arkadyevich Gromov  
Deputy Director General

Mr. Yoshiyuki Yoichi  
Deputy Director General

Dr. Tsumugu Totsuka  
Senior Adviser, ADORC  
Visiting Professor, Edogawa University

Mr. Mitsuo Takei  
Head  
General Affairs Department

Mr. Akihito Morizumi  
Head Clerk  
General Affairs Department

Ms. Satomi Kosugi  
Administrative Staff  
General Affairs Department

Mr. Jiro Sato  
Head  
Planning and Training Department

Mr. Yutaka Taneoka  
Senior Researcher  
Planning and Training Department

Ms. Ayako Kawauchi  
Administrative Staff  
Planning and Training Department

Ms. Kozue Kasahara  
Administrative Staff  
Planning and Training Department

Dr. Tsuyoshi Ohizumi  
Head  
Atmospheric Research Department

Mr. Jun Nagata  
Senior Researcher  
Atmospheric Research Department

Ms. Tomomi Kominami  
Researcher  
Atmospheric Research Department

Dr. Hiroyuki Sase  
Senior Researcher  
Ecological Impacts Research Department

Mr. Takuji Oida  
Senior Researcher  
Ecological Impacts Research Department

Mr. Masato Kamisako  
Researcher  
Ecological Impacts Research Department

Mr. Shinji Nakayama  
Head  
Data Management Department

Dr. Zhiwei Han  
Researcher  
Data Management Department

Mr. Hideto Abe  
Researcher  
Data Management Department  
Tel: +81-25-263-0562  
Fax: +81-25-263-0567  
Email: abe@adorc.gr.jp

Ms. Ayako Aoyagi  
Researcher  
Data Management Department

### Niigata Prefectural Environmental Conservation Corporation

Mr. Shigeru Miyazawa  
Section Chief  
Tel: +81-25-239-5750

**\*Note:**  
**Since this list includes personal information,  
please handle it with enough care.**