

FOR PARTICIPANTS ONLY

ENR/EGM/CBAPEM/Rep.

10 April 2002

ENGLISH ONLY

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

**REPORT OF THE EXPERT GROUP MEETING
ON CAPACITY BUILDING OF AIR POLLUTANT EMISSION MONITORING
IN NORTH-EAST ASIA**

Yokohama, Japan, 13-15 March 2002

This report has been issued without formal editing.

I. Conclusions and Recommendations

The Expert Group Meeting on Capacity Building of Air Pollutant Emission Monitoring in North-East Asia was held in Yokohama, Japan from 13 to 15 March 2002. The Meeting formulated the following conclusions and recommendations for the future development of capacity building and training activities for air pollutant emission monitoring in the countries of North-East Asia:

Finalization of the recommendations on methodologies of air pollutant emission monitoring

- 1) The Meeting acknowledged the final draft Recommendations of Methodologies on Air Pollutant Emission Monitoring, which had been developed on the basis of proposal by the Expert Group Meeting on Emission Monitoring and Estimation, held in Niigata, Japan in January 1999, and endorsement by the Fifth Meeting of Senior Officials of NEASPEC, held in Kobe, Japan in February 1999, to enhance the capacity in North-east Asian countries to address air pollution issues. The Meeting expressed its appreciation to the Task Force on Air Pollutant Emission for developing the Recommendations of Methodologies, as well as to the Government of Japan for the financial support on the activities of the Task Force.
- 2) Adequate emission monitoring is an essential basis for any stationary sources to optimize their operation and minimize air pollutant emission, as well as for authorities to take appropriate actions to enforce emission regulations. On the other hand, emission monitoring data, together with emission estimation data, constitutes indispensable scientific components for developing further subregional cooperation to address possible transboundary aspects of air pollution. In this connection, the Meeting reaffirmed that capacity building for air pollutant emission monitoring is common task of the North-east Asian countries needing urgent attention.
- 3) The Meeting recommended that the Recommendations of Methodologies on Air Pollutant Emission Monitoring should be used as training material in capacity building activities by various international organizations and programmes to enhance the institutional and technical capacity on air pollutant emission monitoring in North-east Asian countries. The Meeting suggested that appropriate training programmes should be developed so that the Recommendations of Methodologies could be most effectively utilized.
- 4) The Recommendations of Methodologies would also provide a firm basis for future NEASPEC activities for enhancing inter-country comparability of air emission data.
- 5) The Recommendations of Methodologies should be published and disseminated among relevant experts and institutions in order to raise awareness on air pollutant emission monitoring in the subregion.

- 6) The Recommendations of Methodologies should also be disseminated via Internet media within the NEACEDT function to exchange and disseminate up-to-date information on relevant capacity building and training opportunities in the subregion.

Identification of capacity building needs for air pollutant emission monitoring in North-East Asia

- 7) In their Country Reports, the representatives of China, Japan, Mongolia, Republic of Korea and Russian Federation presented the current situation of air pollutant emission monitoring in each respective country. The Meeting acknowledged that such presentations provided a valuable opportunity to update the participating countries' mutual understanding on the national situation of air emission monitoring, and recommended that such presentations should be continued through future NEASPEC activities on air emission monitoring. It was also suggested that the information provided in such presentations could be compiled and disseminated by NEACEDT, within its function to deal with descriptive information on monitoring activities and methodologies in North-east Asian countries.
- 8) On basis of the Country Reports presentation, the Meeting discussed the existing obstacles in air pollutant emission monitoring in North-East Asian countries. The Meeting identified major gaps in capacity building for air pollutant emission monitoring in four primary areas, i.e. (a) institutional framework; (b) monitoring facilities and equipment; (c) human resources capacity and technical skills; and (d) data management procedures. The need for the long-term financial basis was also emphasized.
- 9) The Meeting noted the dissemination of the Recommendations of Methodologies and the development of training programmes utilizing the Recommendations of Methodologies, as the first step to address the needs of capacity building for air pollutant emission monitoring, in particular, in areas of (b) monitoring facilities and equipment, and (c) human resources capacity and technical skills.

On-site demonstration of air pollutant emission monitoring

- 10) The Meeting appreciated the organization of the on-site demonstration of air pollutant emission monitoring on day 2 of the Meeting, noting the valuable opportunity in sharing information of different methodologies, equipment and instruments. The Meeting acknowledged this demonstration as a good example to follow for future training programmes.
- 11) The Meeting affirmed that the on-site demonstration should be continued, preferably on a regular basis, in future training programmes, in particular in developing countries. The experience and know-how should be compiled and fed back into the design of future training programmes.

- 12) On-site demonstration would be most effective if combined with lecture-type training, which altogether should address theoretical/principle aspects and legislative requirements/standards, as well as technical capacity of air emission monitoring, including the selection of monitoring points and measurement of the flow-rates for emission gases.

Further development of capacity building in air pollutant emission monitoring in North-East Asia.

- 13) Training and capacity building activities on air pollutant emission monitoring should be further developed as an integral part of future NEASPEC activities, with maximum coordination with other project activities of NEACEDT.
- 14) Within the NEASPEC framework, training programmes on air pollutant emission monitoring could be developed both at subregional and national levels. Subregional training programmes would primarily focus on promotion of the inter-country comparability of air emission data, while national training programmes might directly address the capacity enhancement of managers and monitoring personnel in local environmental authorities, power plants and factories, etc. National training programmes should also be promoted under different initiatives by national and local governments, the private sector and the scientific community in participating countries.
- 15) NEASPEC training programmes at the national level should be developed on a step-by-step basis, taking country-specific needs into full consideration, and should build on the existing national training programmes in each participating country. The Meeting discussed a model training programme presented by Japan, which is attached as Annex II for reference. Countries are encouraged to communicate detailed information on their needs and existing national programmes, in order to facilitate further effective design of future training programmes.
- 16) The Recommendations on Methodologies may be adapted according to the requirements in the country-specific national training programmes, and developed into a training manual tailor-made for the national training programme in each participating country. Such a training manual could be presented in the national language, within a country-specific focus reflecting the legislative and institutional arrangements of the country.
- 17) In developing the training programme, particular attention should be paid to the appropriate selection of the target trainees / audience so that the impact of the training programme could be maximized. The training-the-trainers approach should be considered wherever applicable.
- 18) The Meeting suggested that the next expert group meeting on air pollutant emission monitoring might be organized, focussing on development of training programmes,

including the consideration on common training strategies for the NEASPEC countries.

Others

- 19) The Meeting recommended that the participation of the Democratic People's Republic of Korea in the NEASPEC Project should be encouraged.
- 20) The Meeting recommended that the Eighth Meeting of Senior Officials on Environmental Cooperation in North-east Asia, to be held in Ulaanbaatar, in June 2002, should further consider the use of the Core Fund, and enable its disbursement to the project implementation, including the conduct of future training programmes.
- 21) The Meeting expressed its appreciation to the Government of Japan for its financial support to the organization of this Expert Group Meeting, as well as to the Japan Environment Technology Association and the City of Yokohama for their cooperation.

II. ORGANIZATION OF THE MEETING

1. The Expert Group Meeting on Capacity Building of Air Pollutant Emission Monitoring in North-East Asia was organized by ESCAP and hosted by the Ministry of Foreign Affairs and Ministry of the Environment, Government of Japan, in Yokohama, Japan from 13 to 15 March 2002, as an activity conducted under auspice of the North-east Asian Subregional Programme of Environmental Cooperation (NEASPEC). NEASPEC Task Force on Air Pollutant Emission Monitoring and the North-east Asian Center for Environmental Data and Training (NEACEDT) were also co-organizers of the Meeting.

2. The Meeting was attended by the participants from China, Japan, Mongolia, Republic of Korea and Russian Federation. The list of participants is attached as Annex I.

3. Mr Masakazu Ichimura, Expert on Environmental Policies, Environment and Natural Resources Development Division opened the Meeting on behalf of ESCAP. The participants were also warmly welcomed by Mr Tetsuo Nishide, Director of Air Quality Management Division, Ministry of the Environment, Government of Japan.

4. The Meeting was facilitated by Mr Kozo Ishida (Japan) as chairperson for the first day session and Mr Takashi Ibusuki (Japan) as chairperson for the third day session. The second day session, i.e. on-site demonstration at Kanazawa Incineration Plant, was also facilitated by the group of Japanese experts. Mr Masakazu Ichimura (ESCAP) took a role as rapporteur for the meeting.

5. The Meeting followed the following agenda:
1. Finalization of the recommendations on methodologies of air pollutant emission monitoring.
 2. Identification of capacity building needs for air pollutant emission monitoring in North-East Asia.
 3. On-site demonstration of air pollutant emission monitoring (at a coal-fired power plant).
 4. Further development of capacity building in air pollutant emission monitoring in North-East Asia.
 5. Consideration and adoption of recommendations

Finalization of the recommendations on methodologies of air pollutant emission monitoring.

6. In explaining the mandate of the Task Force on Air Emission Monitoring and its background, a secretariat paper "Recommendations of the Meetings of Senior Officials, and relevant project activities of NEASPEC that are of significant relevance to Capacity Building for Air Pollutant Emission Monitoring" was presented by Mr Masakazu Ichimura (ESCAP)

7. Mr. Takeshi Ibusuki (Japan), on behalf of the Task Force on Air Emission Monitoring, introduced the final draft "Recommendations on Methodologies of air pollutant emission monitoring".

Identification of capacity building needs for air pollutant emission monitoring in North-East Asia.

8. Country reports were presented by the representatives of participating countries, i.e. Mr Wang Ruibin (China), Mr Toshiro Shikata (Japan), Ms Tumendemberel Bulgan (Mongolia), Mr Jun-Seok Cha (Republic of Korea) and Mr Vladimir V. Tsibulsky (Russian Federation). The country reports provided overviews on the current situation of air pollutant emission monitoring in each respective country, as well as the existing needs and obstacles in air pollutant emission monitoring and major gaps in capacity building in the relevant field.

9. The workplan of the North East Asian Centre for Environmental Data and Training (NEACEDT) was presented by Mr Kim Myungjin (Republic of Korea) on behalf of NEACEDT, as major contribution to capacity building for environmental monitoring and data management in the subregion. It would provide a function to exchange and disseminate up-to-date information on capacity building and training opportunities in the field of environmental monitoring and data management, including air emission monitoring.

On-site demonstration of air pollutant emission monitoring

10. An on-site demonstration for air pollutant emission monitoring was conducted on the second day of the Meeting (14 March 2002) at the Kanazawa Incineration Plant, Environmental Services Bureau, City of Yokohama (2-7-1, Sachiura, Kanazawa-ku, Yokohama-shi 236-0003, Japan). It was conducted for the purpose of provoking useful insights for designing future training programme and other capacity building activities. The demonstration covered the manual sampling method, telemetric monitoring system, automatic measuring instruments and their on-site operations.

Further development of capacity building in air pollutant emission monitoring in North-East Asia

11. The participants jointly evaluated the conduct of the on-site demonstration at the Kanazawa Plant. On the basis of such evaluation, views were exchanged regarding the further development of capacity building in air pollutant emission monitoring in North-East Asia.

Consideration and adoption of recommendations

12. A set of recommendations was formulated taken into consideration elements raised by the participants during the sessions, and was adopted by the Meeting.

Study Visit

13. A study visit was organized in the third day afternoon (15 March 2002). The participants visited the Isogo Power Plant of Electric Power Development Co., Ltd. (37-2 Shin Isogo Cho, Isogo-ku, Yokohama, 235-8510 Japan). As this plant had just completed the renovation work to cope with most stringent control of air pollutant emission as required by the voluntary agreement with the local government (City of Yokohama), the participants observed the state-of-art telemetric monitoring technologies, together with the power plant operation system using the real time data of air pollutant generation and emission.