

AIDE MEMOIR

RETA 5865 TRNASBOUNDARY ENVIRONMETNAL COOPERATION IN NORTH-EAST ASIA

FINAL REVIEW MISSION

I. Introduction

1. The \$350,000 RETA, approved in October 1999, aims at promoting effective regional cooperation for environmental protection through three components: (i) training of government officials and enterprise managers for reducing pollution from coal-fired power plants, (ii) development of regional network for transboundary environmental monitoring, and (iii) development of action plans for improving the efficiency of particulate abatement systems in existing power plants. The participating countries of the RETA are the People's Republic of Mongolia, the People's Republic of China (PRC), and the Republic of Korea. Parallel funding for activities within the scope of the TA was provided in kind by all the participating countries and Japan. UNESCAP was selected to implement the TA. The RETA commenced in January 2001 for an approved 30 months implementation period.¹ The completion date was extended from 30 June 2003 to 30 June 2004 due to SARS.

2. A TA Final Review Mission² (the Mission) was held on 7 July 2004 at UNESCAP, Bangkok. The final review meeting was organized by UNESCAP and attended by representatives from Korea, Mongolia, the PRC, and Japan. Appendix 1 provides a list of the participants to the meeting.

II. Findings and Agreements

3. **Major Findings.** TA implementation has been considered satisfactory in general, notwithstanding the late start-up and delays due to SARS. The participants of the final review meeting considered that Component I and III are fully successful, and Component II is partially successful. The training workshops provided under Component I and the action plans prepared at the two existing power plants under Component III are considered useful and effective in building capacity. While a common vision on the needs of information sharing among participating countries was reached through the training workshop and expert group meetings under Component II, lack of data compatibility and sustainability of data collection, analysis, and sharing has not been resolved. Currently, the data collection activities are mainly volunteer-based. The most encouraging outputs that reflect the TA's impacts in addition to the capacity building are (i) the Government of Mongolia is proposing to develop a national emission standard for the thermal power plants; and (ii) the China Electricity Council prepared Taiyuan Power Plant Action Plan on Air Pollution Reduction under the TA, and the Council is proposing to expand the action plan into an investment proposal for IFI's support.

4. **Component I.** For the first component of RETA on the regional training, a subregional training center at Korea Electric Power Research Institute (KEPRI) in the Republic of Korea has been established, and two training workshops were organized. The first training workshop was held on 10–21 December 2001. Five participants from the PRC and Mongolia attended the workshop. The second workshop was held on 3–16 December 2002, with 6 participants from

¹ The late start-up for about 15 months was due to (i) one of the participating countries had different view on TA title and scope, and (ii) it took one year to finalize the agreement between UNESCAP and ADB.

² Comprising X. Ma, Environmental Specialist/Project Officer.

the PRC and Mongolia trained. The training program covered topics on coal testing and combustion, boiler and turbine technology, new technology and practices on pollution control, power plant operation and maintenance, performance management, and relevant policies and regulations. Representatives from Mongolia and the PRC evaluated the quality of the training courses highly.

5. Participants of the final review meeting recommended that further trainings conducted by the trainers should be followed-up, and it would be more cost-effective and effective to organize the further training workshops in each of the participating countries rather than at KEPRI, considering that participating countries vary in terms of the development stage of their respective policies and regulations, technology, and standards.

6. **Component II.** For the second component, a subregional information center at the National Institute of Environment Research (NIER) in Korea has been established. A website was finalized in June 2004 at the Center. To support the operationalization of the regional monitoring network, two expert group meetings on Capacity Building and Data Inter-compatibility for Ambient Air Quality Monitoring in North-East Asia were held, respectively, in Japan in March 2002 (attended by 17 representatives from the PRC, Mongolia, Japan, Korea, the Russian Federation, and UNESCAP), and in Korea in April 2002 (attended by 23 participants from the PRC, Mongolia, Japan, Korea, and UNESCAP). Following the two expert group meetings, a report on Recommendations on Methodologies of Monitoring Air Pollution Emissions was published and widely distributed. In addition, a training workshop on Emission Monitoring and Estimation in North-East Asia was held in the PRC on February 2003. More than 40 participants from the PRC, Mongolia, Korea, Japan, and the Russian Federation attended. An on-site Assessment Workshop on Capacity Building and Data Inter-compatibility for Ambient Air Quality Monitoring in North-East Asia was organized from 22–24 September 2003 in Mongolia, attended by 21 representatives from the PRC, Mongolia, Korea, and Japan.

7. While data on ambient air quality for the year 2000–2001 from all the participating countries has been collected, sustainability of the data gathering and data compatibility is a concern given that the data collection activities are mainly volunteer-based. Participants of the TA final review meeting recommended that follow-up actions are needed to establish an institutional mechanism for data collection, analysis, and sharing. It was also agreed that the database as a decision-support system should be further developed.

8. **Component III.** For the component of action plans of the existing power plants, two on-site workshops in Guiyang, PRC (November 2002) and Ulaanbatar, Mongolia (September 2003), respectively, were organized. At the first workshop in Guiyang attended by 12 participants from the PRC, Mongolia, Korea, and Japan, a recommendation was made on the efficiency improvement of the particulate abatement system at the Guiyang Power Plant by optimizing the entire plant operation and maximizing the electrostatic precipitator performance. The potential of coal blending to improve particulate and SO₂ emission control and combustibility was also explored. At the second workshop in Ulaanbatar, the participants visited Ulaanbatar Power Plant #3 and #4 for training purposes.

9. Action plans for two specific power plants (Ulaanbaatar Power Plant #4 of Mongolia and Datang Taiyuan #2 Thermal Power Plant of the PRC) were developed under the TA. A subregional workshop on Action Plan for improvement of the Particulate Abatement Systems of Coal-fired Power Plants was held on 7–8 June 2004 in Beijing¹ to review and discuss the action

¹ Ashok Bhargava, energy specialist of ECEN, attended the third workshop in Beijing.

plans. The importance of developing a subregional action plan and possible process and structure was also discussed. The workshop was attended by 18 representatives from the PRC, Mongolia, Korea, and 2 resource persons from the Russian Federation and Kazakhstan. Experts attending the workshop agreed that setting up national standards on emission from coal-fired power plants is the first step and is critical to developing any projects to reduce emissions. Countries such as the PRC, Korea, and the Russian Federation have developed such standards. It was recommended that further study on the implications of emissions at the subregional level was needed.

10. **Future Actions.** At the final review mission, the representative from the Ministry of Environmental Protection of Mongolia informed that, as follow-up actions of the TA, the Government of Mongolia (i) is proposing to develop its national standards on air emission from coal-fired power plants and (ii) has included the action plan of emission control at Ulaanbaatar #4 Power Plant developed under the TA in the list of priority projects and would like to explore the opportunity of ADB's support. The representative from the Ministry of Environmental Protection of Mongolia also pointed out that the Ministry of Environmental Protection is going to pursue this in cooperation with the Ministry of Infrastructure. The representatives from the China Electricity Council indicated that they are planning to expand the Taiyuan #2 Power Plant Action Plan on Air Pollution Reduction into an investment proposal for ADB's support. The Mission encouraged the representatives from Mongolia and the PRC to further prepare the proposals and contact the Ministry of Finance and Economy of Mongolia and the Ministry of Finance of the PRC, respectively, for pipeline entry as well as ECEN, ADB. UNESCAP also discussed the possibilities for a second phase TA project to be financed by ADB. The Mission agreed to convey this information to ADB.

11. **Sustainability of Training Center at KEPRI.** During the TA review mission in June 2002, there was a main concern related to the sustainability of the training center at KEPRI after completion of the TA project. It was indicated that KEPRI would not be able to continue hosting the Training Center after completion of the current project in October 2003 due to the reorganization of the Korea Electric Power Corporation. This is no longer a concern, as the original reorganization plan was dropped.

12. **Financial Status.** The Mission also reviewed the financial status through a separate meeting with Mr. C. Davies from the Programme Management Division and Ms. A. Nikolova from Environment and Sustainable Development Division of UNESCAP. It was confirmed that the project was operationally completed, and there would be no new obligations. It was also agreed that, since the value of obligations is higher than the final liquidation, it was likely that at least \$60,025 plus interest earned in 2004 would be returned to ADB. As required by the Letter Agreement between UNESCAP and ADB, UNESCAP will submit to ADB a final report for the Project within 2 months of the TA completion date (i.e., 31 August 2004).

III. Conclusions and Recommendations

13. Overall, the TA has been successfully implemented, notwithstanding the late start-up and delays due to SARS. Technically, the TA should be closed now, and financially the TA will be closed after UNESCAP submits to ADB the final financial statement and transfers the TA savings back to ADB.