

Clean Air Technology Workshop
4-5 November 2018
Qingdao, Shandong, China

Summary of the Clean Air Technology Workshop

I. Introduction

1. The Clean Air Technology Workshop was held from 4 to 5 November 2018 at the International Conference Center, Qingdao, China. The workshop was organized by Asia Center for Air Pollution Research (ACAP), collaborated with Environment Research Institute, Shandong University, Atmospheric Environment Branch (AEB) of China Society for Environmental Sciences (CSES), and Qingdao Association for Science and Technology.
2. The objectives of this workshop are to introduce clean air technologies and consider the application of them to improve the atmospheric environment in the region. It is expected that these technologies will be used in countries in an appropriate manner.
3. The Session was attended by representatives of Cambodia, Indonesia, Japan, Lao PDR, Mongolia, Myanmar, Republic of Korea, Russia, Thailand and Viet Nam as well as representatives from related industries, institutions and international organizations such as UN Environment, Asia and Pacific Office. The List of Participants is attached as Annex.

II. Opening Session

4. Dr. Wang Jun, Deputy Secretary General, Qingdao Association for Science and Technology, Mr. Tomi Haryadi, Coordination Officer, UN Environment, Asia and Pacific Office, Dr. Erdenebat Eldev-Ochir, Deputy Director General, ACAP made the introductory remarks.
5. Prof. Meng Fan, Secretary General, AEB of CSES made the presentation on Air Pollution Prevention Action Plan of China and Control Technology as an introduction.

III. Session 1: Current Situation, Challenges and Technological Demands

6. Representatives of countries made presentations on Current Situation, Challenges and Technological Demands of clean air technology:
7. It was pointed out that many countries mentioned transportation problems and some developing countries are suffered from the primary Particulate Matter (PM) emitted from the transportation sector, so the primary emission control is essential for management of PM_{2.5}. However, the situation is differentiated in some countries such as China, Japan, Republic of

Korea. It was commented that vehicle management, quality of gasoline for standard value, small and heavy-duty truck, transportation control have been implemented. However, it needs some time to achieve the significant result.

8. It was suggested that the control of air pollutants not only for ozone and PM2.5 but also for NOx are still important issue depending on the situation of countries. The co-benefit approach is key concept to link the climate change and air quality management issues. This opportunity is very good to know the problems countries face.

IV. Session 2: Introduction of Clean Air Technology

9. The related industries made the presentations as follows:
 - Japan Automobile Manufacturers Association (JAMA) titled “Air Quality Improvement and Latest Vehicle Emission Control Technology”.
 - DNV GL & VeChain titled “Taking a Broader view”.
 - Miura Co. Ltd. titled “Miura Once Through Boiler”.
 - The paper presentation titled “Haier Group Environment Benefit Communication”.
 - International Promoting Council of Industrial Coating Association (IPCO) titled “The Biological Treatment of VOCs Reduction on Paints & Coatings (Propose from Japan)”.
 - MEANAC Heco Co. Ltd titled “Biological Treatment of Organic Waste Gas”.
 - Horiba Co. Ltd titled “Monitoring Systems for Air Pollution Control”.

10. The discussions were as follows;
 - The question on what the most effective technology is to improve road traffic related air pollution issue was raised, considering there are many traffic conditions exist in cities and rural from north to south in Asia. In response, JAMA mentioned that it is difficult to answer this, though fuel quality control is an important issue.
 - It was pointed out that the presentations of DNV GL & VeChain are very creative and informative, which provide an enlightened solution for the emission control system.
 - Considering the engagement of partnership between the business sector and government is crucial, it is requested the business sector to share related practice and information. The Miura responded to this request with sharing some related good practices and experiences in Singapore and the Philippines. It was also mentioned that the intergovernmental platform should be established and utilized to facilitate the technology cooperation in the future. In response, DNV GL and VeChain also shared their practice on partnership with government on the trading system,
 - Mr. Heng Nareth made remarks: 1. some technology introduced by Japan can be used in old cars? 2. Any problem about gasoline quality for grading up of emission standard? JAMA replied: 1. it was difficult to ally the technology for the old cars, 2. first is fuel quality, second is the introduction of practical technology, and it is possible in step-by-step manner.

- A question for Horiba: the economic equipment could be introduced, such as a sensor, because it is special technology developed in Japan. In reply to the question, Horiba suggested to draw attention to the accuracy to maintain the budget for any kind of sensors.

V. Session 3: International Technology Cooperation

11. Representatives of Japan Environmental Sanitation Center (JESC) and ACAP made presentations on the general introduction and four demonstration cities projects progress respectively on “Bilateral Inter-city Project on the Improvement of Air Quality”.
12. Trilateral Cooperation Secretariat made commenting remarks with the topic on “Trilateral Cooperation on Environmental Protection”.
13. The discussions were as follows;
 - It was asked if there is any potential of the program other than this project? In reply, the MOEJ does not intend to expand. However, there are other existing bilateral important cooperation with co-benefit approach.
 - It was questioned that what is the challenges and it worked well? In reply to it, the policy aspect is done by IGES but the technical part is going well.
 - It was questioned for JESC about monitoring: 1. How the sample was introduced to the ICP-MS? 2. What type of VOCs are emitted from the textile industry? JESC replied: 1. The sample gas is introduced directly into the ICP-MS, so that the filter is not needed, 2. The polar VOCs are emitted from the factory.
 - It was commented that how is the OBD used in cars? ACAP replied that OBD is small and can be installed in a car. It only measures the GPS position, fuel consumption as vehicle motion. Combined with monitor, the concentration of NOx etc. can be monitored.

X. Discussion of Meeting Summary

14. The Secretariat made a presentation on the draft summary of the Clean Air Technology Workshop. After the discussion, the summary was agreed in principle by the participants. It was announced by the secretariat that the summary will be circulated among the participants soon later.
15. It was requested by countries for the consideration of ACAP that the similar workshop should be conducted in the future in order to encourage the technology cooperation for Clean Air technology so as to improve the regional cooperation on air quality management.

XI. Closing Session

16. The Session was closed by the closing remarks delivered by Mr. Cao Xianqiang, Vice President of Shandong University, Prof. Meng Fan, Secretary General of AEB of CSES, Mr.

Tomi Haryadi, Coordination Officer, UN Environment, Asia and Pacific Office and Dr. Erdenebat Eldev-Ochir, Deputy Director General of ACAP, thanking all the participants for their great contributions.

List of Participants

Country Representatives

Cambodia

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Indonesia

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International Organizations

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Enterprises and Institutions

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 Qingdao University of Technology, School of
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 *Haier's presentation

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 Japan Automobile Manufactures Association,
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Ms. Namin SUN
 Nissan (China) Investment Co.,Ltd

Mr. Huijie BO
 Director General for Healthcare China
 DNV GL Business Assurance

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Organizers

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