

International Workshop on Asian Air Pollution and Biodiversity Conservation

The Eighth Tripartite Presidents Meeting among NIES, NIER and CRAES

Closing Remarks (Session1)

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Dear President OHGAKI, President PARK, Ladies and Gentlemen,

First of all, on behalf of CRAES delegation, I would like to express our heartfelt thanks to the researchers who have prepared excellent presentations and all the hard-working staff who have helped facilitate the Parallel Workshop.

The selection of “Air Pollution” as one of the themes of this parallel workshop demonstrates both our common interests on this international hotspot issue, and the domestic requirements of current air pollution research in our three countries.

The Northeast Asian region is the home of more than one billion people, and is the area of the world which has experienced the fastest economic growth in recent decades. Massive coal consumption and a rapid increase in the numbers of motor vehicles have contributed to air pollution not only in individual cities, but also on a larger regional scale.

The regional atmospheric pollution issues in Northeast Asia include acid rain, photochemical oxides, and atmospheric brown clouds. In addition, although dust and sandstorm is a natural process in Asia, it is also influenced by human activities. Therefore, conducting multi-country cooperation on regional air pollution is important to achieve an understanding of the formation mechanisms and impact and control pathways of these regional issues, which in turn is crucial in deciding the necessary countermeasures to address them.

Compared with CO₂, which remains in the atmosphere for hundreds, or even thousands of years, and exerts a continual influence on climate, the short-lived climate forcers (SLCF) - including ozone, black carbon and methane - only remain in the atmosphere

for a comparatively short period of time (from several days to several decades). As such, the control of emissions from these short-lived climate forcers is potentially more effective in the alleviation of climate change. Meanwhile, since particulate matter can affect the climate in both direct and indirect ways, controlling particulate matter in the atmosphere may have an impact on climate. Therefore, research on the key features of SLCF covering composition, life cycle, spatial distribution, transport and transformation, etc. is crucial in order to develop systematic strategies on climate change and air pollution control. In addition, forecasting and assessing the positive and negative impacts of particulate matter on climate change is also of great importance to climate safety.

In order to understand the essence of air pollution in Northeast Asia, scientists from China, Japan and Korea have undertaken more than ten years of fruitful cooperation. In 2008, scientists from CRAES, NIES and NIER initiated a collaborative research project on long-range air pollution (LTP). A large quantity of monitoring data has been collected through large-scale and long-term monitoring. At the same time, they have applied numerical modeling in order to conduct long-term simulation of the transport, transformation, deposition and source-receptor relationships of atmospheric pollutants. Through their extraordinary work, they have begun to contribute to an understanding of the features of atmospheric transport in Northeast Asia, which will form a solid foundation for future regional cooperation.

CRAES is striving to establish a mega-regional environmental monitoring station at present while an air quality forecasting and modeling system has been built which will provide comprehensive coverage for Northeast China. Using this modeling system, a series of research projects have been conducted on acid rain, transboundary transport of air pollutants, and the interaction between air pollution and climate change. A number of cooperation and research projects on regional air quality in Northeast Asia have also been initiated among CRAES, NIES and NIER, which will contribute greatly to the development of related research, policy, and mechanisms for regional air pollution control.

Thank you all!