

The Thirteenth Session of the Scientific Advisory Committee
on the Acid Deposition Monitoring Network in East Asia
25-27 September 2013, Xiamen, China

PROPOSAL FOR ASIA SCIENCE PANEL FOR AIR QUALITY AND CLIMATE (ASPAC)

1. Background and Aims

Accompanying rapid economic growth, emissions of air pollutants and CO₂ in East Asia covering Northeast and Southeast Asia have already exceeded each of those in European and North American continents. This situation apparently brings about serious urban and regional air pollution in this area, and also prompted concerns on emissions in East Asia from the point of hemispherical air pollution and global climate change. The concerned air pollutants would consist of air toxicants such as photochemical oxidants and particulate matter (PM_{2.5}), biogeochemically active species such as acidic and nitrogenous compounds as well as short-lived climate pollutants (SLCPs) such as black carbon and tropospheric ozone. Those atmospheric species are interwound through emissions of common precursors, chemical and physical transformations, and depositions. An emerging issue to seriously consider is the link between air pollution and climate change via the role of SLCPs and an effect of SO₂ reduction on climate change.

The overall issues are very complicated, and there is a strong need to consider such issues from a scientific viewpoint and to give clear message and make suggestions from scientific community to policy makers to take actions. However, the situation in Asia is different from Europe and North America where regional cooperation on air pollution mitigation based on scientific knowledge has been well developed under the Convention on Long-rang Transboundary Air Pollution (CLRTAP). Asia does not have an adequate framework for scientific discussion for atmospheric management to be reflected into policy making. Meanwhile, it is now very important to input the views of Asian scientists to those of European and North American, since their understandings and views on Asian situation might be different from Asians.

On the basis of the above considerations, a Japanese research team headed by Prof. Akimoto conducted research on the necessity of possible regional framework to strengthen atmospheric management and the science-policy interface to send timely and appropriate messages from the scientific community to policy makers. This team now proposes an Asia Science Panel on Air Quality and Climate (ASPAC) (formally proposed as Asia Science Panel on Air Quality, ASPAQ) aiming to synthesize scientific knowledge on air pollution in the Asian region to reach a common understanding among scientists and policy makers, and to develop an international initiative for an integrated approach to air pollution and climate change reflecting the views of Asian scientists.

2. Contents of ASPAC

ASPAC would be constituted of scientists related to air pollution research. It would review the existing latest scientific knowledge, prepare reports and "Summary for Policy Makers" based on a

consensus of major research scientists on the issues of air pollution and its relation to climate change in the Asian region.

While the concept of ASPAC is still in the discussion stage, the preliminary research identified several important issues to be considered/discussed:

(i) What should be the major functions of ASPAC?

There are several different types of such scientific bodies, e.g. the Intergovernmental Panel on Climate Change (IPCC), the Ozone Panels under the Montreal Protocol, and science bodies under the CLRTAP. ASPAC may address newly emerging scientific findings for consensus building among scientists. In addition, major questions include:

- ✧ What should be the scope of research: atmospheric science, impact studies, short-term/long-term mitigation measures? The scope may cover all of them but actually ASPAC may take a stepwise approach from atmospheric science/impact studies:
- ✧ Whether the focus of activities should be mainly on review of existing research, or whether the focus should be broader including enhanced research collaboration and joint research, and/or capacity building of atmospheric scientists? Although the main function of ASPAC might be review of existing research to identify emerging scientific findings, it might have a broader scope and activities depending on the situation.

Other issues to be further elaborated include:

- (ii) What should be the geographical scope? East Asia or Asia as a whole?
- (iii) How ASPAC members should be selected? National nomination, selection by a scientific committee or both?
- (iv) Whether a new body should be created, or whether existing bodies could be reformed? Joint Forum, EANET, ABC Asia Technical Committee or any other candidate?

3. Ad Hoc High-Level Science Meeting

As an immediate initiative, an ad hoc high-level science meeting for air pollution in Asia is proposed for the purpose of discussing importance of Asian air pollution in a global perspective, and the best way of synthesizing scientific views on relevant issues and of conveying them to policy makers inside and outside the region. The participants of the high-level science meeting may consist of eminent scientists of the highest level in this field in East Asia as well as some from outside regions. Policy makers in East Asia will be invited as observers. The meeting is hopefully to be convened by international bodies such as UNEP and supported by some donor countries/organizations.