

Welcome Address

Prof. Dr. Tsuneyuki Morita

(National Institute for Environmental Studies, Japan)

First of all, I sincerely appreciate the participation of distinguished policy makers and experts from Indian government, Japanese Government, and other countries in the side event. I am also grateful for the wonderful preparation of the event arranged by Professor Shukla who has been promoting Asian Modeling Program with us over the past 10 years.

This side event is planned to introduce the result of an Asian joint modeling program for climate policy assessment, and to exchange opinion between modeling experts and policy makers for the future development of the program.

As all participants have well recognized, Asia has the highest potential for economic growth, and it also has the largest environmental loads and the most serious damage due to deterioration of the environment, including climate change. This is why a number of environmental researchers have focused on Asia, and it is now recognized that sustainable development of this region is the key to the solution of global environmental issues such as global climate change.

However, there are several reasons why the search for a solution is extremely difficult. The first is that the problems arise from huge, complex systems. There are numerous factors that are interrelated and hard to predict. Thus it is difficult to understand the problem comprehensively, making it hard to define what the problem really is, where it comes from, what we should do to address it, and what the consequences of our actions will be. Second, it will require more than a century to solve the problem. Taking the example of climate change, it is estimated that it may take more than 30 years before severe damage will appear, and it may take more than 100 years of action to stabilize the world climate. The third reason is that to implement actions it is necessary to address the differences between the North and the South, and the different value systems in the world. How should we grapple with such a problem?

We began the process of developing large-scale computer simulation models 12 years ago. This process was also intended to offer a platform for policy makers and researchers. Using the models, we attempted to enhance communication among these communities, and systematically to bring out the latest scientific findings to the policy-making processes at both international and regional levels. We tried to forge a community where researchers and policymakers from various backgrounds and nationalities discuss these long-term problems while respecting differences in opinions and values. One essential feature of our model development process is “to develop an interface between science and the policymaking process by researchers in Asia,” that is, to develop a common set of models that can be used in Asia by collaborating with researchers in the region, and to offer an opportunity where policymakers and researchers think together while using the models.

The model development process was first promoted for evaluating policy options to prevent climate change, and the first basic model was completed in 1992. Since then, researchers from Asian countries such as India, China, Korea, Indonesia, and Thailand have joined this process and several country models have been applied. More than 20 models have been developed to date. Although the models focus mainly on Asia, world models have been developed to analyze international economic relationships and climate impacts for evaluating policy options from a global viewpoint. These models have been used as a single model or in combination, depending on policy needs, and have been used in various fields such as climate change mitigation, air pollution abatement, ecosystem preservation, water resource management, land use policy, energy policy, promotion of environment-friendly industries, and integrated environmental management policy. Climate models have contributed to the establishment of a communication platform for various policy-making processes not only in the governments in Asian countries, but also in international organizations that have actually used the model such as the IPCC, UNEP, and OECD.

After ten years of starting joint program for Asian integrated modeling, we are here holding a meeting to report significant amounts of work and experience, containing overview of the models developed so far, their structure, and the results and analyses presented to policymakers and researchers. We hope our contributions to the Asian policy progress in climate change, and frank discussions here toward our collaboration extension and further model development for analyzing sustainable development policies in Asia.