

KEY MESSAGES FROM IPCC AR5 AND ITS IMPLICATIONS IN ASIA: FUTURE PERSPECTIVE OF CLIMATE CHANGE POLICIES IN ASIA THROUGH INTEGRATION OF MITIGATION AND ADAPTATION

1 Context/Rationale

The Fifth Assessment Report (AR5)—the most comprehensive assessment of scientific knowledge on climate change—is being released by the Intergovernmental Panel on Climate Change (IPCC) in four parts between September 2013 and October 2014. Knowledge and experiences, compiled by the AR5, have powerfully stimulated climate change debate around the world. Moreover, the Report has already been influencing policies and negotiations on climate change at both the international and national levels, including the United Nations Framework Convention on Climate Change (UNFCCC). Against this backdrop, there is a growing need for raising public awareness of the findings from the AR5 and their implications for the national policies by disseminating the latest information and promoting dialogues between the scientific community, policy makers and the general public.

2 Objectives

Based on the approved reports in AR5, especially the reports by Working Groups (WG) 2 and 3 on climate change adaptation and mitigation, this session, consisting of two sections, aimed to raise awareness of the IPCC and its activities among the general public to promote national debate and actions for addressing climate change through providing the latest scientific findings and encouraging dialogue between scientists, practitioners, and the public. The first section provided an overview of IPCC's activities and the key points of AR5 WG2 and 3 reports with a focus on Asia. The second section then discussed the implication of those findings from the reports for current and future national climate policies.



3 List of Speakers

[Opening Remarks]

Akio Takemoto Director, Research and Information Offices, Global Environmental Bureau,
Ministry of the Environment, Japan

[Moderator & Speaker]

Taka Hiraishi Counsellor, IGES (Member, IPCC Bureau)

[Speakers & Discussants]

Yasuaki Hijioka Head, Center for Social and Environmental Systems Research
(Environmental Urban Systems Section), National Institute for Environmental Studies (NIES)

Kiyoshi Takahashi Senior Researcher, Center for Social and Environmental Systems Research,
National Institute for Environmental Studies (NIES)

[Discussants]

Jiang Kejun Director, Energy Research Institute (ERI), China

Isao Endo Task Manager / Senior Policy Researcher, Natural Resources and Ecosystem Services Area, IGES

4 Key Messages

- **IPCC AR5 strengthened the assessment of the long-term warming of the climate system, set out the risks of climate impacts, highlighted the need for adaptation measures, and indicated the options of a future path for mitigation.**
- **Immediate actions are required for controlling temperature rise below 2 degrees C.**
- **Both mitigation and adaptation based on concrete quantitative projections are indispensable. Interlinkage between them exists and actions for their integration should be considered. Improving land-use planning can be one approach for integration.**
- **Long-term and interdisciplinary perspectives are important.**
- **More quantitative research and discussion are needed.**

5 Summary of Presentation

Akio Takemoto mentioned that it is indispensable to address not only already existing impacts of climate change, but also potential impacts that cannot be prevented in the medium and long terms. In addition to the mitigation to reduce greenhouse gas emissions, the Ministry of Environment, Japan (MOEJ) emphasises the importance of climate change adaptation to enhance resilience against the impacts. As part of its efforts, MOEJ will develop a national adaptation plan by summer 2015 in cooperation with relevant government agencies.

Having overviewed the IPCC and its work with a focus on the process and outputs, Taka Hiraishi highlighted the findings of the AR5 WG1 report. He mentioned that it is noteworthy that there is a linear relationship between the cumulative CO₂ emissions and the future temperature increase. The cumulative emissions have to be capped at a level of about 790 billion metric tons of carbon, and emissions of approximately 515 billion metric tons have already been discharged. This implies that immediate actions are needed to control the temperature rise below 2 degrees C relative to the preindustrial levels.

Kiyoshi Takahashi explained the risk of climate impacts resulting from the interaction of climate-related hazards with the vulnerability and exposure of human and natural systems. He introduced major risks that the AR5 reports, including the one that highly affects livelihoods. He also pointed out that these risks were identified based on the following criteria: large magnitude, high probability, or irreversibility of impacts; timing of impacts; persistent vulnerability or exposure contributing to risks; or limited potential to reduce risks through adaptation or mitigation.

Yasuaki Hijioka stated that compared to the previous report, the AR5 widened the area for risk assessment, and evaluations were conducted from the perspectives of risk management. Additionally, the systematic evaluations of adaptation and mitigation measures were implemented. The AR5 summarises ten future risks in Asia, and the major risks and the possibility of reducing those risks were assessed based on expert judgment. Actions are being taken in Asia for adaptation, and the AR5 highlights the measures that are already implemented. He argued that it is necessary to evaluate the climate impact with consideration of future socioeconomic development as well as the effectiveness of adaptation measures. Measures for both mitigation and adaptation as climate actions are indispensable and the long-term and interdisciplinary perspectives are important.

Kejun Jiang overviewed the findings from AR5 WG3 report, focusing on Asia. He stated that it was a challenge to show the future path for mitigation. For example, the report analysed the share of low-carbon energy after 2030 based on the GHG emission scenarios. Evaluation was conducted by sector for the first time with consideration of global energy demand. It is estimated that emissions in 2030 should be the same as those in 2010 in Asia to maintain atmospheric CO₂ concentration at 425-475 ppm.

Isao Endo suggested improving land-use as one approach to integrate mitigation and adaptation measures. He explained about a project conducted by IGES to support local government in developing countries such as the Philippines. The approach that IGES advocates includes various steps such as risk assessment with consideration of climate impacts, the evaluation of development plans, and the creation and implementation of climate actions that consist of adaptation and mitigation measures at the local level. It was stressed that climate-sensitive land-use planning will contribute to making cities in developing countries low-carbon and climate-resilient.

6 Summary of Discussion

A wide range of issues were discussed, and these included the trade-off/co-benefits, cost/finance, and effectiveness of climate mitigation and adaptation as well as their integration. Panelists argued that in addition to climate mitigation costs and climate impacts, it is required to consider co-benefits of the climate actions and their integration with national development planning. Land-use planning can be a key instrument for integration because there are sectors and areas that the planning will greatly affect. The costs of mitigation and adaptation have not been fully comprehended yet but they need to be integrated in development planning. More research, in quantitative terms, needs to be done on these issues.