

15th AIM International Workshop

February 20-22, 2010

Ohyama Memorial Hall, NIES, Tsukuba, Japan

February 22 (Monday) Day 3

10:25-11:55 Panel Discussion

Coordinator: Dr. M. Kainuma (NIES, Japan)

Rapporteur: Prof. A. Deshpande (MANIT, India)

Panelist:

- Prof. P.R. Shukla (IIM, India)
- Dr. K. Jiang (ERI, China)
- Dr. R. Shrestha (Nepal)
- Prof. R. Boer (IPB, Indonesia)
- Dr. J. Edmonds (JGCRI/PNNL, U.S.A.)
- Prof. C. Ho (UTM, Malaysia)
- Dr. T. JUNG (ADB, Philippines)

Key questions

1. What kind of Asia LCS scenarios shall we develop?
2. What kind of strategies is required/recommended to make use of Asia LCS scenarios to support climate policy development?
3. What activities of AIM are required/recommended to develop Asia LCS scenarios and to support climate policies?

The Panel discussion started with the address of the coordinator Dr. M. Kainuma (NIES, Japan) who introduced the LCS issues and concerns of the 15th AIM International Workshop. She proposed three questions and invited the panelist for comments and feedbacks on the AIM modeling exercises.

Comments by panelists are summarized below.

❖ Prof. P.R. Shukla (IIM, India)

In his deliberation Prof. Shukla opined that all the three issues are connected. The Asia LCS scenarios are important as international modeling forums and scientific community world over are giving importance to future development scenarios in their analysis. Asian scenarios shall remain the focus both in the short and the long terms. He emphasized on working out a framework of Asian scenario development addressing the ground realities and requirements of policymakers. It is expected that in the year 2020, the emissions from Asia being

quite large and emphasis being given on emission reduction measures, the issues about implementation of actions would be of greater concern for the policymakers.

He called upon the researchers to address the issues of policy changes and fulfill the need of policymakers requiring support from scientific community by carrying out policy relevant analysis. Further, he added that from the Indian perspective, the LCS scenario threads with the India's objective of sustainable development in creating Sustainable Low carbon scenario. He pointed out that for development of Asian LCS will require cooperation amongst various Asian forums and also with global modeling community.

He said that, to support the broad strategies of climate policy, policymakers are depending heavily on the research inputs at the same time the outcomes of various researches are being put under high scrutiny. He suggested that to increase the credibility the research community should be open to discussion and make information widely accessible by getting the research outcomes published in reputed journals.

He emphasized the need to collaborate in Asian modeling exercise and learn from each other's experience and also to develop common protocols for answering common set of questions to coordinate responses to the specific issues for policymakers.

In 15 years of AIM activates, the driving force has remained in Japan and have greatly contributed in capacity building for Asian country researchers and modelers. He expressed hope the AIM team will continue to furthering and coordinating the Asian research activity and capacity building for the region.

❖ **Dr. K. Jiang (ERI, China)**

Dr. Jiang in his remarks for the first question said that the CGE type model in his experience gives more consistent analysis. In China the focus has been on low carbon economy rather than low carbon society and indicated that policymakers primary concern is if China takes the path of low carbon what shall be characteristic GDP growth rate. In his second comment about the cost benefit analysis, he said that in case low carbon activity brings new economic activity to China this will result in a positive impact on GDP and expressed the hope to use CGE type modeling exercise addressing potential opportunities in low carbon activity. He felt that the time is now opportune to go back for large scale integrated assessment modeling to address the issues of clubbing land use and adaptation together for China, as recent modeling studies could support this and

they are in the process of Chinese 12th Five Year Plan development. The collaborative network of AIM provides good opportunity to learn from ensembles of low carbon case studies carried out in different cities. He also pressed upon to draw learnings from the low carbon road map for Japan developed by AIM colleagues. He concluded emphasizing on the importance of ongoing negotiation process and expressed the need to prepare for it using modeling exercises for climate change mitigation.

❖ **Dr. R. Shrestha (Nepal)**

Dr. Shrestha gave the developing country perspective and highlighted that most of the attention is being given to China and India in the Asian region, whereas the rest of the countries in Asia are also equally important for climate change mitigation and adaptation strategies in the region. There is an equal need for them to be sensitized for climate change mitigation and low carbon society efforts as their roles are also enhancing. It is important to focus on the communication with policymakers. He suggested that for linking the issues of climate change and sustainable development, it is important to prioritize the strategies and technology options available for the policymakers. He emphasized that these linkages will be important while formulating low carbon pathways and action plans as, in many cases, there exists a synergy in adaptation and mitigation strategies. While talking about the problems encountered in the energy modeling exercises, he stressed upon the enhancement of information dissemination about the new technology development and their penetration rate for long term scenarios specifically in developing countries and suggested to include additional elemental model for predicting rate of technology penetration, in the AIM family of models.

❖ **Prof. R. Boer (IPB, Indonesia)**

Prof. Boer reiterated the importance of studies carried out by AIM modeling community to help policymakers to change the way they develop the country's future. He emphasized that in such studies care must be taken about the behavioral changes (not easy to do but easy to say) and the use of technology. He elaborated the technology into three types of technology as; 1st readily available technology but diffusion is limited due to country policy or up-scaling costs, 2nd readily available technology which can be easily developed by country capacity and with low cost and the 3rd as advanced technology or leap-frog technology which are suitable for low carbon pathways. He emphasized on the need to incorporate the deceleration and acceleration of diffusion of technology in the modeling exercises and link the country's economic development and climate

variability in integrated climate models. He concluded by saying that there are big challenges to the modeling community and the challenges pester moving ahead in research, but it is very interesting to continue to work.

❖ **Dr. J. Edmonds (JGCRI/PNNL, U.S.A.)**

At first Dr. Edmonds acknowledged the 15 years of AIM team accomplishment for community building and research contribution not only for Asia but for the world. He urged the AIM team to continue to further the community building and research activities which are their core strength.

In his comments on the issue of low carbon society scenario development, he described the AIM approach to scenarios as a long term vision and emphasized on establishing the institutions for formulating comprehensive approaches to accomplish the low carbon society goals of Asian economies.

On the second issue of developing LCS strategies, he suggested that the AIM team should continue to develop database and standards for database development. In addition, it is time now that the AIM leadership should also be extended to the Integrated Assessment Modeling Consortium (IAMC) for developing global set of standards for data bases.

On the third issue he commented that AIM has been very successful in developing wealth of models and it is important to integrated these tools; like Land use model with energy model, Water model with energy model and climate model, etc. and contribute in the world integrated earth system model development which is a potential area and the direction for this scientific community. Dr. Edmonds pointed out that interaction between technology and policy is important as technology alone won't achieve low carbon society goals and AIM leadership should also contribute in EMF 24. He reiterated that, having state of the art computing infrastructure and best modelers in the world, AIM team should also venture into formal uncertainty analysis.

❖ **Prof. C. Ho (UTM, Malaysia)**

Prof. Ho in his remarks stated that, Malaysia being the young nation and undergoing transformation with rapid urban development, the LCS scenario provides an opportunity to leapfrog and felt the need for early measures, use of green technology, comprehensive land use, compact city development, urban planning and sustainable forestry for country's development. Emphasizing the need for common single institutional framework for efficient implementation, he pointed out that for Malaysia, the strategy is to incorporate LCS into National

Spatial Plan. He also stressed the importance of effective communication at every level for policy planners and implementing agencies.

❖ **Dr. T. JUNG(ADB, Philippines)**

Dr. Jung echoed the need for institutional network for developing LCS scenario development. Highlighting the Asian developing country point of view, he underlined the need to consider the development concerns like poverty, hunger, education and incorporate the demographic transitions, electricity needs, per capita GPD and development side stories in the modeling exercises. Stressing the need to integrate the sustainability issue for LCS scenario development in Asian countries, he pointed out the financing issues in terms of how to provide technology to achieve the global goal needs to be addressed for decision makers and also asked to include the issues of cost of adaptation for climate change or extreme events.

After the panel presented their views, comments from the floor were invited and Prof. Matsuoka (Kyoto Univ., Japan), Mr. T. Seino (MOE, Japan) and Dr. S. Nishioka (IGES, Japan) contributed to the discussion. Important issues highlighted by them are summarized below.

❖ **Prof. Matsuoka (Kyoto Univ., Japan)**

Prof. Matsuka explained the AIM modeling development exercise from AIM point of view and elaborated that the objective of AIM modeling development is to account for the development process and to describe the pathways to LCS, where the development is accounted for with the help of fiscal capital, social capital and institutional framework. He emphasized the need and necessity of data building and integration of various tools. He assured that this has always been a priority on the AIM modeling agenda and AIM team shall continue to work in this direction.

❖ **Dr. S. Nishioka (IGES, Japan)**

Dr. Nishioka pointed out that in regional or country related models, impacts of change in industrial structure of each country and role of international assistance or related money or financial aspects also needs to be captured.

❖ **Mr. T. Seino (MOE, Japan)**

Mr. Seino appreciated the efforts of NIES for their significant role in developing both Low Carbon Pathways 2050 and also 2020 pathways for Japan. He opined that the objective of the modeling exercise is not to achieve perfect outputs but to have convincing output. To make modeling exercise more suitable for policymakers by providing convincing output he suggested a two step process

for bringing together the modeling scientists and real world. He suggested that, as a first step models should offer, an opportunity for scientists, for industry, and for common person to look at the various aspects of the possible scenarios by showing them some options including the BAU and LCS and; secondly models should provide with indispensable information on high-tech scenario, the cost scenario and accordingly based on the feedback / responses / reactions from the industries and the denizens, a second draft of the scenarios should be drawn. In the end, he said, that the comparative advantage of the models, is to keep the consistency between the cost and technology. He also added that models should be used as the communication tools for policymakers. He expressed the hope that the LCS studies can have an input in national development plans / national strategic plans for being adopted in each country and this is how AIM community can contribute to the policymaking process.

At the end of the panel discussion Dr. Kainuma, extended her heartiest thanks to the panelists and the august gathering for their valuable comments and suggestions.

