

## **U.S.-Japan Workshop on Climate Actions and Co-benefits: Executive Summary<sup>1</sup>**

### **Summary**

The Institute for Global Environmental Strategies (IGES) and the U.S. Environmental Protection Agency (EPA) convened a two-day workshop on climate actions and co-benefits on March 22-23, 2006, at Arlington, Virginia, the United States of America. The workshop gathered 61 participants hearing presentations from 27 speakers and discussing the progress in climate actions and their co-benefits in Japan and the U.S. as well as their implications for Asian developing countries. Participants included government officials from the U.S. EPA, the Japanese Ministry of the Environment (MOE), the U.S. Department of State, the Tokyo Metropolitan Government, and the Illinois EPA; representatives from business and environmental groups; and academic experts. The main goal of this workshop was to find out effective action for promoting co-benefits from key policies on climate change and to explore their implications for developing countries' efforts in greenhouse gas (GHG) emissions control. The workshop started with the introduction of on-the-ground developments of climate actions in the two countries and the perspectives on co-benefits. The opportunities for promoting co-benefits and their policy implication were assessed in selected key policy-areas such as energy security, industrial/manufacturing process, air pollution control, waste management, and food security. Discussions also examined co-benefits promotion at the local, national and international levels. Domestic actions in energy efficiency/renewable energy promotion and initiatives by local governments to enhance co-benefits in the two countries were examined to identify critical incentives. Lessons were also drawn from experiences in international initiatives about how to analyse, promote, and support developing countries' efforts to obtain co-benefits. At the end, a panel discussion summarised lessons learnt from domestic climate and co-benefits actions in the two countries, and considered bilateral cooperation for promoting co-benefits of GHG mitigation in Asian developing countries. During the workshop, lack of awareness and capacity to quantify co-benefits of GHG mitigation and differences in interests within a country were identified as major barriers to co-benefit promotion in developing countries. To overcome these barriers, participants emphasised the importance of capacity building, the conduct of feasibility analysis and pilot projects, and the development and diffusion of quantification tools, where the bilateral cooperation between the U.S. and Japan is promising.

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<sup>1</sup> Prepared by Dr. Kentaro Tamura. He is responsible for any errors or omissions.

## Introduction

In order to strengthen mutual understanding of climate policies in the United States and Japan, the Institute for Global Environmental Strategies (IGES), Japan, initiated a series of bilateral workshops two years ago with support from the Ministry of the Environment, Japan (MOE). Previous workshops in 2004 and 2005 discussed such issues as domestic/international climate policies and local initiatives.<sup>2</sup> The 2004 workshop highlighted the shared interests in technology development and commercialisation as well as engaging developing countries more proactively. The discussion at the 2005 workshop showed the importance and progress in local initiatives in the two countries. The focus for 2006 was on co-benefits of climate policies to bring our experiences at the national and local levels to regional collaboration. The workshop was organised in conjunction with the U.S. Environmental Protection Agency (EPA).

A co-benefits approach is increasingly recognized as a practical starting point for addressing climate change issues at the various domestic levels of the two countries, as well as an effective tool to encourage developing countries to be more proactive in GHG emissions control. Consideration of the various co-benefits of GHG mitigation policies can enhance the progress in such mitigation policies, because they can not only get global benefits (i.e., GHG emissions reduction) but also explicitly achieve local benefits (e.g., local air quality), thereby winning wider support. The workshop, therefore, offered an important and timely avenue for making progress at local, national, regional, and international levels.

The main goal was to find out effective actions for promoting co-benefits and to explore their implications for developing countries' efforts in GHG emissions control. The workshop had two main objectives:

- First, the workshop provided a forum to brainstorm and discuss domestic climate initiatives and co-benefits programs in the U.S. and Japan, including:
  - Information sharing on domestic and international climate policies and exploration into their future direction (Session I);
  - Overview of and perspectives on co-benefits programs (Session II);
  - Reviewing the opportunities for strengthening climate policies through assessment and implementation of co-benefit potentials in such policy-areas as energy security, industrial/manufacturing processes, air quality control, and food security (Session III);
  - Reviewing domestic policies and measures to promote co-benefits in the two countries with special reference to policies for promoting energy efficiency and

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<sup>2</sup> The presentation materials and summary reports of the 2004 and 2005 workshops are available at [http://www.iges.or.jp/en/cp/output\\_all/workshops/usjapan/usj.html](http://www.iges.or.jp/en/cp/output_all/workshops/usjapan/usj.html) and [http://www.iges.or.jp/en/cp/output\\_all/workshops/W1\\_CCAP/index.html](http://www.iges.or.jp/en/cp/output_all/workshops/W1_CCAP/index.html).

- renewable energy and local governments' initiatives (Session IV); and,
- Discussing opportunities for strengthening regional and international cooperation for promoting co-benefits through pragmatic GHG mitigation initiatives (Sessions IV and V)
  - Second, the workshop sought options for further work in this area, especially with a view to encourage Asian developing countries to take more proactive actions in GHG emission controls, as well as to explore opportunities for U.S.-Japan cooperation for facilitating such actions (Session V)

### **Session I: Domestic Climate Policy Update**

The purpose of Session I was to share information on domestic and international climate policies and explore their future direction. The session began with presentations by four U.S. speakers on U.S. climate actions. Wiley Barbour, the Environmental Resources Trust, discussed the issue of measuring, monitoring and reporting of GHG. While the tracking and reporting systems are developing at the national, state, and private company levels, he pointed out, there still remained critical challenges of how to set baselines, how to measure additionality, and how to avoid leakage. Vicki Arroyo, the Pew Center, examined a range of approaches to target-setting in terms of timing and stringency. She emphasised that costs would be a key issue and that milestones for incremental targets would be necessary. Jim Sullivan and Julie Rosenberg reported EPA initiatives, the “Climate Leaders Partnership” and the “Clean Energy-Environment State Programs”, respectively. These EPA programs helped in identifying incentives necessary for maximization of co-benefits. They include public recognition, tax incentives and subsidies, energy efficiency and saving, provisions of technical assistance and expertise, , and the necessity to comply with national and regional obligations. Public benefits funds, renewable portfolio standards and appliance efficiency standards were also pointed out as most commonly adapted policies by state and local governments.

Akio Takemoto of the MOE explained the process and progress for making climate policy in Japan and highlighted the Kyoto Target Achievement Plan. He emphasised a top-runner approach for improving energy efficiency, the mandatory GHG emissions reporting system, the Kyoto credit purchasing scheme, and awareness raising campaign such as the “Cool Biz” campaign. Tomonori Sudo, IGES, discussed Japan’s Voluntary Emissions Trading Scheme, including an outline of the Scheme and some considerations regarding its scale and costs.

At the general discussion session, a question was raised as to whether the current development of various GHG emissions reporting systems within the U.S. contributes to or complicates national debates over climate policies. It was also pointed out that with regard to target-setting, there was a dilemma: targets should be modest enough to get political support,

but simultaneously need to be stringent enough to drive technology R&D. In addition, similarities and differences among U.S. and Japanese policies were discussed. Both governments currently focus on voluntary programs and technology. However, the U.S. government has not attempted to subsidise a voluntary emissions trading program, while the Japanese government has chosen to do. Differences in the nuances of voluntary actions between the two countries were also pointed out.

## **Session II: Overview of Co-benefit Programs in Japan and US**

Session II provided overview of and perspectives on co-benefits programs from Japan and the U.S. Toshiro Kojima of the MOE reported a history of anti-pollutant policies in Japan and compared such policies with climate change policies. Pointing out similarities between the two policy-areas, he argued that scientific uncertainty should not be basis for delaying climate actions and the political will was critical. Further bilateral cooperation between the U.S. and Japan on co-benefits projects in developing countries would solve environmental problems, while harnessing the economic development. Katherine Sibold, the U.S. EPA, provided an outline of the Integrated Environmental Strategies (IES) program. With regard to IES, barriers and challenges at the operational level were discussed. In addition to lack of awareness, resources and technical capability, the fact that governments at the different levels sometimes have different interests and concerns was pointed out as a major challenge to demonstrate the co-benefits.

## **Session III: Strengthening Climate Policies through Assessment and Implementation of Co-benefit Potentials in Various Sectors**

The purpose of Session III was to review the opportunities for strengthening climate policies through assessment and implementation of co-benefit potentials in such policy-areas as energy security, industrial/manufacturing processes, and air quality control. Local governments' initiatives were also presented.

Using the Asia-Pacific Integrated Model (AIM) framework, Sunil Malla of the Asian Institute of Technology, Thailand, examined emissions reduction potential of CO<sub>2</sub> and air pollutants (SO<sub>2</sub> and NO<sub>x</sub>) through tax policies, emissions reduction targets and a biofuel promotion program in Thailand, Indonesia and Vietnam. His calculation showed that the case of carbon tax at US\$ 200/tC would lead to 16% CO<sub>2</sub> emissions reduction compared to a baseline in 2035 in Thailand, while reducing SO<sub>2</sub> and NO<sub>x</sub> emissions by 13.9% and 7.0%, respectively. From the U.S. side, voluntary actions in the electric power sector (Eric Holdsworth, the Edison Electric Institute) and environmental and socio-economic benefits of methane recovery and reuse (Brian Guzzone, the EPA) were presented. Explaining GHG emissions reduction actions at Kodak's worldwide manufacturing sites, Scott Summers said that in addition to such

economic benefits as energy saving, preparation for carbon trading opportunities was an incentive for the company to take action. Takeshi Fujiwara, Kyoto University, reported a method of measuring and monitoring CO<sub>2</sub> and methane emissions from waste management. Douglas Barnes of the World Bank made a presentation on indoor air pollution caused by using traditional biomass for cooking. He mentioned that such various social costs as health problems, gender disparity and forest and soil degradation were associated with the use of traditional biomass in unsustainable ways, and suggested several solutions including behavioural change and the provision of better housing, better stoves and better fuels. Shobhakar Dhakal (IGES) argued the significance of urban transportation in GHG emissions and air pollution in Asian countries. He pointed out that local priorities were not GHG mitigation, but rather local issues such as air pollution and congestions (not even energy saving), and local actors could not compromise with limited resources that are crucial for solving local problems.

On actions taken by state and local governments, Amy Royden-Bloom (STAPPA/ALAPCO) discussed policy progress at other levels of governments in the U.S., including a regional emissions trading scheme in the Northeast states, California's ambitious initiative, and the establishment of the US Mayors Climate Protection Agreement by 217 cities. She said that achieving the co-benefits of GHG mitigations was one of driving forces behind local initiatives. Yuko Nishida, the Tokyo Metropolitan Government, provided an outline of a climate policy package consisting of a green building program and an energy efficiency labelling program for home electric appliances. She emphasised that it was very important to refer to not only global warming but also such local issues as the so-called "heat island" effect, when the Metropolitan Government promoted climate actions.

#### **Session IV: Strengthening Cooperation on Co-benefit and Co-controls**

Session IV had two main objectives. One was to review domestic policies and measures to promote co-benefits in the two countries with special reference to policies for promoting energy efficiency and renewable energy and to examine co-benefits in the agriculture and forestry sector. The other was to discuss opportunities for strengthening regional and international cooperation for promoting co-benefits through pragmatic GHG mitigation initiatives.

Leslie Cordes, the Alliance to Save Energy, and Mika Obayashi, the Institute for Sustainable Energy Policies, emphasised the importance of energy efficiency improvement and renewable energy promotion through showing specific examples of success (ENERGY STAR Renewable Portfolio Standards, Public Benefit Funds, and wind farms) in the U.S. and Japan respectively, and pointed out the need for further progress in implementation of policies and programmes. A new initiative in Illinois to create a carbon market for farmers was explained by Ronald Burke, the Illinois EPA. The initiative can be a new income source for farmers. Given

the importance of agriculture states in national policy debates, he also stressed political implications of this kind of initiative: i.e., if farmers are part of the solution, an effective, national strategy for reducing GHG emissions is more likely to happen. Ancha Srinivasan of IGES mentioned that reducing N<sub>2</sub>O and methane emissions from the agriculture sector and CO<sub>2</sub> emissions from deforestation was critically important in Asian developing countries. He pointed out the necessity to clarify not only environmental but also socio-economic co-benefits of GHG emissions reductions, especially to convince policy-makers in developing countries.

The latter part of this session discussed international, regional and bilateral cooperation on climate change mitigation and co-benefits. Trigg Talley, the U.S. Department of State, explained the recent developments of the Asia-Pacific Partnership on Clean Development and Climate. He emphasised the importance of implementing actions involving the private sector. Paul Gunning of the U.S. EPA mentioned the projects for the recovery and use of landfill methane under the Methane to Markets Partnership. While identifying co-benefits of methane recovery and use including local energy sources, improved industrial safety and productivity, and improved air quality, he pointed out such barriers as lack of awareness of emission levels and value of lost fuel, lack of information, traditional industry practices and limited infrastructure. The U.S. and Japan can cooperate in, for example, identifying project opportunities and conducting feasibility analysis. Kunihiko Shimada of the MOE described various MOE-initiated regional programs, and suggested that a multi-track approach should be pursued to enhance co-benefits of GHG mitigation into account. Collin Green of National Renewable Energy Laboratory presented EPA cases studies demonstrating that technology transfer cooperation could generate significant environmental and socio-economic co-benefits. Drawing upon lessons learnt from the cases studies, he stressed the importance of network among stakeholders and the necessity of focusing products and techniques with multiple benefits. Taizo Yamada of the Japan International Cooperation Agency (JICA) explained JICA's activities in international assistance for developing countries. He emphasised that JICA has adopted ideas similar to co-benefits and indeed the concept of co-benefits has been built in JICA's activities at the operational level. Finally, James Yienger of the International Council for Local Environmental Initiatives (ICLEI) presented ICLEI's activities and stressed the importance of accurate and harmonised analytical tools. He also introduced quantification software named HEAT (Harmonised Emissions Analysis Tool).

## **Session V: Panel Discussion**

The Panel Discussion addressed the following five questions:

1. What lessons can be learned from current domestic climate actions and their co-benefits in the US and Japan?

2. Which sectors and/or policy areas have high potential for co-benefits in the US, Japan and developing countries?
3. How can CDM (Clean Development Mechanism) investors and project developers be encouraged to consider co-benefits in assessing the costs and benefits of such projects?
4. Which aspects of capacity building are crucial to promote awareness on co-benefit potentials in various sectors and to enhance harmonization of methods in evaluation and communication of co-benefits?
5. How can the national governments, local governments, and the private sector in the US and Japan play a catalytic role in promoting co-benefits of GHG mitigation in developing countries of Asia?

Six panellists: Hironori Hamanaka (IGES); Sergio Sanchez (the World Bank); Akio Takemoto (MOE); Kevin Rosseel (U.S. EPA); Wei Shiuen Ng (World Resources Institute); and Ancha Srinivasan (IGES), provided comments and suggestions concerning the above five questions. These suggestions included:

- The involvement of local stakeholders is important in order to sufficiently meet various needs, since different interests and concerns are observed at the different levels of governments as well as across geographical areas.
- By the same token, it is useful to develop technology and policy portfolios/inventories.
- Lack of awareness and capacity to quantify co-benefits are identified as major barriers to co-benefits promotion in developing countries. To overcome such barriers, the U.S. and Japan could cooperate by sharing experiences and conducting capacity building programs for developing countries. It is important for the two countries to work together in order to avoid duplication.
- Action-oriented programs and pilot projects are useful to demonstrate actual co-benefits of GHG mitigation.
- ODA (define) can be utilised to promote co-benefits approach in developing countries.
- The importance of public-private partnership, like the Methane to Markets program, and the involvement of the private sector are particularly important for facilitating technology transfer.
- The importance of making long-term urban plans, making an inventory of policy options, and providing adequate incentives is a lesson learnt from a co-benefits program in the transportation sector in China.
- It is important to have a balanced perspective on co-benefits and co-costs without

overemphasising only co-benefits.

- In determining sustainable development benefits of CDM projects, co-benefits of GHG mitigation should be assessed more thoroughly.
- Rather than focusing solely on environmental co-benefits, it is important to identify socio-economic co-benefits in order to convince policy-makers of developing countries, where climate change mitigation is not yet a high priority.
- Co-benefits analysis has been so far limited to transportation and energy efficiency. However, analysis of co-benefits in other important climate-sensitive sectors, such as agriculture, forestry, and tourism, could be useful.
- The importance of South-South cooperation was pointed out. The role of U.S.-Japan bilateral cooperation in facilitating such cooperation needed to be explored.

## **Conclusion**

In his closing remarks, Akio Morishima (IGES) noted that there were many areas where mutual understanding about climate actions in the two countries can be enhanced and the workshop laid a good foundation for future collaboration. Finally, Dina Kruger (the U.S. EPA) concluded by noting (1) it was necessary to list the suggestions proposed during the workshop; (2) it was important to explore opportunities for further collaboration between the two countries; and, (3) in particular, by conducting action-oriented programs, the EPA and the MOE can cooperate in mainstreaming co-benefits approaches in developing countries.