

Seminar on a Co-benefits Approach: Emerging Trends and Needs
11- 12 March 2010, Bangkok, Thailand

Presentation Summaries

1. “A Seminar on a Co-benefits Approach: Emerging Trends and Needs” was held in Bangkok, Thailand on 11- 12 March 2010. The seminar was organized by the Institute for Global Environmental Strategies (IGES) in collaboration with the United Nations Environment Programme (UNEP) and other relevant organizations. The Ministry of the Environment, Japan (MOE-J) provided financial support for the seminar.
2. The seminar was attended by more than 80 participants, including government officials from 15 countries and representatives of 14 international organizations. Participants also included experts from several research institutes and local governments.
3. The seminar had three goals: i) to disseminate the concept and the usefulness of a co-benefits approach in Asia; ii) to share the latest information on co-benefits technologies and experiences on co-benefits projects in Asia; and iii) to receive feedback on a possible co-benefits network for Asia.
4. The seminar commenced with an opening address from Mr. Hideyuki Mori, Vice President of IGES, followed by a welcome address from H.E. Mr. Pimuk Simaroj, Vice Minister of Natural Resources and Environment (MONRE), Thailand. Mr. Katsunori Suzuki, Senior Fellow, IGES and professor, Kanazawa University, introduced the objectives and organizational structure of the seminar.
5. The remainder of the seminar had two substantive sessions, followed by discussions. An overview and four case studies on on-going co-benefits projects (air pollution, waste and waste water, urban planning and transport sectors) in Asia were presented in Session One on experiences with co-benefits projects in Asia. A presentation on a map of co-benefits technologies followed. Seven international organizations and the Ministry of the Environment, Japan (MOE-J) made presentations on their co-benefits activities in Session Two on co-benefits activities by international organizations.

Session One: Experiences with Co-benefits Projects in Asia

6. **Eric Zusman, Institute for Global Environmental Strategies (IGES), Framing Presentation-**A co-benefits approach can address multiple development challenges at once. There are significant cost savings from using co-benefits approach to meet these challenges in Asia. One of the more important opportunities to capture these savings is recognizing diverse perspectives on co-benefits (the climate change, development, and air pollution community have different views on co-benefits). While co-benefits have often been viewed from the climate perspective, a developmental and air pollution perspective might resonate more with policymakers in developing countries. It is further important that stakeholders with these diverse views communicate with each other. A mechanism to improve communication between stakeholders on co-benefits is therefore much needed in

Asia. IGES has launched several activities that could contribute to such a mechanism, including research on transport, waste management, and air pollution co-benefits.

- 7. Wu Xianfeng/Li Liping, Ministry of Environmental Protection (MEP), China, Air pollution project in Panzhihua, China-**A co-benefits approach is a cost-effective approach and win-win solution for both climate change mitigation and pollution control. According to the Statement of Joint Implementation of Co-benefits Projects between Ministry of Environmental Protection (MEP), China and Ministry of Environment, Japan (MOE-J) in December 2007, a joint study of Pollution Control and Co-benefits was started from April 2008. At the first stage of the project, Panzhihua City, Sichuan Province was used as a pilot. The project developed a new methodology to provide a quantitative assessment of the co-benefits of the total pollution control program during 2006-2010 in Panzhihua city. Based on the methodology, significant potential for co-benefits in the total pollution control plan were found in Panzhihua city. At the same time, it could not be ignored that there were some conflicts between climate change and air pollution (or what might be termed co-costs). Therefore, in order to meet the challenge of global climate change and local pollution control, a co-benefits assessment and co-control technologies are urgently needed.
- 8. Tuti Hendrawati, Ministry of the Environment, Indonesia, Waste Management/Wastewater Management Project in Indonesia-**Co-benefits are not a new concept; however, interest in co-benefits has grown with increased attention to climate change in developing countries. The co-benefit approach is also becoming more popular in Indonesia since the approach is more cost-effective than separate pollution control and GHG mitigation actions. Indonesia recently began cooperation with the Government of Japan on several co-benefits projects. Current activities include feasibility studies in Banjarmasin City for a final solid waste disposal site and an ongoing project in Palembang City on a slaughterhouse. Other activities include training on co-benefits in Japan and a “Seminar on Co-benefit Approach” for stakeholders in Indonesia. Outside of bilateral cooperation, the Ministry of Environment, Indonesia has initiated small scale co-benefit projects with dairy farmers, tofu industries, poultry farmers, and a clean river program in Banjarmasin city.
- 9. Suwanna Jungreung, Bangkok Metropolitan Administration (BMA), Urban Planning Project in the BMA-**Bangkok is facing several environmental problems such as air pollution, water pollution and waste management that can also cause severe health problems. The Bangkok Metropolitan Administration (BMA) is dedicated to decreasing air pollution, improving water quality, proper waste treatment and reducing waste. Many of the city’s actions also reduce carbon dioxide (CO₂) and methane (CH₄) emissions and therefore deliver co-benefits. Co-benefits can be achieved by a strong commitment to climate change mitigation, integrating climate change into urban development plans, participating in an international network, launching concrete actions and ensuring benefits accrue across multiple sectors. A program with significant co-benefits in Bangkok is the Bangkok Municipal Administration’s (BMA) five-year action plan on Global Warming Mitigation (2007–2012). The program contains five initiatives with the ultimate goal of a 15% reduction of GHG emissions by 2012. The five initiatives include 1) expanding the mass transit system and improving the traffic system; 2) promoting the

use of renewable energy; 3) improving building electricity consumption efficiency; 4) improving solid waste management and wastewater treatment; and 5) expanding park areas.

10. Cornie Huizenga, Joint Convener, Sustainable Low Carbon Transport Partnership-

The rapid growth in motorization in developing countries is responsible for an increase in greenhouse gases (GHGs) as well as local air pollution. The linkage between these two processes is well documented. Recent studies have indicated that in terms of overall radiative forcing, the transport sector shows the largest warming potential by 2020. Evidence is emerging that local benefits of transport interventions in many cases are higher than the global benefits. Yet little has been done so far to integrate the co-benefits approach in either transport or climate change policies. Also, specific climate modalities such as the Clean Development Mechanism, the Global Environmental Facility, and the Climate Investment Fund have, so far, not gone beyond general support for the principle of sustainable development, and co-benefits are generally not considered explicitly in the assessment of benefits. To make progress in advancing the co-benefit approach it will be important to strengthen emerging climate, transport and environmental policies and to better link these processes. This will require a comprehensive approach which combines a better understanding of co-benefit mechanisms and more integrated policies and assessment instruments which enable a combined assessment and monetarization of global and local benefits. The proposed co-benefit forum or network can play an important role in improving knowledge, policies and instruments on co-benefits.

11. Ryo Hiaraga, IGES-Kansai Research Center, A Map of Co-Benefits Technologies-

In the past, Japan experienced many pollution problems which had serious impact on the environment and human health. Over time, Japan has accumulated the know-how and developed techniques to address these pollution problems and generate many other benefits. These techniques can be adopted by other Asian countries for their local environmental pollution problems as well as global climate change mitigation. Since Asian countries have different characteristics, they may also have different co-benefits technology needs. Thus, to maximize co-benefits, it is crucial to match the appropriate Japanese environmental technology with a host country's needs. In other words: "seeds and needs matching." Our objective is to develop a "co-benefits technology map" that will serve as comprehensive information tool on the available and appropriate techniques to address specific local environmental pollution problems. We have already organized several environmental techniques with the introduction and evaluation criteria for each technology in a matrix. To finalize the co-benefits technology map, it is crucial to identify technology needs in terms of these criteria. To this end, we are administering questionnaire as well as interviewing related personnel in China, India, Indonesia, Philippines, Thailand and Viet Nam. After this survey, we plan to prepare "evaluation guides" to facilitate matching and complete the "co-benefits technology map." We hope the "co-benefits technology map" will be a useful information tool for Asian countries to improve their local environment and contribute to global climate change mitigation.

Session Two: Co-benefits Activities by International Organizations

- 12. Yuji Koresawa/ Keiko Kuroda, The Ministry of the Environment, Japan (MOE-J) and the Junko Morizane, Overseas Environmental Cooperation Center (OECC)-**A co-benefits approach is an approach aimed at reducing greenhouse gas emissions and preventing environmental pollution at the same time. In recent years, the Ministry of Environment, Japan (MoEJ) has supported several projects that apply the co-benefits approach to real world problems. These include not only co-benefits projects in Indonesia and China (summarized in the first session of the Seminar) but also model Clean Development Mechanism (CDM) co-benefits projects in Malaysia and Thailand. The model CDM projects are unique in that the MoEJ subsidizes half of their initial investment costs (on the condition that half of the project's CDM credits are transferred to the government of Japan). The MoEJ has also published a simple manual to assess the co-benefits from air, water and waste pollution projects. The manual is intended to encourage stakeholders in the public/private sector to develop and implement co-benefits CDM projects. The manual allows users to tailor the type of evaluation (from semi-qualitative to quantified evaluation with original data) and the type of measurement indicators to the needs of their project. The MoEJ hopes to improve the assessment manual in the future and disseminate it widely in Asia.
- 13. Johan Kuylenstierna, Global Atmospheric Pollution Forum (GAPF)-** The focus of the GAPF on co-benefits was further developed at the Stockholm conference held in 2008 in conjunction with the UNECE Convention on Long Range Transboundary Air Pollution and the United Nations Environment Programme (UNEP), and in consultation with the United Nations Framework Convention on Climate Change (UNFCCC). The conference concluded that it was no longer sensible to separate atmospheric issues into 'air pollution' and 'climate change' as there were many interactions. This was emphasized by the issues of air pollutants that have radiative forcing properties: for example, sulphate and organic carbon cooling the atmosphere and black carbon and tropospheric ozone having significant warming effects. Therefore, climate policy development could not afford to ignore air pollution policy and vice versa. The warming we will experience depends to a large extent upon air pollution policy as well as GHG mitigation policy. There was also the recognition that in many developing countries, the current priority is air pollution prevention and control, rather than GHG mitigation. The conference concentrated on the need for the global community to reduce the concentrations of black carbon, tropospheric ozone and methane. These are short-lived in the atmosphere and have a warming effect, and reducing them would have an immediate impact on warming over the next decades. The impacts of black carbon (and other particulate matter) and ozone as air pollutants is particularly significant in Asia, affecting human health and crop yields (by ozone), emphasizing the co-benefits of reducing these substances. The interest in these 'short-term forcers' has prompted UNEP to ask GAPF to help coordinate an integrated assessment of black carbon and tropospheric ozone to gather the current scientific understanding and develop the implications for decision making. This is due to be published in early 2011. As well as developing the scientific understanding and developing tools for co-benefits assessment, the Forum is interested in promoting a co-benefit policy in different regions, assessing implementation mechanisms and how they may need to change to support a co-benefits approach.

14. May Ajero, The Clean Air Initiative for Asian Cities (CAI-Asia)-Air pollutants and carbon dioxide (CO₂) are often emitted together from the same key sources and policy or technological solutions to reduce both types of emissions often overlap. Air pollutants are also known to significantly affect the climate. CAI-Asia promotes maximizing co-benefits from integrated air quality management and climate change mitigation, as embodied in its new mission: “Promote better air quality and livable cities by translating knowledge to policies and actions that reduce air pollution and greenhouse gas emissions from transport, energy and other sectors.” This presentation summarizes CAI-Asia activities that focus on integrating air quality management and climate change mitigation. To integrate air quality management and climate change mitigation in Asia, CAI-Asia advocates the following:

- Combined assessment and measurement tools for air pollution controls and climate change mitigation. CAI-Asia has developed a Clean Air Scorecard and Integrated GHG and Air Pollution Emissions Accounting tools for companies and City/Country/Transport.
- Integrated climate change and air pollution plans and policies. The United States Environmental Protection Agency now regulates GHGs as pollutants under the Clean Air Act.
- Alignment of institutional responsibilities for climate change mitigation and air quality management.
- Donors and foundations need to balance global objectives (such as CO₂ reduction) with local development goals (such as air pollution reduction, energy efficiency, and sustainable transport)

15. Kotaro Kawamata, Asian Development Bank (ADB)-The ADB is increasing its operational emphasis on the environment. In considering co-benefits, the transport sector is a priority because it comprises one-fourth of ADB’s total lending. In addition, the ADB has started a Sustainable Transport Initiative and it aims to develop projects that will link sustainable transport to effective environment management, energy efficiency, and inclusive social development. Urban transport projects have increased recently so that the ADB needs to consider health costs associated with air pollution. The ADB expects that a co-benefit network will provide tools for quantifying the health costs associated with air pollution by transport. Currently, the economic analyses of a project do not fully consider the health costs associated with air pollution or the costs of greenhouse gas (GHG) emissions by the project. Economic analysis should consider all costs and benefits in order to make decisions that addresses economic, environmental and social. The proposed study carried out by IGES on the quantification of health costs associated with air pollution can be plugged into economic analysis of a project. Opportunities for collaboration with the ADB on co-benefits include the 1st ADB Transport Forum on 25-27 May at Manila and BAQ Asia on 9-11 November at Singapore. The organizer of BAQ is CAI-Asia and it operates a Community of Practice on Co-benefits (accessible at www.cleanairinitiative.org) under ADB Technical Assistance.

16. Akiko Nishimae, World Bank (WB)-This presentation focused on the co-benefits activities of the World Bank. The World Bank has launched several initiatives that support the integration of climate change into development planning. These include the Clean Technology Fund (CTF) to finance the demonstration, deployment and transfer of low carbon technologies. They also include the Community Development Carbon Fund (CDCF) that leverages climate finance for projects with development co-benefits. For instance, the CDCF has helped finance a biogas project in Nepal that reduced indoor air pollution, decreased respiratory disease, enhanced soil fertility, lowered expenditures on firewood, reduced time women spend collecting firewood, and improved sanitation. Though the World Bank has considered co-benefits for over a decade, they have not been systematically integrated in its development portfolio. Plans are under way to build a more coherent framework to identify opportunities for co-benefits. This may include quantitative assessments of co-benefits.

17. Mushtaq Memon, UNEP/ International Environmental Technology Center (IETC)- This presentation highlights the immediate challenges for local governments due to rapid increase in solid waste generation levels and increased costs of waste management. Improper waste management leads to severe public health and environmental impacts, including greenhouse gas (GHG) emissions. A limited policy framework and the lack of political priority are major hurdles to establish effective waste management system based on resource recovery and turning waste into wealth. UNEP has taken local projects which can contribute at the global level by reducing emissions from waste management as well as by replacing fossil fuels with energy from waste. UNEP is working on a strategic framework to develop clear linkages between waste management and climate change. This would result in local actions with a global impact. The basis for promoting this strategy depends on understanding the holistic scenario, where waste management and climate change should not be considered in isolation, but in the context of co-benefits due to myriad environmental, social and economic implications of waste management decisions. Hence cities need efficient and effective waste management system based on a 3R (reduce, reuse and recycle) approach that will incorporate co-benefits for climate change.

18. Mylvakanam Iyngararasan, United Nations Environment Programme (UNEP) This presentation highlighted UNEP activities related to co-benefits for atmospheric environmental issues. Atmospheric environmental issues such as indoor air pollution, urban air pollution, regional air pollution, and climate change are interrelated and these issues need to be addressed through an integrated approach to achieve the optimum environmental and social-economic benefits. Realizing this need, UNEP, in collaboration with partners, is implementing activities using an integrated framework for the development of science, capacity, and networks for an integrated response. In 2001, UNEP established a science team to study the scientific aspects of atmospheric environmental issues under an integrated framework. The science team has made significant progress. An initial impact assessment report was completed in November 2008. Findings from this assessment have helped place the co-benefits approach on the political and scientific agenda in many countries and organizations. The presentation also highlighted the efficient implementation of the global level agreement on Ozone Depleting Substances (Montréal Protocol), which resulted in a significant reduction of

greenhouse gases (GHGs). At the regional/sub-regional level, UNEP in collaboration with the sub-regional and regional institutions has played a key role in facilitating the formation of intergovernmental networks on air pollution issues. These intergovernmental networks have contributed to national level capacity building and regional level networking. UNEP has also initiated several pilot projects, such as Project Surya, to demonstrate integrated solutions at the local level.

19. Lorenzo Santucci, United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)-UNESCAP presented its work in promotion of co-benefits in the region. Co-benefits, broadly defined, are an integral part of UNESCAP's work, which promotes policies that deliver economic, social and environmental benefits. In particular, UNESCAP's work on Green Growth seeks to highlight synergies between environment and development. More specifically, UNESCAP is promoting a co-benefits approach through a number of programmes. The Kitakyushu Initiative for a Clean Environment has been instrumental in enhancing the political attention given to local environmental management actions on clean air, waste management and wastewater treatment, by highlighting the socio-economic benefits of these actions. The project on Eco-efficient and Sustainable Urban Infrastructure in Asia and Latin America seeks to introduce the principles of eco-efficiency into urban infrastructure development and interventions and policy options that maximize socio-economic benefits while minimizing environmental impacts. The Asia-Pacific Mayors' Forum on Environmentally Sustainable Urban Infrastructure, convened on a yearly basis since 2008, provides a platform for city mayors, top government officials and decision makers from the region to discuss key challenges, review emerging practices, share experiences and identify priority areas for making urban infrastructure more sustainable. UNESCAP has also recently launched a new project on pro-poor Decentralized Solid Waste Management in Secondary Cities and Towns, which seeks to replicate and upscale a successful model that reduces waste going to landfill by using recycling and composting, creates employment for the poor, and reduces GHG emissions. Under the East-Asia Climate Partnership Programme of the Republic of Korea, UNESCAP will be developing a Low Carbon, Green Growth Roadmap for East-Asia and convene a 2nd East-Asia Climate Summit. Lessons learned from these and other programmes will be presented at the 6th Ministerial Conference on Environment and Development scheduled from 27 September to 2 October 2010 in Astana, Kazakhstan.