

The 7th Workshop on GHG Inventories in Asia (WGIA7)

Capacity building for measurability, reportability and verifiability under the Kobe Initiative

7-10 July 2009, Seoul, the Republic of Korea

The Ministry of the Environment of Japan (MoEJ) and the National Institute for Environmental Studies (NIES), jointly with the Ministry of Environment of the Republic of Korea (MoEK) and the Korea Environmental Management Corporation (EMC), convened the 7th Workshop on Greenhouse Gas Inventories in Asia (WGIA7) on 7-10 July 2009 in Seoul, the Republic of Korea, as part of the “Kobe Initiative” of G8 Environment Ministers Meeting. The workshop was attended by 100 participants from eleven WGIA-member countries in Asia (Cambodia, Indonesia, Japan, the Republic of Korea, Lao P.D.R., Malaysia, Mongolia, Myanmar, Philippines, Thailand, and Vietnam), as well as the United Nations Framework Convention on Climate Change (UNFCCC), the Intergovernmental Panel on Climate Change (IPCC), and the Regional Capacity Building Project for Sustainable National Greenhouse Gas Inventory Management Systems in Southeast Asia (SEA GHG Project). The Greenhouse Gas Inventory Office of Japan (GIO) under the NIES functioned as WGIA secretariat.

The objectives of the workshop were:

- to share information on the progress in inventory preparation by each participating country,
- to share experiences gained through the activities following the conclusions of WGIA6 (e.g., uncertainty analysis, development of time series estimates, awareness-raising),
- to discuss possible plans for activities in the future, particularly after completion of the latest national communications currently under preparation¹, by the individual countries as well as by WGIA, taking the “Kobe Initiative” into account,
- to discuss sector-specific issues and possible ways to solve them, and
- to discuss how we can accelerate the improvement of GHG Inventory as a key to mitigation actions in a measurable, reportable and verifiable (MRV) manner.

The workshop was opened with an opening address by Mr. Joon-Seok Hong, Deputy Minister of Environment, the Republic of Korea, followed by welcome addresses delivered by Mr. Reo Kawamura, Deputy Director of Climate Change Policy Division, MoEJ and Mr. Ki-Jong Woo, Secretary-General of the Presidential Committee on Green Growth. The workshop was chaired by Mr. Taka Hiraishi, Senior Consultant of the Institute for Global Environmental Strategies (IGES).

The participants discussed various subjects of interest to Asian countries, including uncertainty assessment, time series estimates and projection, awareness-raising about GHG inventory and mitigation, future WGIA activities, and sector-specific issues. The outcomes of the discussions about each subject are summarized below.

Through the discussions of these subjects, the participants reaffirmed the importance of GHG inventory as a key tool for promoting mitigation actions in a MRV manner. The participants agreed that each country should continue its efforts to improve its national GHG inventory, and that the continuous cooperation among Asian countries was essential.

The workshop was closed with closing remarks by Mr. Chang-Han Joo, Executive Director of EMC, and by Mr. Yukihiro Nojiri, Manager of GIO.

Uncertainty Assessment

Following the conclusion on this subject from the previous meeting (WGIA6, July 2008), the participants shared their experiences with uncertainty assessment undertaken after WGIA6. Some countries reported they had conducted uncertainty assessment using the *2006 IPCC Guidelines for National Greenhouse Gas Inventories (2006 IPCC Guidelines)* and that they would include the results in their national communications currently under preparation. It was agreed upon that each country should continue its efforts to perform uncertainty assessment, and that information exchange and discussion via WGIA network (e.g., using the mailing list) should be promoted to find out solutions to the problems each country

¹ When this workshop was held, the Republic of Korea was preparing its third national communication, Myanmar was preparing its initial national communication, and the other participating countries were preparing their second national communications.

had encountered.

Time Series Estimates and Projection

As was the case about uncertainty assessment, the participants shared their experiences gained through their work on time series estimates and projection of GHG emissions/removals undertaken after WGIA6. Many countries reported that they had developed time series estimates for some sectors/categories to be included in their latest national communications currently under preparation. For example, Mongolia developed GHG inventories for 17 consecutive years from 1990 to 2006. The participants agreed to continue and enhance their efforts to develop and improve their time series estimates and projection. They also agreed to make use of the WGIA network to cooperate to overcome the problems that each country had encountered.

During this workshop, a lecture and hands-on training on techniques to fill data gaps were given by Mr. Simon Eggleston, Head of the Technical Support Unit for the IPCC Task Force on National Greenhouse Gas Inventories. They were welcomed and appreciated by the participants as it helped them further consider how to improve their time series estimates. The participants were encouraged to disseminate what they had learned from their colleagues after returning to their countries.

In addition, Mr. Shuichi Ashina of NIES explained projection of GHG emissions using the Asia-Pacific Integrated Model (AIM). Many participants expressed their great interest in the AIM.

Awareness-raising about GHG inventory and mitigation

In accordance with the conclusions from WGIA6, a draft template of “summary for policymakers” (SPM) on GHG inventory was presented by Mr. Leandro Buendia, Coordinator of the SEA GHG Project which was in close cooperation with WGIA. This draft had been prepared through discussion within the SEA GHG Project. The participants in this workshop were in general of the view that the draft was already fine, but agreed to consider further possible improvements to suggest to the SEA GHG Project. Also, the participants were encouraged to produce SPMs for their own countries using this draft template. Furthermore, some participants underlined the necessity of drawing attention of a wider range of stakeholders to the usefulness of GHG inventory for various purposes such as evaluation of mitigation options. It was therefore agreed upon that efforts for awareness-raising should be further enhanced, for example by incorporating the contents of the aforementioned SPM into the executive summary of national communications.

Future WGIA activities after completion of the latest national communications

Many WGIA-participating countries were in the last stage of preparation of their latest national communications under the UNFCCC. As an integral part of this work, many countries were making fairly good progress in GHG inventory compilation. The participants agreed upon the importance and necessity of keeping this momentum to further improve their GHG inventories continuously and efficiently, even after completion of the national communications currently under preparation. With this consensus, the participants discussed possible plans for WGIA activities in the future.

WGIA emission factor database and roster of regional experts

The WGIA secretariat reported that it was constructing a database of emission factors used in the national communications of WGIA participating countries (WGIA-EFDB) as well as a roster of inventory-related experts in Asia in order to meet the demand expressed by participants in the previous WGIA meetings. The participants in this workshop welcomed this work being done by the WGIA secretariat. They recommended the WGIA secretariat to enrich the WGIA-EFDB with more data/information not only to make it more useful to WGIA participating countries but also to contribute with collected data to the IPCC Emission Factor Database (IPCC-EFDB). The WGIA secretariat encouraged the participants to make good use of the roster of regional experts to promote collaboration among countries.

Financial support to ensure continuity of inventory work

Some participants pointed out that it was crucial for each country to secure funds to ensure the continuity of inventory-related work. In this context, the participants were strongly encouraged to take advantage of one of the conclusions made by the Subsidiary Body for Implementation under the UNFCCC at its 30th

session (June, 2009)² which allows non-Annex I Parties to submit project proposals to the Global Environmental Facility (GEF) for the funding of their subsequent national communications before completion of their current national communications. Some participants suggested that they should also look for other sources of funds (e.g., Japan International Cooperation Agency (JICA)).

Improvement of data collection

The participants also discussed how to overcome the lack of data, which was one of the most common and fundamental problems that all the WGIA participating countries experienced. It was agreed that relevant ministries and agencies, particularly statistical offices, should be urged to cooperate in inventory compilation. The participants also agreed that it would be advisable to use the new guidance on data collection as well as updated default data contained in the *2006 IPCC Guidelines*.

Cooperative actions among WGIA participating countries

The participants also discussed possible cooperative actions among WGIA participating countries. The Republic of Korea made a presentation in this context, on experiences gained through the mutual GHG inventory review between Korea and Japan in October 2008, which was voluntarily implemented focusing only on waste sector. This mutual inventory review was found to be very fruitful as it facilitated active and substantial discussions between experts from both countries and resulted in considerable improvements in Korea's GHG inventory. The participants in this workshop took interest in this new bilateral cooperative action taken by Korea and Japan, and agreed that similar activities should be promoted among other WGIA participating countries. It was suggested that the WGIA website should be used as a platform for this purpose.

Others

Many participants expressed their interest in expanding the WGIA activities to enhance the utility of the GHG inventory (e.g., activities to link GHG inventories to mitigation planning), by, for instance, awareness building for relevant government agencies. Many participants supported this suggestion.

Sector-specific Issues (Energy, Agriculture, LULUCF, and Waste Sectors)

In one of the sessions during the workshop, the participants split into four different breakout groups to discuss issues on each of the following four inventory sectors: Energy, Agriculture, LULUCF, and Waste.

Energy Sector

This group discussed issues on activity data for calculation of emissions from fuel combustion, focusing on two types of key energy statistics, namely: energy balances that can be used for "Reference Approach" and detailed statistics on energy consumption by sector to be used for "Sectoral Approach".

As regards energy balances, the participants observed three stages of development in Asian countries, i.e., 1) no experience in developing energy balances, 2) some experiences but not available annually, and 3) available annually. The participants concluded that each country needed to decide on their priorities in developing energy statistics depending on which stage it was currently in. Countries with no experience may need to prioritize development of energy balances first while countries with energy balances available annually should switch their attention to detailed statistics.

The participants took note of the value of detailed statistics as they would allow of estimates of non-CO₂ emissions as well as understanding of potential co-benefits such as reduction of local air pollutants. The group recommended each country to develop and enhance official data collection as well as to make use of international energy statistics where national data were not available.

Agriculture Sector

This group discussed country-specific emission factors for Agriculture Sector used in the GHG inventories as part of the national communications currently under preparation. From presentations and discussions, the participants found that many Asian countries had developed their own country-specific emission factors, particularly for CH₄ emissions from rice cultivation. The participants welcomed it, and encouraged each country to input their data into the WGIA-EFDB to facilitate exchange of useful data and information in the region. It was also noted, however, that care should be taken about the

² See FCCC/SBI/2009/8, paragraph 21.

applicability of country-specific emission factors, as using such data might not always be the best choice depending on the conditions under which they were measured or modeled.

The participants also discussed and made recommendations for WGIA activities in the future, including: to share experiences in using software and other various tools that help move from simple tier 1 to tier 2 methods, to combine LULUCF and Agriculture sectors, to focus on improvement of emission estimates for agricultural soil and livestock, and to discuss mitigation options.

LULUCF Sector

This group shared experiences and lessons learnt in applying data obtained from remote sensing (RS) and geographic information systems (GIS) for LULUCF inventory. The participants agreed that RS and GIS data could greatly help each country improve their LULUCF inventories, but they also noted that lack of relevant human resources within inventory compiler teams hampered utilization of such data in many Asian countries. The group stressed the necessity of training RS and GIS experts as well as engaging existing RS and GIS experts within each country in GHG inventory compilation. It was also recognized that many global datasets were available and could be accessed freely by developing countries to improve their inventory. The group recommended each country to access such datasets. The participants also agreed on the need to make efforts in obtaining more ground data required for verifying the use of RS and GIS data, in particular for estimating emission/removal factors or carbon stocks in five carbon pools.

The participants concluded that further discussions were necessary on the following subjects: identification of barriers to data collection and approaches to solve them; ways to acquire relevant data nationally and globally for LULUCF GHG inventories; and national systems to support the development of high quality inventory in subsequent national communications.

Waste Sector

This group discussed two main subjects. One of them was improvement of data collection scheme for the Waste sector, and the other was issues on wastewater handling. As regards the improvement of data collection scheme, experiences were shared by the Republic of Korea and Japan. Korea introduced their experiences gained through monitoring the change of composition of municipal solid waste (MSW) that was supposed to be driven by the Ban on Direct Landfill of Foodwaste. Japan reported their experiences highlighting the roles of prefectural governments and municipalities in charge of accumulating industrial data and municipal solid waste data under the law on waste management and public cleansing. As to the issues on wastewater handling, Japan shared their experiences in estimating GHG emissions from this source as well as findings from relevant studies, referring to the importance of operation-related GHG emissions (especially those associated with electricity used in wastewater handling facilities) in evaluation of mitigation options, etc.

The participants agreed on the importance of information sharing through WGIA about new waste management policy schemes introduced in each country. They also agreed on the necessity of providing waste managers or government officials in charge of waste management in each country with knowledge and data accumulated through WGIA with the aim of engaging them in GHG inventory work as well as in possible mitigation planning.