

1. Executive Summary of WGIA10

The Ministry of the Environment of Japan (MOEJ) and the National Institute for Environmental Studies (NIES), jointly with the Ministry of Natural Resources and Environment of Vietnam (MONRE), convened the 10th Workshop on Greenhouse Gas (GHG) Inventories in Asia (WGIA10) on 10-12 July 2012 in Hanoi, Vietnam, as a capacity building workshop for Measurability, Reportability and Verifiability (MRV). Ever since 2003 the workshops have aimed at supporting Non Annex I (NAI) Parties in Asia to develop and improve their GHG inventories. The 10th workshop was attended by 130 experts from thirteen WGIA-member countries (Cambodia, China, India, 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 Technical Support Unit of the Task Force on National Greenhouse Gas Inventories of the Intergovernmental Panel on Climate Change (IPCC TFI TSU), the United States Environmental Protection Agency (USEPA), the Regional Capacity Building Project for Sustainable National Greenhouse Gas Inventory Management Systems in Southeast Asia (SEA GHG Project), the U.S. Agency for International Development (USAID), Department of Climate Change and Energy Efficiency of Australia (DCCEE), and Japan International Cooperation Agency (JICA). The Greenhouse Gas Inventory Office of Japan (GIO) at the Center for Global Environmental Research (CGER) of NIES functioned as the WGIA10 Secretariat.

The objectives of the workshop were:

- to have mutual learning,
- to report on the latest national communications (NCs) submitted to the UNFCCC Secretariat,
- to discuss decisions by the Conference of the Parties (COP) and future activities of WGIA,
- to discuss sector-specific issues,
- to have hands-on training using the IPCC Inventory Software, and
- to discuss the activities of international organizations.

On 10th July, the mutual learning, in-depth methodological discussion between two countries by means of studying the partner country's latest inventory in advance, was conducted for a limited number of participants. A SEA GHG Project meeting for Phase II was also held as a side event of WGIA10. On 11th July, the welcome address was delivered by Mr. Shinsuke Oda, Officer of the Low-Carbon Society Promotion Office, MOEJ, followed by the welcome address delivered by Mr. Nguyen Khac Hieu, Deputy Director General of the Department of Meteorology Hydrology and Climate Change (DMHCC) under MONRE. Dr. Yukihiro Nojiri, Manager of GIO under NIES acted as the overall chairperson.

In the afternoon of 11th July, a hands-on training using the IPCC Inventory Software and discussion on Agriculture, Forestry and Other Land Use (AFOLU) were held. In the morning of 12th July, the experiences and plans of JICA, USEPA, USAID, and DCCEE for inventory capacity building programs in Southeast Asia were shared. As the final presenter, NIES presented its achievement relating to emission projection in Asia. After the wrap-up of all sessions, the workshop was closed with closing remarks by Mr. Nguyen Khac Hieu, Deputy Director General of DMHCC and by Dr. Yukihiro Nojiri, Manager of GIO.

The experts discussed various subjects of interest to Asian countries, including the recent progress made by member countries, possible future activities in each member country and the WGIA itself, and sector-specific issues. Through the discussions and lessons, all attendees reaffirmed the importance of the inventory as a key tool for mitigation actions. Those who joined the mutual learning and hands-on training found these activities useful and supported their continuation. All attendees agreed to continue WGIA.

The outcomes of the discussions about each subject are summarized below.

Mutual Learning

Mutual Learning (ML) was conducted in order to improve the individual countries' inventories through exchanging inventories between two countries to learn from each other. The target sectors in this workshop were: Energy (Cambodia and Thailand), Industrial Processes (Indonesia and Japan), Agriculture (Indonesia and Vietnam), and Waste (China and the Republic of Korea). Before the meeting, 1) worksheets used for estimating emissions and reports describing details of methodologies, 2) comments on good points as well as issues of the partner country, and 3) questions and answers were exchanged. In the discussions in the meeting, the participants identified further problems relating to not estimated sources, and realized the importance of developing a consolidated national system to compile a sustainable inventory. Also, they recognized clearly the necessity of improving methodology and documentation-archive. The participants were encouraged to follow-up the issues pointed out in the discussions, and all participants of WGIA10 agreed to continue ML in future WGIA's.

Japan's climate change policy

The decreasing rate of emissions considering forest carbon sinks and the Kyoto mechanism credit is -10.9% on average (FY 2008-2010). Excluding Industrial Processes and Waste Products, the remaining 94% of CO₂ emissions are related to energy consumption. Household Emissions, including personal vehicles and municipal waste, comprise approximately 20% of the emissions. The remaining 80% is from the Business and Public Sectors. Japan's targets for GHG reduction are "Mid-term target (2020): -25% from 1990" and "Long-Term Target (2050): -80% from 1990". The global warming countermeasures are "Carbon tax", "Feed-in Tariff for renewable energy", "Legislations (Top Runner System)", "Grant for eco-point system", "Environmental Assessment Law", "Mandatory reporting and accounting", and "Forest Management" etc.

Introduction of Mitigation Options for GHG emissions in Vietnam

Emissions from the Energy, Agriculture and LULUCF Sectors are projected to be 169.2, 300.4, and 515.8 Tg CO₂ eq. in 2010, 2020, and 2030, respectively. The Energy Sector accounts for 91.3% of the projected total emissions for 2030. GHG mitigation options were developed for three main sectors: Energy, Agriculture and LULUCF. The current difficulties that Vietnam is still struggling with are "Insufficient information and data on long-term planning", "Some IPCC emission factor (EF) defaults for energy technologies may not be suitable, but the national EFs have not been well-developed yet", "Technical capacity in the development of mitigation options", "Limited information about know-how techniques", and "Insufficient investment and technical expertise for transferring and applying modern, environmentally sound technologies".

Report on the latest NCs (inventories) recently submitted

India and the Republic of Korea reported an overview of their 2nd and 3rd NCs focusing on GHG Inventory. Their reports were improved in completeness and accuracy compared with their 1st and 2nd NCs. Because both India and the Republic of Korea have matured in their experience of preparing inventories, other countries' motivation to improve their inventories seemed to be enhanced.

Discussion relating to COP decisions

UNFCCC and NIES reported updated information relating to NAI National Communications. COP16 had already decided that NAI parties must submit Biennial Update Reports (BUR). COP17, which was held in Durban in December 2011, agreed that the first BUR should be submitted by December 2014 and also that NC should be submitted once every four years.

Review of the past and Proposal for the future of WGIA-activities

NIES reviewed the past activities of WGIA and proposed a future plan with the draft of Terms of Reference (TOR). The number of participants has become larger and reached a maximum number of 130 in this WGIA10, since the interest in Climate Change has been increasing year by year. WGIA-activities have been also changing from in-situ information-exchange to E-mail discussions, sector-specific meetings, hands-on training, and mutual learning in accordance with the member countries' needs. Aiming at hosting more effective and fruitful WGIA in the future, the WGIA Secretariat proposed new TOR.

Hands-on Training using the new IPCC Inventory Software

To help non-Annex I countries to prepare for their national GHG inventories, a hands-on training using the new IPCC Inventory Software was implemented. After an overview of the software by IPCC TFI-TSU, the attendees split into two groups, one on Energy/IP and the other on Waste, followed by trial calculations using laptop PCs with the pre-installed software. Even though currently F-gases are not "shall be reported" gases, the attendees agreed about the importance of F-gases emissions and the effectiveness of the software to be able to calculate the actual emissions. Also, the strength of the software which can estimate the First Order Decay (FOD) of Solid Waste Disposal on Land (SWDL) was recognized by the participants. Some countries agreed to use this software after going back to their countries even though some bugs should be improved by IPCC TFI-TSU.

Discussion on AFOLU

After the introductory presentation by NIES, seven presentations followed by active discussions were made, 1) "Initial NC Project in Myanmar" by Dr. Khin Lay Swe, 2) Inventory and Mitigation for Methane Emissions from Livestock in Indonesia" by Dr. Idat Galih Permana, 3) "Greenhouse Gases Inventory in the Agriculture Sector of Thailand" by Mr. Worapong Waramit, 4) "Greenhouse gas emissions from China cropland" by Dr. Shenghui Han, 5) "Philippines' Second NC: Gaps, Challenges and Improvements for the GHG Inventory of the AFOLU Sector" by Dr. Damasa Magcale Macandog, 6) "Monte Carlo Simulation of Uncertainty Analysis for National GHG Inventories" by Dr. Kyeong-hak Lee (Korea), and 7) "Developing a Sustainable AFOLU GHG System" by Dr. Elizabeth M.P. Philip (Malaysia). The attendees proposed some subjects on AFOLU, which are expected to be discussed in WGIA11, 1) Exchange institutional arrangements, 2) Check the progress of each country, 3) IPCC-EFDB, 4) Supplementary guidelines for Wetlands, 5) Uncertainty, and 6) REDD+.

Presentations by donors and international organizations

Experiences and plans of JICA, USEPA, USAID and DCCEE for inventory capacity building programs in Southeast Asia were shared. At the same time, NIES reported on its achievement relating to studies of emission projections in this region. Five presentations were made, 1) "Challenges in the development of GHG-Inventory: Experiences from JICA technical cooperation" by Mr. Naoki Mori (JICA Vietnam), 2) "Update on SEA GHG Project Phase II" by Ms. Mausami Desai (USEPA), 3) "Overview of US Government Programs and the LEAD Program" by Mr. Orestes Anastasia (USAID), 4) "Inventory systems and carbon markets - the Australian story" by Mr. Rob Sturgiss (DCCEE), and 5) "Future Low-Carbon Society Scenarios in Vietnam and Asia". Most projects were relatively new, reflecting the rapidly growing demand for MRV in developing countries. The importance of donor coordination for efficient support and some other issues were discussed.