



Malé Declaration on Control and Prevention of Air Pollution and its Likely Trans-boundary Effects for South Asia

5th Emission Inventory Training
23-25 May 2012, Colombo, Sri Lanka

Summary of the Training

Introduction

1. The 5th Emission Inventory Training was held in Colombo, Sri Lanka on 23-25 May 2012. It was opened by the Lighting of traditional oil lamp. The training was organized by the Central Environment Authority (CEA), Sri Lanka which serves as the Regional Center on Emission Inventory of the Malé Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia (Malé Declaration) and co-organized by the Secretariat for Malé Declaration, the United Nations Environment Programme, Regional Resource Centre for Asia and the Pacific (UNEP RRC.AP).
2. The objective of the training was to enhance the capacity and capability of National Implementing Agencies (NIAs) and those involved in the participating countries to undertake emission inventory and scenario development, and integrated assessment modeling.
3. Representatives of the participating countries of the Malé Declaration which include Bangladesh, Bhutan, Maldives, Nepal, Pakistan, and Sri Lanka attended the training. The representatives of UNEP, Headquarters, UNEP RRCAP, and experts from the Asian Institute of Technology (AIT) and Stockholm Environment Institute (SEI) attended the training. The list of participants is attached as Annex 1.

Welcome Address

4. Ms. Ramani Ellepola, Director General, delivered the Welcome Address on behalf of the CEA. She warmly welcomes all the participants and expressed her great appreciation to the experts and the Secretariat for the support and cooperation to this training. She highlighted that CEA, based on its performance in the Malé Declaration activities, was identified as the Regional Center for Emission Inventory. She pointed out that it is now time to act to further improve the technical capacities to develop the updated emission inventory for the country.

Opening Remarks

5. Ms. Adelaida B. Roman, Head, Network Support Component of the RRCAP, delivered the Opening Remarks on behalf of the Malé Declaration Secretariat. She mentioned that as part of the capacity building activities, emission inventory has been regularly organised since the previous implementation phase of the Malé Declaration in order to strengthen the monitoring capacity of the

countries. The quality of the emission inventories being produced by the Malé Declaration is improving in every phase. Furthermore, the development of the Malé Declaration Integrated Information Assessment System (IIAS) was also done by the network.

6. Mr. S.M.D.P Anura Jayathilake, Director General, South Asia Co-operative Environment Programme (SACEP), gave the Opening Speech on behalf of SACEP. He commented the efforts of the Malé Declaration through the years, being the network that finds solutions to the problem of transboundary air pollution in the region. He is confident that the training will be a good forum and venue to provide compilation of emission inventory that it is relevant to all participating countries of the network including Sri Lanka.
7. Mr. Charitha Herath, Chairman , CEA delivered the Keynote Address, on behalf of CEA. He pointed out that air pollution has been identified as a priority environmental issue in South Asia. CEA as the regional center for emission inventory is committed to: continue to improve methodologies and science required to compile a high quality emission inventories for the member countries; facilitate good partnership with governments and other stakeholders in all the member countries; and continue to assist the member countries in the compilation of emission inventory and conduct quality assurance in the emission inventories that are submitted to the regional center.
8. Mr. Mylvakanam Iyngararasan, Project Coordinator, made the Opening Remarks on behalf of UNEP. He mentioned about some regional cooperation and programs that are taking place regarding air pollution matters, e.g. the successful and recent signing and adoption of the Instrument for Strengthening the Acid Deposition Monitoring Network in East Asia (EANET). He stressed that regional cooperation is important and it also supports national capacity building, emission inventory, and others. He talked about the implementation of the Project Surya which aims to provide sustainable, pro-environment, pro-poverty, pro-health, infrastructure and technologies to switch to cleaner technologies such as efficient cooking stoves. He pointed out that the implementation on using cooking stoves in the South region could provide good example in the world.

Vote of thanks by CEA

9. Mrs Wasantha Wijesinghe, Director, CEA, delivered a Vote of Thanks. She specially thanked the presence and support of the Chairman of CEA, the D.G of SACEP, and the representatives of UNEP and SEI. She thanked all the representatives from the participating countries of the Malé Declaration for all the support and cooperation. She also thanked all colleagues of CEA and the Secretariat, UNEP RRC.AP for the valuable efforts in successfully organizing the training.

Session 1

Male' Declaration and the Short-Lived Climate Forcers (SLCFs)

10. Mr. Mylavakanam Iyngararasan made a presentation regarding the Male' Declaration and Short-Lived Climate Forcers (SLCFs). The presentation focused on the development of the Male'

Declaration and the current activities which include: regional cooperation, capacity building programmes, emission inventory and integrated assessment modeling, conducting assessment studies, policy formulation and air pollution prevention, and public awareness activities. He also presented the implementation of Phase IV and establishment of the Task Force on Future Development, including its updates and progress. He also presented the 2012- Climate and Clean Air Coalition. The Voluntary Coalition was launched in February 2012 by six Governments and UNEP to: 1) raise awareness of SLCFs impacts and mitigation strategies; 2) enhance and develop new national and regional actions, identify and overcome barriers, enhance capacity and mobilize support; 3) promote best practices and showcase successful efforts; and 4) improve scientific understanding of SLCFs.

Controlling Short-Lived Climate Forcers (SLCF)- a ‘Win-win’ for Air Pollution and Climate Change

11. Dr. Harry Vallack, Stockholm Environment Institute (SEI), University of York, made a presentation on the topic “Controlling Short-Lived Climate Forcers (SLCF)- a ‘win-win’ for air pollution and climate change”. Short-lived climate forcers cause global warming and are relatively short-lived in the atmosphere, (e.g. Black carbon (BC), Methane (CH₄), Tropospheric ozone (O₃)). He highlighted the multiple benefits of reducing short-lived climate forcers which include: slow down near-term global warming; reduce regional impacts of climate change; and reduce air pollution so as to protect health and crops.

Session 2

Individual Presentations from Malé Declaration Countries

12. The representatives of the Malé Declaration countries (i.e. Bangladesh, Bhutan, Maldives, Nepal, Pakistan, and Sri Lanka) presented the progress on emission inventory in their respective country. Presentations focused on the results on current emission inventory; problems, data gaps and how they will be addressed; the future plans on compilation; and others.
13. Mr. Jayaratne, CEA presented the objectives of the training on emission inventory under Malé Declaration. He also presented the role of CEA, being appointed as the regional centre for emission inventories. CEA will be the lead centre in South Asia in the field of emission inventory and retain and enhance scientific capacity on emission inventories. Some specific tasks of CEA are as follows: to continue to improve methodologies mentioned in the Manual for Emission Inventory; to facilitate good partnerships with governments and relevant agencies in all the Malé Declaration countries on the emission inventories; to continue to assist the countries in conducting emission inventory; and to conduct Quality Control on the emission inventories submitted to the centre.

Session 3

The Basics of Emission Inventory Compilation

14. Dr. Harry Vallack presented on the topic “Basics of Emission Inventory Compilation”. The overview of the presentation includes: 1. general approach for calculation of emissions (e.g. emissions factors and activity data); 2. the Malé Declaration emission inventory manual and workbook (e.g. air pollutants included, emission source structure, looking at the Excel workbook); and 3. general steps in inventory development (e.g. planning, data collection, calculations, references/documentation, Quality assurance and quality control (QA/QC)).

Emission Inventory Compilation

15. Dr. Harry Vallack made presentations, discussions and conducted hands-on exercises on the Emission Inventory Compilation for the following:
- Sector 1: Combustion in energy sector
 - Sector 2: Combustion in manufacturing/construction
 - Sector 3: Transport
 - Sector 4: Combustion in other sectors
 - Sector 5: Fugitive emissions from fuels
 - Sector 6: Industrial processes
 - Sector 7: Solvent and other produce use
 - Sector 8: Agriculture
 - Sector 9: Vegetation Fires & forestry
 - Sector 10: Waste

Session 4

Quality assurance and Quality control (QA/QC)

16. Dr. Harry Vallack presented on the Quality assurance and Quality control (QA/QC) for conducting the Emission Inventory. He pointed out that emissions inventories should be transparent, accurate, complete, consistent, and comparable. He highlighted that to ensure that objectives of emission inventory are met; QA/QC checks are required. Quality Control is a system of routine technical activities implemented by the inventory development team to measure and control the quality of the inventory as it is being compiled. Quality Assurance is a system of external review and audit procedures conducted by personnel not involved in the inventory development process.

Session 5

Linking Emission Inventory to the Air Quality Models

17. Mr. Didin Agustian Permadi, AIT, made a presentation on the topic “Linking Emission Inventory to the Air Quality Models”. The outline and sub-topics of his presentation include: emission inventory (EI): Atmospheric Brown Cloud (ABC), biomass open burning emission, EI framework; interface of EI to air quality model; air quality model types; Case studies in Asian Developing countries (AIT studies); and introduction to IIAS tool. He presented some models on air quality. Modeling tool is used to integrate these processes in a systematic approach to assess the impacts of

alternative scenarios on air quality. The results of the modeling are being used in the Integrated Information and Assessment System (IIAS) of the Male' Declaration so that the emissions can be linked to the concentrations and deposition, the impacts and policy options.

Exercise on IIAS and Way Forward

18. Mr. Didin Agustian Permadi also taught and handled exercise on IIAS and Way Forward. The contents of this topic include: system requirements; highlight on the user guide; practical session for participants; introduction to emission scenario used in the practical session; and summary and way forward. Air quality modeling and emission inventory are important components in air quality management (AQM).

Other Issues and Future Plans

19. Some issues and matters were raised:

- The participants confirmed to have institutional network within the country, ensure the continuity of the work of the personal, and also ensure participation of the same personnel on the EI compilation.
- On EI, SEI could supply the data matrix and matrix shall be sent to the countries.
- It was mentioned that knowledge on EI has to be within the country and not to leave the work to the consultant.
- It was agreed to prepare a one-page brief for policy makers, particularly for presentation at the Thirteenth Session of the Intergovernmental Meeting (IG13) to be held on the last quarter of 2012. The Regional Center on EI and Secretariat, with the advice of SEI (Dr. Harry), will prepare the one page brief on EI.

Closing of the Training

20. Mr. Kulasena of CEA expressed his deepest gratitude to the participants of the training and to the Secretariat for all the support and assistance. He also expressed his thanks to the resource persons, particularly to the representatives SEI and AIT for all the efforts and valuable lectures during the training.

21. The Secretariat closed the Session, thanking and appreciating the contribution and cooperation of the participants; the hospitality of the Sri Lankan government, the great assistance of CEA colleagues, and the support of lecturers/resource persons of the training.

List of Participants

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Resource Persons

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