

Malé Declaration

on Control and Prevention of Air Pollution
and its Likely Transboundary Effect for South Asia



Malé Declaration/IG 11/

Eleventh Session of the
Intergovernmental Meeting

English Only

20-21 January 2010, Dhaka
Bangladesh

REPORT OF THE SESSION

I. INTRODUCTION

1. The Eleventh Session of the Intergovernmental Meeting (IG11) on the Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia was held in Dhaka, Bangladesh on 20-21 January 2010. The agenda is enclosed as Attachment I.
2. The meeting was attended by the Ministries of Environment National Focal Points (NFPs) and National Implementing Agencies (NIAs) of the participating countries, South Asian Cooperative Environment Programme (SACEP), Stockholm Environment Institute (SEI), United Nations Environment Programme (UNEP), UNEP Regional Resource Centre for Asia and the Pacific (RRC.AP) and an independent facilitator. The list of the participants is enclosed as Attachment II.
3. Mr. R. Rajamani, former Secretary of Ministry of Environment and Forests, Government of India chaired the meeting as the Regional Facilitator.

II. REVIEW OF THE PROGRESS (Agenda item 1)

4. Ms. Naw Wahwah Htoo, UNEP RRC.AP presented the key progress after the Tenth Session of the Intergovernmental Meeting (IG10) which was held in Colombo, Sri Lanka on 21 August 2008 (Malé Declaration/IG10/1). She said that during 2008/2009 period, Phase III activities were completed based on the 6 objectives. Activities for Phase IV were prioritized; publications under the implementation phase were completed; the Terms of Reference (ToR) for the Task Force on Future Development (TFFD) of Malé Declaration was revised; and nomination for Task Force members was done. She also presented all the activities conducted during the implementation phase.
5. Ms. Naw Wahwah Htoo, UNEP RRCAP presented the implementation plan for phase IV, (2010-2012). Activities are based on the 6 objectives of the Malé Declaration. Highlights of the presentation under each objective include:
 - Regional cooperation: Three Intergovernmental (IG) meetings; two regional stakeholder-cum-coordination meetings held back-to-back with the IG meetings; two National stakeholder meetings; and six meeting of the TFFD

- Air pollution monitoring: continue monitoring; conduct third and fourth inter-laboratory comparison programmes for quality assurance and quality control (QA/QC); translate standard operating procedure manual (SOP) and relevant documents in local languages; conduct regular Regional Refresher training (2010,2011,2012) and 3 in-country trainings; and monitoring database
 - Capacity on emission inventory: improvement of Malé emissions inventory preparation Manual and Workbook; improvement and updating (to 2005) of national level emission inventories and development of scenarios; training workshops
 - Impact assessment capacity: health, crops, corrosion impact assessment will be conducted
 - Assist with air pollution reduction: the Task Force will organise a feasibility study on developing a regional framework such as convention on air pollution in South Asia for consideration to the IG Meeting; development of country-specific technical, fiscal and policy measures for emission reduction
 - Rise awareness: publish newsletters; handbook on prevention and control at the fingertip of governments in the region; two regional-level training-cum-awareness workshop be conducted for middle-level policy makers
6. The meeting participants were invited to give their suggestions or comments. Major discussions made are as follows:
- It was suggested that the countries should develop their own emission inventory.
 - Advise policy makers base on the data
7. The Session acknowledged the Progress Report as presented (Malé Declaration/IG 11/1/1).

III. RAPIDC AND ITS IMPLEMENTATION (Agenda Item 2)

8. Mr. Kevin Hicks, SEI, presented an update on RAPIDC implementation. He mentioned the purpose of the programme which is “to facilitate the development of agreements and/or protocols to implement measures which prevent and control air pollution through promoting international cooperation and developing scientific information for the policy process”. He presented the approach as well as the Phase III RAPIDC structure. He mentioned key questions on impacts of transboundary air pollution to health, crops, ecosystems and materials. He mentioned the support done by RAPIDC for Malé Declaration which is to support decision for prevention and control of air pollution and presented the Malé Declaration Integrated Information and Assessment System (IIAS). In conclusion, he mentioned the following a)Malé region have the building blocks for further development of agreements and policies; b)serious impacts on health, crop yields and corrosion have been demonstrated; c)confidently, Phase IV is to go on where regional frameworks to discuss emission prevention and control can be developed; and d)economic analysis and progress on policy development now needs to be a greater focus.

IV. UPDATES ON NATIONAL LEVEL IMPLEMENTATION AND PLAN FOR PHASE IV (Agenda item 3)

9. Mr. Quazi Sarwar Imtiaz Hashmi, Department of Environment, Bangladesh, presented the update on the national level implementation and the phase IV plan for Bangladesh. He discussed the background and implementation of Malé Declaration in the country; the institutional arrangement; monitoring activities; the data completeness; the stakeholders participation conducted; the status of emission inventory and modeling; status of impact assessment including the outcomes; and the awareness activities. He also presented the challenges and difficulties which include a) retaining trained technicians; b) irregular electricity supply; c) replacement of funnels and other accessories d) maintenance of equipments; e) unavailability of triple distilled water; f) replacement of hollow cathode lamps of AAS (sodium, potassium, calcium) and air compressor of AAS. He said that the plan for the next three years is almost the same with that of the past implementation phase but the institutional arrangement may change with the inclusion of a new study.
10. Mr. Karma Tshering, National Environment Commission, Bhutan, presented updates on the implementation of Malé Declaration in the country and the plan for Phase IV implementation. He presented the monitoring activities and mentioned the additional passive sampling station established under the Regional Air Pollution in Developing Countries (RAPIDC) for surface ozone, NO_x and SO_x as an experimental for impact assessment. Plans for phase IV include a) strengthening of the existing stations with particulate matter monitoring facilities in Bhur and a new additional station to be setup; b) part of monitoring to be outsourced to expert institution; c) emission inventory report will be updated; d) data system will be strengthened; e) information dissemination on air pollution will be conducted; f) impact study will be initiated. Challenges faced include limitations on a) capacity; b) passive sample result interpretations; c) in house analyses of samples; d) set up of monitoring system; and e) financial resources.
11. Dr. Dipankar Saha, Central Pollution Control Board (CPCB) India, presented the details of NIA and the institutional arrangement on Malé Declaration in the country, monitoring activities, stakeholders' participation, data completeness, status of emission inventory and modeling, and the status of impact assessment conducted. He also presented additional activities conducted by CPCB including the a) source apportionment study of PM₁₀ in six cities covering the profile for vehicular sources and non-vehicular sources; b) revision of the national ambient air quality standard (November 2009) which was presented in detail by Mr. J.S. Kamyotra; c) preparation of criteria for comprehensive environmental assessment for industrial clusters (December 2009); and d) development /revision of emission standards. He also discussed the seventh regional refresher course conducted on March 2009. Plans for Phase IV implementation include a) monitoring of all parameters including new parameters in all monitoring stations; b) capacity building for impact assessment studies on health, crops and materials; and continuation of all other activities previously conducted.
12. Mr. Masood Zhandi, Environmental Research Center, Iran, presented the progress on the activities on Malé Declaration in the country. He mentioned the major sources of air pollution and the monitoring stations; the trends of PM₁₀, total suspended particulate matter (TSPM) and NRSPM concentration changes in the monitoring station as of 2009. He also mentioned the sources of transboundary air pollution such as sandstorms from neighboring countries.

- Plan for phase IV include a)strengthening and development of air pollution monitoring specially in west of Iran; b)implementation of desertification in sandy area of Iraq and Iran; c)enhancing the impact assessment capacity of the national institution; d)assisting the member countries including Iraq ,Syria and Turkish for the reduction of air pollution; e)continue to assist the Malé Declaration Secretariat and sending samples from old and new station; f)enhancing public awareness for future action on air pollution; and f)strengthening crop and health assessment research on issues of air pollution.
13. Ms. Bidya Banmali Pradhan, International Centre for Integrated Mountain Development (ICIMOD) Nepal, presented updates on the implementation of Malé Declaration. First she presented the institutional arrangement in the country and the monitoring sites' location and the existing instruments. She also presented the national stakeholders' meeting with 70 participants and the results of the monitoring, emissions inventory, rapid urban assessment, corrosion and crops impact study, as well as the awareness programmes conducted during Phase III implementation. Challenges and difficulties faced are on a)electricity reliability (up to 18hr power cut); b)instrument calibration; and c)political situation. Plans for phase IV include the following: a)additional station representing mid hills to be set up; b)impact assessment such as on health, crops yield and stock at risk and corrosion to be conducted; and c)others including modeling –IIAS, regional data centre, awareness, cleaner technologies and speciation of samples.
 14. Mr. Asad Ullah Faiz, Pakistan Environment Protection Agency, presented the costs of environmental damage, and the percent environmental degradation percentages according to the cause; health impact assessment and the status of air quality in the country. He discussed the monitoring activities under the Malé Declaration phase III implementation including the monitoring stations and the onsite monitoring activities; the onsite laboratory and the list of equipments installed; and trainings conducted as capacity building on monitoring. He discussed the results from monitoring, inter-comparison study, emission inventory, and the health and crop impact assessment. Difficulties and challenges include a)communication and logistical constraints for supervising & monitoring the site; b)some equipments showing sign of wear and tear; c)ground staff needs more training; d)weak coordination among NIA and expert institute nominated for crop impact assessment. He also presented the plan for Phase IV which include crop, corrosion, soil and health impact assessments.
 15. Mr. Jarayatne, Sri Lanka, presented the institutional arrangement, the monitoring activities and the results of monitoring, the results of the impact assessment studies, the challenges and difficulties being faced and the plan for the next few years under the Malé Declaration. Main challenge faced is on the material which include a)the non durability of plastic material of the lid and the funnel holder of the wet only collector; b)the brittleness of the funnel of bulk collector due to hot sunshine; and c)spare lids should be replaced every 6 months. Future plan for phase IV implementation include a)continuation of monitoring activities, b)corrosion impact studies, c)preparation of emission inventory for the country, d)carrying out public awareness, e)capacity building and technical enhancement on modeling, trend analysis and source identification; f)inclusion of relevant Malé Declaration activities into the National Air Quality Management Action plan 2015.

**V. REVIEW OF THE DATA REPORT AND MONITORING RELATED ACTIVITIES
(Agenda item 4)**

16. Ms. Naw Wahwah Htoo, UNEP RRC.AP and Mr. Kevin Hicks, SEI presented the data report during the Phase III implementation. Highlight of their presentation include the following:
- Summary remarks on the inter-laboratory comparison during the Phase III include a)strong bias for most of parameters, especially for low concentration sample (less than 1st attempt); b)results of parameters requiring less sample treatment are more accurate (EC, pH); c)larger number of reported data (56 in 1st attempt vs. 69 in 2nd); d)DL provided by most labs in reports of 2nd attempt (none was reported in 1st attempt); e)less BDL data (1 in M22); f)5 laboratories have enough data points for R1 and R2 calculation, one submitted the R1 and R2 (vs. none in 1st attempt)
 - General comments on the results of data in Phase III: a)all the countries reported the results of ambient air sampling using diffuse/passive samplers; b)in many cases the samplers are sent very late to IVL or have incorrect label; c)however, most of the countries seem to have become more familiar/comfortable with the entire monitoring procedure particularly since 2007 when most of the countries became regular in carrying out the sampling and reporting the result as per the required protocol; d)the results indicates that most of the countries are as yet in the process of strengthening their monitoring and analytical capabilities.
17. The participants were invited to provide comments on the report. Major discussions included the following:
- It was mentioned that there is a need to increase the number of monitoring stations. Regarding this, it was suggested to work with networks doing monitoring.
 - It was mentioned that regionally representative sites coupled with modelling studies should be good to maximize results of data monitoring.
 - It was suggested to have a manual to analyse data using passive sampler.
 - It was mentioned that the network is open with any methodology that are most economical and can be used easily. However, the standardization and harmonization is the issue.

VI. CONSIDERATION AND ADOPTION OF THE DOCUMENT ON THE FUTURE DEVELOPMENT OF THE MALÉ DECLARATION (Agenda Item 5)

18. Mr. Iyngararasan, UNEP, presented the document on the TFFD of Malé Declaration. He presented the background and the qualifications of the Task Force members. He presented the main tasks of the members including a)conduct a feasibility study on the establishment of specialized regional centres; b)conduct a feasibility study on developing a regional framework such as convention on air pollution in South Asia; and c)develop sustainable financing mechanism for the Malé Declaration. He also discussed the activities under its task mentioned and the timetable of the activities. He mentioned that members from each participating country were already nominated except for 2 countries which need to have nominations soon.

19. Mr. Rajamani presented the document on the establishment of sustainable financing mechanism. He mentioned the background of the document. He presented the financing arrangement which is to look at future funding and to put in place a sustainable financing scheme in the interest of carrying forward this effort at subregional cooperation in South Asia. He discussed the six proposed principles of mechanism including the following: a)activities of the Malé Declaration will be classified into three groups: (1) national level (2) regional level and (3) additional activities such as research activities; b)member countries will take the lead in financing their respective national level core activities; c)member countries will make effort to contribute to the regional level core activities based on the UN assessment scale or a mutually agreed formula; d)financial resources for the additional activities will be mobilized from external sources; e)financial contribution of member countries will be on voluntary basis; f)stepwise approach will be implemented for the contributions from the member countries.
20. The participants were invited to provide comments on the documents. Major discussions made are as follows:
 - It was suggested that more tangible indicators on the financial mechanism should be developed as a proposal to be presented to the ministerial meeting of SACEP or to the government.
 - It was mentioned that the following concerns is to be discussed by the Task Force: 1)substantive side: what are the activities; how much it will cost; what is the formula for burden sharing. 2)process side: they could inform the policy makers on a solution such as calling on the Governing council of SACEP.
 - The Task Force may explore additional ways based on the principles of sustainable mechanism.
21. The Session endorsed, in principle, the draft documents and instructed the Secretariat to incorporate the comments from the countries, if any, to the extent possible.

VII. CONSIDERATION OF THE WORK PROGRAMME OF MALÉ DECLARATION IN 2010 (Agenda item 6)

22. The draft Work Programme in 2010 for Malé Declaration (Malé Declaration/IG11/6/1) was presented by Ms. Naw Wahwah Htoo, UNEP RRC.AP. Major activities included are under the six key components: a) Strengthen Regional Cooperation: National Stakeholders Meeting in June; b) Air pollution monitoring: regional training programme in May, third attempt for inter-laboratory comparison, data report at the end of 2010, 1st and 2nd Meeting of the TFFD for Malé Declaration on March and October respectively, and site audits; c) Capacity Building: emission inventory and IIAS and impact assessment modeling to be included in the 8th regional training on May 2010; d) Capacity building on impact assessment: final reports on health, crops and corrosion impact assessment and the rapid urban assessment will be distributed to NIAs, national level health and crops assessment to be initiated during the 2nd quarter of 2010; e) Assist with air pollution reduction: 1st Regional-level training cum-awareness will be conducted on the 2nd quarter of 2010, TFFD members will conduct

feasibility study on developing regional framework, national level country-specific air pollution measures will be developed, and workshop on clean fuels and vehicles will be conducted; f)Rising awareness: two newsletters will be published during the year, compilation on the result of the national level public awareness campaigns in Sri Lanka, multimedia presentation and publication will be disseminated to young people in South Asia.

23. The Meeting was invited to discuss the proposed work plan. The following are the major discussions made:
- It was agreed that the 1st Task Force Programme should be moved to May 2010.
 - It was agreed to select one or two countries to do impact assessment during the phase IV
 - It was suggested that a brainstorming workshop on clean fuels and vehicles is to be conducted.
24. The Session adopted the document.

VIII. JOINT FORUM ON THE ATMOSPHERIC ENVIRONMENTAL ISSUES IN ASIA AND THE PACIFIC

25. Mr. Mylvakanam Iyngararasan presented the Future Plan on Joint Activities on Air Pollution in Asia and the Pacific. First, he mentioned the background of the Joint Forum on Atmospheric Environmental Issues in Asia and the Pacific (Joint Forum). He discussed the result of the First Joint Meeting conducted on March 2009. He discussed the goals of the future plan through which the vision (the vision which is “a clean atmospheric environment through collective and coherent actions in Asia and the Pacific region) will be achieved. The work programme for the initial three years (2010-2012) will focus on the consolidation of information sharing and capacity-building as a basis for subsequent policy measures which, ideally, will be further enhanced during the following three-year period (2013-15).
26. The meeting participants were invited to discuss the Future Plan. Major discussions made are as follows:
- Transboundary air pollution issue should be included in the implementation plan.
 - There should be discussion among the networks, on the areas of cooperation, timing and analysis.
 - Without consent of NIA and NFP, should not.
 - The joint forum should be a cooperation that accommodates everybody

IX. CLOSING OF THE SESSION

27. Mr. Weddikkara Rathnadeera, SACEP, delivered a remarks. He mentioned that Malé Declaration is one of the good initiatives with a long term vision to curtail air pollution issues in the region and said that it understood that the ownership of the project and the implementation should be handed over to national institutions for long term for sustainability. He said that SACEP could play an important role in the implementation of Phase IV. He said that the purpose of coordination meeting is to ensure that governments are aware of the major

air pollution related activities. He thanked Sida and SEI for their continuous support, dedication and optimism in this project. He also thanked the government of Bangladesh for hosting the IG11.

28. Mr. Mylvakanam Iyngararasan, UNEP delivered a closing remarks. He thanked all member countries for continued support for Malé Declaration. He said that the long term commitment from the countries are very encouraging. In behalf of all participants, he thanked the Department of Environment Bangladesh, all the staff, crew and all supporters for hosting the meeting and for the very hard work they made. He also thanked the resource person and the regional facilitator.
29. Mr. Lars Nordberg, thanked all the participants and expressed appreciation to Mr. Rajamani for his unending support to the project. He also congratulated all the participants from the member countries for the hard work and continued support to the Malé Declaration.
30. Mr. Jindal, expressed appreciation to the host, for working hard in hosting the meeting. He also thanked all the participants for contributing to the success of the meeting.
31. Mr. R. Rajamani, the regional facilitator noted that this had been a very significant meeting. Regarding the data report, he said that the participating countries are advancing slowly and that is the way it should be. Regarding the document on future development of the Malé Declaration, he said that further discussion of the task force on the sustainable financing mechanism is being looked forward and that the member countries start thinking of contributing for the sustainable financial mechanism. On the joint forum, primarily, the plan of Malé Declaration is to be looked into and that all should cooperate. Cooperation should continue to be strengthened. Cooperation in the subregion should be used to the advantage. He thanked DoE, Bangladesh for the very good arrangements of hosting even with the limited time of preparation. He gave thanks to UNEP, SACEP, Mr. Lars Nordberg, Mr. Kevin Hicks and all participants for the continued support.

Attachment I. Meeting Agenda

Attachment II. List of Participants