

## **PROCEEDINGS**

### **NATIONAL STAKEHOLDERS FORUM ON MALÉ DECLARATION**

**25 February 2004, Dhaka, Bangladesh**

## **C O N T E N T S**

List of Acronyms

Proceedings

Attachment I: Speech of the Secretary

Attachment II: Speech of the Chairperson

Attachment III: Participant list

Attachment IV: Technical Papers Presentations

- Progress on Malé Declaration
- Overview of Malé Declaration activities in Bangladesh
- History of Air Pollution
- Status of air pollution in Bangladesh
- Impacts of air pollution on Allergy and Asthma in Bangladesh
- Impact of Air Pollution on child health in Bangladesh
- Impact of air pollution- A Key Policy Driver

# Proceedings of the National Stakeholders Forum under Malé Declaration on Control and Prevention of Air Pollution & Its Likely Transboundary Effects for South Asia.

(25 February 2004, Dhaka)

## 1. Preamble

To cope with the issues of transboundary air pollution in South Asia a policy dialogue was organized by UNEP RRC.AP with the technical support from SEI and financial support from Sida in March 1998. The policy dialogue participated by senior government officials and scientists from South Asia agreed on a draft declaration on transboundary air pollution. The draft Declaration was discussed and adopted by Ministers of the Environment at the Seventh Meeting of the Governing Council of South Asia Cooperative Environment Programme (SACEP) in Malé, Maldives. The declaration aims to achieve intergovernmental cooperation to address the increasing threat of transboundary air pollution and consequent impacts due to concentrations of pollutant gases and acid deposition on human health, ecosystem function and corrosion of materials. Malé declaration also makes provision for the cooperation among the key stakeholders in tackling the transboundary air pollution in South Asia.

To this end National Stakeholders Forum under Malé Declaration was jointly organized by SACEP, SEI, UNEP, RRC, AP and DoE on 25 February, 2004 at the Meeting Room No 1, IDB Bhaban, Agargaon, Dhaka.

## 2. The Forum

### 2.1. The Aim of the Stakeholders Forum

The stakeholders' forum had 3 (three) main aims;

- To increase the awareness on the transboundary air pollution;
- To share stakeholders views and ideas on the implementation of Malé Declaration and
- To improve the information exchange between information generators and users.

### 2.2. Inaugural Session

The National Stakeholders Forum on **Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia** was inaugurated by Syed Tanveer Hussain, Hon'ble Secretary, Ministry of Environment and Forest attended the Forum as Chief Guest and Mr. Khan M. Ibrahim Hossain, Director General, Department of Environment attended the Forum as Chairperson. Mr. P. K. Kotta, Project Coordinator, SACEP, Mr. M. Iyngararasan, Senior Programme Specialist, UNEP, Regional Resource Centre for Asia and the Pacific and Dr. Johan Kuylenstierna, Director, Stockholm Environment Institute at York also spoke on the occasion.

The inaugural session started with opening statement of Mr. P.K. Kotta, Project Coordinator SENRIC, South Asia Cooperative Environment Programme (SACEP). He explained the role of SACEP in the process of implementation of Malé Declaration. He expressed the hope that

National Stakeholders Forum will come out with some good recommendations at the end of the day.

The representative of the United Nations Environment Programme – Regional Resource Centre for Asia and the Pacific (UNEP RRC AP) Mr. M. Iyngararasan, Senior Programme Specialist explained the historical background of Malé Declaration and the purpose of National Stakeholders Forum. He hoped that this stakeholders meeting will put a milestone in the implementation of Malé Declaration. He thanked the organizer for successfully organizing this meeting.

On behalf of Stockholm Environment Institute (SEI), Dr. Johan Kuylenstierna, explained the role of his organization in the implementation of Malé Declaration. SEI is providing technical support to the project. He expressed the hope that this stakeholders forum will be successful in achieving its objectives.

Syed Tanveer Hussain, Hon'ble Secretary, Ministry of Environment and Forest while addressing stressed that "This National Stakeholders Forum assumes considerable significance in view of the initiative and measures being undertaken throughout our region toward implementation of the Malé Declaration, where it has been stated the need for countries to carry forward, initiate studies or programmes on air pollution in each countries". He stressed the need for more studies on the Impact of air pollution on human health. At the end of the inaugural session the Secretary taking the floor again requested resource persons from SACEP, UNEP and SEI and Officials of Air Quality Management Project to assess the need to enhance the capacity of our Air Monitoring Capacity. He also requested for details on ASEAN haze agreement. He gave directives to make the people aware of transboundary air pollution issues. The speech of the Secretary has been attached as Annex I.

Khan M. Ibrahim Hossain, Director General and Chairperson of the inaugural session, while delivering his address, informed the audience of the activities being carried out by the Department of Environment in the implementation of Malé Declaration. He informed the gathering that one transboundary monitoring station is being set up at Sham Nagar Upazila of Satkhira District. He thanked the SACEP, UNEP and SEI representative for their cooperation and support. Text of Mr. Chairperson's address has been attached as Annex II.

Nearly 70 participants attended the lay long meeting. The stakeholders included DoE officials, Air Quality Monitoring Project officials and officials from different organizations and NGOs.

### **2.3. Technical Session**

Inaugural Session over, Technical Session of the Forum was held at the same venue. Director General, Department of Environment Mr. Khan M. Ibrahim Hossain presided over the meeting. The presentation started with the presentation of Mr. M. Iyngararasan, UNEP Regional Resource Center for Asia and the Pacific. Mr. Iyngararasan briefed the needs for an intergovernmental cooperation on transboundary air pollution in South Asia and provided the history and progress in the implementation of Malé Declaration. He informed that capacity building is the major part of Phase II implementation of the declaration. Under the capacity building program monitoring equipment is being installed in each of the participating countries together with training on monitoring transboundary air pollution. To date six countries have received their in-country training. Three regional level training programs have

also been organized under the current phase. He also expressed the need to incorporation of mitigation option such as renewable energy sources.

Mr. Quazi Sarwar Intiaz Hashmi, Project Director of Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia in Bangladesh described the Implementation Status of Malé Declaration in Bangladesh.

Presenting the European Experience with Air Pollution Dr. Johan Kuylenstierna tried to shed light on the problems of Air Pollution during the last few centuries especially starting from the age of industrial revolutions. Presenting the current state of air pollution in Europe he tried to show that for their own benefit all the polluters – small and big, joined hand in hand to solve the problem as the transboundary nature of air pollution has ultimately affected all the neighbouring countries. He also tried to show that dedicated NGO activities has raised the awareness to such a level that ultimately government and polluters were compelled to solve the problems with individual as well as collective action. He said that between 1972 and 1977 studies confirmed that air pollutants could travel several thousands of kilometers before deposition and damage occurred. For that reason, cooperation at the international level was clearly necessary to solve problems such as acidification. He reiterated the positive role of international and regional cooperation among neighbouring countries.

While presenting the Status of Air Pollution in Bangladesh, which was prepared by Dr. Swapan with the monitoring data of Air Quality Management Project (AQMP) and Bangladesh Atomic Energy Commission (BAEC), tried to show that how air pollution level varies from season to season. How the pollution level has changed due to specific intervention by the government. He presented data to show the participants that due to introduction of lead free gasoline and phase out of two stroke three wheeler, lead level and air pollution level has gone down significantly in Dhaka City in the last few years.

Dr. M. A. Hasan while presenting his paper on **Impact of Air Pollution on Allergy and Asthma in Bangladesh** showed that dust, especially particulate matter in the range of 2.5 micron to 10 micron, mites, aerosol and other allergens is the main cause of respiratory problems. According to his study 5% or 7 million people are suffering from Asthma in Bangladesh. He pointed both indoor as well as outdoor air pollution as the cause of asthma in Bangladesh. He identified Aerosol, Mosquito Coil, Dust and Cigarette Smoke as the main cause of Asthma Provoking Factor.

After the Lunch Break While presenting the paper on **Impact of Air Pollution on Child Health in Bangladesh**, Dr. Pravat Borua, noted that Health Cost related to the atmospheric pollution in Dhaka is estimated to be about US\$ 200-800 million per year, or 0.7% to 3.0% of Gross Domestic Product of the Country. He also quoted the BAEC study showing an excess of ~ 8,000 deaths in Dhaka City per year.

Presenting the paper **Impacts of Air Pollution: A Key Policy Driver**, Dr. Johan Kuylenstierna tried to show different country experience on the problems of Air Pollution. He showed there is vivid example of impact on productivity with and without polluted air. He also tried to show the vulnerability of the population in Dhaka City, in reference to the **WHO recommended dose response relationships for PM10 and Health Impacts**, whereby 10% increase in Mortality, 12% increase in hospital admission and more than 30% susceptibility to cough may occur due to presence of present level of PM10 in the air of Dhaka City.

Technical Papers have been attached as Annex IV.

### **3. Open Discussion and Recommendation Session:**

Technical Paper Presentation over, the floor was opened for discussion. Extensive discussions in relation to the implementation of Malé Declaration specially in Bangladesh was held. Followings are the major discussions and recommendations:

- Mr. Sujit Barua, of Department of Meteorology during question and answer session, described in brief how he has selected site. He suggested that more stations, especially at Sylhet district, as there are many fuel refinery centre across the border. Likewise he suggested having a centre at the South Eastern side on Bangladesh in the bordering regions of Myanmar and Bangladesh. He also requested the Department of Environment to request the Department of Meteorology to present paper in the future on air pollution issues. Responding to the comment Mr. Hashmi responding to the issues said that in the initial stage only one station would be established. Later the number would be increased. Replying to the answer Director General, Department of Environment requested the Project Director to sought Technical Papers from the Meteorological Department in the future stakeholders meetings.
- Representative of Rupantarito Prakritic Gas Co Ltd. (RPGCL) showed his interest and requested the Project Director to include RPGCL in the National Advisory Committee. The Project Director agreed to his proposal. Pointing to awareness raising regarding air pollution of the project, Mr. Mamunur Rahman, of Dhaka Transport Coordination Board (DTCB) requested DoE to take initiative to introduce Environmental issues in the Environmental Curricula for primary and secondary levels. Replying to the question Mr. Mirza of the Department of Environment, referred to the ongoing project of SEMP, which is being implemented by the Department of Environment, mentioned that under the project environmental curricula is at the final stage of development and would be introduced at the primary and secondary level educational institutions. Director General supported the statement and stated that so the environmental curricula issues would be addressed soon.
- Representative of Soil Research Development Institute suggested that due to deforestation, soil erosion may cause heavy metals to come into contact with air, and may cause air pollution. He also suggested that this could be contained by vegetation cover.
- Assistant Professor from Jahangirnagar University requested, while preparing the ambient air quality standard side by side considering the presence of physico-chemical indicators; whether biotic indicators could be used to ascertain the level of pollution. He also said that the presence of Lichen is used as a Air Pollution Indicator in some countries as research purpose. Answering to the question Mr. Sagar Dhara, said there are some passive to find out the presence of air pollution, but this is used more in the research purpose. Commenting on different issues he suggested that awareness should be raised that susceptibility of children being ill due to indoor air pollution living in a smoking kitchen is much higher than a clean kitchen. He also cited few examples, regarding the simple experiments where children has shown that plant leaves become smaller the closer they grow to roads.

- The need for packaging the best practices on energy serving technologies such eco-buildings expressed. Dissemination of such technologies will facilitate emission reductions.
- Interaction among the stakeholders should be enhanced through exchange of information and research findings in future.
- Soil Research Development Institute (SRDI), Bangladesh Forest Research Institute (BFRI) and Bangladesh Agriculture Research Council (BARC) may be given the responsibility to carry out research on impact of air pollution on soil, water and vegetation (especially the top dying of Sundary tree at Sundarban forest). Technical and Financial support will required for such studies.
- In-depth epidemiological studies including cost-benefit analysis to address the impact of air pollution on human health and socio-economic life should be carried out. Institutes such as NIPSOM, National Institute of Child Health, Institute of Child and Mother health, Allergy Asthma & Environmental Research Institute and other government and non-government health research organizations should be involved to carry out such kind of research.
- At least two or more monitoring stations will be required to set up at the Eastern and Northern borders of Bangladesh to establish a monitoring network for effective monitoring of transboundary air pollution.
- Monitoring activities are expected to start shortly and monitoring results would be disseminated among all stakeholders.

#### **4. Closing Session**

At the fag end of the discussion session Director General appreciated the interactive discussion among the participants and technical paper presenters. He said that like other stakeholders he too has also become immensely benefited. He reiterated his hope that the main goals of the forum seem to have been achieved through the discussion and paper presentation and awareness among the stakeholders has been enhanced. At the end he thanked all the resource persons for their informative paper presentation.

# Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia

## National STAKEHOLDERS FORUM FOR BANGLADESH 25 February 2004

Jointly organized by - SACEP, SEI, UNEP/RRC.AP and DoE

Air pollution is an emerging environmental issue in Asia as it is in other parts of the world. In particular, emissions of sulphur dioxide, nitrogen oxides and particulates have been rising steadily over the past few decades. In addition, rapid growth of cities, together with associated expansion of industry and transport systems, has made the Asian region increasingly concerned with these emissions.

To cope with the issue of transboundary air pollution in South Asia, the “*Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia*” was discussed and adopted by Ministers of the Environment at the seventh meeting of the Governing Council of South Asia Cooperative Environment Programme (SACEP) in Malé, Republic of Maldives.

The Declaration is an agreement which aims to achieve intergovernmental cooperation to address the increasing threat of transboundary air pollution and consequential impacts due to concentrations of pollutant gases and acid deposition on human health, ecosystem function and corrosion of materials. Besides laying down the general principles of intergovernmental cooperation for air pollution abatement, the Declaration sets up an institutional framework linking scientific research and policy formulation. The Malé Declaration also makes provision for cooperation among the key stakeholders in tackling transboundary air pollution in South Asia.

The main aims of the stakeholders forum are to:

- Increase the awareness of transboundary air pollution;
- Share and receive the stakeholders views and ideas on the implementation of the Malé Declaration;
- Improve the information exchange between information generators and users.

### PROGRAM SCHEDULE

09:00	Opening Statements
09:30	Malé Declaration and its implementation; by UNEP
10:00	Implementation of Malé Declaration in Bangladesh; by DoE
10:30	European Experience with Air Pollution and the Inter-governmental Policy Response; by SEI
11:00	Coffee/Tea Break
11:30	Technical presentation on air pollution 1; by Bangladesh stakeholders
12:00	Technical presentation on air pollution 2; by Bangladesh stakeholders
12:45	Lunch
14:00	Technical presentation on air pollution 3; by Bangladesh stakeholders
14:30	Technical presentation on impacts; by SEI
15:00	Discussions and recommendations for the further implementation of Malé Declaration
16:00	Closer of forum





## Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia

### NETWORK MEETING 2003

*Dhaka, Bangladesh*

06-07, October 2003

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#### Tentative Agenda

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#### **06 Oct., 2003 – Monday**

08:30 Registration

09:00-10:15 Opening Session

Opening and welcome Addresses

Tour de table for self-introduction of participants

10:15 Coffee/Tea Break

10:30 Introduction and meeting aims (R. Rajamani)

Adoption of Agenda

11:00 Progress in the implementation (UNEP RRC.AP)

11:30 Presentation on the national monitoring plan (20 min). Each presentation  
will be followed by a short discussion (10 min).

11:30 Bangladesh

12:00 Lunch

13:00-16:40 Presentation on the national monitoring plan (cont...)

13:00 Bhutan

13:30 India

14:00 Iran

14:30 Maldives

15:00 Nepal

15:30 Pakistan

16:00 Sri Lanka

18:00 Reception Dinner

#### **07 October, 2003 – Tuesday**

9:00 Facilitated discussion on further improvement of monitoring network

9:30 Presentation of technical manuals developed for monitoring transboundary  
air pollution under the Malé Declaration (MoC)

10:00 Discussions to update the technical manuals developed for monitoring  
transboundary air pollution under the Malé Declaration

Coffee/Tea Break

11:00 Presentation on emission inventory manual

11:30 Discussions and review of emission inventory manual

12:00 Lunch

13:30 Integrated Assessment Model presentations and discussions

14:30 Other Issues

15:00 Comments and suggestions from SACEP

15:10 Comments and suggestions from SEI

15:20 Comments and suggestions from UNEP

15:30 Summing up (Rajamani)