



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

Eleventh Session of the Intergovernmental Meeting

20-21 January 2010  
Dhaka, Bangladesh

## Tentative Agenda

### Day 1 Wednesday: 20 Jan

#### Opening Session

08:30 Keynote address

Photo session

**10: 55 Coffee/Tea Break**

#### Introduction

11:15 Introduction to the meeting by Regional Facilitator

#### Agenda Item 1: Review of the progress

11:25 Presentations and facilitated discussion for reviewing the progress of Malé Declaration activities in 2008/09 and Plan for Phase IV activities

#### Agenda Item 2: RAPIDC and its implementation

12:00 Presentation of update on RAPIDC and its implementation

#### Agenda Item 3: Review of the data report and consideration of revised monitoring manuals

12:20 Update on National level Implementation and plan for Phase IV of the Malé Declaration

- Bangladesh

- Bhutan

**13:00 Lunch**

#### Agenda Item 3: Continue.....

14:00 - India

-Iran

-Maldives

- Nepal

-Pakistan

-Sri Lanka

**16:00 Coffee/Tea Break**

#### Agenda Item 4: Review of the data report and monitoring related activities

16:15 Presentation and facilitated discussion for reviewing the data report and monitoring related activities on transboundary air pollution monitoring in 2008/09



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

Eleventh Session of the Intergovernmental Meeting

20-21 January 2010  
Dhaka, Bangladesh

## Agenda Item 5: Consideration and adoption of the document on the future development of the Malé Declaration

- 16: 45      Presentation and facilitated discussion on the work plan for the Task Force on future development of the Malé Declaration  
Presentation and facilitated discussion on the establishing a sustainable financial mechanism for the Malé Declaration

## 17:45    *Closing of Day 1*

*(Note: Reception Dinner at Mabel room of Dhaka Sheraton Hotel at 7:30 pm)*

## Day 2 Thursday: 21 Jan

## Agenda Item 6: Work Program of Malé Declaration in 2010

- 8:00          Presentations and facilitated discussion for considering the work programme for the Malé Declaration implementation in 2010

## Agenda Item 7: Joint Forum on the Atmospheric Environment in Asia and Pacific

- 8:30          Presentation and facilitated discussion on a draft Implementation for the Joint Forum on the Atmospheric Environment in Asia and Pacific

## Agenda Item 8: Other issue

- 9:40          Discussion and consideration on other issues to be raised by the participants

## Agenda Item 9: Closing of the Session

- 10:00        Summing up by Regional Facilitator and closing of the meeting

## 11:00    *Field trip to two CDM projects*

### **Field trip Organizer:**

1. Diamond Auto-Bricks Limited, Bulta, Rupjang, Naranganj, Narayanganj
2. WWR Bio-fertilizer Bangladesh Limited, Bulta, Rupjang, Naranganj, Narayanganj



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

## Eleventh Session of the Intergovernmental Meeting

---

20-21 January 2010  
Dhaka, Bangladesh

### Annotated Provisional Agenda

1. Opening of the Session

The Session will be opened by the Secretariat.

The Ministry of Environment and Forest of Bangladesh will deliver the Keynote Address.

2. Adoption of the Agenda

Regional facilitator will provide an introduction to the meeting and the Session will be invited to consider and adopt the Agenda of the Session

3. Report of the Progress of Malé Declaration 2008/09

The Secretariat will make presentations on the progress of the Malé Declaration implementation activities during 2008/09, and the plan for Phase IV. The Session will be invited to review, discuss and endorse the progress report.

4. Update information on RAPIDC and its implementation

SEI will provide an update on Regional Air Pollution in Developing Countries (RAPIDC) and its implementation. The Session will be invited to make comments on the document.

5. Update on National level Implementation and plan for Phase IV of the Malé Declaration

All National Implementation Agencies (NIA) will make presentations on progress of national level implementation, and plans for Phase IV of the Malé Declaration. The Session will be invited to discuss and provide suggestion on the reports.

6. Review of the data report and monitoring related activities

The Secretariat and the Monitoring Committee members (MoC) will make presentations on the data collected, data analysis and monitoring activities conducted during 2008/09. The Session will be invited to review, provide comments and guidance on the document.

7. Consideration and adoption of the document on the future development of the Malé Declaration

The Secretariat will make presentations on the list of Task Force members nominated by the countries and the future development plan of the task Force. A draft Sustainable Financial Mechanism of the Malé Declaration will be included in the presentation. The Session will be invited to review and provide guidance on the document.

8. Consideration of the Work Program of Malé Declaration in 2010

The Secretariat will present the Draft Work Program of the Malé Declaration in 2010. The Session will be invited to discuss and adopt the document.

9. Consideration of the Implementation for Joint Forum on Atmospheric Environment in Asia and the Pacific

A draft Implementation for Joint Forum on Atmospheric Environment in Asia and the Pacific will be presented for comments.

10. Other issues

The Session will discuss and consider other issues to be raised by the participants.

11. Closing of the Session

The facilitator will close the Session.

The Eleventh Session of the Intergovernmental Network Meeting  
of the Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for  
South Asia; 20-21 January 2010

## **Report on the Progress of Malé Declaration after the Tenth Session of the Intergovernmental Meeting (IG10)**

### **I. INTRODUCTION**

1. This report reviews the progress of Malé Declaration activities after the Tenth Session of the Intergovernmental Meeting (IG10) held in Sri Lanka on 20 August 2008.

2. The review is based on the 6 objectives of the Phase IV implementation of the Malé Declaration:

- Strengthen Regional Cooperation for addressing air pollution issues in South Asia;
- Strengthen the air pollution monitoring network and conduct regular monitoring of high quality;
- Enhance the impact assessment capacity of the national institutions and assess the impacts of air pollution and their socio-economic implications in the participating countries;
- Enhance the capacity of National Implementation Agencies (NIAs) to undertake emission inventory and scenario development, atmospheric transfer of pollutants and Integrated Assessment Modelling;
- Assist the member countries of Malé Declaration with the developing air pollution reduction policies and development of a regional framework; and
- Raise awareness for action on air pollution issues through targeted information dissemination.

### **II. STRENGTHEN REGIONAL COOPERATION AND STAKEHOLDER'S PARTICIPATION UNDER THE MALÉ DECLARATION**

#### **II-1 Intergovernmental meeting**

3. The annual intergovernmental and stakeholders meetings are an opportunity for the participating countries to share their experience and to plan for the future. IG10 was held in Colombo, Sri Lanka on 21<sup>st</sup> August 2008. Mr. R. Rajamani, former Secretary of Ministry of Environment and Forests (MoEF), Government of India chaired the meeting as the Regional Facilitator.

4. The Session reviewed the data report and the revised monitoring manuals. The meeting agreed that the revised manuals will be introduced in the Malé Declaration monitoring network after incorporating the above comments. The meeting also agreed to disclose the data report beyond the Malé Declaration network after a review by the Monitoring Committee (MoC) and NIAs.

5. The session endorsed the preliminary impact assessment reports for Malé Declaration (Malé Declaration/IG10/3) and provided inputs for revisions. The comments were incorporated in the reports and the updated versions were circulated to the NIAs for final comments. The reports were then revised according to further comments and final reports are circulated with clearance from the NIAs.
6. The session endorsed, in principle, the draft strategy to implement and upscale the identified best practices in South Asia (Malé Declaration /IG10/4/1) and instructed the Secretariat to incorporate the comments from the countries, if any to the extent possible.
7. The session provided comments and adopted the Terms of Reference (ToR) for the Task Force on the Future Development of Malé Declaration. Comments were incorporated by the Secretariat. The revised ToR was circulated to the NFPs and NIAs on October 2009 for comments to discuss during IG11 meeting. A request letter on nominations of one representative each from NIA and NFP of each participating country to serve as member of the Task Force for three years was sent together with ToR. Most of the countries provide nomination of Task Force members. List of nominated task force member is mentioned in Malé Declaration/IG11/5/1
8. The session also reviewed the progress in 2008 and adopted the work plan for 2009.
9. The Secretariat compiled the proceedings of the meetings and distributed them through the internet. ([www.rrcap.unep.org/Male/](http://www.rrcap.unep.org/Male/))

## **II-2 Regional stakeholders meeting cum coordination meeting**

10. Malé Declaration is one of the few intergovernmental networks to have a formal network for stakeholder consultation, facilitated through annual meetings. The Fifth Regional Stakeholders cum Coordination meeting (RSC5) was held back to back with IG10 in Colombo, Sri Lanka on 19 August 2008. The meeting was attended by the National Focal Points (NFPs) and the NIAs of Malé Declaration as well as representatives from various stakeholders groups and ongoing initiatives on air pollution at national, sub-regional, regional, and global levels. Progress in the implementation of the Malé Declaration during 2008 and the proposed work plan for 2009 were presented and reviewed by the stakeholders. In addition to the review of activities under the Malé Declaration, are updates on air quality related initiatives in South Asia to share their experiences.
11. The Secretariat compiled the proceedings of the meetings and distributed them through the internet. ([www.rrcap.unep.org/male/](http://www.rrcap.unep.org/male/))

## **II-3 Network expansion**

12. The expert institutions, identified by the NFPs were actively involved in the impact assessment studies which has resulted in the expansion of the Malé Declaration network into the impact assessment area. Malé Declaration is now collaborating with Air Pollution Crop Effect Network (APCEN), Corrosion Network (CORNET) and Air Pollution Information Network for Africa (APINA) network. Secretariat had initial discussions with LRTAP convention on potential areas for collaboration. The EMEP steering body and the Executive Body of the LRTAP convention have responded positively.

#### **II-4 National stakeholders forum**

13. National stakeholders forums are being organized as part of the implementation of the Malé Declaration. 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; and
- improve the information exchange between information generators and users.

14. The Second National Stakeholders Workshop for Bangladesh was held in Dhaka on 24 November 2008. The meeting was attended by the NFP, MoEF the NIA, Department of Environment; and representatives from various Ministries, Agencies, research organizations and non-government organizations (NGOs). The inaugural session was chaired by Dr. Khandaker Rashidul Haque, Director General of the Department of Environment. Mr. AHM Rezaul Kabir ndc, the Secretary of the MoEF was the Chief Guest.

15. The workshop was necessary for knowledge updates on air pollution related issues. Conclusions of the workshop included the necessity of working together of the Universities in making effective contribution in the environmental impact studies and the accuracy of the results of the studies since it will go to the policy makers.

### **III. STRENGTHEN CAPACITY BUILDING PROGRAMMES INITIATED DURING PHASE III ON MONITORING**

#### **III-1 Continue operation of the monitoring stations**

16. NIAs continued the operation of the monitoring sites during 2008/9. All the countries have submitted their data to the regional data based at the Malé Declaration Secretariat. Some of the developments in the existing monitoring stations include:

- The NIA in Iran has completed establishment of second monitoring station at Zahedan. The electrical problems have been resolved. The station with the cooperation of security forces installed near the regions police station.
- Progress implementation of four new monitoring stations from India were presented during regional refresher training which stations at Dawki, Meghalaya bordering Bangladesh on Eastern side; Pathankot, Punjab bordering Pakistan; Lakshadweep islands bordering Maldives; Daranga, Baska District near Bhutan Border.
- The new design on wet only collectors presented during IG10 meetings were provided to all 11 stations of Malé Declaration.

17. MoC conducted site audit for India and provided site specific recommendations for further improvement of the data quality.

18. Details of the Malé Declaration monitoring sites are provided in the Annex 1.

### **III-2 Establishment of new monitoring sites**

19. India NIA has sanctioned four new stations under the Malé Declaration. The progress of implementation of these new monitoring stations was presented during the Regional refresher training held on March 2009.

20. In Iran, NIA has completed the installation of equipment at the new monitoring site. They already started the monitoring on sampling and analysis.

### **III-3 Implementation of inter-laboratory comparison**

21. In order to improve the quality of the participating laboratories of Malé Declaration, an inter-laboratory comparison programme was implemented based on an inter-laboratory comparison protocol which was presented during 2007 and reviewed during IG9.

22. The second attempt on inter-lab comparison was completed and the results were discussed during refresher training in March 2009. The results from the second attempt showed a lot of improvement compared to the first attempt.

### **III-6 Regional training programme**

23. The Seventh Regional Training Programme and Refresher Course was held in New Delhi, India on 16-19 March 2009. The main objectives of the training are: a) to strengthen the monitoring capacity; b) to share and discuss the issues encountered in operating the monitoring station in each country; c) to update the implementation activities under Malé Declaration in each country and d) to discuss on prioritization of the Phase IV implementation of Malé Declaration activities. The training was organized by Central Pollution Control Board (CPCB), New Delhi together with UNEP RRC.AP.

24. Thirty two participants from member countries who were drawn from the national implementation agencies and national focal points supporting the monitoring programme under the Malé Declaration participated in the training. Resource persons from SEI, IVL, MoC, CPCB, UNEP RRC.AP, and AIT also attended the training programme.

### **III-7 Central compilation, evaluation, and storage of data**

25. The participating countries have submitted their data and related information obtained through the monitoring activities in 2008/09 to the Secretariat. After quality check by the MoC, the data were added to the regional database. The regional database is available online for the NIAs at: <http://www.rrcap.unep.org/male/>



#### **IV. ENHANCE THE CAPACITY OF NIAs ON EMISSION INVENTORY, SCENARIO DEVELOPMENT AND INTEGRATED ASSESSMENT MODELING**

26. Bangladesh, Bhutan, Nepal and Sri Lanka had submitted the emission inventories for quality check and are seen to be fairly comprehensive. These activities will continue during Phase IV.

#### **V. ENHANCE THE ANALYTICAL AND IMPACT ASSESSMENT CAPABILITY AT THE NATIONAL LEVEL**

##### **V-1. Develop capacity for urban integrated assessments**

27. Kathmandu valley comprises five municipalities and 114 VDCs. Among them, Lalitpur sub metro-politan of Lalitpur district is the second important urban part of the valley. It has 26 wards covering area of 385 square km. The three districts, Kathmandu, Lalitpur and Bhaktapur, share all the economic, social and cultural developments and activities. The estimation of pollutants in the valley is incomplete unless the assessment of these cities are also done. Hence, the study has been extended to quantify the emission and pollutants from various source sectors in grid to get the broader area of pollutants concentration maps. The final pollutant concentration maps combine with RUA-KMC maps is more representing the ambient air pollution status of the urban Kathmandu valley. The final results of the urban integrated assessment will be presented to the IG.

##### **V-2 . Strengthen knowledge on impacts on human health, crop and corrosion**

28. Final report on the health, crop and corrosion impact assessment studies incorporating all the comments from IG10 will be distributed to all the participants of the IG.

#### **VI. PROVIDE DECISION SUPPORT INFORMATION FOR POLICY FORMULATION AND AIR POLLUTION PREVENTION**

29. Decision support information focuses on two major areas:

- Promote case studies in practical options to reduce air pollution;
- Study good practices for local, national and regional level legal and financial measures and provide options tailored for each country.

##### **VI-1 Case studies**

30. UNEP had established a network of experts on eco-housing and has been promoting eco-housing in South Asia through networking, demonstration projects, capacity building and building a knowledgebase. This network is assisting the Malé Declaration countries in disseminating the concept of eco-housing.

31. National workshop on Eco-housing/Green building was held on 23-24 September 2008 in Dhaka, Bangladesh. The objective of the workshop is to build capacity and raise awareness on eco-housing through sharing experiences and expert opinions to help formulate well thought out recommendations for policy dialogue and dissemination of the eco-housing concept among the stakeholders. The workshop was inaugurated by Hon'ble, Chief Guest, Raja Devasish Roy, Special Assistant to Hon'ble Chief advisor, Ministry of Environment and Forests, Agriculture, Fisheries and two special guests, Secretary of the Ministry of Environment and Forest Mr. AHM Rezaul Kabir,ndc and Member, Agriculture, Water Resources and Rural Institution Division of the Ministry of Planning Mr. Md, Shah Alam. The participants were from DoE, Engineers and Architects from HBRI, NGO, University, Institutions and others Stakeholders (planners, architects, the building designers, engineers and the developers). Around 80 participants attended the workshop.

## **VII. RAISE AWARENESS FOR ACTION THROUGH TARGETED DISSEMINATION**

### **VII-1 Newsletter and Brochure**

32. . The Malé Declaration newsletter was launched in 2002 to disseminate Malé Declaration related information to the public and stakeholders. The content of the newsletter has largely been reports on the network's activities. It is expected that the newsletter will serve as a medium for information sharing both within and beyond the Malé Declaration network. The digital file could be downloaded from <http://www.rrcap.unep.org/male> . The newsletter and brochure were distributed to all the members of UNEP Collaborative Assessment Network (CAN), which includes generators and users of environmental data in Asia. The newsletter is also distributed through relevant meetings.

### **VII-2 Information sharing**

33. The Secretariat updated the Malé Declaration website by posting relevant information on Malé Declaration activities, such as training programmes, meeting documents, and the newsletter. Relevant scientific and technical information was disseminated among the participating countries, as well as other countries, relevant organizations, and individuals.

### **VII-3 Dissemination through the youth network**

34. SAYEN has been participating in the awareness activities of the Malé Declaration. A public awareness document titled "Youth for Clean Air" was launched by His Excellency Patali Champika Ranawaka, Minister of Environment and Natural Resources of Sri Lanka, during the inaugural session of IG10 meeting. Based on the publication an animated interactive CD has also developed and launched during regional youth workshop which was held on November 2009 in Sri Lanka. These public awareness information will be disseminated through national level awareness programmes for other Youth, and school.

**VII-4 National level public awareness campaigns**

35. The Awareness campaigns in Sri Lanka is targeted according to the levels of education and understanding of the general public, School and University students and Technical/Scientific professionals. The NIA in Sri Lanka is in the process of implementing the national level awareness activities.

Annex 1: Details of Malé Declaration monitoring sites

<p><b>Country:</b> Bhutan; <b>Station:</b> Gelephu  <b>Latitude and longitude:</b> 27°0'N; 90°30'E  <b>Altitude:</b> ~ 350m above sea level  <b>Site type:</b> Remote site, close to Jigme Singye Wangchuk National Park and Manas National park  <b>Monitoring parameters:</b>  Air quality: PM<sub>10</sub> (particulate mass of particles with diameters &lt;10µm) or Respirable Suspended Particulate Matter (RSPM) or, Total Suspended Particulate Matter (TSPM), Sulphur dioxide (SO<sub>2</sub>) and Nitrogen dioxide (NO<sub>2</sub>).  Wet deposition: pH, and Electric Conductivity (EC)</p>	<p><b>Country:</b> Bangladesh; <b>Station:</b> Kulna  <b>Latitude and longitude:</b> 22° 18.975' N; 89° 02.607'E  <b>Site type:</b> Rural site, located about 30 km North to the Sundarbans forest.  <b>Monitoring parameters:</b>  Air quality: PM<sub>10</sub> (particulate mass of particles with diameters &lt;10µm) or Respirable Suspended Particulate Matter (RSPM), Total Suspended Particulate Matter (TSPM), Sulphur dioxide (SO<sub>2</sub>) and Nitrogen dioxide (NO<sub>2</sub>).  Wet deposition: pH, and Electric Conductivity (EC)</p>
<p><b>Country:</b> Iran; <b>Station:</b> Chamsari  <b>Latitude and longitude:</b> 32° 24'N, 47°31' E  <b>Site type:</b> Rural site, 40 km south to the town of Dehlaran and about 200 km south to Ilam, the headquarters of the province.  <b>Monitoring parameters:</b>  Air quality: PM<sub>10</sub> (particulate mass of particles with diameters &lt;10µm) or Respirable Suspended Particulate Matter (RSPM), Total Suspended Particulate Matter (TSPM), Sulphur dioxide (SO<sub>2</sub>) and Nitrogen dioxide (NO<sub>2</sub>).  Wet deposition: pH, and Electric Conductivity (EC)</p>	<p><b>Country:</b> India; <b>Station:</b> Port Canning  <b>Average annual rainfall:</b> 1750 – 1800 mm  <b>Dominant wind direction:</b> N/NE during winter and S/ SW in summer  <b>Site type:</b> Rural site, close to Synderbans.  <b>Monitoring parameters:</b>  Air quality: PM<sub>10</sub> (particulate mass of particles with diameters &lt;10µm) or Respirable Suspended Particulate Matter (RSPM), Total Suspended Particulate Matter (TSPM), Sulphur dioxide (SO<sub>2</sub>) and Nitrogen dioxide (NO<sub>2</sub>).  Wet deposition: pH, and Electric Conductivity (EC)</p>
<p><b>Country:</b> Maldives; <b>Station:</b> Hanimaadhu  <b>Latitude and longitude:</b> 6.78° N and 73.18° E  <b>Altitude:</b> ~2 m  <b>Site type:</b> Remote site, in the northernmost atoll of Maldives located about 400 km to the north of the country's capital, Malé.  <b>Monitoring parameters:</b>  Air quality: Sulphur dioxide (SO<sub>2</sub>) and Nitrogen dioxide (NO<sub>2</sub>).</p>	<p><b>Country:</b> Nepal; <b>Station:</b> Rampur  <b>Latitude and longitude:</b> 27° 38'N; 84° 20'E  <b>Altitude:</b> 164.95 m  <b>Site type:</b> Rural site, located about 15 km to the south of the Royal Chitawan national park.  <b>Monitoring parameters:</b>  Air quality: PM<sub>10</sub> (particulate mass of particles with diameters &lt;10µm) or Respirable Suspended Particulate Matter (RSPM), Total Suspended Particulate Matter (TSPM), Sulphur dioxide (SO<sub>2</sub>) and Nitrogen dioxide (NO<sub>2</sub>).  Wet deposition: pH, and Electric Conductivity (EC)</p>
<p><b>Country:</b> Pakistan; <b>Station:</b> Bahawalnagar  <b>Site type:</b> Rural site  <b>Monitoring parameters:</b>  Air quality: PM<sub>10</sub> (particulate mass of particles with diameters &lt;10µm) or Respirable Suspended Particulate Matter (RSPM), Total Suspended Particulate Matter (TSPM), Sulphur dioxide (SO<sub>2</sub>) and Nitrogen dioxide (NO<sub>2</sub>).  Wet deposition: pH, Electric Conductivity (EC)</p>	<p><b>Country:</b> Sri Lanka; <b>Station:</b> Dutuwewa  <b>Latitude and longitude:</b> 08° 20.952' N; 80 45.751'E  <b>Altitude:</b> ~ 100m  <b>Site type:</b> Remote site, in a forest in the north-central part of Sri Lanka  <b>Monitoring parameters:</b>  Air quality: PM<sub>10</sub> (particulate mass of particles with diameters &lt;10µm) or Respirable Suspended Particulate Matter (RSPM), Total Suspended Particulate Matter (TSPM), Sulphur dioxide (SO<sub>2</sub>) and Nitrogen dioxide (NO<sub>2</sub>).  Wet deposition: pH, Electric Conductivity (EC), Na<sup>+</sup>, K<sup>+</sup>,</p>



---

**20 - 21 January 2010  
Dhaka, Bangladesh**

**PLAN**

**FOR THE**

**PHASE IV IMPLEMENTATION**

**(Malé Declaration /IG11/2/1)**

## 1. Background

In 1998, UNEP together with the Stockholm Environment Institute (SEI) drew attention to the possibility of the impacts of transboundary air pollution in South Asia. This initiative led to the adoption of the “Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia” by eight participating countries—Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan, and Sri Lanka during the Seventh Governing Council of South Asia Cooperation Environment Programme (SACEP). The initiative was funded by the Swedish International Development Cooperation Agency (Sida) as part of the Regional Air Pollution in Developing Countries (RAPIDC) programme.

The purpose of the Malé Declaration is to promote establishment of a scientific base for prevention and control of transboundary air pollution in South Asia to encourage and facilitate coordinated interventions of all the stakeholders on transboundary and shared air pollution problems at national and regional levels’

## 2. Current Status

During Phase I of the Malé Declaration implementation programme (1998-2000), a network was established, baseline studies were completed and action plans drawn up. The baseline studies provided valuable information on air pollution management programmes in the participating countries and clearly identified the gaps in the existing monitoring systems to understand transboundary air pollution. Consequently, a capacity building programme was initiated in Phase II of the implementation programme which included strengthening the monitoring network and training. National and regional level stakeholders consultations were also held during this phase. Capacity building activities initiated during the implementation of Phase II have made significant impact at the national and regional level. The Phase III implementation (2005 to 2009), continued the

capacity building for monitoring which was initiated during Phase II. In addition, capacity building for impact assessment and prevention of air pollution were also initiated.

## 3. Objective for Phase IV Implementation

The objectives of carrying out the Malé Declaration activities in Phase IV are to:

1. Strengthen Regional Cooperation for addressing air pollution issues in South Asia
2. Strengthen the air pollution monitoring network and conduct regular monitoring of high quality
3. Enhance the impact assessment capacity of the national institutions and assess the impacts of air pollution and their socio-economic implications in the participating countries
4. Enhance the capacity of National Implementing Agencies (NIAs) to undertake emission inventory and scenario development, atmospheric transfer of pollutants and Integrated Assessment Modelling
5. Assist the member countries of the Malé Declaration with developing air pollution reduction policies and development of a regional framework
6. Raise awareness for action through targeted information dissemination







Objectives	Activities	Description	Outputs/ performance indicators	Year 2010				Year 2011				Year 2012			
	<b>2.4 Develop the regional harmonised database for use in risk assessments and trend analysis</b>	- The data will first be cleared and quality checked by the NIAs and in some cases considered by National Advisory Committee. The secretariat will maintain the database. There will be a report informing about the progress in developing the database.	<ul style="list-style-type: none"> <li>Data reports developed for the IG meetings outlining data quality, trends and implications</li> </ul>												
		- Data reports each year will discuss data quality and implications by putting the data into context using modelling data.	<ul style="list-style-type: none"> <li>Publicly released data reports periodically produced when cleared by IG meeting on advice of Task Force.</li> </ul>												
<b>3. ENHANCE THE IMPACT ASSESSMENT CAPACITY OF THE NATIONAL INSTITUTIONS AND ASSESS THE IMPACTS OF AIR POLLUTION AND THEIR SOCIO-ECONOMIC IMPLICATIONS IN THE PARTICIPATING COUNTRIES</b>	<b>3.1 Assessing the socio-economic impact of air pollution on the health of people in Malé Declaration Countries</b>	<ul style="list-style-type: none"> <li>The aim of the health study in this phase is the demonstration of the impacts in one location.</li> <li>The simple epidemiological study undertaken in Bangladesh investigating the impact of air pollution on school children will be expanded to one more country.</li> <li>The results will be discussed at 1 health workshop and at national and regional stakeholder meetings.</li> </ul>	<ul style="list-style-type: none"> <li>Results of studies on the exposure of children to air pollution, and their response through schools studies.</li> </ul>												
	<b>3.2 The impact of ozone and climate change on arable agriculture, food security and livelihoods in South Asia</b>	<ul style="list-style-type: none"> <li>Assessments to quantify yield losses in relation to prevailing O<sub>3</sub> levels and climate using experimental approaches will be conducted in all Malé countries</li> <li>Experimental approaches will demonstrate the absolute magnitude of crop yield losses at the experimental sites. Methods will focus on chemical-protectant studies (EDU studies) which will provide estimates of yield losses occurring under the ambient O<sub>3</sub> pollution climate.</li> <li>EDU studies will be performed</li> </ul>	<ul style="list-style-type: none"> <li>Results of regional workshop</li> <li>Results of experiments will be analysed and presented during regional workshop. A workshop report as well as a policy brief – focusing on impacts of air pollutants on agriculture and hence food security in the region - will be prepared and disseminated among workshop participants and interested scientists and policy makers.</li> </ul>												

Objectives	Activities	Description	Outputs/ performance indicators	Year 2010			Year 2011			Year 2012						
		during one possibly two year(s), using mung bean because of its i) nutritional value in South Asian diets, ii) economic importance for small-scale farmers as well as national economies and iii) reported O3-sensitivity. - NIAs have nominated expert institutions to conduct the crop impact assessment studies and experimental studies that have been initiated in 6 countries. A regional workshop will be convened to discuss the results during year 2 or 3 of this project phase. If required, an additional workshop mainly focusing on training at beginning of this project phase could be held back-to-back with a policy multi-stakeholder dialogue meeting in Asia, scheduled for the first half of 2010.														
	<b>3.4 Develop a synthesis assessment of impacts of air pollution using available data and knowledge for policy makers</b>	-It is proposed that the data from the Malé Declaration and related programmes on emissions, impacts and levels of pollution be used to develop a short overview assessment report designed to inform policy makers.	<ul style="list-style-type: none"> <li>Short summary assessment report pulling together relevant information</li> </ul>													
<b>4. ENHANCE THE CAPACITY OF NATIONAL IMPLEMENTING AGENCIES TO UNDERTAKE EMISSION INVENTORY AND SCENARIO DEVELOPMENT, ATMOSPHERIC TRANSFER OF POLLUTANTS AND INTEGRATED</b>	<b>4.1 Developing national emission inventories and scenarios for air pollutants</b>	- Improvement of Malé emissions inventory preparation Manual and Workbook allowing co-benefits with certain GHGs, temporal and spatial distributions to be investigated.  -Improvement and updating (to 2005) of national level emission inventories and development of scenarios:  -Training workshops will be held for personnel designated by NIAs to undertake the emission inventories, based upon the manual and	<ul style="list-style-type: none"> <li>Improved manual including new methods for specific sectors, black and organic carbon, GHGs and spatial and temporal distributions.</li> <li>Improved national emission inventories with quality checking</li> <li>Report from 3 training workshops organize together with Regional Refresher course</li> </ul>													







The Eleventh Session of the Intergovernmental Network Meeting of the Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia; 20-21 January 2010, Dhaka, Bangladesh

### **Work Programme in 2010 for Malé Declaration**

#### **I. INTRODUCTION**

1. The implementation of Malé Declaration (MD) Phase IV started on 1<sup>st</sup> December 2009 which will continue to assist the member countries to enhance their regional cooperation, monitoring, impact assessment, strengthen the initiatives started in the first three phases, and to initiate new ones. The implementation will follow the institutional arrangement of (MD), which was adopted during the Eight Session of the Intergovernmental Network Meeting (IG8) in Bhutan.

2. An implementation plan for Phase IV (MD/IG11/2/1) is submitted to the Eleventh Session of the Intergovernmental Network Meeting (IG11). This report describes the work programme of MD in 2010 including the remaining activities for the calendar year 2009.

#### **II. OBJECTIVES**

3. Phase IV implementation will continue to focus on assisting the member countries of the MD in the reduction of air pollutants. The objectives are:

- Strengthen Regional Cooperation for addressing air pollution issues in South Asia;
- Strengthen the air pollution monitoring network and conduct regular monitoring of high quality;
- Enhance the impact assessment capacity of the national institutions and assess the impacts of air pollution and their socio-economic implications in the participating countries;
- Enhance the capacity of National Implementation Agencies (NIAs) to undertake emission inventory and scenario development, atmospheric transfer of pollutants and Integrated Assessment Modelling;
- Assist the member countries of MD with the developing air pollution reduction policies and development of a regional framework; and
- Raise awareness for action on air pollution issues through targeted information dissemination.

4. Towards achievement of Phase IV objectives, the implementation plan is developed based on availability of resources.

### III. STRENGTHEN REGIONAL COOPERATION FOR ADDRESSING AIR POLLUTION ISSUES IN SOUTH ASIA

#### III-1 Intergovernmental meeting, regional stakeholders cum coordination meeting

5. The Twelve Session of the Intergovernmental Meeting (IG12) will be held in January 2011. Countries willing to host the IG12 are invited to express their intention to the Secretariat. The Secretariat will discuss the date and venue with the host country.

6. The IG12 may wish to consider the following agenda items, which will be elaborated later by the Secretariat in communication with the participating countries:

- review of the progress of MD activities in 2010;
- review of the data report on transboundary air pollution monitoring in 2009/10;
- report from the Task Force on Future Development of the MD:
  - Decision on “Sustainable Financial Mechanism for MD;
  - Discussion on feasibility report on the establishment of specialist regional centres;
- consideration of the work programme of MD in 2011; and
- any other issues raised by the participating countries.

7. The Sixth Session of the Regional Stakeholders cum Coordination (RSC6) meeting will be held before the IG12 in January 2011. RSC6 may wish to consider the following agenda items, which will be elaborated later by the Secretariat in communication with the participating countries, stakeholders, and representatives of regional initiatives:

- review of the progress of MD activities in 2010;
- updates from air pollution related activities in the member countries of MD;
- updates from initiatives focusing on air pollution at regional and sub-regional level; and
- updates from initiatives focusing on air pollution at global level.

#### III-2 National Stakeholders meeting

8. The MD needs to reach out to, and involve in its activities, various important stakeholders at the regional and national levels. All the participating countries have organized national stakeholder meeting in their countries during recent years. One National Stakeholders meeting will be held in June 2010. NIAs, in principle, should cover part of the expenses for conducting the national stakeholders meeting. The major aims of the national stakeholders meetings include:

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

### III-3 Task Force on Future Development of MD (TFFD)

9. Two TFFD meetings will be held during 2010. The First meeting will be held in March 2010 and the Second meeting is scheduled for October 2010. The participants will be from officially nominated member of the TFFD from National Focal Points (NFP) and NIAs. The major aims of the meetings are:

- discuss on the draft document on the Sustainable Financial Mechanism for MD incorporating the comments and guidance of the IG11 for the consideration of the IG12;
- compile the list of Terms of References (ToRs) for each specialist centre;
- compile the list of relevant institutions capable of functioning as the regional centres; and
- discuss on the draft feasibility study on developing a regional framework for consideration of the IG12.

10. The first meeting will initiate the discussions on the contents and formats of the outcomes of the Task Force and the second meeting will review all outcomes for the submission to the IG12.

## IV. STRENGTHEN THE AIR POLLUTION MONITORING AND CONDUCT REGULAR MONITORING OF HIGH QUALITY

### IV-1 Regional training programme on monitoring

11. The Eighth Regional Refresher training on monitoring transboundary air pollution will be organized in May 2010. Major objectives of the training will include:

- review the implementation of Quality Control and Quality Assurance (QA/QC) programme, specially on the data sampling and analysis;
- discussion and training on data analysis;
- review the data report 2009/10; and
- discuss the issues encountered in operating the monitoring sites in each country.

### IV-2 Implementation of inter-laboratory comparison

In order to improve the quality of the participating laboratories of MD, the inter-laboratory comparison was initiated and completed two attempts during 2008/09. The third attempt will be implemented in 2010 for ensuring high data quality.

### IV-3 Central compilation, evaluation, and storage of data

12. NIAs will continue to operate the existing monitoring sties. The participating countries will submit the data and related information obtained through the regular monitoring activities to the Secretariat. The Monitoring Committee (MoC) will conduct a data verification to ensure the quality of the data. After the quality check by the MoC, the data will be added to the regional



database. Based on this, a data report for 2009/2010 will be compiled by the Secretariat. After the verifications, the data will be available for the participating countries at [www.rrcap.unep.org/male/](http://www.rrcap.unep.org/male/) website. The data report will also be disseminated.

13. In order to improvement of monitoring activities at the national level, IG9 decided to develop Standard Operating Procedures (SOP). Draft SOP has been developed and final manual will be disseminated to all NIAs and technical personal in charge of Malé monitoring site) during 2010. All NIAs are encouraged to adopt the SOP manual for monitoring stations.

#### V. ENHANCE THE CAPACITY OF NIAs TO UNDERTAKE EMISSION INVENTORY AND SCENARIO DEVELOPMENT, ATMOSPHERIC TRANSFER OF POLLUTANTS AND INTEGRATED ASSESSMENT MODELING

##### V-1 Emission inventory

14. Most of the participating countries have submitted their national level emission inventories for the year 2000. In 2010, NIAs will continue to update/compile the emission inventories with 2005 data.

##### V-2 Training workshop

15. Regional training on Emission Inventory is planning to be held together with the Eighth Regional Refresher training during May 2010. Updated Integrated Information and Assessment System (IIAS) and Integrated Assessment modeling will also be included in training course.

#### VI. ENHANCE THE IMPACT ASSESSMENT CAPACITY OF THE NATIONAL INSTITUTIONS AND ASSESS THE IMPACTS OF AIR POLLUTION AND THEIR SOCIO-ECONOMIC IMPLICATIONS IN THE PARTICIPATING COUNTRIES

16. Final reports on health crop, corrosion impact assessment, and rapid urban assessment developed based on the Phase III activities will be distributed to all NIAs. NIAs will be encouraged to inform the policy makers the findings of the impact assessments.

17. National level implementation arrangements for conducting health impact assessment and crop impact assessment will be developed. These impact assessment studies will be initiated during second quarter of 2010. The Secretariat will contact each NIA and designated expert institutions for the development of the implementation plan.

## VII. ASSIST THE MEMBER COUNTRIES OF THE MALÉ DECLARATION WITH THE DEVELOPING AIR POLLUTION REDUCTION POLICIES AND DEVELOPMENT OF A REGIONAL FRAMEWORK

### VII-1 Regional workshop on control and prevention of air pollution

18. The first regional-level training-cum-awareness workshop will be conducted for middle-level policy makers during the second quarter of 2010. This workshop will be designed to place all the information on prevention and control at the fingertips of governments in the region. It will contain three modules: (i) the context - fundamentals of air pollution; (ii) negotiation techniques to develop policy tools, and (iii) a compilation of the material on policies and measures and issues related to implementation. A report on strategies to implement and upscale the identified best practices in South Asia, which was submitted to the Tenth Session of the Intergovernmental Network Meeting (IG10) will also be used as a training material.

### VII-2 Conduct feasibility study on developing a regional framework

The TFFD member will conduct a feasibility study on developing a regional framework for consideration of the IG12. This document will be discussed during TFFD meetings before submitting to IG12.

### VII-3 National-level implementation

19. At the national level, country-specific measures for air pollution reduction would be prepared. This activity will include identifying the developing national policy, outlining the most likely or useful measures to be introduced over the next 5 years. It is proposed that the appropriateness of available measures be assessed for one country as a demonstration.

### VII-4 Clean fuels and vehicles - sulphur

20. In order to support the development of air pollution reduction policies, a regional workshop for member countries will be held to promote the adoption of clean fuels and vehicles policies and raise awareness of the issues surrounding such fuels. Activities will be initiated, during and after the workshop, to support member countries to introduce 50 parts per million (ppm) low sulphur fuel and clean vehicle standards. Regional and national fuels and vehicle data will be disseminated, and best practices in vehicle emissions in South Asia identified. High-level policy makers in relevant ministries (Transport, Oil, Energy, Roads, Standards) will also be targeted to broaden the awareness of the issues.

## VIII. RAISE AWARENESS FOR ACTION THROUGH TARGETED INFORMATION DISSEMINATION

### VIII-1 Newsletter

21. The MD network newsletter was launched in 2002 to disseminate the MD related information to the public and stakeholders. The content of the newsletter has largely been reports on the network's activities. Two issues of the newsletter will be published during 2010 period. NIAs are encouraged to submit articles and news items for the newsletter.

### VIII-2 Awareness materials

22. National level public awareness campaigns on the impacts of air pollution will be continued in Sri Lanka. Outcomes of these activities will be compiled before June 2010.

23. A publication/multimedia presentation on air pollution targeting youth was launched during Phase III. The multimedia presentation will continue to be used as a tool/material in youth training workshops.

### VIII-4 Information sharing

24. The Secretariat will update the MD website by presenting relevant information on MD activities, such as training programmes, meeting documents, and newsletter. MD website provides useful weblinks to national air quality data from three countries (i) Central Pollution Control Board, India; (ii) Ministry of Environment, Science and Technology, Nepal; and (iii) Air Resource Management Center, Sri Lanka. Other participating countries are encouraged to provide appropriate weblinks to the Secretariat.

**The Eleventh Session  
of the Intergovernmental Meeting  
of the Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects  
for South Asia; 20-21 January 2010**

**Work plan of the Task Force on the Future Development (TFFD) of Malé Declaration  
for year 2010**

1. The Ninth Session of the Intergovernmental Meeting (IG9) held on 13<sup>th</sup> September 2006 in Maldives proposed the establishment of a Task Force on Future Development of Malé Declaration during the phase IV implementation aiming for further development of the Malé Declaration.
2. The Tenth Session of the Intergovernmental Meeting (IG10) held in Sri Lanka on 21<sup>st</sup> August 2008 discussed and adopted a Terms of Reference (TOR) for the Task Force which was presented during the meeting. The revised version of the ToR for TFFD, incorporating all the comments from IG10 was circulated to the National Focal Points (NFPs) and National Implementing agencies (NIAs) of the Malé Declaration countries during October 2009. The TFFD will have 3 tasks: (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. The revised ToR is enclosed as Annex 1.
3. As mentioned in the TOR, the Task Force is a subsidiary body of the Intergovernmental Meeting (IG). The IG is the governmental body which overlooks the implementation of Malé Declaration and the Task Force will report to the IG. The Malé Declaration Secretariat (AIT/UNEP RRC.AP) will serve as the secretariat for the TFFD. The regional facilitator will serve as the advisor to the Task Force.
4. The Secretariat communicated to the member countries to nominate Task Force members from NFPs and NIAs. Member countries have nominated members for the Task Force as given in the Annex 2. Member countries who have not yet nominated the Task Force members are requested to provide the details of their TFFD members to the Secretariats by first week of February 2010. Relevant actors at the sub-regional level, including South Asian Association for Regional Cooperation (SAARC) and South Asia Cooperative Environment Programme (SACEP) will also be invited for the Task Force meetings. Related organizations from other regions will be asked to provide expertise and to join the meeting of the Task Force, as appropriate.
5. Schedule of activities for the TFFD is given in the Annex 3.
6. The First TFFD meeting is proposed to be held on 15-16 March 2010. One Chairperson and two Vice-chairpersons will be elected for three-year term of the Task Force sessions during the meeting. The meeting may wish to consider the following agenda items, which will be elaborated later by the Secretariat in communication with the participating countries:
  - a. Review the second draft document on Sustainable Financial Mechanism for MD incorporating the comments and guidance of the IG11;

- b. Discussion on the outline of the feasibility report on the establishment of specialist regional centres prepared by consultant;
- c. Discussion on the outline of the TOR for each specialist centre; and
- d. Discussion on the outline of the feasibility study of the proposed regional framework such as convention on air pollution in South Asia.

7. The Second TFFD meeting will be held in September 2010. The documents agreed during this meeting are for submission, decision and guidance of the IG12 to be held in January 2011. The meeting may wish to consider the following agenda items:

- Review the third draft document on Sustainable Financial Mechanism for MD for submission and decision to the IG12;
- Review the first draft document of the TOR for each specialist centre for the submission to the IG12;
- Review the first draft feasibility report on the establishment of the specialist regional centres for the submission to the IG12
- Review the second draft document on the feasibility study of the proposed regional framework such as convention on air pollution in South Asia for the submission guidance and decision of the IG12

## Annex 1:

### **Terms of Reference for the Task Force on Future Development of Malé Declaration**

1. In line with the decisions at the Ninth Session of the Intergovernmental Meeting (IG9) held in Maldives, on 13<sup>th</sup> September 2006, a Task Force on Future Development (TFFD) of Malé Declaration (hereinafter referred to as the “Task Force”) will be established on an ad hoc basis during the phase IV implementation of the Malé Declaration.
2. The Task force will consist of representatives from National Focal Points (NFPs) and National Implementing agencies (NIAs). The members of the Task Force from the participating countries shall be nominated by NFPs and NIAs. It should be adequately represented by relevant actors at the sub-regional level, including South Asian Association for Regional Cooperation (SAARC) and South Asia Cooperative Environment Programme (SACEP). Representatives of related organisations from the other regions will be asked to provide expertise and asked to join the meeting of the Task Force, as appropriate.
3. One Chairperson and two Vice-chairpersons will be elected for three- year term of the Task Force sessions.
4. The Task Force is a subsidiary body of the Intergovernmental Meeting (IG). The IG is the governmental body which overlooks the implementation of Malé Declaration and the Task Force will report to the IG. The Malé Declaration Secretariat (AIT/UNEP RRC.AP) will serve as the secretariat for the Task Force. The regional facilitator will serve as the advisor to the Task Force.
5. The Task Force will, under the guidance of the IG and with the help of the NFPs’, NIAs,’ and technical advisers:
  - Task 1: Conduct a feasibility study on the establishment of specialized regional centres*
    - Compile a Terms of Reference (TOR) for each specialist centre and, on the basis of this, prepare a list of relevant institutions capable of functioning as the regional centres;
    - Visit the potential institutions to study the existing capacities;
    - Develop feasibility report on the establishment of new technical centres. The feasibility study will finalise the appropriate focus of the different specialist centres, develop term of reference and identify the organizations that could coordinate the relevant technical development;
    - Convene meetings of the Task Force; and
    - Submit the feasibility report for consideration by the IG.
  - Task 2: Conduct a feasibility study on developing a regional framework such as convention on air pollution in South Asia*
    - Conduct a feasibility study of the proposed regional framework such as convention on air pollution in South Asia;
    - Convene meetings of the Task Force; and

- Submit the feasibility study for consideration by the IG.

*Task 3: Develop sustainable financing mechanism for the Malé Declaration*

- Conduct a study of the proposed sustainable financing mechanism for the Malé Declaration;
- Convene meetings of the Task Force; and
- Submit the findings for consideration by the IG.

5. The Task Force, may establish sub-Task Force for specific areas considering that the items of TOR contains varied topics.

## Annex 2:

### Nominated list of Task Force members by the NPFs and NIAs

<p><b>Bangladesh</b></p> <p>Ms. Dilruba Yesmin Deputy Chief Ministry of Environment and Forests Room# 1309 Building 3 Building #6 Bangladesh Secretariat, Dhaka , Bangladesh Fax: 880-2-7619210 Email: <a href="mailto:adrita_2006@yahoo.com">adrita_2006@yahoo.com</a></p>	<p>Mr. Mahmood Hasan Khan Deputy Director (Research) Department of Environment Paribesh Bhaban Room No. 101, E-16, Agargaon, Sher-E-Bangla Nagar, Dhaka-1207, Bangladesh</p>
<p><b>Bhutan</b></p> <p>Mr. Tshewang Dorji, Environment Officer, National Environment Commission P.O. Box 466, Thimphu, Bhutan Fax: 975-2-323385 Email: <a href="mailto:dorji.tshewang@nec.gov.bt">dorji.tshewang@nec.gov.bt</a></p>	
<p><b>India</b></p> <p>Mr. R. N. Jindal, Additional Director Ministry of Environment and Forests Paryavaran Bhawan, CGO Complex, Lodi Road, New Delhi-110003, India Tel: 91-011-24366347 Mobile: 9868113036 Email: <a href="mailto:rnjindal@yahoo.com">rnjindal@yahoo.com</a></p>	<p>Mr. J.S. Kamyotra Member Secretary Central Pollution Control Board Parivesh Bhavan, East Arjun Nagar Delhi 110 032 Phone # 91-11-22306387 Fax # 91-11-22301995 E-mail: <a href="mailto:kamyotra.cpcb@nic.in">kamyotra.cpcb@nic.in</a></p>
<p><b>Iran</b></p> <p>Dr. Hassan Asillian Deputy Head of the Department for Human Environment Department of the Environment, Environmental Research center Pardisan Nature Park, Shahid Hemat Highway, Tehran-Iran, Islamic Republic of Iran Tel: (+9821) 88267991; Fax: (+9821) 88267990</p>	<p>Mr. Masood Zandi, Deputy of Air Pollution Research Bureau- Department of Environment Environmental Research Center, Hemmat Highway Pardisan Park Tehran, Islamic Republic of Iran Tel (O): 98-21-8267996, Fax (O): 98-21-8269920, Email: <a href="mailto:Zandi740@yahoo.com">Zandi740@yahoo.com</a></p>
<p><b>Maldives</b></p>	
<p><b>Nepal</b></p> <p>Ms. Sushma Upadhyay Chief of Environmental Pollution Control and Monitoring Section</p>	<p>Ms. Bidya Banmali Pradhan Environment Officer, MENRIS International Centre for Integrated Mountain Development (ICIMOD) P.O. Box 3226, Kathmandu, Nepal</p>



Ministry of Environment Singha durbar, Kathmandu, Nepal Email: <a href="mailto:upadhyay_sushma@hotmail.com">upadhyay_sushma@hotmail.com</a>	Tel (O): 977-1-525313 ext. 566; (R): 977-1-253044 Fax: 977-1-524509/536747 Email: <a href="mailto:bbanmali@icimod.org.np">bbanmali@icimod.org.np</a>
<b>Pakistan</b>	
<b>Sri Lanka</b>  Mr. R N R Jayaratne Assistant Director Central Environmental Authority 104, Robert Gunawardana Mawatha, Battaramulla, Sri Lanka Email: <a href="mailto:nuvanj@cea.lk">nuvanj@cea.lk</a>	

## Annex 3:

### Activities Timetable of the Task Force

Activities	Year 2010	Year 2011	Year 2012
<b>Task 1: Conduct a feasibility study on the establishment of specialized regional centres</b>			
Activity1: Compile TORs for each specialist centre	■	■	
Activity2: Prepare a list of relevant institutions capable of functioning as the regional centres	■	■	
Activity3: Develop feasibility report on the establishment of new technical centres.		■	■
Activity4: Submit the feasibility report for consideration by IG			■
<b>Task 2: Conduct a feasibility study on developing a regional framework such as convention on air pollution in South Asia</b>			
Activity 1: Conduct a draft feasibility study on developing a regional framework for the consideration by IG12	■	■	
Activity 2: Finalize the feasibility study on developing a regional framework with comments from IG12		■	■
Activity 3: Submit the feasibility study for consideration by IG13			■
<b>Task 3: Develop a sustainable financing mechanism for the Malé Declaration</b>			
Activity 1: Develop draft sustainable financing mechanism of MD	■	■	
Activity 2: Submit the sustainable financing mechanism for consideration by IG 12		■	

### Timetable for Task Force Meetings

TF Meetings	Year 2010	Year 2011	Year 2012
First Task Force meeting (Mar 2010)	■		
Second Task Force meeting (Oct 2010)		■	
Third Task Force meeting (Mar 2011)		■	
Fourth Task Force meeting (Sep 2011)			■
Fifth Task Force meeting (Mar 2012)			■
Sixth Task Force meeting (Sep 2012)			■



The Eleventh Session of the Intergovernmental Network Meeting  
of the Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary  
Effects for South Asia; 20-21 January 2010, Dhaka, Bangladesh

## **Establishment of Sustainable Financing Mechanism for Malé Declaration**

### **I. BACKGROUND AND OBJECTIVES**

1. Air pollution in South Asia has become a priority issue for all the countries of the region for various reasons. The pollutants released in the air have increased with the use of fossil fuels in the sectors of transport, energy production and industry. Indoor air pollution and biomass burning have also added to the problem. These pollutants cause adverse effects on human and animal health, crop and animal husbandry and also by corrosion of materials and objects of cultural heritage. These pollutants can also travel across national boundaries. Though the countries of the region are at the base of the economic growth ladder, there is need to act in time and with vigilance to promote preventive and control measures and also do scientific studies on transboundary movements of air pollutants. While each country will, in its own interests and within its own means, take measures to prevent and control air pollution, it is necessary to monitor transboundary effects, if any. In a recognition of all these factors, the Environment Ministers of the region adopted the Malé Declaration in Maldives in 1998 in a meeting convened by South Asia Cooperative Environment Programme (SACEP) and United Nations Environment Programme (UNEP)

2. The salient points of the Malé Declaration (hereinafter described as MD) include:

- i) Analysis (economic and technical) of the origins, causes and effects of local and regional air pollution using expertise in various institutions and building capacity in them;
- ii) Development of strategies to minimize air pollution;
- iii) Co-operation in monitoring arrangements and standardizing methodologies for monitoring, beginning with sulphur, nitrogen and volatile organic compounds;
- iv) Transfer of financial resources and technology for the programme and training securing incremental assistance from bilateral and multilateral sources; and
- v) Encouragement of key stakeholders in the effort and activities.

3. MD further stressed improvement of national reporting systems as well as scientific and academic effort. The process would continue in stages to draw up and implement national and regional action plans and protocols based on a fuller understanding of transboundary air pollution issues. In the process, appropriate national structures and networks will be evolved and the good offices of regional, international, bilateral and multilateral agencies in this process will be used, as appropriate.

4. It may be pointed out at this juncture that MD visualized only incremental assistance and good offices of international, bilateral and multilateral agencies being taken. In other words, the major effort for funding and setting up structures, networking etc., would come from member countries themselves.

## II. PROGRESS SO FAR

5. The implementation of MD so far has been in phases with funding from Swedish International Development Agency (Sida) and secretarial support from UNEP RRC/AP. Member countries have so far contributed only in kind and that too marginally by helping in the organizing of meetings on their soil and providing land and appurtenant facilities for the monitoring stations. No cash contributions have come so far from member countries and it is their contribution which has been incremental and small while the 'good offices' of international agencies have also meant underwriting the financial component of MD thus far.

6. Inline with the Phase I implementation plan adopted in February 1999 by the First Intergovernmental meeting (IG1), countries prepared the baseline studies on the national structures, modalities, regulations, institutions and capacities available to tackle air pollution. Each country nominated a National Focal Point (NFP) which are generally at the policy level and National Implementing Agency (NIA) which are generally authorities or agencies engaged in environmental regulation. The baseline studies led to the formulation of the National Action Plans by the NFPs and NIAs which indicated requirements for monitoring equipment and capacity building. The second intergovernmental meeting (IG2) reviewed and adopted these outputs and also agreed that national and sub-regional stakeholders meetings will be held.

7. An important decision of the second meeting was the creation of a Monitoring Committee (MoC) with experts on air pollution which was mandated to study the national needs in monitoring and capacity building. The three-member MoC prepared a strategy paper by June 2001 including criteria for location of monitoring sites near the borders of the countries. An outline of a technical manual was also prepared.

8. In Phase II, the third intergovernmental meeting (IG3) reviewed the strategy and adopted the monitoring manual for training and requested the MoC to prepare a full-fledged manual. The first regional training programme was conducted in UNEP RRC/AP in May 2002 bench mark criteria for setting up monitoring stations were prepared.

9. The fourth intergovernmental meeting (IG4) at Kathmandu in July 2002 discussed these developments. This was followed by activity in 2003 to set up monitoring stations in all the countries starting with Nepal and covering Bhutan, Sri Lanka, Maldives, Bangladesh, India, Iran and Pakistan. The second regional training workshop was held in India in August 2003 run by the Central Pollution Control Board.

10. The fifth intergovernmental meeting (IG5) held at Dhaka in October 2003 witnessed –presentations by member countries on various activities under MD and by Stockholm Environment Institute (SEI) on parallel activities on emission inventories compilation and air pollution modeling. An outline of Phase III activity was also discussed. The first regional stakeholders meeting was held after this meeting in Dhaka. In March 2004 a workshop on rapid urban assessment, health impacts and corrosion assessment was held in New Delhi, India under the Regional Air Pollution in Developing Countries (RAPIDC) programme funded by Sida.

11. The sixth intergovernmental meeting (IG6) was held at Teheran, Iran wherein plan of implementation of Phase III was adopted. Apart from carrying forward activities like capacity building and coordinated interventions of stakeholders, it was decided to strengthen analytical and assessment capabilities through integration of data from monitoring stations, local pollution prevention and rapid impact assessment studies. Raising awareness through targeted information dissemination was also agreed upon.

12. In the seventh intergovernmental meeting (IG7) at New Delhi in October 2005 Phase III plans were firmed up for implementation up to August 2008. Data reports from air samplers were presented and it was felt more information flow from all countries was required to draw meaningful conclusions Capacity building for impact assessment and prevention of air pollution was also initiated.

13. The eighth intergovernmental meeting (IG8) at Bhutan in September 2006 decided to draw up plans for Phase IV. The proposal drafted in pursuance of this was adopted in the ninth intergovernmental meeting at Maldives in October 2007.

14. The tenth session of the intergovernmental meeting (IG10) was held in August 2008 at Colombo, Sri Lanka after the Fifth Regional Stakeholders cum Coordination meeting. The significance of these meetings was that a mention was made of the need for participating countries to take a greater ownership of the project especially in terms of the financial support for the implementation of MD. A detailed report on data analysis was presented in the intergovernmental meeting and the results of the impact assessment studies made in Phase III were discussed along with future plans for MD activities. One of the documents presented was a compendium of best practices in preventing and controlling air pollution in South Asia.

15. After 11 years of implementation the MD has achieved significant progress in the area of air pollution management in South Asia. Capacity of member countries to address the atmospheric issues had been increased in terms of skilled manpower, infrastructure, and institutional setup. More importantly, the MD has been providing the framework for the governments and stakeholders for cooperation at the regional as well as national level. The need for the MD has been proven and agreed by all the stakeholders in South Asia. There is a need to establish a sustainable financing mechanism to continue this process with the ownership of the member countries.

### III. FINANCING ARRANGEMENTS

16. As mentioned, so far, the activities under MD have been funded by Sida and to some extent by UNEP which has also offered valuable secretarial assistance. The member countries have also chipped in but mostly with small contributions in kind. After so much progress in the four phases, the time has arrived also 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, which is unique in many ways and is in the long term interests of the South Asian countries themselves.

17. The stage is now set for the eleventh intergovernmental meeting (IG11) to be held in Dhaka, Bangladesh on 20-21 January 2010 to discuss the establishment of a sustainable financing mechanism for MD. The present document has been prepared to facilitate the discussion on the principles of the sustainable financing mechanism, keeping in mind the funding pattern so far and observations in the earlier meetings and the indications of phased withdrawal of donor support.

18. This exercise has benefited a good deal from the earlier experience in the Acid Deposition and Monitoring Network in East Asia (EANET). It has taken into account the circumstances prevailing in South Asia which are somewhat different from other subregions of Asia and the Pacific like East Asia, particularly in terms of the economic strengths of the countries participating in those networks. The need for greater ownership and financial participation, is, however, very clear, keeping in mind the mutual and distinct interest of all member countries in tackling air pollution issues.

#### IV. PRINCIPLES OF SUSTAINABLE FINANCING MECHANISM

19. Proposed principles of sustainable financing mechanism for the MD include:

1. Activities of the MD will be classified into three groups: (a) National level core activities such as implementation of monitoring activities at the national level, (b) Regional level core activities such as intergovernmental meeting, and (c) additional activities such as research activities.
2. Member countries will take the lead in financing their respective national level core activities
3. Member countries will attempt to contribute to the regional level core activities based on the UN assessment scale (see annex 1) or a mutually agreed formula for burden sharing.
4. Financial resources for the additional activities will be mobilized from external sources.
5. Financial contribution of member countries will be on voluntary basis
6. Stepwise approach will be implemented for the contributions from the member countries. It is not necessary that all countries will start contributing at once

20. The Task Force on future development of the MD will develop a report on the sustainable financing mechanism for the MD for the consideration of the twelfth intergovernmental meeting (IG12). The report will be based on the above principles. The report will define activities under three groups and provide annual estimates for the regional level core activities and additional activities.

V. SUGGESTIONS FOR CONSIDERATION

21. The member countries have to decide on the substance and process of developing a self sustaining mechanism for financing future MD activity. Keeping in mind the developing status of the South Asian countries it is suggested that some leeway be given for the smaller countries by way of a moratorium for three years while others start sharing first on the basis an agreed method. Based on the six principles agreed by this meeting and the deliberations and outcomes of the Task Force, the IG 12 will attempt to take a decision on the burden sharing option.



### **Annex 1: UN Assessment scale**

An exercise was done based on UN assessment scales to determine approximately the percentage shares of member countries. The present UN scale percentages and the percentages derived approximately for burden sharing under MD based on those assessments are as follows:

<u>No</u>	<u>Country</u>	<u>Percentages in UN assessment</u>	<u>Percentages in MD(app)</u>
1.	<u>Afghanistan</u>	<u>0.001</u>	<u>0.14</u>
2.	<u>Bangladesh</u>	<u>0.010</u>	<u>1.4</u>
3.	<u>Bhutan</u>	<u>0.001</u>	<u>0.14</u>
4.	<u>India</u>	<u>0.450</u>	<u>63.00</u>
5.	<u>Iran</u>	<u>0.2520</u>	<u>25.00</u>
6.	<u>Maldives</u>	<u>0.001</u>	<u>0.14</u>
7.	<u>Nepal</u>	<u>0.003</u>	<u>0.4</u>
8.	<u>Pakistan</u>	<u>0.059</u>	<u>8.2</u>
9.	<u>Sri Lanka</u>	<u>0.010</u>	<u>1.4</u>

The member countries may look at these numbers and options and decide upon the future course of burden sharing. Once there is broad agreement on this and the projected expenditure is determined by the Secretariat, contributions of each country in cash could be worked out.

11 November 2009

## **DRAFT**

# **JOINT FORUM ON THE ATMOSPHERIC ENVIRONMENT IN ASIA AND THE PACIFIC**

## **FUTURE PLAN FOR JOINT ACTIVITIES ON AIR POLLUTION IN ASIA AND THE PACIFIC**

### **A. INTRODUCTION**

There is an extensive range of regional and sub-regional networks on atmospheric issues in Asia. Countries in East and Southeast Asia have initiated scientific cooperation under the Acid Deposition Monitoring Network in East Asia (EANET). In South Asia, eight countries have formally agreed to cooperate under the framework of the Malé Declaration on the Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia (Malé Declaration). Countries of Southeast Asia have agreed on a formal treaty on the control of transboundary haze pollution from forest fires/ clearance etc.; and the Central Asian Republics have adopted an environmental treaty considering air pollution as a major issue. There is a need to develop a mechanism to help them share experiences and identify opportunities for effective collaboration and thus, speed the development of knowledge regionally as a prerequisite for political and social action to reduce the pollution burden on people and ecosystems. Enhanced coordination among the regional/sub-regional networks will provide win-win situations for all the networks and form a regional force to address atmospheric issues.

#### **1. Background for Taking up the Plan**

Air pollution is a rising environmental challenge in the region and is also intrinsically linked to greenhouse gas emissions and global warming with consequential impacts on human health, agriculture, forests, water bodies and water budgets, physical structures and habitats. The *per capita* emissions in Asia are low as the region supports a large and growing population but as lifestyles change this will also rise. Already, the total consumption of commercial fuels, with the bulk being fossil fuels, is higher in the region than in many other regions of the world. It is necessary, therefore that the countries of the region cooperate to chart a course of action that will promote collective monitoring of the air pollution phenomena and also take measures to moderate the consumption of energy sources by appropriate means. It is also necessary to study the magnitude of the impact on the people and natural resources of the region while also recognizing the global responsibilities that may be involved as that would help in putting

together individually as nations or collectively as a region, policy measures to abate air pollution and its deleterious consequences. It follows from this that a regional approach to common air pollution problems should be applied, where appropriate, regarding e.g. monitoring, modelling, research, information sharing, public awareness-raising and capacity building, as a basis for subsequent consideration and development of mutually beneficial science-based policies, nationally as well as inter-governmentally.

## **2. Mandates from International Agreements**

The United Nations Conference on Environment and Development (UNCED) adopted Agenda 21 which recognized protection of the atmosphere as a matter of major concern. Many of the issues were addressed in the Vienna Convention on the Protection of the Ozone Layer, the Montreal Protocol on Substances that deplete the Ozone layer, the UN framework Convention on Climate Change, the Kyoto Protocol and other international arrangements. The World Summit on Sustainable Development was held in 2002 in Johannesburg following the UN General Assembly Resolution in 1997 reaffirming a commitment to Agenda 21 and adopted the Millennium Development Goals which too supplement efforts to implement Agenda 21. Thus, the commitments concerning air pollution/atmosphere are both implicit and explicit in the international agreements covering not only the general concerns, but also monitoring mechanisms, air pollution management strategies and partnerships and implementation through capacity building, technology transfer, information exchange and public awareness.

## **3. Goals**

The goals that need to be kept in mind in implementing the Future Plan are:

- (a) Development and expansion of the knowledge base on the causes, sources, types and impacts of air pollution and their relation to associated issues, and good practices for prevention and control;
- (b) Understanding of the methodologies and technologies involved in controlling air pollution and its impacts. This should cover monitoring, assessment, prevention and mitigation;
- (c) Integration of this knowledge base with policy-making and public awareness-raising;
- (d) Development of skills through systematic capacity-building and training of individuals and institutions and providing them with the necessary instrumentation and support;
- (e) Development of social, political, moral and economic ethos to carry forward the plan for mutual benefits;
- (f) Search for cost-effective and cost-beneficial solutions for the whole region, not only for

separate countries; and

(g) Facilitation of consensus-building within the region, recognizing the opportunity for differentiated responsibilities and obligations.

#### **4. Challenges**

The challenges will arise not only from the differing geographical, cultural, social and political situations in the region but also from considerations of economic growth and eradication of poverty which are imperatives in the region. These can be overcome by building on existing networks which have been monitoring air pollution and adopting ameliorative measures and the widespread scientific and political support for them. The evolution of national policies and programmes in the field is at varying stages of maturity in the different countries and the Future Plan can suggest ways for all countries to fall in line without compromising national priorities or aspirations, taking into account that provisions may be realized over time subject to the stage of development and economic circumstances of individual countries.

#### **B. SCOPE**

Within the framework of the Joint Forum, 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).

#### **C. INFORMATION SHARING AND ENHANCED COOPERATION**

(a) A network of data bases on air pollution will be further developed using existing initiatives (national programmes, EANET, Malé, ABC and others) as guidance. Requirements for related monitoring as to parameters and time schedules, analysis, assessment and reporting will be agreed upon by the Joint Forum following suggestions from the Secretariat and open to flexible applications and amendments.

(b) The good practices for atmospheric pollution control applied in individual countries will be shared with all participating countries through an information dissemination programme to be agreed upon.

(c) The application of abatement technologies, including best available technology (BAT), will be promoted and exchange and transfer of such technologies will be encouraged through bilateral and multilateral cooperative schemes. Cost differentials will be assessed as possible obstacles to progress in many countries. The Joint Forum will facilitate such schemes, fully recognizing the possible commercial implications of the programmes.

(d) Individual countries and countries participating in sub-regional networks are encouraged to disseminate data on air pollution according to agreed formats. National data managers will facilitate such reporting and will exercise quality control as required. Data will be shared among participating countries and reported to the Joint Forum and the Secretariat.

#### **D. PROMOTION OF PREVENTION AND CONTROL OF EMISSIONS**

Countries will be encouraged to take the following actions, taking into account their individual situations/conditions.

(a) Policy measures including regulatory and fiscal measures (economic incentives and disincentives) will be developed and available technologies will be employed to attain agreed emission standards in the industrial sector. For example, adoption of cleaner coal technologies in all thermal power plants and industries using coal so as to reduce emissions to more strict minimum standards over a negotiated time period at the national level might be developed;

(b) Policy measures will be developed and available technologies employed to attain agreed emission standards in the transport sector. For example, taking up Cleaner City initiatives over a negotiated time period at the national level in all cities having more than 10 million inhabitants;

(c) Policy measures will be developed to promote the use of renewable energy sources in the domestic sector;

(d) Multilateral cooperation to support national programmes will be enhanced;

(e) Long-term scenarios will be developed and reviewed for, say, 2020, 2030, 2040 and 2050 regarding population, urbanization, economic activity, energy pathways, transport systems, emissions, impacts, mitigation, poverty, costs, co-benefits, practices, public awareness, global expectations and requirements;

(f) National programmes will be developed according to the priorities, capabilities and time-scales of individual countries.

#### **E. STRENGTHENING THE FRAMEWORK FOR INTERGOVERNMENTAL COOPERATION**

The Joint Forum will provide a stable mechanism for discussing cooperation on strategies and policies for flexible national emission reductions in the region based on evidence of long-range transport of air pollution and its harmful effects, as well as consideration of the cost-effectiveness of measures. The Secretariat will facilitate progress on this issue taking into account achievements gained in existing sub-regional networks.

Implementation of the following provisions is to be realized over the envisaged six-year period subject to the stage of development and economic circumstances of each of the participating countries. It is suggested that focus over the first three years (2010-2012) should be on information exchange, capacity-building and consideration and definition of subsequent policy measures as indicated below. During the following three years (2013-2015), while continuing the initial activities, those measures are expected to be gradually implemented according to tentative timescales to be agreed upon.

## **F. SPECIFIC POLICY-ORIENTED SECTOR CONSIDERATIONS**

### **1. Transport**

#### Cleaner Fuels

- 1.1 Consider regulations to reduce sulphur levels in fuels to 500 ppm (parts per million) by end of 2012 as an intermediate step for countries that import refined fuel.
- 1.2 Consider regulations to reduce sulphur levels in fuels to 50 ppm from 2012 onwards for both refining and importing countries.
- 1.3 Promote the harmonization of fuel standards.
- 1.4 Complete the phase-out of leaded gasoline; and phase out the use of other harmful metallic additives.
- 1.5 Consider regulations against procurement, sale and use of fuels not meeting current fuel specifications.
- 1.6 Carry out scientific assessments of energy economics, environmental and socio-economic consequences before shifting to significant use of bio-fuels.

#### Cleaner Vehicles

- 1.7 Consider regulations to require that all used vehicles imported into the region from 2012 onwards should be equipped with a functional catalytic converter.
- 1.8 Consider regulations to require that all new vehicles imported into or manufactured in the region should meet a regionally agreed minimum emissions standard by the end of 2012.
- 1.9 Consider a ban on the import and sale of two-stroke motorcycles and promote the use of cleaner two-wheelers.
- 1.10 Consider regulations to restrict the age of vehicles imported into the region to a maximum of 10 years.
- 1.11 Consider regulations for vehicle emissions testing, maintenance and inspection to ensure that vehicles comply with the agreed emissions standards.
- 1.12 Consider implementation of cleaner vehicle technologies, for example compressed natural gas or diesel retrofits, in large fleets.
- 1.13 Consider regulations to require that all diesel powered on-highway trucks and

buses that are more than 10 years old are equipped with diesel retrofit devices.

- 1.14 Consider the requirement that vehicles crossing international borders for goods or passenger conveyance comply with these regional emission standards.

## **2. Urban Planning and Transport Infrastructure**

- 2.1 Support land use planning policies for sustainable mobility.
- 2.2 Plan for and promote safe, attractive and affordable public and non-motorised transport that is interconnected.
- 2.3 Encourage increased use of non-motorised transport systems.
- 2.4 Allocate an equitable share of road development funds and investments for non-motorised transport.
- 2.5 Consider controlling passenger car use through appropriate measures like road pricing, congestion charging and parking management.
- 2.6 Promote the use of transport corridors for efficient traffic movement and reduce travel time by locating transport hubs nearer to industrial, commercial and residential areas.
- 2.7 Create efficient linkages between non-motorised transport, public transport and individual motorised transport to improve efficiency of urban mobility.
- 2.8 Set service standards for public transport vehicles.
- 2.9 Consider regulations for tree planting, greening of urban space and paving of walkways and driveways.

## **3. Energy and Industry**

- 3.1 Encourage regional cooperation to address national and transboundary air pollution issues, through harmonisation of legal frameworks for air quality management of industrial emissions across the region, including specific criteria and procedures for point source emission permitting and monitoring.
- 3.2 Promote the use of best available technology for new industrial plants so as to meet the requirements of the harmonised legal frameworks and consider regulations for retrofit of old installations.
- 3.3 Maximise the synergies and co-benefits of air pollution and climate change mitigation projects.
- 3.4 Consider regulations that require industry to undertake environmental impact assessments and audits in line with the requirements of the harmonised legal frameworks.
- 3.5 Consider regulations that require industry to retrofit old plants with necessary equipment so as to comply with the requirements of the harmonised legal frameworks, or alternatively to phase out obsolete plants over appropriate timescales.
- 3.6 Consider fuel switches and saving of energy and resources keeping cost minimization in mind.

#### **4. Open burning**

##### Vegetation fires, uncontrolled burning and deforestation

- 4.1 Support investigations into the frequency and impacts of natural fires in the region.
- 4.2 Consider regulations to prevent and control human initiated vegetation wild fires.
- 4.3 Develop and implement fire early-warning systems and fire management strategies.
- 4.4 Promote reforestation programmes in damaged landscapes.

##### Waste management

- 4.5 Consider the implementation of integrated waste management systems.
- 4.6. Consider regulations to prevent uncontrolled combustion of waste.
- 4.7 Provide adequate and suitable facilities for pre-collection, collection, transport and treatment of all forms of waste.
- 4.8 Consider regulations to control the manufacture, sale and use of plastic packaging materials.

#### **5. Indoor Air Pollution**

- 5.1 Promote the use of more efficient, cleaner burning and safer energy appliances.
- 5.2 Promote the use of cleaner fuels, where feasible, for social, cultural, economic and other reasons.
- 5.3 Formulate recommendations and guiding principles for domestic indoor air quality.
- 5.4 Formulate recommendations and emission standards for combustion appliances.
- 5.5 Formulate recommendations and guiding principles for construction of properly ventilated, energy-efficient houses.
- 5.6 Formulate indoor air quality standards for public and commercial facilities.
- 5.7 Support establishment of sustainable supply of cleaner burning appliances.
- 5.8 Support financing of indoor air quality improvement.
- 5.9 Consider legislation to prevent smoking in indoor public places and outdoor gathering locations.

#### **G. NATIONAL AIR QUALITY MANAGEMENT**

- 6.1 Develop policies, laws and regulations with respect to air quality management, integrated with relevant Conventions and Treaties.
- 6.2 Create or enhance national environmental agencies, to include air quality management divisions.



- 6.3 Create or enhance an inspectorate branch to enforce air quality and emissions regulations.
- 6.4 Develop and maintain surveillance and data systems for recording air pollution impacts on public health, crops, materials and ecosystems, using harmonised regional approaches.
- 6.5 Develop and maintain national emissions inventories for main pollutants and green-house gases and assess the impact of different policies and measures on these emissions.
- 6.6 Establish at least one air quality monitoring station per country using harmonised regional instrumentation and protocols and link this with modelling efforts in the region.
- 6.7 Consider regulations for industry to monitor their emissions and provide the data and calibration certificates to regulatory agencies as required.
- 6.8 Facilitate the harmonisation of air pollution standards within the region.
- 6.9 Carry out periodic reviews to benchmark regional national air quality standards against best international practice.
- 6.10 Carry out periodic state-of-atmospheric environment reports to determine if standards and targets are being attained.
- 6.11 Harmonise policies and management strategies that impact the atmospheric environment across key governmental agencies, for example departments of energy, health, agriculture, planning, finance and transportation.

## **H. PUBLIC PARTICIPATION**

- 7.1 Increase public awareness on air pollution issues using all formal and informal communication channels.
- 7.2 Enhance public participation on air pollution issues by capacity development (education and training) in governmental, educational and civil society organisations.
- 7.3 Engage civil society and other stakeholders in collaborative air pollution projects.
- 7.4 Promote accessibility to information on air pollution issues and exchange of information, education and research on air pollution.
- 7.5 Develop effective communication strategies on the impact of air pollution on human health and the environment.
- 7.6 Promote advocacy, public awareness and participation concerning indoor air quality and domestic energy management.

## **I. RESEARCH AND DEVELOPMENT**

- 8.1 Support and enhance research on all aspects of air pollution, including interdisciplinary cooperation on transboundary issues and interlinkages among different atmospheric pollutants, their sources and effects.

- 8.2 Consider the feasibility of possible regional training centres on air quality management and related issues.
- 8.3 Promote and support regional post-graduate training and student exchange programmes within the region and with international partners on air quality management and related issues.
- 8.4 Promote and support the inclusion of air pollution in environmental impact studies and socio-economic assessments in collaboration with local and international academic institutions.
- 8.5 Promote and establish initiatives for reducing air pollution in collaboration with international organizations (such as the Global Atmospheric Pollution Forum, the United Nations Environment Programme (UNEP), the World Health Organization, the World Meteorological Organization, the World Bank) and other regional air pollution networks.
- 8.6 Support the application of the harmonised emissions inventory, monitoring and modelling, impact assessment, mitigation options and policy framework approaches employed by existing sub-regional networks and programmes.
- 8.7 Establish a regional air quality information system.
- 8.8 Conduct economic analysis to develop and optimise alternative scenarios and options, which include air pollution, to guide development policies consistent with sustainability.
- 8.9 Continue the regional dialogue on urban air pollution with CAI-Asia and other relevant actors.

## **J. EVALUATION, REVIEW AND REPORTING**

Implementation of the Future Plan will also involve review exercises. A national evaluation mechanism to monitor progress every two years will be put in place. Based on the national level review, the Secretariat will, subject to available resources, commission a review of progress in the implementation of the Future Plan at the regional level. This review would involve an expert or group of experts to assess the arrangements and suggest improvements. The review process would allow for regular reporting back to the participating countries every second year which could facilitate remedial action and necessary programme adjustments, if deemed appropriate, for follow-up two years later. The Secretariat will prepare an Annual Progress Report for every meeting based on inputs from every country and from participating organizations and circulate it for information to relevant regional and donor organizations.

## **K. METHOD OF WORK AND WORK PLAN**

A graph will specify items, developed from the preceding sector descriptions, to be implemented over a six year period. Ideally, the table will consist of a list of all participating countries and columns for work elements to be carried out and with proposed dates for completion and intermediary progress and final reporting. Not only will the table show the

expected successively produced output of individual countries but also collaborative schemes and responsibilities as a basis for evaluation, follow-up and possible adjustments. It is expected that the list will be flexible, containing differentiated responsibilities and open to amendments over the envisaged six year implementation period.

**National Level**

Participating Country	Work elements to be carried out	Resource requirements and plan	Proposed dates for completion

**Sub-regional/Regional Level**

Sub-region/Region	Work elements to be carried out	Resource requirements and plan	Proposed dates for completion
Asia-Pacific			
Central Asia			
East Asia			
Southeast Asia			
South Asia			
Pacific			

**L. IMPLEMENTATION MECHANISM**

The vision of the Joint Forum on Atmospheric Environmental Issues in Asia and the Pacific, an intergovernmental cooperative scheme, is to achieve a clean atmospheric environment through collective and coherent actions in Asia and the Pacific region. To achieve its vision, the Joint Forum will adopt the seven goals defined in Section A.3 (above) of the Future Plan.

The activities of the Joint Forum will complement and strengthen the activities of existing independently operating regional/sub-regional networks and programmes as well as national ones and form a regional force to address atmospheric issues. The Joint Forum will be the decision-making body which oversees the implementation process and reviews progress on the basis of draft assessments prepared by the Secretariat.

The Future Plan and the process for its implementation are uniquely owned by the Joint Forum as an expression of the determination to cooperate for the benefit of the whole region. The Secretariat, as advised by the Forum, will represent the programmes in the region vis-à-vis other international programmes and networks worldwide and report to the Forum on the outcome of such activities.

## **Presentation of the IG11 (20 minutes)**

Implementation during Phase III (last 3 years)

1. Details of National implementing agency and institutional arrangement
2. Details of Monitoring activities under Male' Declaration in your country
3. Details of Stakeholders participation on Male' Declaration activities in your country
4. Data completeness
5. Status of emission inventory and modeling
6. Status of impact assessment including outcome
7. Challenges and difficulties

Plan for Phase IV (next 3 years)

- Institutional arrangement (any changes from last 3 years)
- Monitoring plan
  - Existing station (including new parameters to be included)
  - New station
- Plan for emission inventory and modeling
- Plan for impact assessment including capacity of the expert institution
  - Health impact
  - Crops impact

*The Eleventh Session of the Intergovernmental Meeting (IG11) on  
Malé Declaration  
20-21 January 2010, Dhaka, Bangladesh*

***Initial Information***

**For the Participants to whom UNEP RRC.AP will bear the travel expenses**

**1. Flight arrangements to and from Bangladesh**

UNEP RRC.AP staff will contact you for detail flight arrangement. Following are suggestion for those who needs to buy their own ticket:

- Please buy/book ticket for your flights by the most direct route between the nearest international airport and Bangladesh International Airport (round trip economy-class tickets) according to the meeting schedules.
- Please email the price of your air ticket to Male' Declaration Secretariat at RRC.AP for reimbursement arrangement. For your ticket reimbursement, please bring original receipt (not invoice) from your travel agent and account detail (Account Name, Account Number, Bank Name, Branch Name, Bank Address, SWIFT Code or IBAN Code) to Bangladesh.

**2. Visa arrangements**

You are kindly requested to obtain visa at the Bangladesh Embassy in your country for the duration of the meeting. Please let us know if you have any problem getting the visa.

(Need your advice)

**3. The way from Airport to Hotel**

For the participants arriving at ZIA International Airport, Dhaka, Bangladesh

The local organizer will arrange to receive you at the airport. Look for the signboard Male' Declaration. If in case, please contact the hotel (hotel address is mention in No.6) or our Local host.

**4. Departure**

For your ticket reconfirmation, please give your ticket to organizer with your passport on first day at the registration desk.

**5. Venue of the Meeting and local transport**

The Meeting will be held at Ballroom of Dhaka Sheraton Hotel . Transport will be arranged from the Hotel to the venue and back.

On the first day of the meeting (20 January), organizer form DoE (Department of Environment) will be at the Hotel lobby, to guide you to the meeting venue .Please be ready at the Hotel lobby by **08.00** hrs.

## 6. Hotel accommodations

According to your schedule, the Organizer will make accommodations at Laurel Hotel. The hotel room charges will be 60US \$ per person per day (single), 70 US\$ for double room for two person, which includes tax and service charge, include breakfast. The hotel is located at Banani, Dhaka. The hotel will not request any deposits in advance.

### Hotel check-out:

The usual check out time is at 12 noon. If you wish to stay longer, please consult with the Organizer. When you check out, please pay your room charge and all incidentals such as the usage of laundry service, telephone calls to outside the hotel (both local and international), and facsimile.

### Address of the hotel

LAUREL HOTELS LTD  
House-54,Road-18,Block-J,Banani,Dhaka-1213,Bangladesh  
Tel:88-02-8834009,8827399,8853747,8833820,8833821  
Fax:88-02-8834010  
E-mail:info@laurelhotelbd.com

## 7. DSA

The Organizer will provide you with the DSA for the nights to stay for the Meeting, plus one-day DSA in lieu of terminal and miscellaneous. Included in these DSA are the necessary expenses, for instance, for visa procedures, hotel room charges, meals that are not provided by the Organizer, all incidentals while staying at the hotel such as the usage of laundry service, telephone calls to the outside the hotel, facsimile, and local transportation costs to/from the airport in your home country and in Bangladesh, and airport taxes.

## 8. Meals

### < Breakfast >

Breakfast is include in the hotel charge mentioned in 6 above. You can have breakfast at the restaurant of the hotel.

### < Lunch >

Lunches on 20 and 21 January, will be provided by the Organizer.

### < Dinner >

The Organizer will provide dinner on 20 January . You should take your dinner by yourself on other days.

## 9. Registration

You are requested to register at the Registration Desk. Registration Desk will be open at morning on 20 January 2010 before the meeting. Please bring your air tickets and passport with you to the Registration Desk.

## **10. Reception party**

Reception Dinner for the meetings will be held on 20 January 2010.

## **11. Currency exchange**

In Bangladesh, foreign currency is generally accepted although you may be able to exchange for Rupee at your hotel and the Bank.

## **12. Contact Information**

### **UNEP RRC.AP**

Ms Wah Wah Htoo  
Programme Officer  
UNEP/RRC.AP  
Asian Institute of Technology  
P.O. Box 4, Klong Luang, Pathumthani 12120  
Thailand  
Fax: 662 516 2125  
Tel: 662 524 6239  
Email: WahWah.Htoo@rrcap.unep.org

### **Local Host**

1. Mr. Zafar Ahmed Khan,  
Director General,  
Department of Environment  
Tel:880-2-9113328  
Fax: 880-2-9127882
2. Quazi Sarwr Imtiaz Hashmi,  
Deputy Director(Planning & Development)  
Department of Environment, Bangladesh  
Tel:880-2-9113328  
Fax: 880-2-9118682,9113328