

Fifteenth Session of the Intergovernmental Meeting of  
Malé Declaration on Control and Prevention of Air Pollution and  
Its Likely Transboundary Effects for South Asia (Malé Declaration)  
16 October 2016, Colombo, Sri Lanka

## **Draft Report of the Expert Group on Strengthening the Framework of Malé Declaration**

### **I. Introduction**

1. A feasibility study was conducted on the “Malé Declaration on Control and Prevention of Air Pollution and its likely Transboundary Effects for South Asia” to assess the socio-economic as well as the air pollution situation of South Asia and recommend policy options for strengthening the framework on air pollution reduction at the regional and national levels. The feasibility report on strengthening the regional framework on air pollution reduction in South Asia was carefully discussed at the Second Meeting of the TFFD in November 2010, and finally endorsed and adopted during the 12th Intergovernmental Meeting (IG12) in June 2011. Recommendations of the study include, among others, the harmonization of air pollution policies (ambient and emission standards), which would be strengthened by the technical assistance of the experts on standards across the region and thus enable protocols to be drawn up. The 13th Session of the Intergovernmental Meeting (IG13) subsequently decided on the establishment of the Expert Group on Strengthening the Framework of the Malé Declaration.

2. The Fourteenth Session of the Intergovernmental Meeting (IG14) held in November 2015 endorsed and approved the Terms of Reference of the Expert Group (please see attached Annex 1 of this document), and their tasks include as follows:

- Review of the existing Ambient Air Quality Standards, Emission Standards for industrial and mobile sources for the member countries;
- Identification of the sectors for which standards need to be proposed;
- Recommend substances and pollutants to be standardized;
- Prepare a roadmap for harmonizing the standards in the region, to make it country/their phased implementation specific;
- Recommend procedures for monitoring and emission reduction;
- The expert group will identify the available technologies; and propose a roadmap for emission reduction from selective sectors in South Asia;
- Submit progress report to IG; and
- Prepare a final report for endorsement of the IG.

3. The IG14 adopted the composition of the Expert Group, namely, the Chairman, one representative from each member country and the Secretariat.

### **II. Draft Outline of the Report of the Expert Group on Strengthening the Framework of Malé Declaration**

4. In response to the decision of the IG14 regarding the TOR and various tasks of the Expert Group, highlighted below is the draft outline of the Draft Report of the Expert Group on

Strengthening the Framework of Malé Declaration. This was presented and discussed at the First Meeting of the Expert Group (EG1) held on 18 August 2016 in New Delhi, India:

### **Content and Outline of the Report of the Expert Group on Strengthening the Framework of Malé Declaration**

- I Introduction
- II. Review of the existing Standards
  - 2.1. Ambient Air Quality Standards
  - 2.2. Emission Standards for industrial sources
  - 2.3. Mobile sources for the member countries
- III. Identification of the sectors for which standards need to be proposed
- IV. Available technologies in each country
- V. Issues of implementation in the member countries
- VI. Recommendations
  - 6.1 Substances and pollutants to be standardized
  - 6.2 Procedures for monitoring and emission reduction
  - 6.3 Roadmap for emission reduction from selective sectors in South Asia

5. The First Meeting of the Expert Group on Strengthening the Framework of Malé Declaration was held on 18 August 2016 in New Delhi, India. The major discussion during EG1 included:

- The Secretariat will collect all the air quality standards of each country.
- Countries are requested to update the air quality status and policies and add the available technology in the information.
- It was proposed to have another meeting of the Expert Group before the IG15, depending on time and resources availability.
- Suggestion was raised to hire an expert/consultant to develop the report and for countries to verify the same. The consultant will assess the needs and prepare a roadmap for development and harmonization of standards.
- Regarding the outline of the status paper on air quality standards to be prepared by all countries:
  - 1st week after the meeting: format to be finalized and be distributed by the Secretariat.
  - 2nd week after the meeting: Data status be received from countries and compiled by the Secretariat
  - Consolidated data to be prepared and presented at the next meeting before IG15 in October 2016 (if meeting of the Expert Group be convened).
- Consult all stakeholders after preparing the report for submission at the IG17 in the year 2017.
- There should be more frequent interaction with countries.

### **III. Review of the Existing Standards in Malé Declaration Member States**

6. In order to review the country standards and to complete the Report of the Export Group on Strengthening the Framework of Malé Declaration, it was discussed at the IG1 that the Secretariat shall draft the outline or format of the air quality status on air pollution and standards and be sent to the Expert Group members after the meeting. The country status is needed and will form part of the report of Expert Group. It is requested that the member countries be able to provide data and information, following the below outline.

### **Draft Outline/format of Country Status on Air Pollution and Standards**

#### **I. Introduction**

- 1.1 National Ambient Air Quality Standards and Guidelines
- 1.2 Existing Emission Standards
- 1.3 Emission Regulations

#### **II. Air Pollution Problems and Major Sources of Air Pollution**

- 2.1 Reasons for High Air Pollution
- 2.2 Vehicular Pollution Problems
- 2.3 Industrial Air Pollution Problems

#### **III. Air Quality Monitoring System**

- 3.1 National Air Quality Monitoring Programme
- 3.2. Monitoring Locations and Parameters

#### **IV. Enforcement Mechanism**

#### **V. Problems and Challenges on Implementation of Emission Standards**

VI. Overall situation with respect to air quality in the country including, air quality challenges

VII. Future programmes

### **3. 1 General Description on country status**

7. Air pollution is a major environmental risk to health. By reducing air pollution levels, countries can reduce the burden of disease from stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma. The lower the levels of air pollution, the better the cardiovascular and respiratory health of the population will be, both long- and short-term. The "WHO Air quality guidelines" provide an assessment of health effects of air pollution and thresholds for health-harmful pollution levels.

8. During EG1, the air quality policies, issues and challenges and future plans on air quality, among others, were discussed. Some references were made available, specifically the draft document based on research that UNEP conducted in 2015, in response to Resolution 7 of the UNEA. After the meeting some countries made validation, i.e Maldives and Sri Lanka, herewith attached as Annex 2. This will be helpful as a source of data information for the Report of the Export Group. Some countries have not yet validated the data information from UNEP UNEA, attached as Annex 3.

### **Bangladesh**

9. Brick kilns and transport (emissions and road dust) are two of the biggest sectors contributing to air pollution; also cement and metal smelting; Dhaka ranks high on the list of major cities with poor urban air quality. Unplanned construction, steel re-rolling and cement industries are some other major sources of air pollution. Dhaka is one of the major cities in

Bangladesh which suffers air quality of below standard during some of the days of dry season especially November to March. In Bangladesh Air Quality Standards have been set out for CO, Pb, NOX, SPM, PM10, PM2.5, O3 and SO2. The ambient air quality monitoring data from the Continuous Air Monitoring Stations (CAMS) suggest that PM10 and PM2.5 are the most critical pollutants often exceed the national ambient air quality standard (NAAQS) during dry season. In Dhaka City the concentration of particulate matter in dry season has found to exceed NAAQS for more than 100 days of a year. It is observed that the gaseous pollutants remain within the limiting values of the NAAQS.

### **Bhutan**

10. Generally good, as the level of industrial activity and the number of vehicles are still low, although this is changing; The capital Thimphu City is the largest urban area (100,000 people) and has seen increased construction activities, which impacts air quality; in urban areas, vehicle emissions and smoke from wood-burning stoves used for heating (in winter) are key sources of pollution; forest fires caused by land clearing and brown haze from India are issues.

### **India**

11. Air pollution still an issue, with most cities above the PM10 targets. Main sources are fuel wood and biomass burning, vehicle emissions, and large scale crop residue burning. Some improvements have been made: between 1995 and 2008, average nationwide levels of major air pollutants have dropped by 25 – 45%, but some cities show more improvement than others. Air pollution regulations are associated with these improvements; their success is linked with high demand by citizens for better air quality, indicating that strong public support allows environmental regulations to succeed even in weak institutional settings. While regulations have become stronger, implementing and enforcing them remains a challenge

### **Iran**

12. Air pollution is one of the biggest environmental problem that Iran currently faces especially in the capital city of Tehran and other major cities. About 1.5 million tons of pollutants are produced in Tehran annually, with carbon monoxide from car exhaust making up a large percentage of these pollutants. In the capital city, topography worsens air pollution, especially during cold and calm nights. Traffic congestion is one of the main contributors to air pollution in large cities.

### **Maldives**

13. Air quality is generally quite good, as there are no appreciable number of polluting activities, and the sea breeze clears the air; Male is experiencing increased pollution from land and sea vehicles, diesel power generation, open burning of waste in Thilafushi and construction; high-rises disrupt air circulation; transboundary air pollution from Indonesia and India is a seasonal issue.

### Nepal

14. In urban areas, particulate matter is the main pollutant of concern; PM10 exceeds WHO guidelines in Kathmandu Valley, high levels of pollutants, especially PM, from brick kilns, domestic fuel burning, vehicles and road dust, mobile sources being the most significant.

### Pakistan

15. South Asia's most urbanized country, Pakistan has among the world's most severe urban air pollution due to emissions from vehicles, biomass burning; coal combustion; industrial emissions.

### Sri Lanka

16. Still good, although deteriorating in urban areas mainly due to vehicles and thermal power plants. Also of concern: open burning of waste, resuspension of road dust, industries, refinery, biomass burning.

## 3.2 National Ambient Air Quality Standards and Guidelines

17. Tabulated hereunder is the comparison of the ambient air quality standards of the Male Declaration countries, together with the WHO guidelines.

Ambient Air Quality Standards of Male' Declaration Member Countries ( $\mu\text{g}/\text{m}^3$ )																
Country	PM <sub>2.5</sub>		PM <sub>10</sub>		TSP		SO			NO			O <sub>3</sub>		CO ('000)	
	24 hr	Annual	24 hr	Annual	24 hr	Annual	1 hr	24 hr	Annual	1 hr	24 hr	Annual	1 hr	8 hr	1 hr	8 hr
Bangladesh	65	15	150	50	-	-	-	365	80	-	-	100	235	157	40	10
Bhutan	-	-	100	60	200	140	-	80	60	-	80	60	-	-	4	2
India	60	40	100	60	-	-	-	80	50	-	80	40	180	100	4	2
Iran	25	10	50	20	-	-	-	96.94	18.34	-	-	39.48	-	100	40.08	10.58
Maldives	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nepal	40	-	120	-	230	-	-	70	50	-	80	40	-	157	-	10
Pakistan	35	15	150	120	500	360	-	120	80	-	80	40	130	-	10	5
Sri Lanka	50	25	100	50	-	-	200	80	-	250	100	-	200	-	30	10
WHO guideline	25	10	50	20	-	-	-	20	-	200	-	40	-	100	-	-

## 3.3 Vehicle Emission Standards

18. Emission standards are the legal requirements governing air pollutants released into the atmosphere. Emission standards set quantitative limits on the permissible amount of specific air pollutants that may be released from specific sources over specific timeframes. They are

generally designed to achieve air quality standards and to protect human health. Many emissions standards focus on regulating pollutants released by automobiles (motor cars) and other powered vehicles. Others regulate emissions from industry, power plants, small equipment such as lawn mowers and diesel generators, and other sources of air pollution.

<b>Vehicle Emission Standards of Male' Declaration Member Countries</b>		
<b>Country</b>	<b>Emission Standards (current)</b>	<b>Remarks</b>
Bangladesh	Euro 1 for diesel driven vehicle and Euro 2 for patrol driven vehicle.	Euro 2 - July 2014 (Nationwide) Euro 3 - July 2014 (Dhaka & Chittagong) Euro 3 - July 2019 (Nationwide) Euro 4 - July 2019 (Dhaka & Chittagong)
Bhutan	Euro 1; In-use vehicle emission standards, although not enough resources to implement testing	
India	Euro 3	Euro 4 in eleven major cities
Iran	Euro 4 for light-duty vehicles was planned for some time in mid-2013; plans for Euro 3 standard for heavy duty vehicles	
Maldives	None	
Nepal	Euro 3,	although pre-Euro vehicles are still being used
Pakistan	None	
Sri Lanka	Euro 1	

### **3.4 Emission Standards**

19. The Secretariat has requested the member countries the emission standards, e.g. industrial emission standards, vehicular emission standards, among others and they have been attached in this document as Annex 4.

### **IV. Actions needed**

20. The IG15 is requested to provide comments and guidance on the Draft Report of the Expert Group on Strengthening the Framework of Male' Declaration, including the draft outline of the report.