Current status on tackling Air Pollution in Japan

Air Environment Department
Environmental Management Bureau,
Ministry of the Environment, Japan
Outline

1. Current status
2. Domestic actions
3. International framework
Achievement status of environmental quality standards (EQS)

**SO₂**
- 0.04 ppm (Daily)

**NO₂**
- 0.06 ppm (Daily)

**PM₂.₅**
- 15μg/m³ (Annual)
- 35μg/m³ (Daily)

| Fiscal Year | General ambient air monitoring stations | | Automobile exhaust monitoring stations |
|-------------|----------------------------------------|----------------------------------------|
|              | Achievement status (%) | Annual average concentration (μg/m³) | Achievement status (%) | Annual average concentration (μg/m³) |
| FY2012      | 43.3 | 14.5 | 33.3 | 15.4 |
| FY2013      | 16.1 | 15.3 | 13.3 | 16.0 |
| FY2014      | 37.8 | 14.7 | 25.8 | 15.5 |

**SO₂**

**NO₂**
### Comprehensive Measures on PM2.5 (Dec. 2013)

#### Objective 1
To ensure safety and provide assurance to citizens
- Improve forecast and prediction accuracy
- Raise alerts appropriately and accurately

#### Objective 2
To achieve environmental quality standards
- Review measures to elucidate the PM2.5 phenomenon and reduce PM2.5 levels

#### Objective 3
To share clean air in the Asian region
- Promote regional initiatives

### Projects that form the foundation for initiatives
- **Consolidating sources of information about emission incidents**
- **Elucidating the secondary emission mechanisms**
- **Building simulation models**
- **Improving air environment monitoring**
- **Gathering findings about health impact**
Based on the guideline of the survey, the national government measures background conditions such as in remote island.

<table>
<thead>
<tr>
<th>Region</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hokkaido/Tohoku</td>
<td>1 (1)</td>
<td>4 (1)</td>
<td>13 (1)</td>
<td>18 (2)</td>
</tr>
<tr>
<td>Kanto</td>
<td>17</td>
<td>22 (1)</td>
<td>33 (1)</td>
<td>40 (2)</td>
</tr>
<tr>
<td>Hokuriku/Chubu</td>
<td>11</td>
<td>15</td>
<td>38 (1)</td>
<td>39 (2)</td>
</tr>
<tr>
<td>Kinki</td>
<td>12 (1)</td>
<td>21 (1)</td>
<td>28 (1)</td>
<td>32 (1)</td>
</tr>
<tr>
<td>Chugoku/Shikoku</td>
<td>9</td>
<td>13</td>
<td>19 (1)</td>
<td>20 (1)</td>
</tr>
<tr>
<td>Kyushu</td>
<td>8 (2)</td>
<td>12 (5)</td>
<td>21 (6)</td>
<td>31 (6)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>58 (4)</td>
<td>87 (8)</td>
<td>152 (11)</td>
<td>180 (14)</td>
</tr>
</tbody>
</table>

( ) conducted by National government
National immediate measures for reducing emissions of PM2.5 is summarized in March, 2015.

**Summary** Based upon the fact that there have been issues to be scientifically clarified with regard to the PM2.5 generation mechanism or attributable proportion of individual source, the short, mid- and long-term agendas should be sorted out and the step-by-step measures should be promoted.

**Short-term Agenda**
Based on current knowledge, existing air pollution control policies will be further promoted, with the perspective of PM2.5 measures.

- The strengthening of emission regulations of soot and dust, and nitrogen oxides (NOx) will be reviewed.
- The introduction of measures against evaporative fuel emissions, etc., will be reviewed.

In addition, measures against motor vehicle emissions, etc. will be steadily implemented.

**Mid- and Long-term Agendas**

Phenomenon clarifications, information gathering, etc., which are fundamental to addressing comprehensive measures, will be worked on, and, depending on progress, additional measures will be examined.

- The status of Volatile organic compounds (VOC) which have high ability of generating PM2.5 and photochemical oxidant will be clarified, and countermeasures of them will be examined.
- Air pollution sources with high attributable proportion will be estimated through source information gathering and advanced simulation, etc.
Overview of international cooperation toward Clean Air in Asia

Efforts by Japan, China, and Korea under the TEMM framework

- Holding of Tripartite Policy Dialogue on Air Pollution (TPDAP)
- In TEMM17, three countries agreed to enhance cooperation through two working groups under the TPDAP

Strengthening of Bilateral Collaboration

- **Cooperation with China**
  - Intercity collaboration and cooperation projects, in which local government’s or industries’ knowledge and know-how are used for capacity building and human resources development in the major cities in China, have been promoted.

- **Cooperation with Korea**
  - Cooperation on PM2.5 monitoring, prediction, inventory, data sharing, etc., has been implemented.

Collaborative Efforts with International Organizations

- **Collaborative efforts with the United Nations Environment Programme (UNEP)**
  - Establishing Joint Forum through the Asia Pacific Clean Air Partnership (APCAP) programme

- **Collaborative efforts with Clean Air Asia (CAA)**
Guidance and support

**CHINA** (MEP)

**Intergovernmental coordination**

**JAPAN** (MOE)

**Overall coordination**

**Provinces**
(Liaoning, Jiangsu, Hebei, Canton, Shanxi)

**Cities**
(Beijing, Tianjin, Shanghai, Shenyang, Wuhan, Handan, Xian, Xiamen, Chongqing, Zhuha, Tangshan)

(Examples of areas of cooperation)
- VOC emission measures
- Vehicle emission measures (including off-road vehicles, etc)
- Dust pollution control measure of construction works
- Forecast and warning system
- Emission source analysis
- Monitoring, etc.

(Examples of ways of cooperation)
- Training in Japan
- Dispatching experts
- Japan-China joint research
- Model project, etc

**Platforms for Inter-City Cooperation**
(Supporting Japan-China inter-city cooperation with finance and technology)

**Inter-City cooperation**

**Support organization**
(Japan Environmental Sanitation Center)

**Tokyo Metropolitan Government**

**Prefectures**
(Saitama, Toyama, Nagano, Hyogo, Fukuoka)

**Cities**
(Kawasaki, Yokkaichi, Kobe, Kitakyushu, Oita)

- Support each inter-city cooperation (arrangement, coordination, etc)
- Financial Management and execution

**Guidance and support**

 Provide finance

 CHINA (MEP)

 Intergovernmental coordination

 JAPAN (MOE)
Backgrounds

- Aims at enhancing partnership among countries in Asia Pacific region through sharing experiences and knowledge about tackling air pollution.
- The Joint Forum was established in collaboration with MOEJ and UNEP.

The Joint forum for air pollution in Asia Pacific region.

- 1st meeting: 26th and 27th November, 2015 at Bangkok
- 120 participants: policy makers from 30 countries, experts, NGO, aid organization
- Program:
  1. Sharing information of activities of existing initiatives and latest scientific knowledge
  2. Discussion about the framework of the regional assessment reports

Future Action

- Holding 2nd Joint Forum: late November 2017
- Promote science-policy linkage by developing policy brief (clean energy policy, indoor air pollution, and PM2.5 and O₃ control) and assessment report by experts in the region
(Establishment History)

- Due to the recent remarkable growth etc. of the East Asian region, the emission amount of air pollutants which cause acid deposition has been increasing, and, therefore, the serious impacts of this are a matter of concern. **Regular Phase Activities started from January 2001.**
- The Asia Center for Air Pollution Research (ACAP) has been designated as the Network Center for the EANET.

(Objectives)

- To create a common understanding on acid deposition problems in East Asia
- To provide basic input on policy decision-making towards acid deposition prevention measures
- To promote international cooperation on acid deposition problems in East Asia

(Recent activities)

- New Medium Term Plan for the EANET (2016-2020) was approved at EANET IG17 in November 2015.
- The plan includes new activities such as promotion of the monitoring of ozone and PM$_{2.5}$ and promotion of research and technical cooperation on emission inventory.
THANK YOU FOR LISTENING!