

# Outcomes from questionnaire and consideration on expansion of scope

The Network Center for EANET

# Findings from Questionnaire (1/5/1) I

Table 2.1.4-18 Summary of the high priority challenges for countermeasures against air pollution (○) and the most difficult part in addressing the high priority challenges (◎)

|             | Public awareness/ education | Measures for automobile | Measures for automobile (other than automobiles) | Waste measures | Monitoring | High concentration measures | Industrial/ energy measures | Research | International cooperation | Technical/ financial support | Atmospheric environment management | Training/ capacity building | Implementation of laws and regulations | Implementation of various policies | Economic policy |
|-------------|-----------------------------|-------------------------|--|----------------|------------|-----------------------------|-----------------------------|----------|---------------------------|------------------------------|------------------------------------|-----------------------------|--|------------------------------------|-----------------|
| Cambodia    | ○○◎                         | ○                       |  | ○              | ○          |                             |                             |          |                           |                              |                                    |                             | ○○◎                                    |                                    |                 |
| China       |                             | ◎                       |  |                |            | ○                           | ○                           |          |                           |                              | ◎                                  |                             |  |                                    |                 |
| Indonesia   | ○                           |                         |  |                |            |                             | ◎                           |          |                           |                              |                                    |                             |  |                                    |                 |
| Japan       |                             | ○                       |  |                | ○○◎        |                             | ○                           | ○○◎      |                           |                              |                                    |                             | ◎                                      | ◎                                  |                 |
| Lao PDR     | No answer                   |                         |  |                |            |                             |                             |          |                           |                              |                                    |                             |  |                                    |                 |
| Malaysia    |                             | ○                       |  |                |            |                             | ○○◎                         |          | ○○◎                       |                              |                                    |                             |  |                                    |                 |
| Mongolia    |                             |                         |  |                |            |                             |                             |          |                           | ◎                            |                                    |                             | ○                                      |                                    |                 |
| Myanmar     | ○○◎                         |                         |  |                | ○○◎        |                             |                             |          |                           | ○                            | ○○◎                                | ○○◎                         | ○○◎                                    |                                    | ◎               |
| Philippines |                             | ○○◎                     |  |                |            |                             |                             |          |                           |                              |                                    |                             |  |                                    |                 |
| R. of Korea |                             | ◎                       | ○○◎  |                |            |                             | ○                           |          |                           |                              |                                    |                             |  |                                    |                 |
| Russia      | Not submitted               |                         |  |                |            |                             |                             |          |                           |                              |                                    |                             |  |                                    |                 |
| Thailand    | ◎                           | ○                       |  | ○              |            |                             |                             |          |                           | ◎                            |                                    |                             |  |                                    |                 |
| Vietnam     | Not submitted               |                         |  |                |            |                             |                             |          |                           |                              |                                    |                             |  |                                    |                 |

|             | The high priority challenges for countermeasures against air pollution   |
|-------------|--|
| Cambodia    | <u>Automobile measures</u><br>- Using old vehicles with improperly maintenance   |
| China       | <u>Industrial/energy measures</u><br>- Structural adjustment is difficult. At present, China's industrial structure is heavier, energy structure is more coal, transport structure is more highway, land structure is more extensive and other problems have not been fundamentally changed.   |
| Indonesia   |  |
| Japan       | <u>Industrial/energy measures</u><br>(1) Measures for fixed sources related to soot and smoke<br><u>Automobile measures</u><br>(2) Measures for mobile sources<br>- Vehicle Information and Communication System (VICS)<br>- ETC2.0 service<br>- Advanced optical beacons, etc. to improve and enhance the content and accuracy of road traffic information<br>- Improvement of traffic lights<br>- Promotion of road information and communication system (ITS) such as public vehicle priority system (PTPS)<br>- Measures against traffic congestion around tourist spots<br>- Comprehensive parking measures<br>- Public awareness of eco-driving<br>- Low pollution and low carbon by switching to public transportation. |
| Lao PDR     | No answer  |
| Malaysia    | <u>Industrial/energy measures</u><br>- Ensuring clean emission strategies<br><u>Automobile measures</u><br>- Adopting a large-scale policy at the national level that reduces direct application of petrol and diesel engines.<br>- Difficulty in conversion from internal combustion engines (ICE) vehicles i.e petrol/diesel engine vehicles in the long run (within the next two decades) to the energy efficient vehicles (EEV) such as electric vehicles or new generation vehicles (hydrogen cells vehicles).  |
| Mongolia    |  |
| Myanmar     |  |
| Philippines | <u>Automobile measures</u><br>- Mobile Sources (Transport Sector) such as Old Jeepneys<br>- Dilapidated Utility Vehicles such as trucks, buses in which are running without any emission control devices<br>- Non-Appearance in Private Emission Testing Centers (PETCS)   |
| Korea       | <u>Measures for mobile sources and sources other than automobiles</u><br>- Control of sources that have attracted relatively low attention, compared to non-road (shipment and ports) transportation<br>- Road transportation sources, etc.<br><u>Industrial/energy measures</u><br>- Industrial sectors including agriculture   |
| Russia      | Not submitted  |
| Thailand    | <u>Automobile measures</u><br>- Law enforcement of EURO 5 standard both for fuel oil and automobile<br>- Promotion of Electric Vehicles (EV).  |
| Vietnam     | Not submitted  |

|             | The most difficult part in addressing the high priority challenges of Q1 above  |
|-------------|---|
| Cambodia    |   |
| China       | <u>Automobile measures</u> <ul style="list-style-type: none"> <li>- comprehensive control of atmospheric pollution</li> </ul>   |
| Indonesia   | <u>Industrial/energy measures</u> <ul style="list-style-type: none"> <li>- The use of cheap and dirty fuel that are not good for air quality</li> <li>- People prefer cheaper fuel because of the financial capacity of their economy ability</li> <li>- Policies for clean fuels</li> </ul>  |
| Japan       |   |
| Lao PDR     | No answer   |
| Malaysia    | <u>Industrial and energy measures</u> <ul style="list-style-type: none"> <li>- Readiness of industries to balance between economy and environmental protection for the sake of sustainable development.</li> <li>- Pursuing potentially expensive clean technology-based application (industry, vehicle and household) which may not be compatible with the gross household income.</li> </ul>  |
| Mongolia    |   |
| Myanmar     |   |
| Philippines | <u>Measures for automobiles</u> <ul style="list-style-type: none"> <li>- The second-hand engine and vehicle industry</li> <li>- The resistance of Jeepney Owners to modernize their dilapidated vehicle</li> <li>- Massive Traffic due to Poor Urban Planning and Mass Transport Systems</li> </ul>   |
| Korea       | <u>Measures for automobile sources (special vehicles) and car</u> <ul style="list-style-type: none"> <li>- Improve accuracy of air pollutant inventory for agricultural machinery, port load/unload equipment, military vehicles, etc.</li> <li>- Development of emissions reduction units in a form of being attached to agricultural machinery, military vehicles, port load/unload equipment and its economic feasibility considering the cost to develop versus small demands.</li> </ul> |
| Russia      | Not submitted   |
| Thailand    |   |
| Vietnam     | Not submitted   |

# Findings from Questionnaire (1/5/1) II

Table 2.1.4-19 The benefits of participation in the EANET

|             | Created common understanding of the state of acid deposition problems | Provided the cooperation platform for information sharing among PCs | Provided capacity building in various aspects to PCs | Provided useful information and scientific evidences to PCs | Remarks            |
|-------------|---|---|--|---|--------------------|
| Cambodia    |   |   |  |   | Mismatched answer* |
| China       | ✓   | ✓   | ✓  | ✓   |                    |
| Indonesia   |   | ✓   |  |   |                    |
| Japan       |   | ✓   | ✓  | ✓   |                    |
| Lao PDR     |   |   |  |   | No answer          |
| Malaysia    | ✓   |   | ✓  |   |                    |
| Mongolia    | ✓   | ✓   | ✓  |   |                    |
| Myanmar     | ✓   |   | ✓  | ✓   |                    |
| Philippines |   |   |  | ✓   |                    |
| Korea       | ✓   | ✓   |  |   |                    |
| Russia      |   |   |  |   | Not submitted      |
| Thailand    | ✓   | ✓   | ✓  | ✓   |                    |
| Vietnam     | ✓   | ✓   |  | ✓   |                    |

|                    | created a common understanding of the state of acid deposition problems                                 | Provided the cooperation platform for information sharing among PCs   | Provided capacity building in various aspects to PCs   | provided useful information and scientific evidences to PCs  | Remarks  |
|--------------------|---|---|--|--|--|
| <b>Cambodia</b>    |   |   |  |  | Through the participating with EANET, Cambodia, especially MoE |
| <b>China</b>       | Gave periodic assessment on the state of acid deposition of the region                                  | Made great achievements in the cooperation on the acid deposition issues and has grown into the most important cooperation mechanism in East Asia | Help PCs to improve the abilities  | Sharing air pollution monitoring and control tech  |  |
| <b>Indonesia</b>   |   | Be able to compare the policies between member countries in terms of policies for ambient air quality standards                                   |  |  |  |
| <b>Japan</b>       |   | Shared high quality monitoring data among PCs   | Implemented regular quality control activities among PCs   | Developed common manuals and guidelines.<br>Accumulated high-quality data  |  |
| <b>Lao PDR</b>     | No answer   |   |  |  |  |
| <b>Malaysia</b>    | Improvement in monitoring strategies of air pollution and acid deposition                               |   | Importance in long term planning towards upgrading monitoring equipment  |  |  |
| <b>Mongolia</b>    | Created a common understanding on the state of acid deposition problems                                 | promoting cooperation and research in acid deposition and air pollution problems  | Human capacity building<br>active participation in scientific activity including research fellowship is beneficial.  |  |  |
| <b>Myanmar</b>     | public awareness events, and dissemination of information.  |   | capacity of relevant ministries, stakeholders, policy makers, public and education sectors through monitoring activities, training and research activities | Increase knowledge and understanding of issues related to the consequences of air pollution and acid deposition on human health and natural environment          |  |
| <b>Philippines</b> |   |   |  | Monitoring results are used for the design and development of actions plans  |  |
| <b>Korea</b>       | Promote understanding and exchange among countries with different backgrounds and encourage their amity |   |  |  |  |
| <b>Russia</b>      | Not submitted   |   |  |  |  |
| <b>Thailand</b>    | Public awareness activities   | Established as an important initiative for regional cooperation   | Capacity building and research activities, emission inventory, develop policy-relevant reports   | Monitoring result which shows the state of acid deposition and its effect  |  |
| <b>Vietnam</b>     | Creating a common understanding of the state of acid deposition problems in East Asia                   | Contributing to cooperation in solving acid deposition problem among member countries   |  | Providing useful inputs for decision makers at regional, national and local levels to prevent and mitigate adverse effects of acid deposition on the environment |  |

# Findings from Questionnaire (1/5/1) III

Table 2.1.4-21 Expectations for the EANET (Overview)

|             | Provide technical and financial support | Provide capacity building | Promote public awareness | Enhancement of monitoring network | Provide the platform for international collaboration, communication and information sharing |
|-------------|---|---------------------------|--------------------------|-----------------------------------|---|
| Cambodia    | ✓                                       | ✓                         |                          |                                   |   |
| China       |   |                           |                          |                                   | ✓   |
| Indonesia   |   |                           |                          |                                   | ✓   |
| Japan       |   |                           |                          | ✓                                 | ✓   |
| Lao PDR     | No answer                               |                           |                          |                                   |   |
| Malaysia    |   | ✓                         |                          |                                   | ✓   |
| Mongolia    |   | ✓                         | ✓                        | ✓                                 |   |
| Myanmar     |   |                           | ✓                        |                                   |   |
| Philippines | ✓                                       | ✓                         |                          |                                   |   |
| Korea       |   |                           |                          |                                   | ✓   |
| Russia      | Not submitted                           |                           |                          |                                   |   |
| Thailand    |   |                           | ✓                        | ✓                                 | ✓   |
| Vietnam     |   |                           | ✓                        |                                   | ✓   |

|                    | Provide technical and financial support  | Provide capacity building  | Promote public awareness   | Enhancement of monitoring network   | Provide the platform for international collaboration, communication and information sharing  |
|--------------------|--|--|--|---|--|
| <b>Cambodia</b>    | Support focusing on air pollution researches, regulations, guidelines, and activities plan preparation, air quality monitor and analyzer | The knowledge of air pollution, research capacity, and the implementation of air pollution reduction measures  |  |   |  |
| <b>China</b>       |  |  |  |   | Play a positive role in the technology exchange of advanced monitoring technology  |
| <b>Indonesia</b>   |  |  |  |   | In terms of resources and science / research that are useful for maintaining ambient air quality   |
| <b>Japan</b>       |  |  |  | Promote monitoring and quality control, which is its specialty, with the overall scope of air pollution.                                    | Strengthen cooperation with other regions such as Europe   |
| <b>Lao PDR</b>     | No answer  |  |  |   |  |
| <b>Malaysia</b>    |  | Training in technical know-how and quality maintaining strategies with regard to air pollution monitoring. Training with air pollution modelling activity and short-term and long-term policy strategies |  |   | Platform for international collaboration in the field of air pollution on a regional scale   |
| <b>Mongolia</b>    |  | Research on analysis on the relation of air pollution and acid deposition including related chemical substances  | Public awareness on acid deposition and air pollution  | Enhancement of monitoring network   |  |
| <b>Myanmar</b>     |  |  | A better understanding of the consequences of air pollution/acid deposition and its impact on human health and the natural environment in regional to global through EANET |   |  |
| <b>Philippines</b> | Provision of monitoring equipment (e.g., Ozone generator and the corresponding calibrator)   | Trainings/capacity building activities   |  |   |  |
| <b>Korea</b>       |  |  |  |   | As a communication platform of East Asia for the countries with diverse environmental techniques and experiences   |
| <b>Russia</b>      | Not submitted  |  |  |   |  |
| <b>Thailand</b>    |  |  | Put more effort in broadening public awareness and public participation into EANET activities  | Other emerging air pollutants particularly PM2.5, ozone, VOCs and climate change related air pollutants should also be included under EANET | Leading initiative for regional cooperation, not only EANET but also with other initiatives and international agencies. Providing understandable useful inputs to policy makers and encourage them to play an increasingly important role in promoting EANET at international fora as well as in their countries |
| <b>Vietnam</b>     |  |  | Raising awareness  |   | Joining hands in solving acid deposition problem   |



# Findings from Questionnaire (1/5/1) IV

Table 2.1.4-23 Expected capacity building for the EANET (Overview)

|             | Monitoring | Data collection/<br>QA/QC | Research/<br>analysis | Policy<br>making | Others                       |
|-------------|------------|---------------------------|-----------------------|------------------|------------------------------|
| Cambodia    |            | ✓                         | ✓                     | ✓                |                              |
| China       | ✓          |                           |                       |                  | Pollution control technology |
| Indonesia   |            |                           |                       |                  | Information sharing          |
| Japan       | ✓          | ✓                         | ✓                     | ✓                |                              |
| Lao PDR     |            |                           | ✓                     | ✓                |                              |
| Malaysia    | ✓          |                           | ✓                     | ✓                |                              |
| Mongolia    | ✓          | ✓                         | ✓                     |                  |                              |
| Myanmar     |            | ✓                         | ✓                     |                  |                              |
| Philippines | ✓          | ✓                         | ✓                     |                  |                              |
| Korea       |            | ✓                         |                       | ✓                | public awareness             |
| Russia      |            |                           |                       |                  | Not submitted                |
| Thailand    | ✓          | ✓                         | ✓                     | ✓                | public awareness             |
| Vietnam     |            |                           | ✓                     |                  | Clean air tech<br>promotion  |


|                    | Monitoring  | Data collection/QA/QC  | Research/analysis   | Policy making   | Others  |
|--------------------|---|--|---|---|---|
| <b>Cambodia</b>    |   |  | Air quality data analyze, air pollution inventory, air quality modelling                                | Laws, regulations, guideline developing   |   |
| <b>China</b>       | Monitoring technology, Especially VOC                                 |  |   |   | Pollution control technology  |
| <b>Indonesia</b>   |   |  |   |   | Mutual exchange of information, knowledge and technology between member countries in terms of ambient air quality |
| <b>Japan</b>       | Conduct necessary trainings for new comers                            |  | Organize workshops/seminars regarding emission inventory and modeling for researchers and policy makers |   |   |
| <b>Lao PDR</b>     |   | Training on data interpretation  |   | Use the data for further implementation   |   |
| <b>Malaysia</b>    | Air pollution and acid deposition monitoring quality strategies       |  | Air pollution modelling and analysis  | Relating analysis to national policy via policy reports and workshops   |   |
| <b>Mongolia</b>    | Measurement traceability  | Inter Comparison project   | Research fellowship   |   |   |
| <b>Myanmar</b>     |   | Data quality checking and Research activities on air quality and acid deposition impacts on environment and related with climate change using observation data and satellite data. |   |   | Individual training   |
| <b>Philippines</b> | Series of training with regards to Air Quality Monitoring improvement | QA/QC and best practices, calibration and preventive maintenance   | Development of Country specific Emission Factors for Emission Inventory                                 |   |   |
| <b>Korea</b>       |   | Operate programs for QA/QC managers of PCs to exchange information   |   | Share status and tendency of air quality in the region, operate policy and technology exchange program for air pollution prevention, etc. | Operate programs for the public and civil societies to increase their awareness                                   |
| <b>Russia</b>      | Not submitted   |  |   |   |   |
| <b>Thailand</b>    | Individual Training for monitoring                                    | Air quality management on PM2.5, Ozone and VOCs  | Individual training for emission inventory and data analysis  | policy development on air pollution and acid deposition based on scientific monitoring data   | Promote public awareness  |
| <b>Vietnam</b>     |   |  | Air pollutant emission inventory, mapping pollutants  |   | Clean air tech promotion  |

**Table 1. Group of Activities and Target Substances (1/5/2)**

| Target Substances  |       | Group of Activities |                    |          |                   |            |  |                  |
|--|-------|---------------------|--------------------|----------|-------------------|------------|--|------------------|
|  |       | Monitoring          | Emission Inventory | Modeling | Impact Assessment | Technology | Provision of Inputs to Policies/ Regulations | Public Awareness |
| SO2  |       | ✓                   | ✓                  | ✓        | ✓                 | ✓          | ✓  | ✓                |
| NOx  |       | ✓                   | ✓                  | ✓        | ✓                 | ✓          | ✓  | ✓                |
| NH3  |       | ✓                   | ✓                  | ✓        | ✓                 | ✓          | ✓  | ✓                |
| PM (mass)  | PM2.5 | ✓                   | ✓                  | ✓        | ✓                 | ✓          | ✓  | ✓                |
|  | PM10  | ✓                   | ✓                  | ✓        | ✓                 | ✓          | ✓  | ✓                |
|  | TSP   | ✓                   | ✓                  | ✓        | ✓                 | ✓          | ✓  | ✓                |
| Ozone  |       | ✓                   |                    | ✓        | ✓                 | ✓          | ✓  | ✓                |
| PM (chemical component: inorganic ions, metallic elements, and organic aerosols) |       | ✓                   |                    | ✓        | ✓                 |            | ✓  | ✓                |
| Precipitation Chemistry (ions, pH, EC)   |       | ✓                   |                    | ✓        | ✓                 |            | ✓  | ✓                |
| CO   |       | ✓                   | ✓                  | ✓        | ✓                 | ✓          | ✓  | ✓                |
| NMVOC  |       | ✓                   | ✓                  | ✓        | ✓                 | ✓          | ✓  | ✓                |
| Black Carbon   |       | ✓                   | ✓                  | ✓        | ✓                 |            |  | ✓                |
| Mercury  |       |                     |                    |          |                   |            |  | ✓                |
| POPs   |       |                     |                    |          |                   |            |  | ✓                |
| CH4  |       |                     |                    |          |                   |            |  | ✓                |
| HFCs   |       |                     |                    |          |                   |            |  | ✓                |

※ Checkered patterned cells (pink) are current core activities, horizontal stripe patterned cells (yellow) are current non-core activity, and vertical stripe patterned cells (blue) are both of core and non-core activity of EANET.

:checkered pattern

:horizontal stripe pattern

:vertical stripe pattern


**Table 2: Category of Target Substances and Impact of Air Pollutions/Acid Deposition (Reference) (1/5/2)**


| Target Substances  |                   | Category of Target Substances |               |  |                           | Impacts of Air Pollutants/ Acid Deposition |           |         |
|--|-------------------|-------------------------------|---------------|--|---------------------------|--|-----------|---------|
|  |                   | Acid Deposition               | Air Pollution | Short-Lived Climate Pollutants (SLCPs) | Green House Gasses (GHGs) | Human health                               | Ecosystem | Climate |
| SO <sub>2</sub>  |                   | ✓                             | ✓             |  |                           | ✓  | ✓         | ✓       |
| NO <sub>x</sub>  |                   | ✓                             | ✓             |  |                           | ✓  | ✓         | ✓       |
| NH <sub>3</sub>  |                   | ✓                             | ✓             |  |                           | ✓  | ✓         | ✓       |
| PM (mass)  | PM <sub>2.5</sub> | ✓                             | ✓             |  |                           | ✓  | ✓         | ✓       |
|  | PM <sub>10</sub>  | ✓                             | ✓             |  |                           | ✓  | ✓         | ✓       |
|  | TSP               | ✓                             | ✓             |  |                           | ✓  | ✓         | ✓       |
| Ozone  |                   | ✓                             | ✓             | ✓                                      |                           | ✓  | ✓         | ✓       |
| PM (inorganic ions, metallic elements, and organic aerosols) |                   | ✓                             | ✓             |  |                           | ✓  | ✓         | ✓       |
| Precipitation Chemistry (ions, pH, EC)                       |                   | ✓                             |               |  |                           |  | ✓         | ✓       |
| CO   |                   |                               | ✓             |  |                           | ✓  | ✓         | ✓       |
| NMVOC  |                   |                               | ✓             |  |                           | ✓  | ✓         | ✓       |
| Black carbon   |                   |                               | ✓             | ✓                                      |                           | ✓  | ✓         | ✓       |
| Mercury  |                   |                               | ✓             |  |                           | ✓  | ✓         |         |
| POPs   |                   |                               | ✓             |  |                           | ✓  | ✓         |         |
| CH <sub>4</sub>  |                   |                               |               | ✓                                      | ✓                         |  |           | ✓       |
| HFCs   |                   |                               |               | ✓                                      | ✓                         |  |           | ✓       |


# Detailed Category of Activity (in 2021)

| Target Substances  |       | Group of Activities |                   |                   |                         |                   |                   |                                  |                   |                   |                                  |                   |                   |                     |                          |  |                  |
|--|-------|---------------------|-------------------|-------------------|-------------------------|-------------------|-------------------|----------------------------------|-------------------|-------------------|----------------------------------|-------------------|-------------------|---------------------|--------------------------|--|------------------|
|  |       | Monitoring          |                   |                   | Emission Inventory (EI) |                   |                   | Modeling                         |                   |                   | Impact Assessment (on ecosystem) |                   |                   | Technology          |                          | Provision of Inputs to Policies/ Regulations | Public Awareness |
|  |       | Regular Monitoring  | Capacity building | Research Activity | Development of EI       | Capacity building | Research Activity | Development/application of Model | Capacity Building | Research Activity | Assessment Activity              | Capacity Building | Research Activity | Technology transfer | Provision of Information |  |                  |
| SO2  | ✓     | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓  |                  |
| NOx  | ✓     | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓  |                  |
| NH3  | ✓     | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓  |                  |
| PM(mass)   | PM2.5 | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓  |                  |
|  | PM10  | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓  |                  |
|  | TSP   | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓  |                  |
| Ozone  | ✓     | ✓                   | ✓                 |                   |                         |                   | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓  |                  |
| PM (chemical component:Inorganic ions, metallic elements and organic Aerosols) | ✓     | ✓                   | ✓                 |                   |                         |                   | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 |                   |                     |                          | ✓  |                  |
| Precipitation Chemistry (ions, pH, EC)   | ✓     | ✓                   | ✓                 |                   |                         |                   | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 |                   |                     |                          | ✓  |                  |
| CO   | ✓     | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓  |                  |
| NMVOC  | ✓     | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓  |                  |
| Black Carbon   | ✓     | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                                | ✓                 |                   |                     |                          | ✓  |                  |
| Mercury  |       |                     |                   |                   |                         |                   |                   |                                  |                   |                   |                                  |                   |                   |                     |                          | ✓  |                  |
| POPs   |       |                     |                   |                   |                         |                   |                   |                                  |                   |                   |                                  |                   |                   |                     |                          | ✓  |                  |
| CH4  |       |                     |                   |                   |                         |                   |                   |                                  |                   |                   |                                  |                   |                   |                     |                          | ✓  |                  |
| HFCs   |       |                     |                   |                   |                         |                   |                   |                                  |                   |                   |                                  |                   |                   |                     |                          | ✓  |                  |

※ Checked patterned cells (pink) are current core activities, horizontal stripe patterned cells (yellow) are current non-core activity, and vertical stripe patterned cells (blue) are both of core and non-core activity of EANET.

:checked pattern


:horizontal stripe pattern


:vertical stripe pattern

# Detailed Category of Activity including opinion of countries in Questionnaire

| Target Substances   |       | Group of Activities |                   |                   |                         |                   |                   |                                   |                   |                   |                                  |                   |                   |                     |                          |   |                  |
|---|-------|---------------------|-------------------|-------------------|-------------------------|-------------------|-------------------|-----------------------------------|-------------------|-------------------|----------------------------------|-------------------|-------------------|---------------------|--------------------------|---|------------------|
|   |       | Monitoring          |                   |                   | Emission Inventory (EI) |                   |                   | Modeling                          |                   |                   | Impact Assessment (on ecosystem) |                   |                   | Technology          |                          | Provision of Inputs to Policies/Regulations | Public Awareness |
|   |       | Regular Monitoring  | Capacity building | Research Activity | Development of EI       | Capacity building | Research Activity | Development /application of Model | Capacity Building | Research Activity | Assessment Activity              | Capacity Building | Research Activity | Technology transfer | Provision of Information |   |                  |
| SO2   |       | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓   |                  |
| NOx   |       | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓   |                  |
| NH3   |       | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓   |                  |
| PM(mass)  | PM2.5 | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓   |                  |
|   | PM10  | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓   |                  |
|   | TSP   | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓   |                  |
| Ozone   |       | ✓                   | ✓                 | ✓                 |                         |                   | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓   |                  |
| PM (chemical component:Inorganic ions, metallic elements and orgnic Aerosols) |       | ✓                   | ✓                 | ✓                 |                         |                   | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 |                   |                     | ✓                        | ✓   |                  |
| Precipitation Chemistry (ions, pH, EC)  |       | ✓                   | ✓                 | ✓                 |                         |                   | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 |                   |                     | ✓                        | ✓   |                  |
| CO  |       | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓   |                  |
| NMVOc   |       | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 | ✓                 | ✓                   | ✓                        | ✓   |                  |
| Black Carbon  |       | ✓                   | ✓                 | ✓                 | ✓                       | ✓                 | ✓                 | ✓                                 | ✓                 | ✓                 | ✓                                | ✓                 |                   |                     | ✓                        | ✓   |                  |
| Mercury   |       |                     |                   |                   |                         |                   |                   |                                   |                   |                   |                                  |                   |                   |                     |                          | ✓   |                  |
| POPs  |       |                     |                   |                   |                         |                   |                   |                                   |                   |                   |                                  |                   |                   |                     |                          | ✓   |                  |
| CH4   |       |                     |                   |                   |                         |                   |                   |                                   |                   |                   |                                  |                   |                   |                     |                          | ✓   |                  |
| HFCs  |       |                     |                   |                   |                         |                   |                   |                                   |                   |                   |                                  |                   |                   |                     |                          | ✓   |                  |

Checked patterned cells (pink) are current core activities, horizontal stripe patterned cells (yellow) are current non-core activity, and vertical stripe patterned cells (blue) are both of core and non-core activity of EANET.

:checked pattern

:horizontal stripe pattern

:vertical stripe pattern

:including country's opinion

# For Discussion on Expansion of Scope of EANET

- Based on the outcomes from the results of Questionnaire (1/5/1) and consideration on Matrix (1/5/2), the actual expansion of scope is expected to be discussed.
- In the next agenda (1/5/3), the Elements for Supplementary Document to the EANET Instrument is discussed furthermore based on the discussion in this sub-agenda.