

# Regional Cooperation on Air Pollution in Northeast Asia

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## I . Air Pollution in NEA

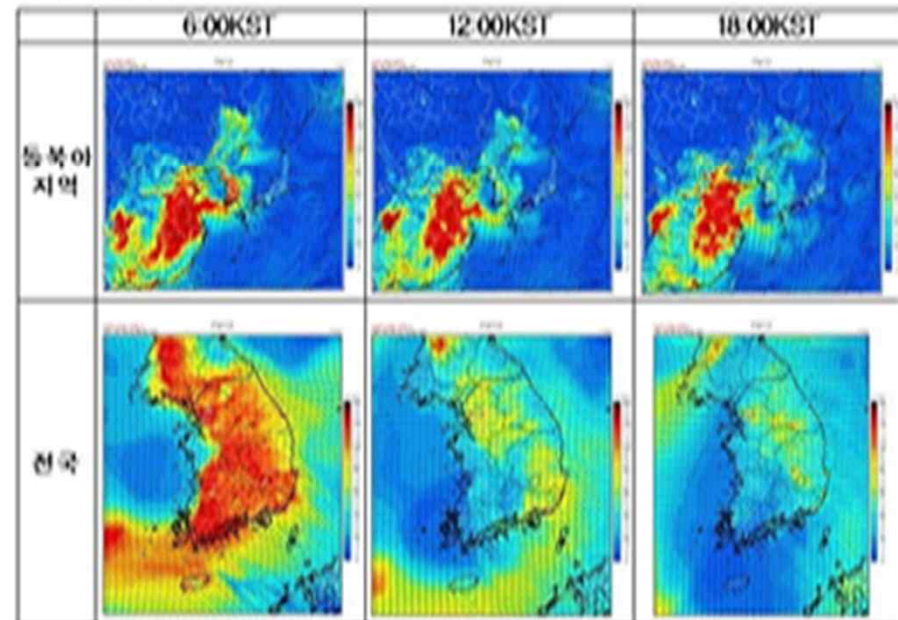
- Main Air Pollution Issues in Northeast Asia
  - Pollutants: PM, SO<sub>2</sub>, NO<sub>x</sub>, DSS, VOCs
  - Coverage: Domestic and Transboundary



"중국발 스모그' 미세먼지 농도 높아져 아주경계

수도권의 미세먼지 예보 등급 '악건나쁨'

예측모델 결과



## I . Air Pollution in NEA

### ● Historical Change of Air Pollution Issues in NEA(1990s~2010s)

	1990s	2000s	2010s
<b>Background</b>	<ul style="list-style-type: none"> <li>-International Environmental Cooperation (Rio Conference)</li> <li>-Learning Experiences of European and North American region</li> <li>-Japanese Environmental ODA/China-Japan Cooperation</li> <li>-Korea-Japan Initiative</li> </ul>	<ul style="list-style-type: none"> <li>-Expansion of Desertification in NEA</li> <li>-Severe DSS Occurrence and Transboundary Impacts</li> </ul>	<ul style="list-style-type: none"> <li>-Severe Air Pollution(PM2.5) Occurrence as Disaster level and Transboundary Impacts</li> <li>-Linkage Response of Air Pollution and Climate Change</li> </ul>
<b>Pollution</b>	<ul style="list-style-type: none"> <li>-Science Evidence of Sources, Movement and Impact of Long-range Transboundary Air Pollutants such as SO2 in NEA</li> </ul>	<ul style="list-style-type: none"> <li>-Science Evidence of Occurrence, Movement and Impact of DSS</li> </ul>	<ul style="list-style-type: none"> <li>-Science Evidence of Source, Transboundary Movement and Impact of Air Pollutant such as PM</li> <li>-Mitigation of Climate Change</li> </ul>
<b>Activity</b>	<ul style="list-style-type: none"> <li>-Monitoring, Information Sharing</li> <li>-Capacity Building of Environmental Management</li> <li>-Establishment and Launching of Cooperation mechanism and Joint Research</li> </ul>	<ul style="list-style-type: none"> <li>-Join Monitoring Network and Data Sharing of DSS</li> <li>-Capacity Building of Environmental Technology and Industry</li> </ul>	<ul style="list-style-type: none"> <li>-Monitoring, Data Sharing</li> <li>-Joint Research/Police Dialogue</li> <li>-Emission Reduction of PM</li> <li>-Co-benefit on Climate Change and Air Pollution</li> <li>-Advancement of Mechanism and Activity</li> </ul>

## II . Regional Cooperation on Air Pollution

### ● Multilateral Cooperation Mechanism

Mechanism	Activity
TEMM Tripartite Policy Dialogue on Air Pollution	<ul style="list-style-type: none"> <li>● Cooperation Channel for addressing air pollution as one priority area of 'Second TEMM TJAP(2015~2019)</li> <li>● Main Activity               <ul style="list-style-type: none"> <li>- Working Group I (Scientific Research on Prevention and Control)</li> <li>- Working Group II (Technology/Policy on Air Quality Monitoring and Prediction)</li> </ul> </li> </ul>
NEASPEC	<ul style="list-style-type: none"> <li>● Russia-initiated project, 6 countries</li> <li>- Development of the Technical and Policy Frameworks for Transboundary Air Pollution Assessment and Abatement of North-East Asia</li> </ul>
EANET	<ul style="list-style-type: none"> <li>● Japan has initiated mechanism from 1998, 13 countries</li> <li>● Main Activity: Monitoring and Evaluation of acid deposition materials</li> </ul>
LPT	<ul style="list-style-type: none"> <li>● ROK initiated the project in 1995, 3 countries</li> <li>● Main Activity: Monitoring and Modeling of long-range transboundary movement of air pollutants among three countries</li> </ul>

## II . Regional Cooperation on Air Pollution

### ● Membership of Multilateral Mechanism

Countries	TEMM	NEASPEC	EANET	LTP
China	O	O	O	O
Japan	O	O	O	O
RO Korea	O	O	O	O
DPR Korea		O		
Mongolia		O	O	
Russia			O	
Cambodia			O	
Indonesia			O	
Lao PDR			O	
Malaysia			O	
Myanmar			O	
Philippines			O	
Thailand			O	
Vietnam			O	

## II . Regional Cooperation on Air Pollution

### ● Evaluation of Multilateral Mechanism

#### Main Activities

- ❖ Monitoring, Data and Information Sharing, Joint Research of Science Evidence and understanding, Capacity Building of Environmental Management, Technology and Industry

#### Methods

- ❖ Voluntary based Approach
- ❖ Small Project

#### Outcomes/ Challenges

##### [Outcomes]

- ❖ Understanding of Air Pollution Phenomena
- ❖ Establishing channel of policy dialogue
- ❖ Joint monitoring and Data Sharing Network
- ❖ Environmental Management and Technology

##### [Challenges]

- ❖ Duplication and Overlap, Lack of Linkage among existing mechanism
- ❖ Lack of Mechanism focusing on Emission Reduction, especially legal binding Mechanism
- ❖ Lack of Common Understanding, Scientific Tool
- ❖ Traditional Approach on transboundary air pollution, - Emergency Response, linkage with climate change

### III. Suggestion of Regional Cooperation

#### ● Direction for advancing Cooperation Mechanism on Air Pollution

##### ❖ Development of Comprehensive Mechanism, but focusing on Emission Reduction as a new function and Scope of Mechanism

- Comprehensive Function and Scope : Monitoring & Data Sharing Modelling, Assessment, Reduction, Policy & Technology

##### ❖ Considering Condition and Interest of each country, history and base of cooperation in NEA

- Strengthening or Mergence of existing mechanisms, also considering establishment of new mechanism focusing on emission reduction

- Voluntary Mechanism, Seeking useful tool for securing effect of legal binding mechanism on emission reduction through agreement among countries

##### ❖ Addressing recent air pollution trend such as severe events, corresponding global trends such as multi effects and co-benefit approach



### III. Suggestion of Regional Cooperation

#### ● Option Analysis for Advancing Cooperation Mechanism

Option	Type	Relevance	Receptiveness	Effectiveness	Sustainability	
1	Existing Mechanism	Legal Binding	△	▼	▲	▲
	Voluntary	△	▲	△	△	
2	New Mechanism	Legal Binding	▽	▼	▲	▲
	Voluntary	△	△	△	△	

Note: ▲ very high, △ high, ▽ low, ▼ very low



**Establishment of Voluntary Mechanism  
through utilization of existing Cooperation Mechanism**

### III. Suggestion for Regional Cooperation

- **Suggestion 1: Northeast Asian Clean Air Program(NEACAP)**
  - **Establishment of NEACAP under existing mechanisms such as NEASPEC, TEMM + etc.**
  - **Air Pollutants Emission Reduction Program in NEA**
  - **Voluntary Participation and Implementation Mechanism**
  - **Commitment of National Action Plan as Intended nationally determined contribution in Paris Agreement for addressing Climate Change**
  - **Set up Mutual Review System**
  - **Reporting Implementation Result to Member Countries and Secretariat**
  - **Arrangement of Incentive and credit sharing mechanism such as co-benefits project linkage with air pollution and climate change among countries**

### III. Suggestion for Regional Cooperation

- Suggestion 1: Northeast Asian Clean Air Program(NEACAP)**

#### Comparison Between CLRTAP and NEACAP

	<b>CLRTAP</b>	<b>NEACAP</b>
<b>Type</b>	Convention	Agreement
<b>Goal</b>	Emission Reduction	Emission Reduction
<b>Reduction Target</b>	Negotiation and CAP	Nationally Determination
<b>Implementation</b>	Legal Binding	Voluntary
<b>Evaluation</b>	Common Evaluation Tool	Mutual Review System

### III. Suggestion for Regional Cooperation

- **Suggestion 2: Emergency Response System**

- **Difference of Emergency Response and usual Pollution Control**

◆ Traditional Transboundary Air Pollution Mechanism: CLRTAP/EMEP

◆ Emergency Response for addressing Severe Air Pollution



**Air Emergency Information Sharing System in Northeast Asia(AEISS)**

- **Coordination and Rearrangement of Current Monitoring and Data Sharing Mechanism and Activities**

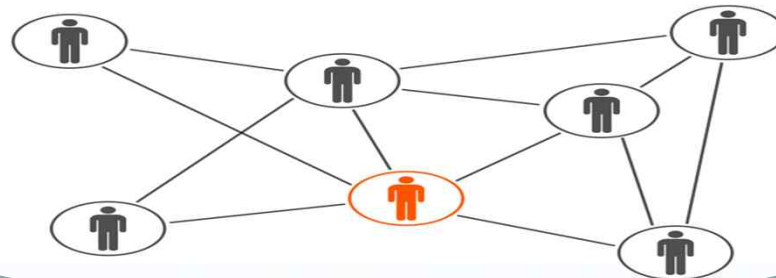
### III. Suggestion for Regional Cooperation

#### ● Suggestion 3: Northeast Asian Clean Air Forum(NACAF)

##### Purpose

- ❖ Cooperative activity for addressing air pollution problems in NEA
- ❖ Establishment of multidisciplinary expert network and promotion of human resources and information exchange and cooperation

**Creation of Epistemic Community  
for Clean Air and Happiness of Residents  
in Northeast Asia**



*Thanks for your  
attention!*

