

Regional Cooperation on Air Pollution in Northeast Asia

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I . Air Pollution in NEA

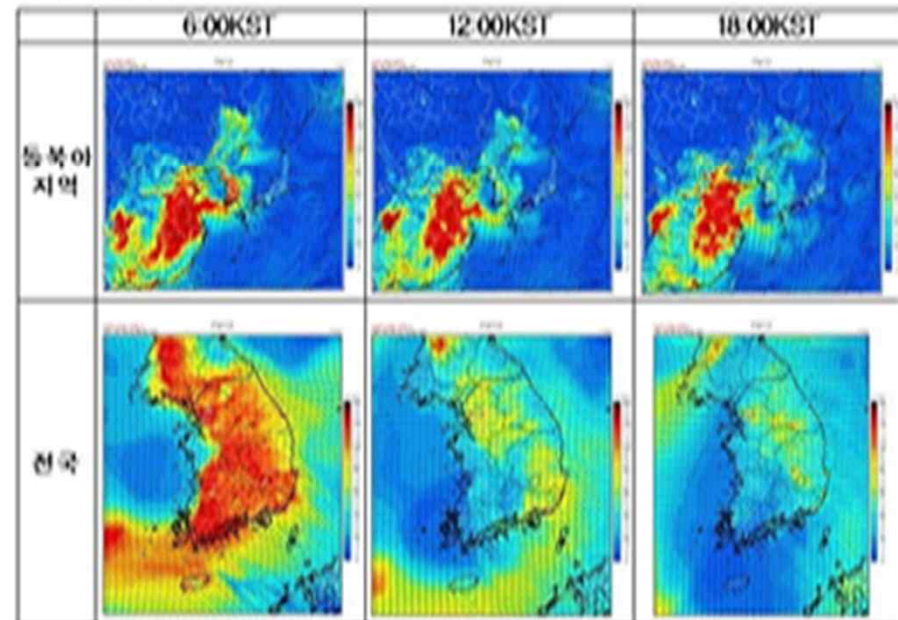
- Main Air Pollution Issues in Northeast Asia
 - Pollutants: PM, SO₂, NO_x, DSS, VOCs
 - Coverage: Domestic and Transboundary



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

II . Regional Cooperation on Air Pollution

● Multilateral Cooperation Mechanism

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

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

	CLRTAP	NEACAP
Type	Convention	Agreement
Goal	Emission Reduction	Emission Reduction
Reduction Target	Negotiation and CAP	Nationally Determination
Implementation	Legal Binding	Voluntary
Evaluation	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**

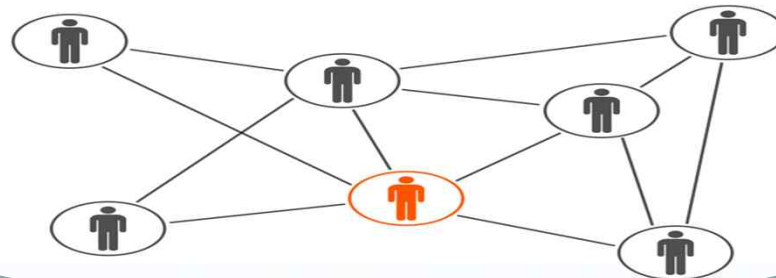
III. Suggestion for Regional Cooperation

● 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!*

