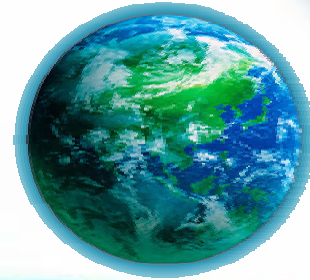


# Building Partnerships for Environmental Protection in Northeast Asia



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Choi, Heung-Jin  
Director, Policy Coordination Div.  
Ministry of Environment

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# Introduction



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## Characteristics of Northeast Asia

• **Countries** : Korea, China, Japan, Russia, and Mongolia

• **Population Growth (2000~2005)**

- Korea(0.5%), China(0.6%), Japan(0.2%), **Russia(- 0.4%)**, Mongolia(1.3%)
- **Total Population : 1.65 Bil.** (as of 2005)

• **Increasing Urbanization, use of vehicles & energy**

• **Rapid Economic Growth and Increased Interdependency**

- Average GDP growth(2000-2005): China(9.6%), Japan(1.3%), Korea(4.6%), Russia(6.2%), Mongolia(5.8%)
- Economic interdependency among NEA countries (export partner, 2005)
  - Korea (2005): 1<sup>st</sup> China, 3<sup>rd</sup> Japan
  - Japan (2005): 1<sup>st</sup> China, 2<sup>nd</sup> Korea
  - China (2005): 4<sup>th</sup> Japan, 6<sup>th</sup> Korea, 8<sup>th</sup> Russia



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# Statistical Data of Northeast Asian Countries

	Population (million) (2005)	Urban Population (% of total) (2004)	GDP (billion USD) (2005)	GNI per capita Atlas Method (current USD) (2005)	Electric Power Consumption (kWh per capita) (2004)	Electricity Generated by Coal (% of total) (2003)	TPES (toe/capita) (2004)	Energy Efficiency (TPES/GDP) (toe/1000 \$) (2000 \$) (2004)	Passenger Cars (per 1,000 people) (2003)	Rank in HDI (2005)
<b>China</b>	1,305	39.6	2,228	1,740	1,607	79.4	1.25	0.85	8	85
<b>Russia</b>	143	73.3	763	4,460	5,642	18.8	4.46	1.95	140	62
<b>Japan</b>	128	65.6	4,505	38,980	8,076	28.2	4.18	0.11	428	11
<b>Korea</b>	48	80.5	787	15,830	7,391	38.9	4.43	0.35	204	28
<b>DPRK</b>	22	61.4	N/A	N/A	827	39.4	0.91	1.94	N/A	N/A
<b>Mongolia</b>	3	56.9	1.9	690	N/A	N/A	N/A	N/A	26	114

Source: UNDP, Human Development Report 2005  
 World Bank, Little Green Data Book 2006  
 World Bank, World Development Report 2007  
 IEA, Key World Energy Statistics 2006



## Major Environmental Issues in Northeast Asia



# Major Environmental Issues in Northeast Asia

## Air Pollution

- ▣ Increase of urbanization, population, energy use and vehicles cause increase of **NO<sub>x</sub>**, **SO<sub>x</sub>**, and **particulate matters**
- ▣ **Acid deposition** due to increase of NO<sub>x</sub>, SO<sub>2</sub> became environmental issues  
 Japan: average pH of rain 4.49~5.85 (1983~2002)  
 5% of rain sample(23regions) is pH<4 (2004)  
 Korea: 4.8~5.2 (pH average)(2005)  
 China: regions with serious acid rain (pH<4.5) are increasing(2006)

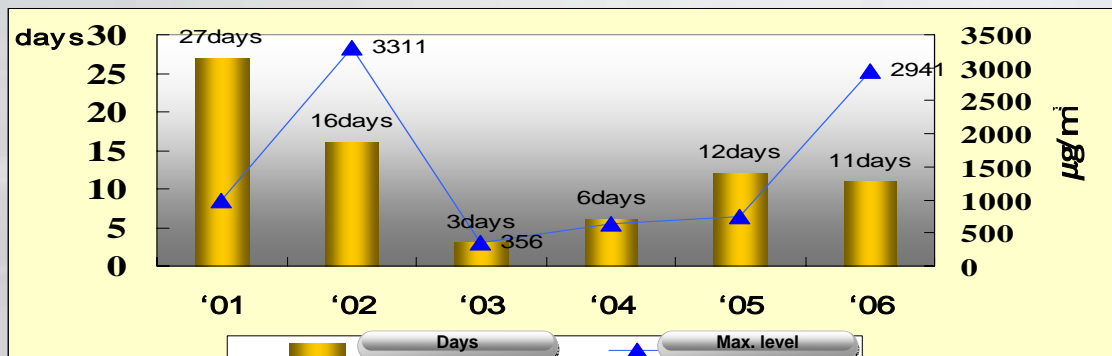
## Degradation-Desertification of Land

- ▣ Climate change, unsuitable agricultural land use, felling, mowing, insufficient water management ·irrigation excessive grazing and etc. (China, Mongolia)
- ▣ Deforestation of 1.74 mil.km<sup>2</sup> (18.1% of total land) (China)  
 90% of total land faces threat of desertification (Mongolia)



## Dust and Sandstorms

- ▣ **Natural causes** (arid climate, drought)  
**anthropogenic causes** (excessive grazing, insufficient management of pasture, water, and irrigation)
- ▣ **Severe DSS** attacks in spring in '02 and '06 damages in health, industry, ecology and livestock  
 - **Max PM10 level: 2,718µg/m<sup>3</sup>**(Ulsan city, 2007)





## Marine Environment

- **Pollution** in ocean and coastal areas:
  - inflow of waste water from land, pollution from vessels & marine activities, ocean dumping of wastes, red tide, large reclamation projects
- **Destruction** of marine ecology & biodiversity
- **Decrease of marine resources,** increase of marine waste



## Loss of Bio-Diversity

- Exportation of natural resources (forest, fish), dams, degradation of forests, wetlands, and pastures due to expansion of farmland, introduction of exotic species, illegal trade of endangered species, excessive felling, poaching
- 20% of Mammalia, Amphibia, Fishes(sea water, fresh water), & vascular plant, 20% of Reptilia, 10% of birds are endangered(2005, Japan)



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## Waste

- With rapid industrialization & economic growth, waste generation increased
  - Korea: Daily waste generation
    - 2003: approx. 2.95bil. ton
    - 1996: approx. 1.75bil. ton



## Others (chemical pollution, energy and etc.)

- **Chemicals** in daily use & chemicals pollution accident cause damages to environment and human body
  - plastics, detergent, food, beverages, paint, and etc.
- **Energy shortage** due to economic growth, **pollution caused by use of fossil fuel**(air pollution, climate change, acid rain), increased demand for clean energy (solar, wind power)



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## Environmental Cooperation in Northeast Asia

## Framework of Environmental Cooperation in NEA

### Bilateral

Korea-Japan  
Korea-China  
Korea-Russia  
Korea-Mongolia

### Multi-lateral

TEMM  
NEAC  
NEASPEC  
LTP  
NOWPAP

## Korea-Japan Environmental Cooperation

- 📖 Agreement on Environmental Cooperation ('93.6)
- 📖 Korea-Japan Joint Committee for Environmental Cooperation
  - 10 rounds of meetings since 1994
  - 10th Joint Committee Meeting ( 2007.7, Korea)
    - **DSS, climate change, migratory birds protection, chemicals**, etc.
- 📖 Korea-Japan Resource Circulation Policy Meeting(2006-)
  - Resource Recirculation Bureau(KMOE) – Office of Waste Recycling Program Planning(JMOE)

## Korea-China Environmental Cooperation

- 📖 Agreement on Environmental Cooperation ('93.10)
- 📖 Korea-China Joint Committee for Environmental Cooperation
  - 12 rounds of meetings since 1994
  - 12<sup>th</sup> Joint Committee Meeting (2007.6, China)
    - **DSS, environmental industry/technology, green procurement, LTP**, etc.



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## Korea-Russian Environmental Cooperation

- 📖 Agreement on Environmental Cooperation ('94.6)
- 📖 Korea-Russian Joint Committee for Environmental Cooperation
  - 3 rounds of meetings since 1994
  - Promote environmental projects (13 in areas like **migratory birds protection, study of waterfowl stocks**)

## Korea-Mongolia Environmental Cooperation

- 📖 Arrangement on Environmental Cooperation('00.9)
- 📖 Arrangement on Cooperation for **Nature Protected Areas** (2007)
- 📖 Korea-Mongolia Environment Ministers' Meeting ('07.1, '07.8)



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## Tripartite Environmental Ministers Meeting (TEMM)

- **Highest-level governing body in Northeast Asia:**  
Korea, China, and Japan
- **Annual meeting was initiated in 1999 under the initiative of Korea**
  - **TEMM 8 in Beijing, China (December 2006):** DSS, Climate Change, Illegal trans-boundary movement of toxic and hazardous waste
- **TDGM on DSS (2007~) : Director General level**
  - **TDGM 2 in Tokyo, Japan (Sep. 2007) :** Joint Research on DSS
- **TEMM cooperation projects**
  - 6 projects are under way



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## TEMM Projects

### Outcomes

- Raising awareness of environmental community
- Addressing global and regional environmental issues
- Information exchange, joint research, training, education
- Environmental industry and technology

### TEMM Projects

- **TEMM Website ([www.temm.org](http://www.temm.org))**
- **Joint Environmental Training Project**
- **Tripartite Environmental Education Network (TEEN)**
- **Ecological Conservation in Northwest China**
- **Environmental Industry Cooperation**
- **Freshwater (lakes) Pollution Prevention Project**



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## TEMM Webpage

- Providing information on TEMM



Introduction

Joint Communiqué

Projects

Recent activities

Archive

Regional cooperation



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## Joint Environmental Training Project

- Annual training by turns among three countries
  - 7th Training in Japan in November 2007
  - Lecture, group discussion and presentation, field trip



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## Tripartite Environmental Education Network

- **Cooperation project led by private sector**
  - Sharing information on Environmental Education
  - 8th TEEN workshop in China in October 2007



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## Ecological Conservation in NW China

- **China is experiencing rapid desertification**
  - Over-grazing, water shortages, etc
  - Major source of DSS
- **Developed guideline for ecological restoration** (August 2007)
- **Study tour in Korea** (October 2007)
  - Chinese experts, local residents and officials from SEPA



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## Environmental Industry Cooperation

### Annual roundtable meeting

- Vision for environment industry and technology in the 21st century
- Achieving resource circulation society
- Sustainable production and consumption and Eco-labeling

7th Meeting in Pusan, Korea (November 2007)

### Eco-products exhibition in Seoul, Korea (November 2007)



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## Freshwater Pollution Prevention Project

### Joint research on lake Xihu, China

### Annual workshop on the prevention of freshwater pollution

- 6th workshop in China in November 2006

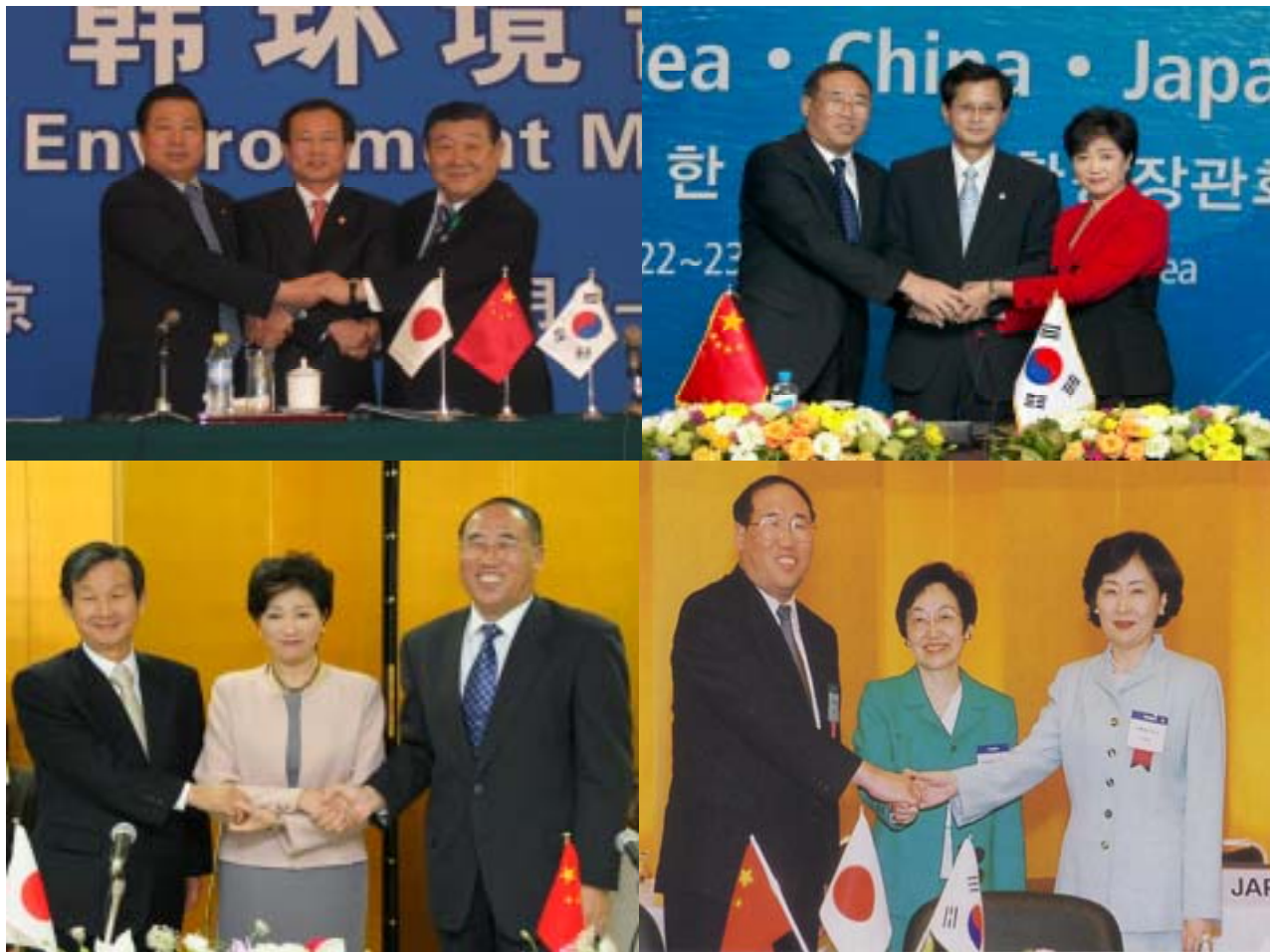
### Training program on water quality management schemes

- Technical training for specialists from China is provided by Korea
- 5th Technical training in Korea July 2007



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## Northeast Asian Conference on Environmental Cooperation (NEAC)

**📁 Korea, China, Japan, Mongolia and Russia**

**📁 Information exchange and Policy dialogue forum since 1992**

- Environmental experts from relevant authorities, local governments, research institutions, and NGOs

**📁 15th NEAC in Ulsan in March 2007**

- NEAC's development measure for future
- DSS response policy





## Meeting of Senior Officials on Environmental Cooperation in Northeast Asia (NEASPEC)

### Six countries and UN/International organizations

- ROK, DPRK, China, Japan, Mongolia, Russia
- ESCAP, UNDP, UNEP, ADB, World Bank

### Annual meeting since 1993

### Cooperation Projects

- Mitigation of Air Pollution from Coal-Fired Power plants in NEA
- Nature Conservation Program in NEA

### 12th NEASPEC in Beijing in March 2007



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## Transboundary Environmental Impact Assessment Training Workshop (EIA)

### Train & Transfer EIA methodology to NEAs including DPRK, Mongolia, China, and Russia

• 1st Workshop	October 2004, Seoul, Korea
• 2st Workshop	October 2005, Beijing, China
• 3st Workshop	September 2006, Vladivostok, Russia
• 4st Workshop	August 2007, Ulaanbaatar, Mongolia

### Serve as a foothold to introduce transboundary EIA and enhance environmental cooperation

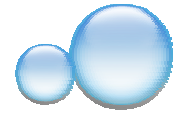


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## Importance of Environmental Cooperation

- Increase of ecological interdependence in NEA
  - ☞ *“the quality of life in a certain country is determined to a significant extent by the activities of other countries”*
- Environment issues like climate change & trans-boundary air pollution, is deteriorating regional environment and economic development
- Environment cooperation, *non-security issue*, can be a basis for the further cooperation in the field of economy and security



## Limits

- ❑ Low level of institutionalization for environmental cooperation
- ❑ Lack of cooperative activities for scientific research to build consensus on the regional problems
- ❑ Linkages and integration among institutions (e.g. TEMM, NEASPEC, and NEAC) are not schematized
- ❑ Lack of participation from NGOs and scientific experts



## Future Directions of Environmental Cooperation

- ❑ Clarifying & establishing a comprehensive framework in NEA
  - Develop TEMM into a environmental consultative body where environmental authorities of 3 countries as well as all related ministries dealing with environmental issues.
  - Regarding DSS issues, environmental authorities, meteorological authorities, and forest authorities of three countries are participating in the discussion





### **Strengthening Policy Dialogues in TEMM**

- Shaping common consciousness through participation of parties of interests by establishing regular special sessions on DSS, climate change and wastes
- Special session on DSS(TEMM5, TEMM6), Workshop on DSS (TEMM8)

### **Strengthening roles of TDGM**

- TDGM's role is expanded into other areas, like climate change & waste, with the successful case in DSS issues
- Drawing up substantial plan for cooperation on major environmental issues in NEA

### **Strengthening linkage between TEMM and other environmental cooperation bodies**

- Establish efficient cooperation mechanism for NEA, through close consultation with cooperative bodies having similar characteristics like TEMM, NEASPEC, NEAC, ASEAN+3





## Other Works for Environmental Cooperation in NEA

- **Active participation of environmental NGOs and expert groups in governance System**
- **Building knowledge on the problems and policies through joint activities on scientific research**
- **Strengthen Cooperation with International Organizations (e.g. UNEP and ESCAP)**



**Thank You !**