

II. Impacts of Climate Change on Korea



Sectoral Impacts on Korea

•Meteor. •Disaster

- **Increases** in damage caused by **natural disasters**
 - ※ Typhoon 'Rusa' ['02] : the cost of 5.46 bn US\$, with the death of 125
 - Typhoon 'Maemi' ['03] : the cost of 4.78 bn US\$, with the death of 117
- Damages caused by “**severe rains**”
- Increases in **damage from floods** by **3.2 times** per **decade**
- Loss of coast lines **by sea level rise, inundation and overflow**
 - The projected area of inundation per 50cm rise in sea level is 1.4 times of Seoul area

III

Strategies for Climate Change Adaptation

III. Strategies on Climate Change Adaptation

National Adaption Policy-Setting of Korea

"National Comprehensive Plan for Climate Change Adaptation

•VISION : Establishment of Safe Society & Support for Green Growth through Climate Change Adaptation

- In May 2007, the National Committee on Climate Change Response chaired by Prime Minister decided to develop a 'National Comprehensive (master) Plan for Climate Change Adaptation'.
- With the numerous efforts including research and reviewing processes by experts of climate change, the government of Korea (Ministry of Environment) set up the plan and officially announced to the public on December 24th, 2008.
- 14 Ministries Participating
 - - Leading by Ministry of Environment

III. Strategies on Climate Change Adaptation

• Strategy

National Comprehensive Plan for Climate Change Adaptation

: consist of 183 projects total

Climate Change Risk Assessment

Monitoring
Forecasting

Impact
Assessment

Vulnerability
Assessment



Climate Change Adaptation Program

- Eco-system : Land (Agriculture, Forest, Mountain), Water
- Water Resource and Quality Management
- Human Health
- Disaster Prevention and Risk Control
- Adaptation related Business and Energy
- SOC : Infrastructure, Urban Design, etc

III. Strategies on Climate Change Adaptation

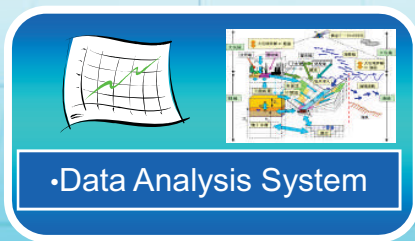
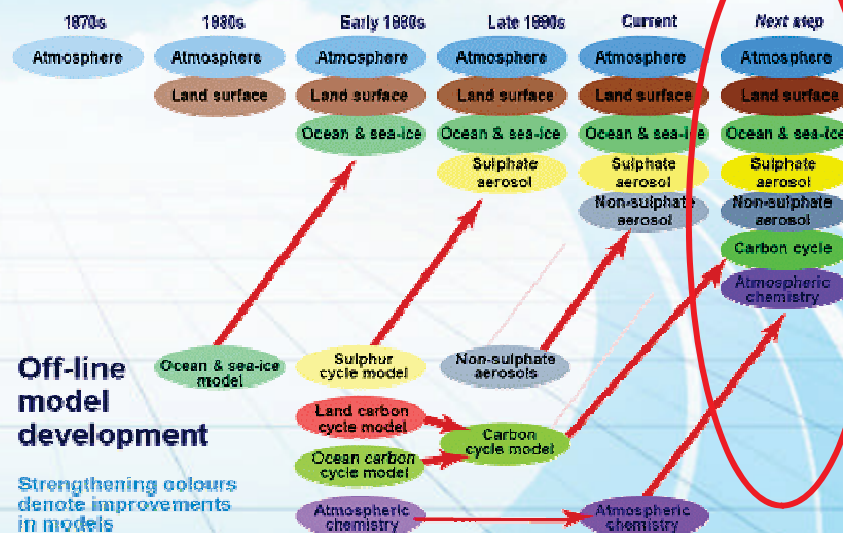
•Climate Change Risk Assessment

•○ Improvement of the **capability to monitoring and forecasting** of climate ch

•3-dimensional monitoring network



•Integrated Modeling System

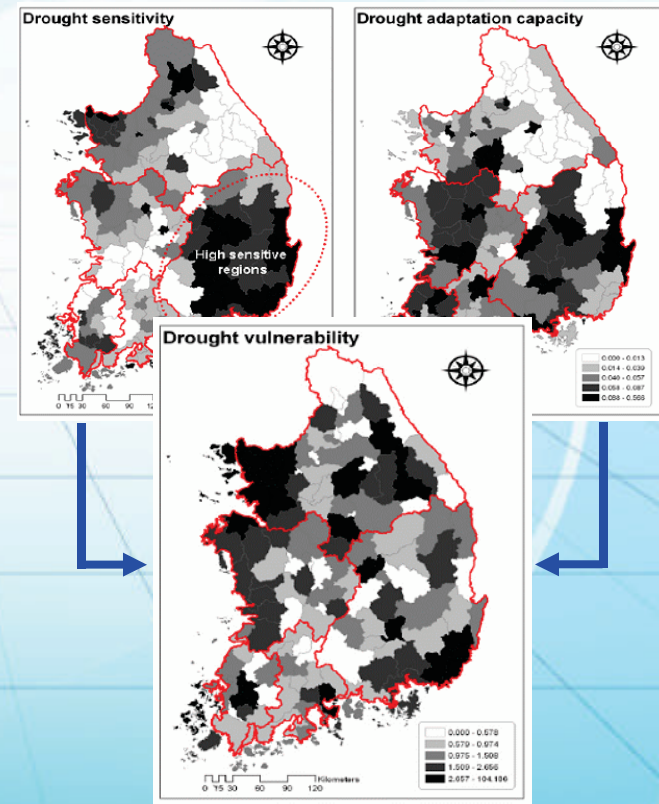
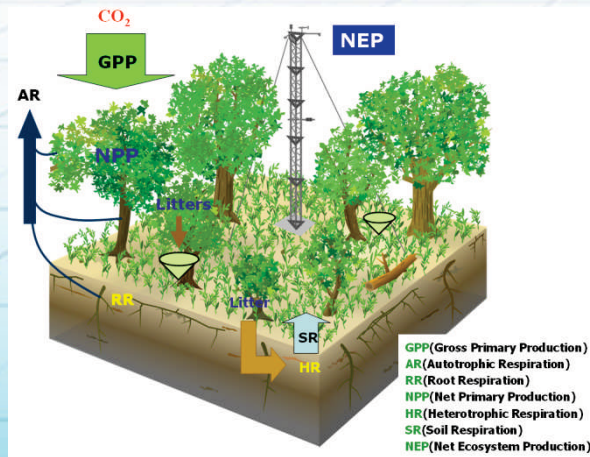


III. Strategies on Climate Change Adaptation

Climate Change Risk Assessment

- Long term monitoring of the impact
- Impact/Resilience Assessment and National Long Term Ecological Research Vulnerability Mapping for each sector
 - i.e.)
 - Impact Assessment
 - Resilience Assessment
- Since yr2003, Total 17 Sites
- Including Land, Fresh Water, Coastal, Animal

•i.e.) Carbon Cycle Monitoring



•Vulnerability mapping

III. Strategies on Climate Change Adaptation

Climate Change Adaptation Program

- **Water resource and quality** management program
 - Renewing the Mid/Long term National Water Resource Management Plan
 - Developing environment-friendly Stable Water Supply System

•Current Status



•i.e.) Nakdong River

•Anticipating Changes



III. Strategies on Climate Change Adaptation

Climate Change Adaptation Program

○ Human health management program

- Developing the surveillance and control systems for vector-borne diseases
- Launching the national research project for environmental health (10 Mil. \$ / yr)

‘Heat/Health Watch-Warning System’

Synoptic Health Watch-Warning

System levels:

EXCESSIVE HEAT WARNING

Dangerous heat stress conditions, which historically have led to excess mortality, are forecast to occur within the next 24 hours.

HEAT ADVISORY

Heat stress conditions, which might be associated with excess mortality, are forecast to occur within the next 24 hours.

HEAT WATCH

Potentially life-threatening heat stress conditions are forecast to occur in the next 24 to 48 hours.

NO ADVISORY

Weather conditions are not forecast to be oppressive.

Network Seoul, South Korea

SBOUL forecast issued 05/29/2008 03:15:01

Time	03h	09h	15h	21h
May 28				Transition
NO ADVISORY				
Temperature / Dew Point	19 / 17	17 / 17	19 / 18	19 / 19
May 29				Transition
NO ADVISORY				
Temperature / Dew Point	18 / 18	23 / 19	29 / 20	19 / 17

III. Strategies on Climate Change Adaptation

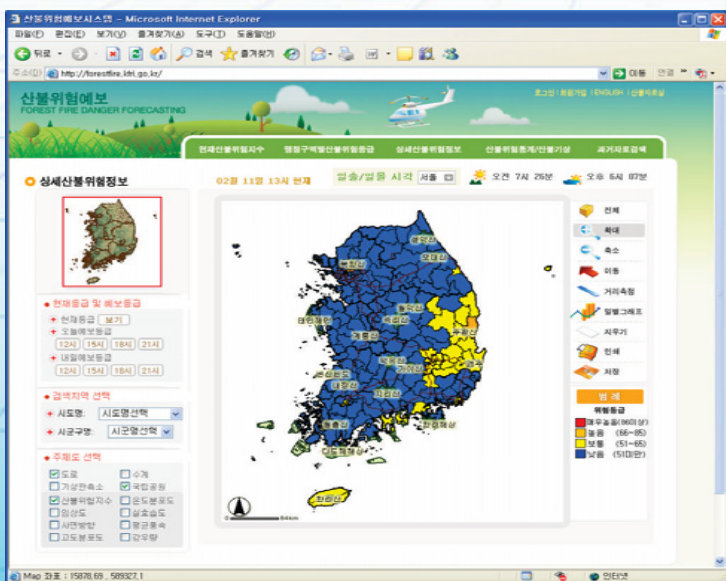
Climate Change Adaptation Program

○ Disaster control program

- Linkage between national development plan and the disaster control plan
- Preparation of the standardized manual and guideline for disaster response
- Introduction of a disaster insurance program

•‘Forest Fire Danger Forecasting WEB’

•‘Guideline : For Safety Life’



III. Strategies on Climate Change Adaptation

Climate Change Adaptation Program

- Building **climate resilient city**
 - Planning **disaster control and response system** to minimize the impact of climate change on the social infrastructure
 - Construction of '**Green Zone**' in the residential area
 - '**Roof Garden**' to mitigate global warming

·Green Daegu Project

- 2007~2011 (5 yrs / 400 Mil. \$)
- Green Park, Green Zone, Green roof



III. Strategies on Climate Change Adaptation

• Domestic and International Cooperation

○ National level capacity building for adaptation

- Enhancing the legal and administrative framework
 - . Incorporation of the climate change risk into national long-term plans and policies
 - . National Climate Change Adaptation Center
- Supporting the local government to get the relevant adaptation option
 - . Provision with 'Guideline and tools' for climate change adaptation

○ Domestic and International cooperation

- Establishing the partnership with various stake-holders
- Promote the 'Green Start Campaign' to enhance public awareness
- Enhancing the international cooperation with UNEP, WMO, IPCC and etc



Thank You