

# **Another Challenge in both Biodiversity Conservation and Adaptation Policy; Cross- Border Condition**

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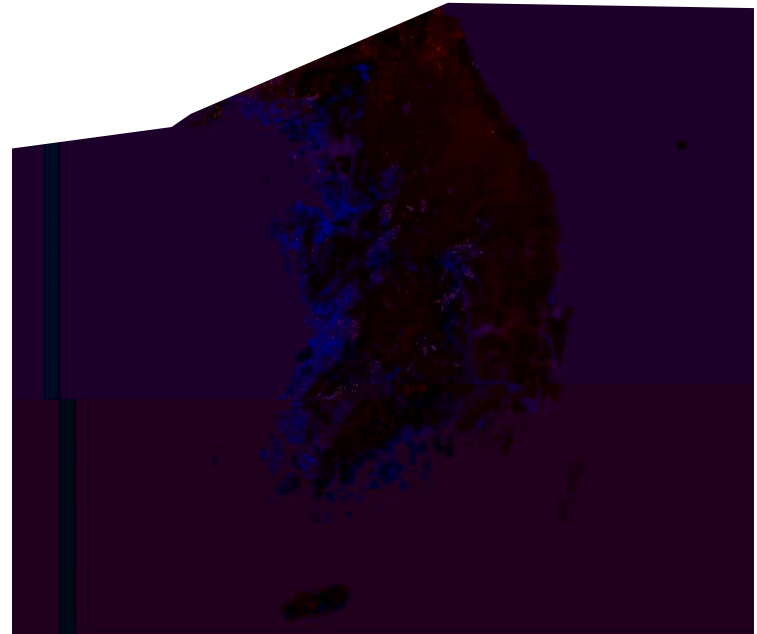


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# SOUTH KOREA

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- ✿ **Southern Part of Han Peninsular**
- ✿ **Area: 100,000km<sup>2</sup>**
- ✿ **Population: 48 millions**
- ✿ **Mountain area: 70%**
- ✿ **Temperate zone**
- ✿ **High public interests in environmental protection**



# Biodiversity (sp.) in Korea (2010)

Taxa		No. Species
PLANTS	Lower Plants	9,319
	Higher Plants	5,230
	Sub Total	14,549
ANIMALS	Invertebrates (incl. Insects)	20,531
	Vertebrates	1,841
	Sub Total	22,372
Total		36,921

How many species? → potentially ca. 100,000 spp.

Unidentified sp. → ca. 70,000 spp.

# Adaptation in Biodiversity - 1

## **"A matter of Conservation"**

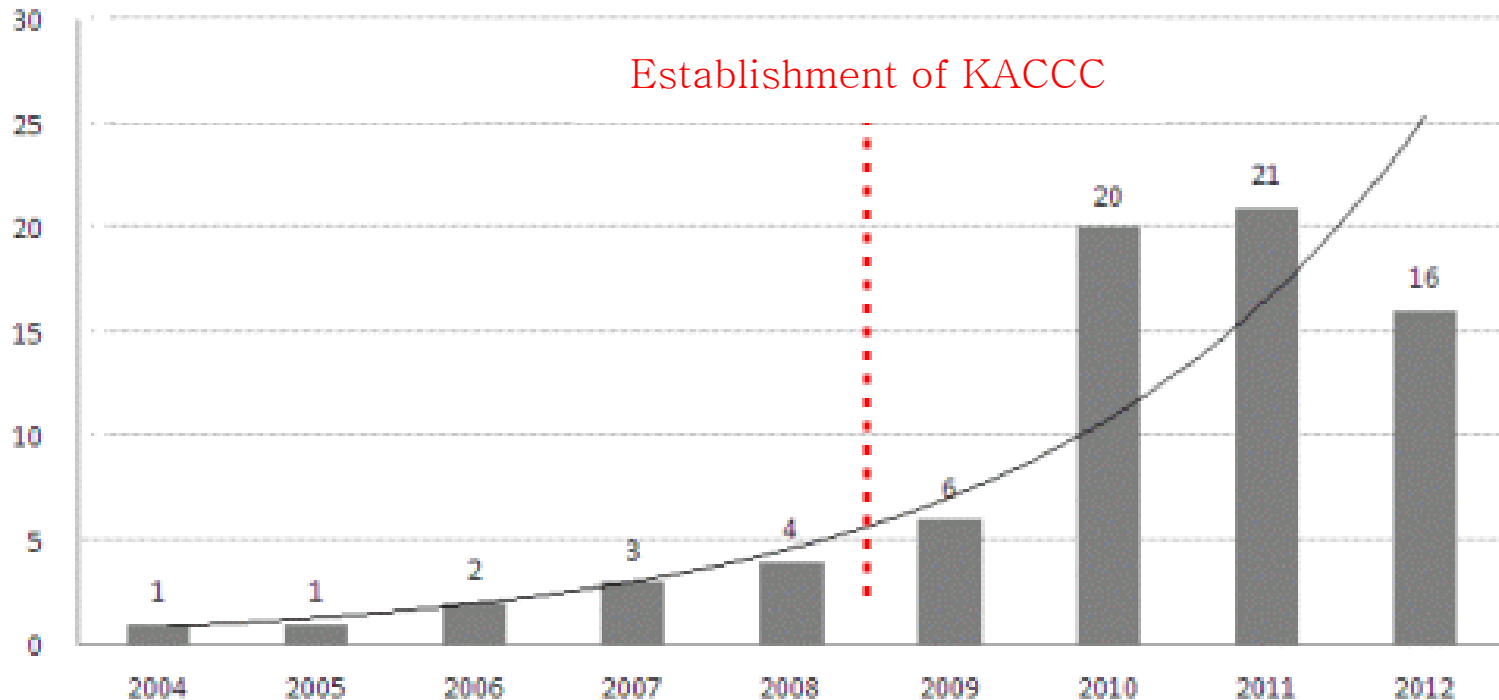
### **- Laws of Conservation -**

- ▶ **Extinction is FOREVER**
- ▶ **Incompatibility between Human Pop. Growth & Conservation**
- ▶ **Incompatibility between Growth-oriented Economic System & Conservation**
- ▶ **Moral Decision**
- ▶ **Issue of Human Well-being and Survival**

# What we have done I

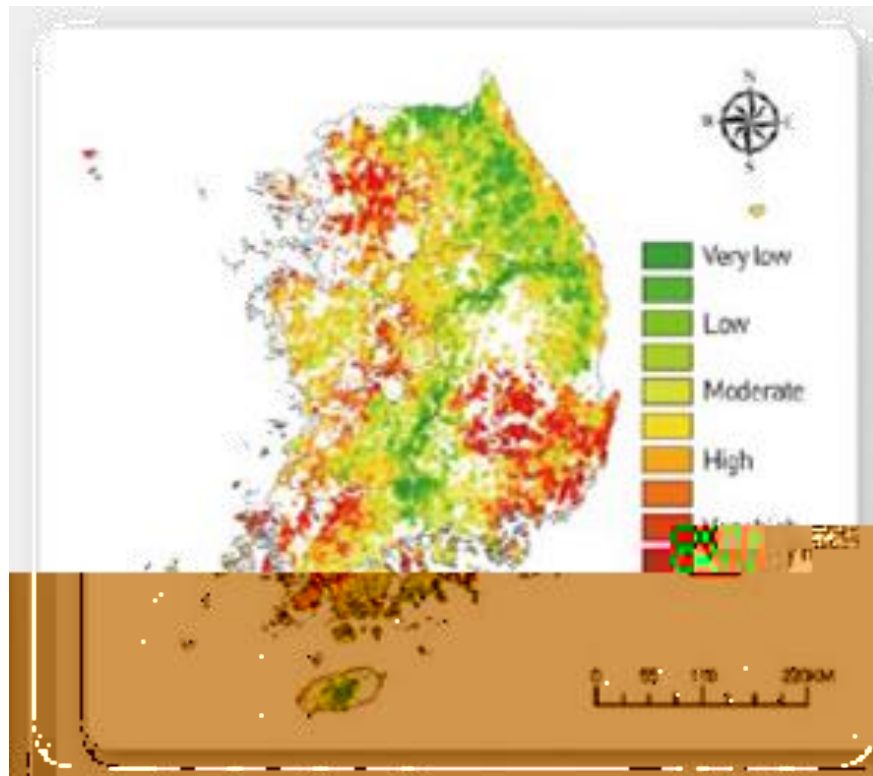
## Researches for Adaptation Policy and Practices

63 researches on climate change adaptation have been conducted by KACCC during the past 3 years.

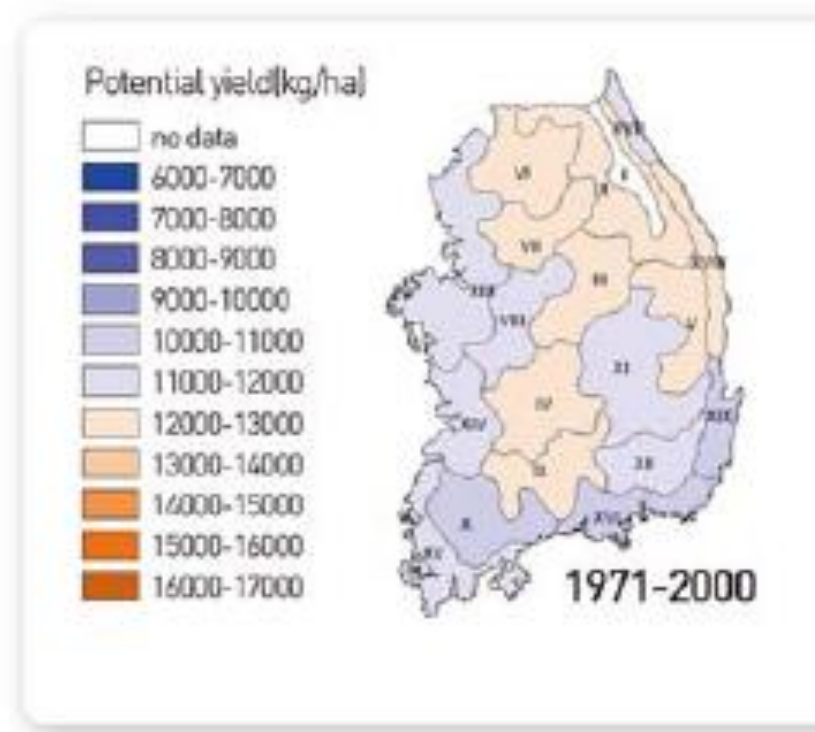


# What we have done I (continued)

## Example: Economics of Climate Change in Korea



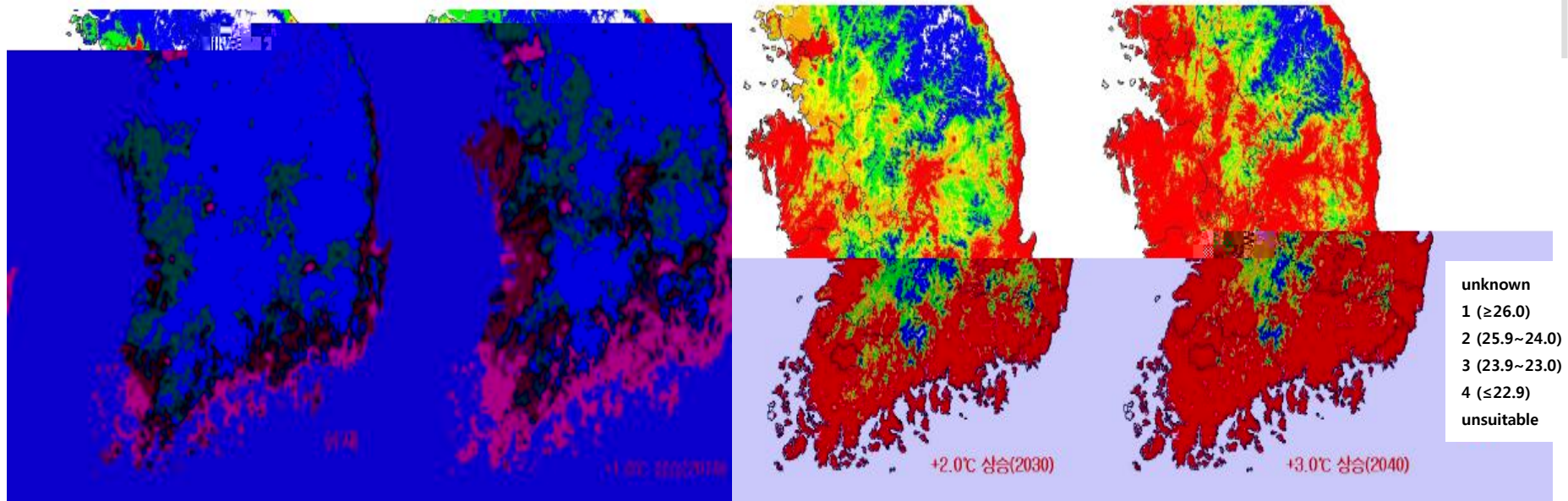
Vulnerabilities to Climate Change for Forest Disasters



Projected of Yield Change in Rice due to Climate Change

# What we have done I (continued)

## Apple Vegetation Change by climate change

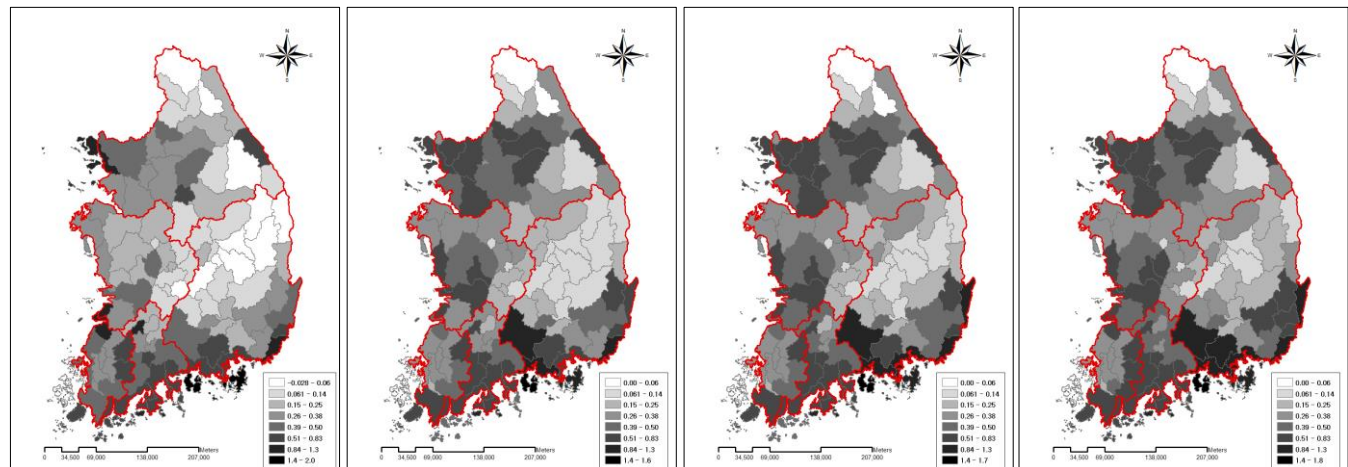
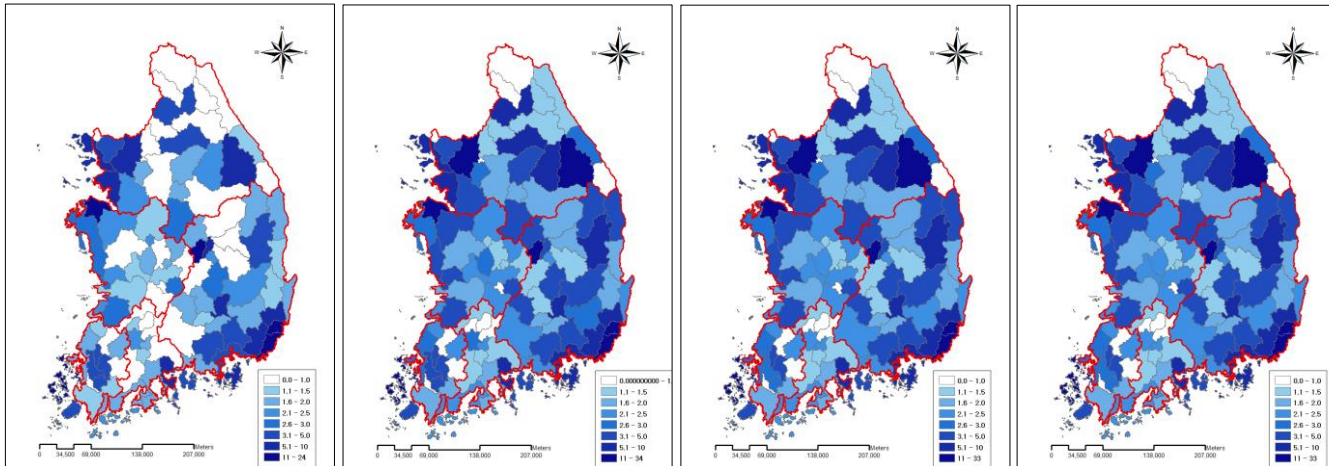


(Suh, 2005)

# What we have done I (continued)

## Increasing vulnerability to drought and flood

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# What we have done II

## National Climate Change Adaptation Action Plan

### Sectoral Goals and Contents

#### Monitoring & Projection



- ❖ Providing sound basis for adaptation with optimized CC prediction

#### Ecosystem



- ❖ Conserving vulnerable biodiversity

#### Forest

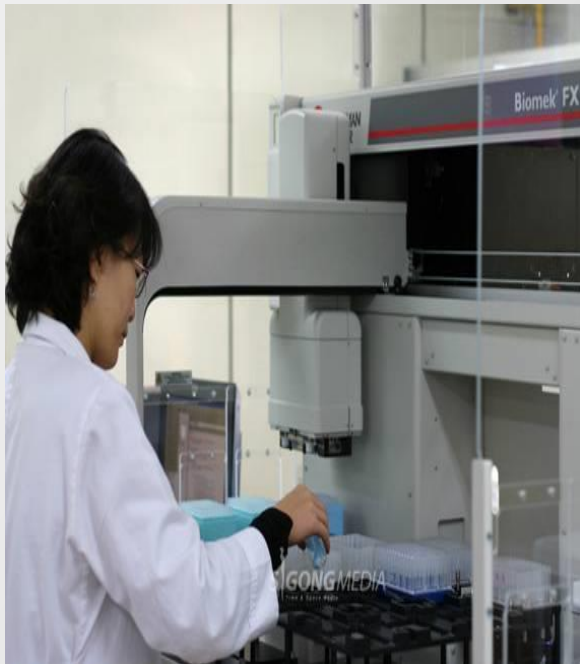


- ❖ Improving forest productivity and preventing landslide<sup>9</sup>

# What we have done II (continued)

## Sectoral Goals and Contents (cont)

### Agriculture



- ❖ Applying climate-friendly crop production by scientific management and tech

### Marine/Fishery



- ❖ Strengthening competitiveness of marine and fishery

### Water



- ❖ Supplying stable water and preserving aquatic ecosystem



# What we have done II (continued)

## Sectoral Goals and Contents (cont)

### Health



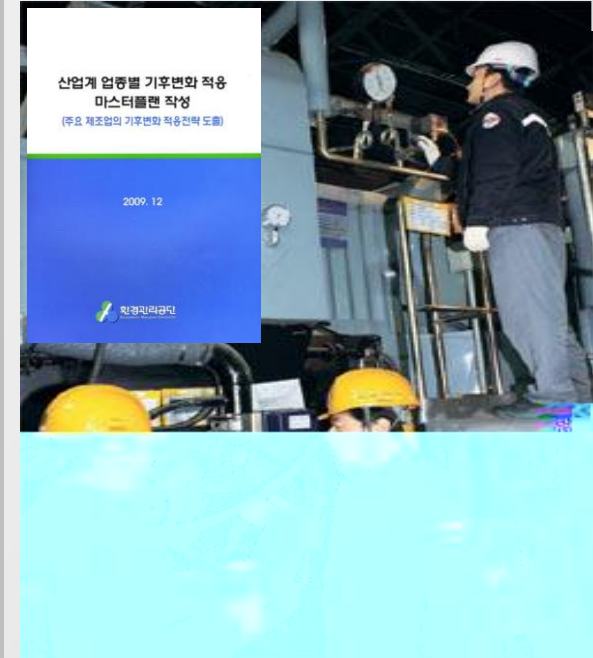
- ❖ Taking adaptation action based on people's life style from extreme weather events

### Disaster-Infrastructure



- ❖ Minimizing damage by early warning system and promoting insurance
- ❖ Building CC daptation infrastructure

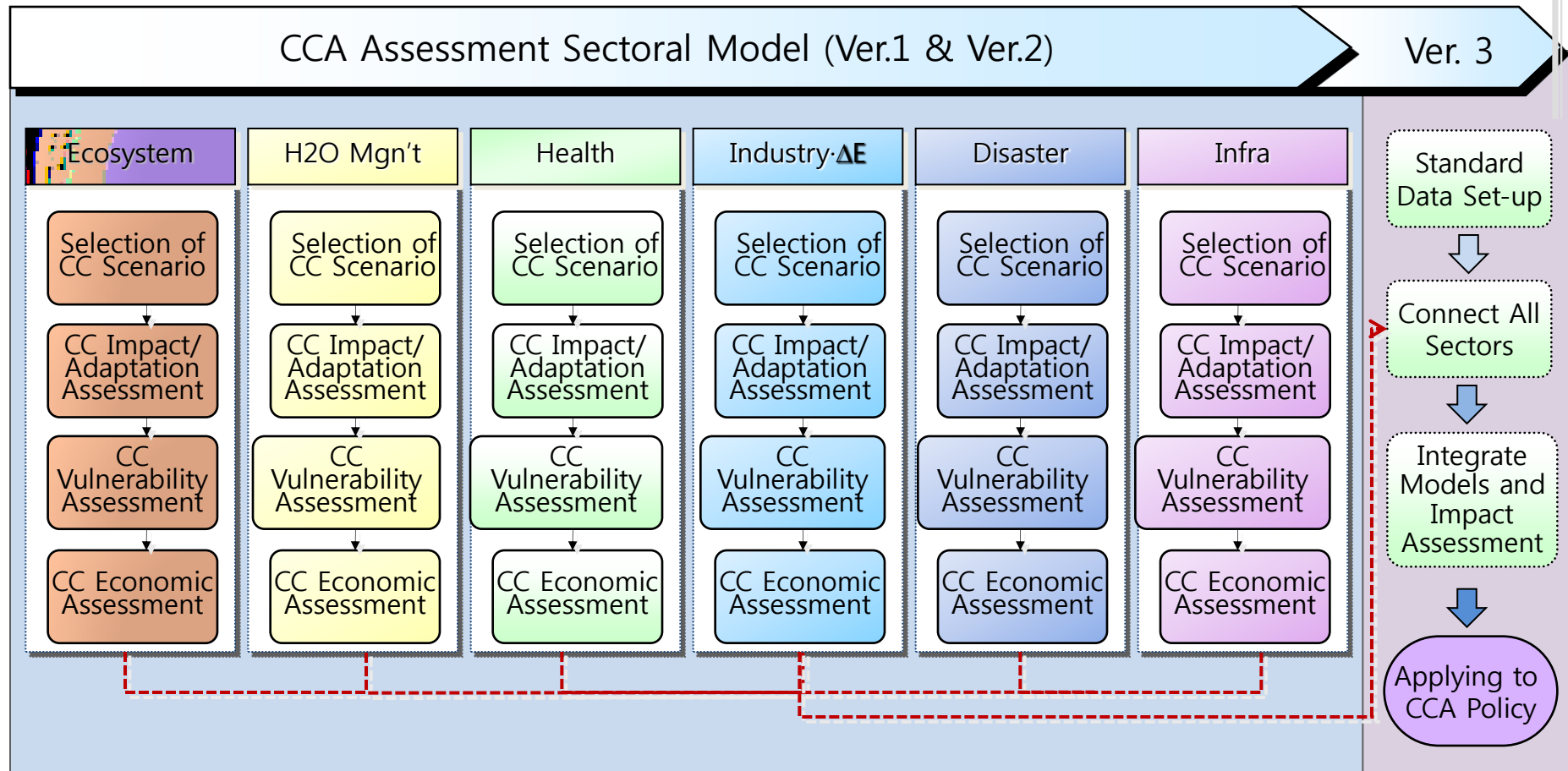
### Business/Energy



- ❖ Developing adaptation business and minimizing damage in energy use

# What we have done II (continued)

## Climate Change Adaptation Integrated Model



※ Sectoral Application based on the Comprehensive Plan for National Climate Change Adaptation

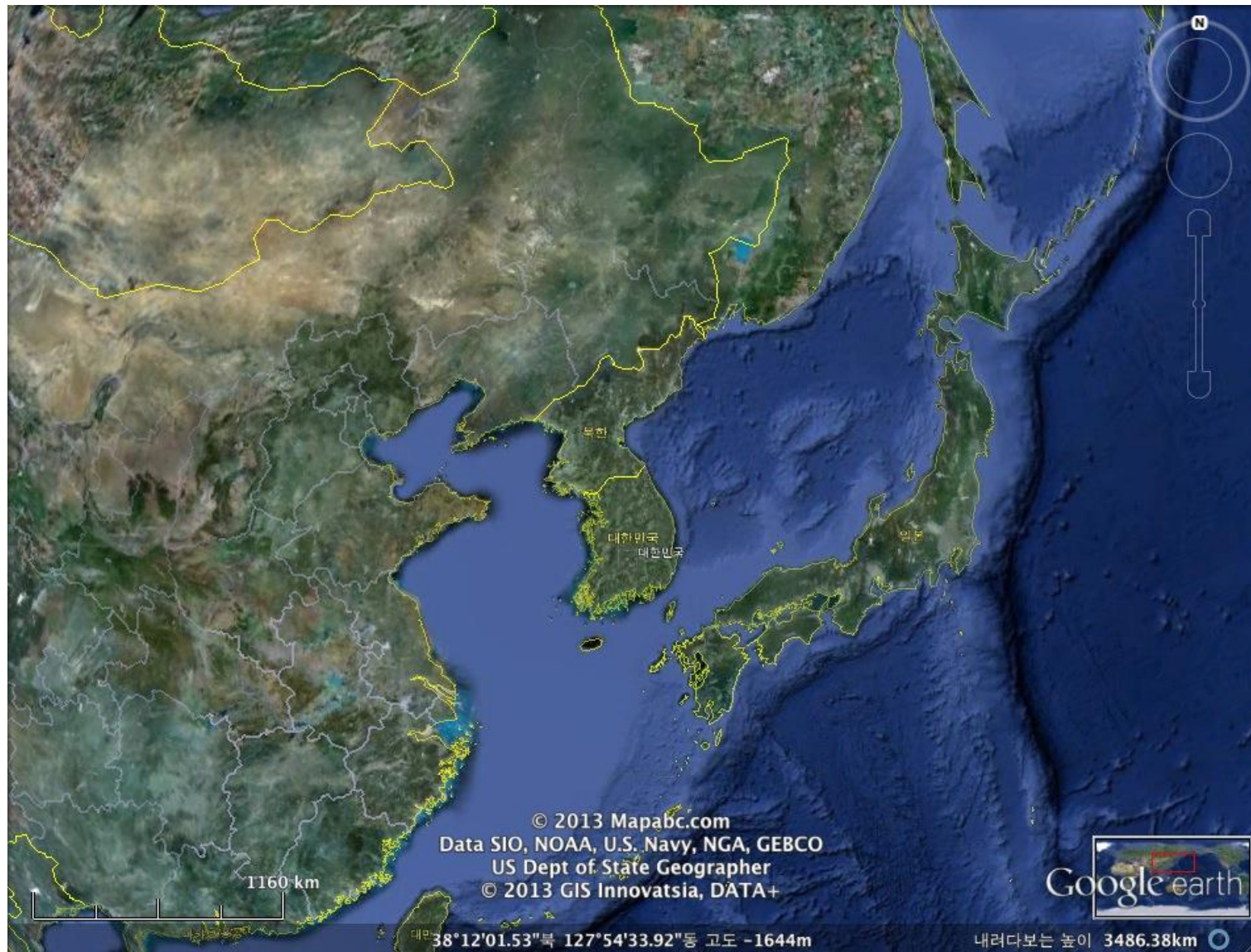
***However,  
There seem  
to be  
Some  
Difficulties in  
Conservation  
Policy...***



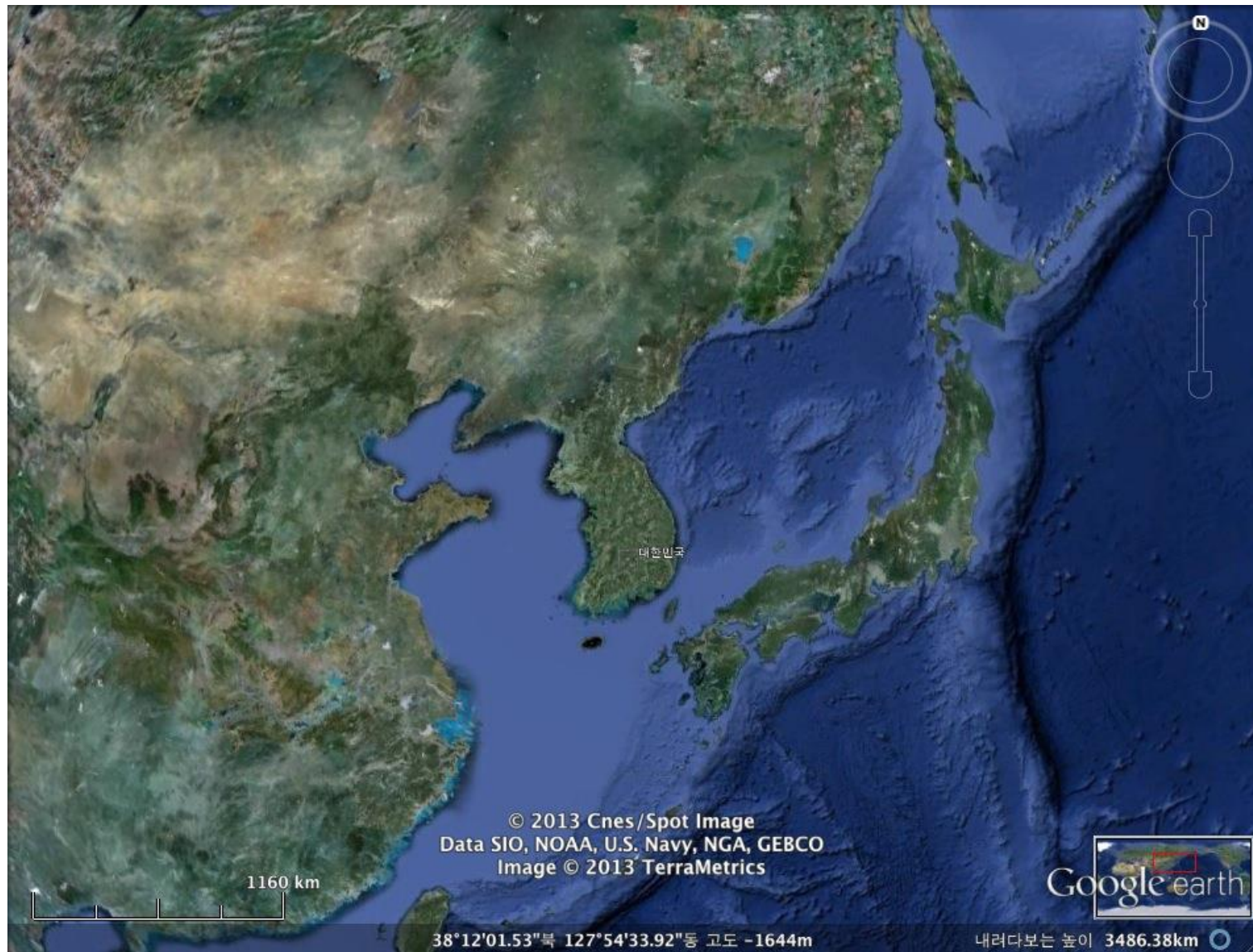
**When dogs were used for hunting.**



# Boundaries in Region



# No Boundaries in Nature





# Adaptation in Biodiversity - 2

## **"A matter of Boundaries"**

- ▶ The region where development demands high
  - Regional economic growth rate is much higher than world average
  - Emerging environmental issues NE Asian countries
- ▶ Complicate socio-political matters in the region
  - Inflexible political situation
  - Discrete geopolitical condition
- ▶ No more progress in practical cooperative policy regarding on CC Adaptation in the region  
**"Running on same spot"**



# **Suggestions to fulfill successful adaptation strategy in NE Asia**

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- **To take and maintain “Double-track Strategy”**
  - Academic / Research Institutional Partnership
  - Intergovernmental Talk
- **Intl. Cooperation / Special Research TF Team**
  - Pilot study, Case study and/or Current issue
- **Periodical Meeting for Practical Working Group**
  - Inventory Survey for Outlook
  - NE Asian Conservation / TEIA Guideline
- **Annual conference for all stakeholders to widen & strengthen network**

# Enforcement in Trans-boundary EIA

- **International projects need TEIA**
  - Transcontinental Railroads; TCR, TMR, TMGR, TSR
  - China-ROK-Japan Submarine Tunnel Project for Intercontinental High-speed Railroad
  - The Far East Gas Pipeline
- **Biodiversity “Hot Spot” Study for Recovery Project**

**Environmental Sector's inborn Obligation and Responsibility**

# Difficulty in Single-track Strategy

## Intergovernmental Talk

**Driving Force**  
**Financial Support**  
**Fast Reaction for Disaster**

**Depending on Political Situation**  
**Outcome-oriented Projects**  
**Low Level of Flexibility**

(strength) S W (weakness)

(opportunity) O T (threat)

**Stable Partnership**  
**Economic and Financial Profit**  
**Production of Secondary Projects**

**Lack of Professionalism**  
**Spreading Officialism (red-tapism)**  
**Dropping Long-term Research**

# Continued.

## Academic / Research Institutional Partnership

**Independent of Political Situation**  
**Bottom-up & Fundamental Study**  
**Diverse Interactions (bi+multi)**

**Low Continuity**  
**Limited Funding Capacity**  
**Slow Adopting into Policy**

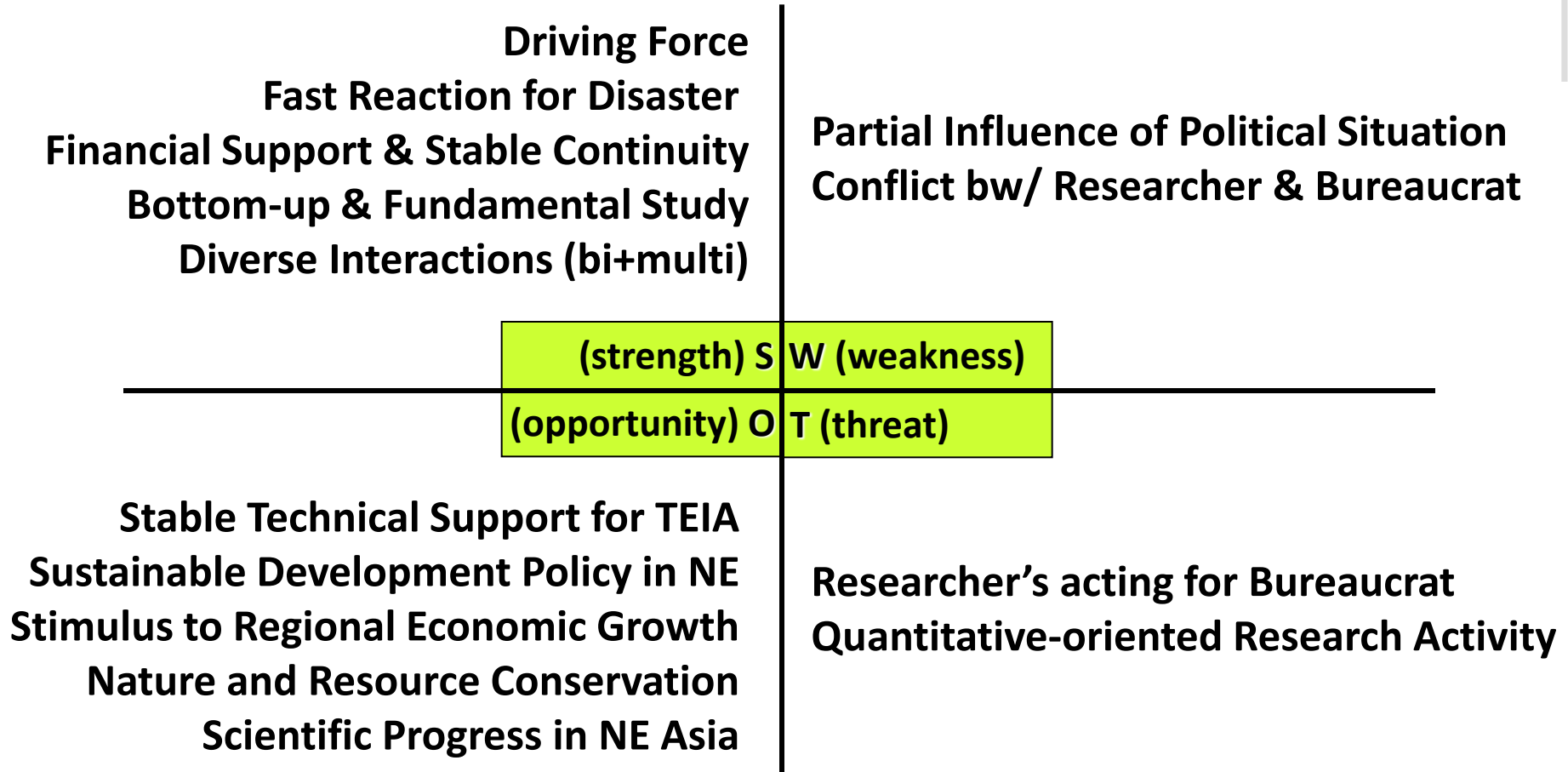
(strength) S W (weakness)

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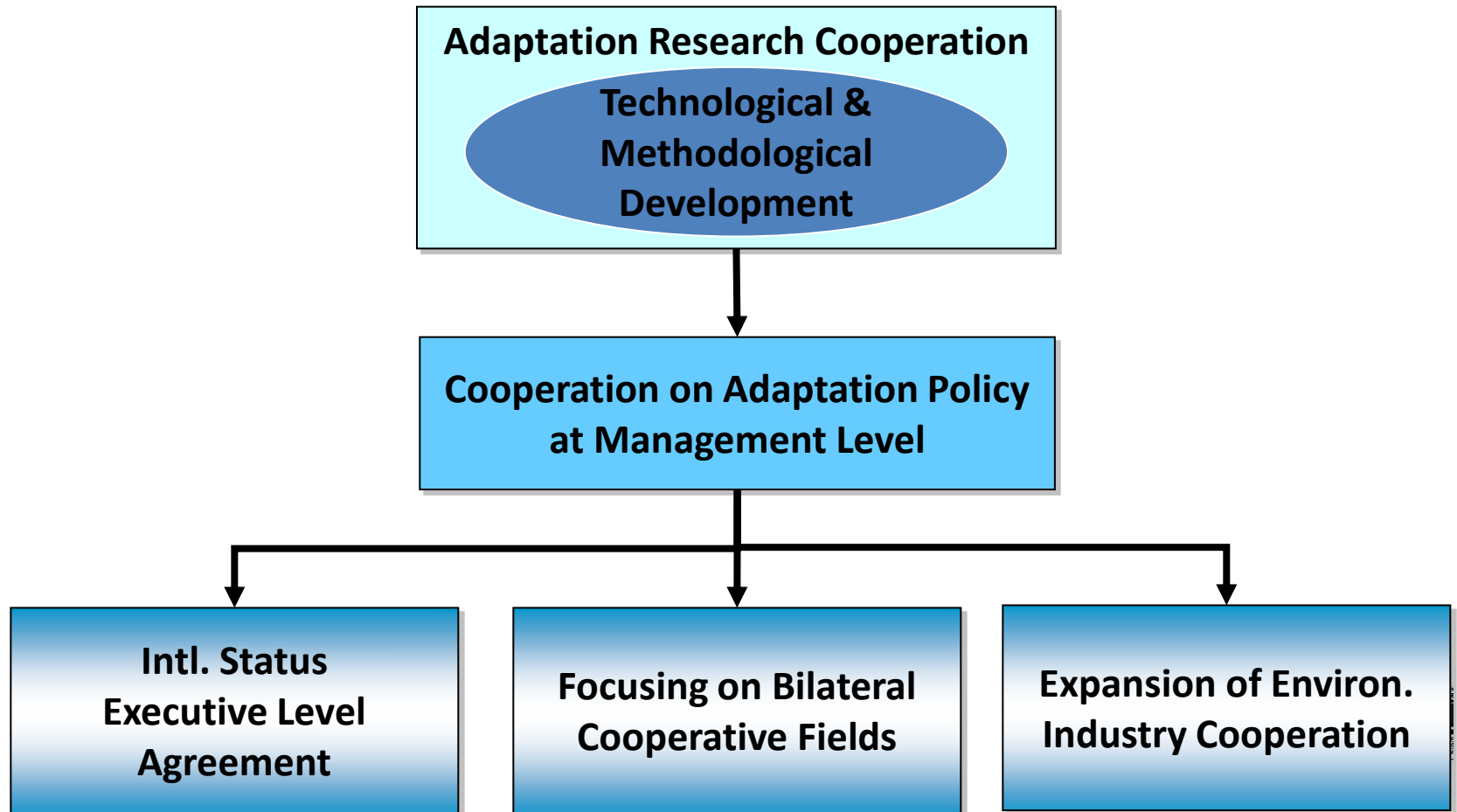
**Technical Support for TEIA**  
**Environment-oriented Policy**  
**Scientific Progress in NE Asia**

**Duplication in Co-working Topics**  
**Expanding Res.-oriented Interaction**  
**Low Socio-political Productivity**

# SWOT of Double-track Strategy



# Operation of Double-track Strategy



# Conservation beyond Socio-political Situation

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- “Multilateral + 15 Bilateral Efforts” to bring all 6 nations’ stakeholders at ONE TABLE

**Back To Square One as in 1995**

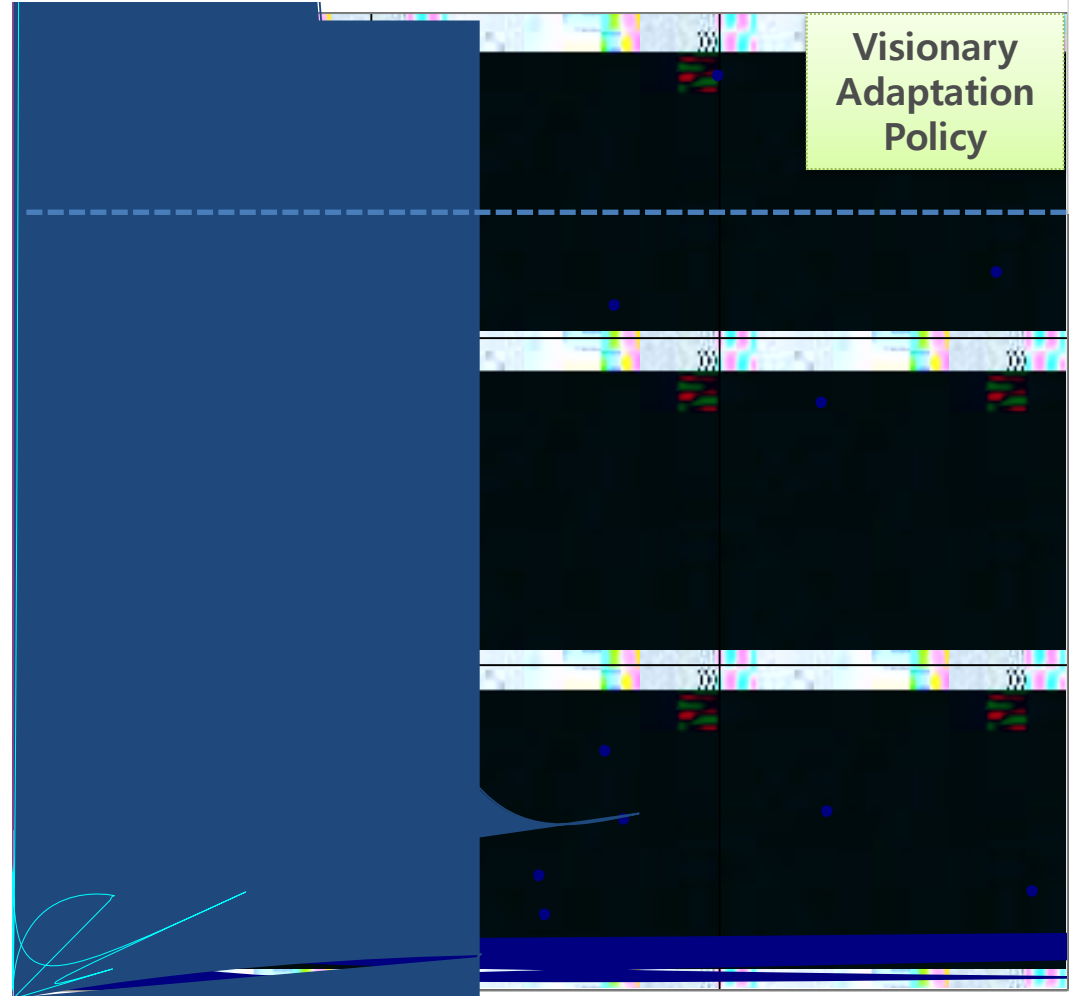
- Priority in Academic / Research Institutional Partnership
  - Need to strengthen independent co-works at Institutional level
- “Incentive or Motive System” for all participants

# Time and Space Scales

*Although the perspectives of the world's people vary in space and time, every human concern falls somewhere on this graph.*

*The majority of the world's people are myopic. Others look farther ahead or over a larger area.*

*Only a very few people have a global perspective that extends far into the future!*





## References

- *Yong-Ha PARK. 2010. Korea's Efforts and National Strategy for Climate Change Adaptation*
- *Young Han Kwon. 2012. Korea Adaptation Center for Climate Change: Achievements and Future Challenges*

**Thank you!**