

# Major Issues of Climate Change Adaptation Strategies in Incheon

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## Incheon

- Temperature and sea level have been changing significantly for 50 years
- Recent keyword : 2014 Asiad & GCF Host city, fiscal crisis...
- Chance of encouraging the political background for Global Green City

## Our Task

to analyze the current status and the trends of climate change in Incheon  
to get a clue about measures that assess the vulnerability to climate change  
to build up the adaptive capacity to minimize the adverse impacts







CBD in Seoul (2010. 9. 21)



Destroyed Bridge at Nakdong River (2011. 6. 25)



Constructed in 1905  
Using as footbridge  
Designated as cultural property  
in 2008







Landslide at Mt. Woomyeon (2011. 7)



## Planning & Assessment

National Plan for Climate Change Adaptation

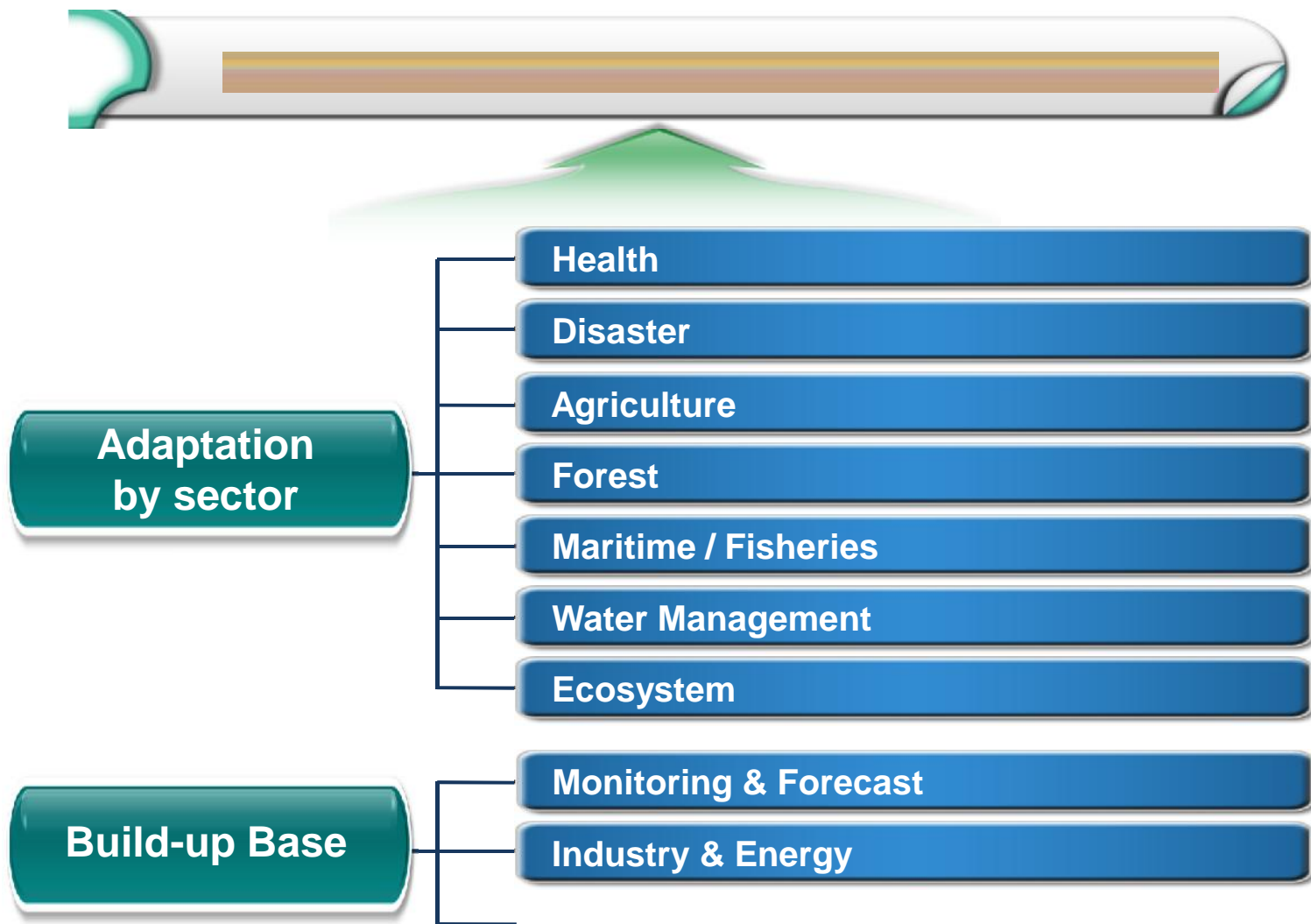
- Adaptation measures by sector and Build-up Base
- Incheon's Climate Change Adaptation Plan

Priority over Incheon's Climate Change Adaptation Plan

- Green Asiad strategies for 2014 Asian Games
- Green City Plan for low emission of green house gas

Vulnerability Assessment

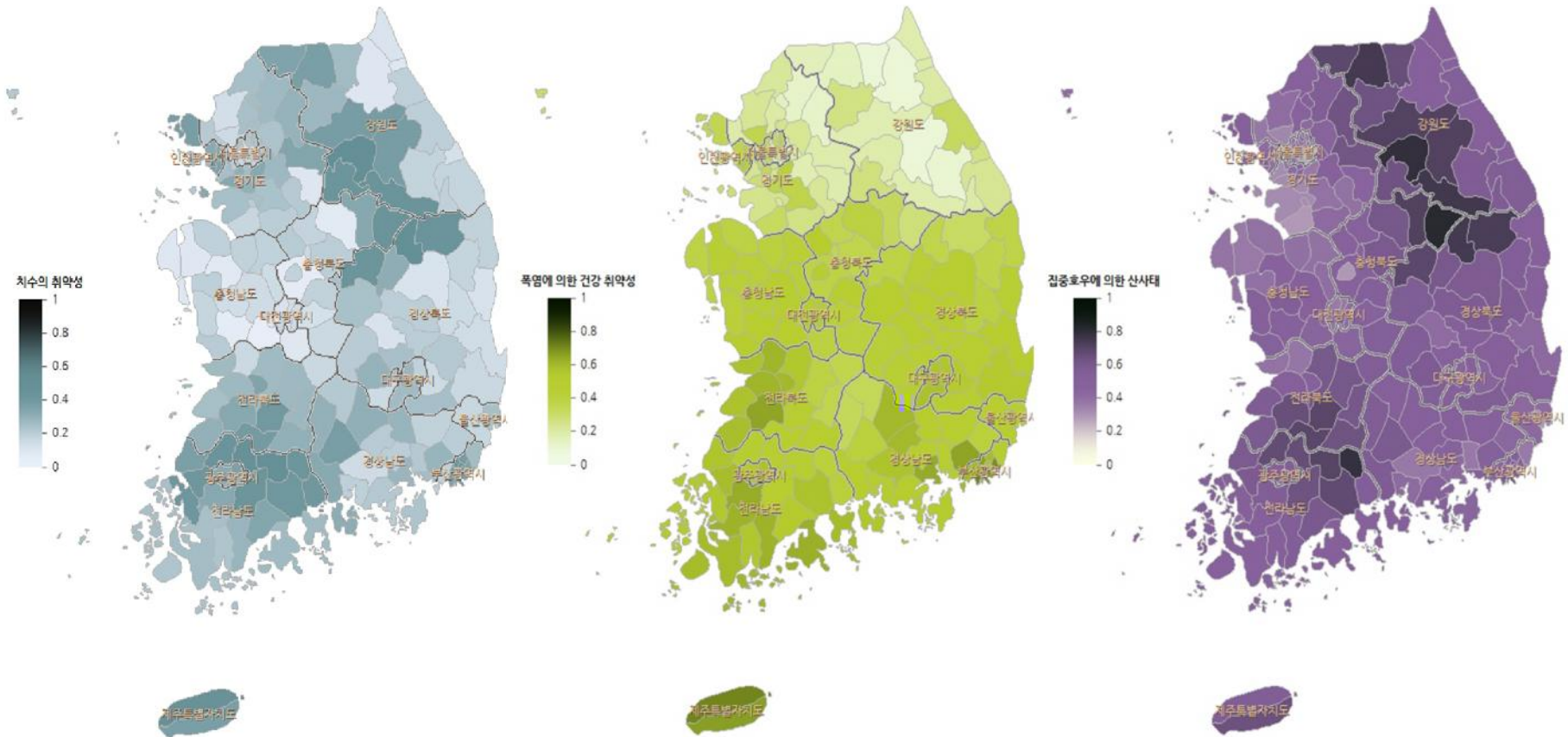
- CCGIS & LCCGIS : Climate Change adaptation toolkit based on GIS





## Vulnerability Assessment (2050)

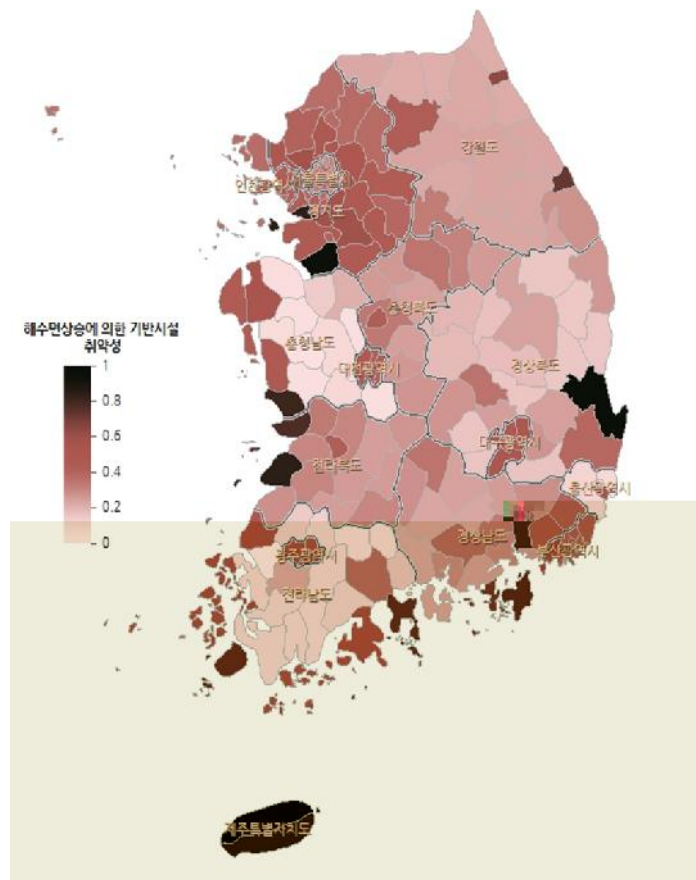
- CCGIS & LCCGIS : Climate Change adaptation toolkit based on GIS
- Low Vulnerability than Other Areas



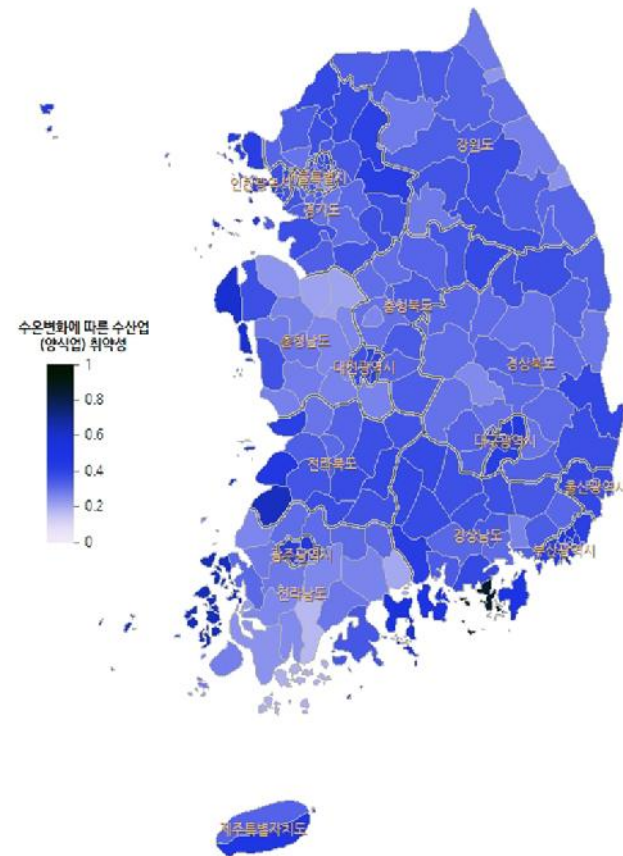
Water Resources

Health related to Heat Wave

Landslide by Heavy Rain



Infrastructure by sea level change

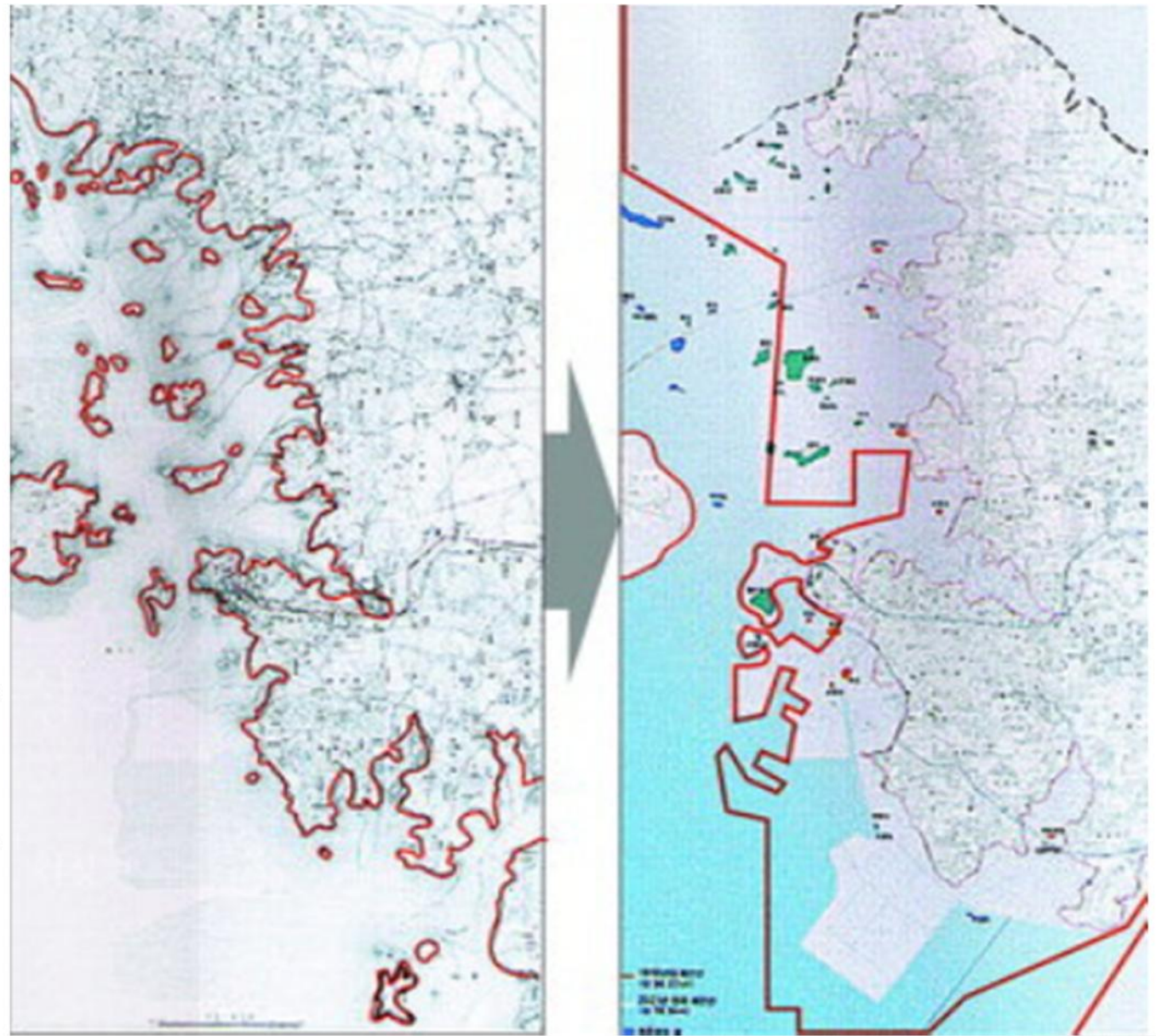
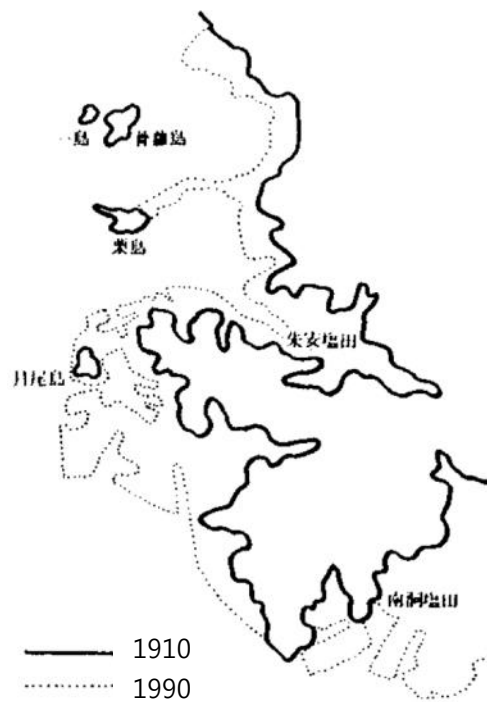


Fisheries by temp. change

- Relatively high vulnerability on Urban Infrastructure and Maritime Fisheries
- High Vulnerability of large landfill (reclaimed area) site ⇒ **1<sup>st</sup> Issue**
- Limitation of the averaging information & need for detailed data ⇒ **2<sup>nd</sup>**



# Change of coastline (1910 to 2010)





Incheon Harbour, 1947



Incheon Harbour, 2011





Songdo area, 1947



Songdo area, 2011







Construction plan of tidal power plants with large dams as barriers







## Issues & Key Clues

1. Compensation than Resilience
  - Songdo IFEZ's green area share : over 32%
2. Green Conflicts between Environment sector and Green Energy sector
  - Reclamation of Tidal Flat
  - Construction of Tidal Power Plant
  - Conservation of Coastal Area as an Absorbent of Green House Gas
  - Designation & Management as National Park
3. Inevitable Dead space of Vulnerability Assessment
  - ⇒ Integrated Alternatives
  - Management of the river mouth of Han river & Ganghwa coastal area
  - Minimizing Green Conflicts and Climate Change Vulnerability





HOCHWASSER  
MAI 1988

HOCHWASSER  
MÄRZ 1988

HOCHWASSER  
JAN 1955

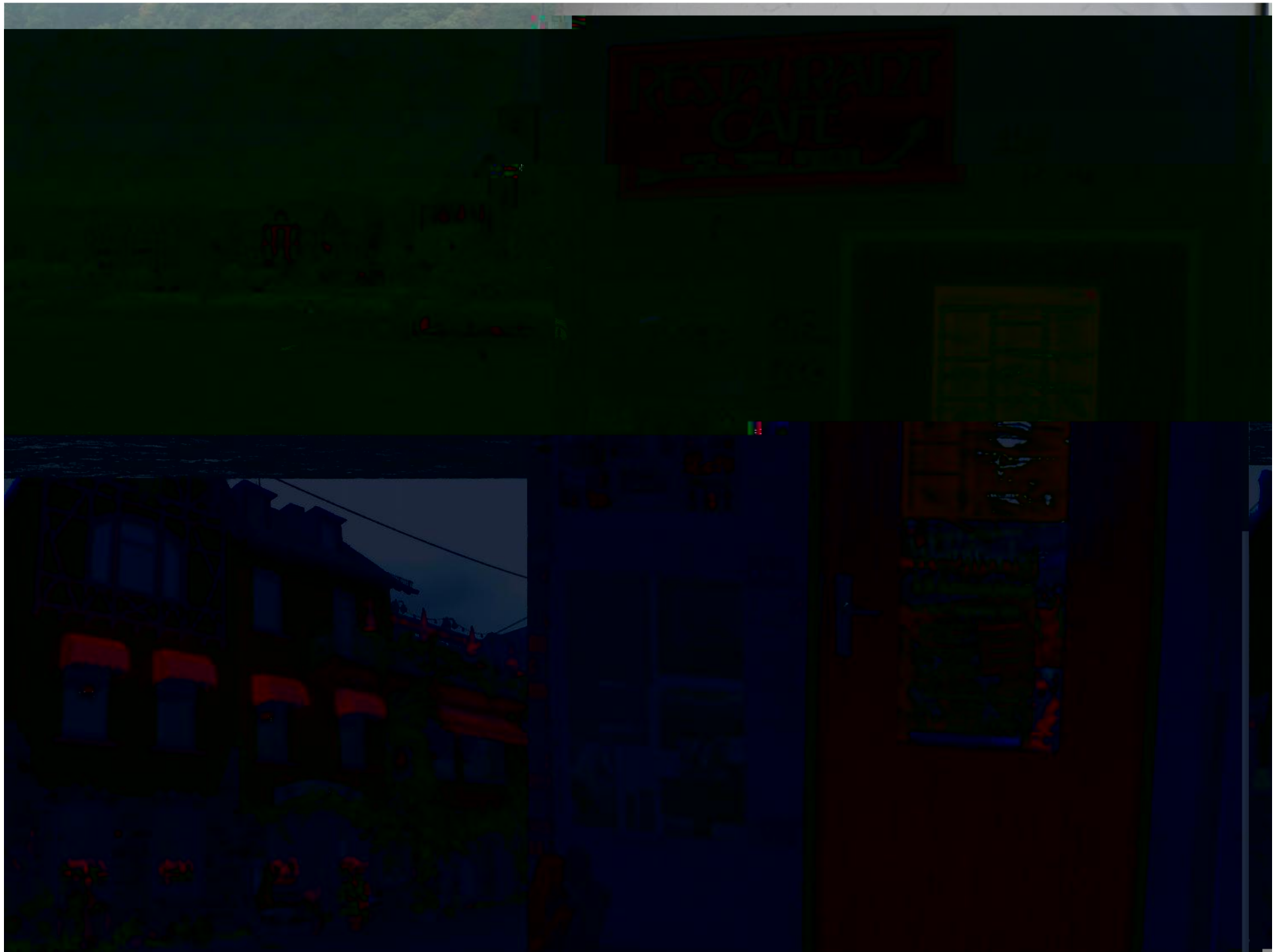
Hochwasser  
Februar 1970



Internationale Commissie ter  
Bescherming van de Rijn  
International Commission for  
the Protection of the Rhine







## Issues & Key Clues

4. Inconsistency of Trend and Marginal Change due to Env'tal Disturbance  
⇒ Acquirement of more detailed information, temporally and spatially

### Importance of Locally detailed data

- Fudai's Seawall
- Based on the village was s



5. Design and Establish "Incheon Green Climate Fund"
- Using the Finance for implementing Climate Change Adaptation Plan
  - Restoration of environmental justice by Big emitters
  - Intensive citizen participation for reduction of green house gas

Seawall at Fudai in Iwate





# Thanks

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