Taking the Nexus Approach for Adaptation to Climate Change

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Introduction

Climate change

- Unavoidable global phenomena

- The method to cope with climate change
  - integration of mitigation and adaptation

    (IPCC AR5 WG II SPM, 2014.3)
  - current perspectives on climate change : **“RISK” and “INTEGRATION”**

Introduction

Current perspectives on climate change

- **RISK**
  - socioeconomic anxiety and damages from climate change
  - linkage between climate change and the safety of a society

- **INTEGRATION**
  - methods to manage the risks of climate change
  - effective and innovative process
  - policies based on collaborative governance

Integration for safety society: NEXUS approach

Integration, convergence, and sustainability

- The needs of NEXUS approach
  - simultaneous consideration of the indiscriminate land development, urbanization, climate change, globalization, and water resources

- Climate change adaptation using NEXUS approach
  - applying three principles of NEXUS approach to climate change adaptation : **inequality, vulnerable class, efficient policy integration, and sustainability**

New issues of NEXUS and adaptation

Problems on effective integration

- Insufficiency on
  - key variables of integration
  - level of integration(spatial level, policy level, governance level)
  - local knowledge and scientific data
  - policy/political framework and process for integration

New issues of NEXUS and adaptation

Suggestions for effective integration

- Five ways to integrate NEXUS and adaptation
  - **spatial scope of integration**
  - **knowledge making platform**
  - **integration between infrastructure and ecosystem services**
  - **socioeconomic behavior research of human**
  - **creative policy framework**

Five suggestions for NEXUS approach

1. Discussions on the spatial scope of integration

- Identifying the central point of connections

  - the spatial scope of each field for searching common factors
  - reducing the spatial scope to achieve solution-centered integration
  - integration the problem of climate change adaptation with other regional issues

Five suggestions for NEXUS approach

2. Building a platform in generating solutions through integration

- Knowledge Platform for needs and resources

  - identifying local needs
  - integration of two methods
    - needs assessment
    - text-mining process based on non-structured language
  - mainstreaming the adaptation to local and community

Five suggestions for NEXUS approach

3. Integration between infrastructure and ecosystem services

- Multi-functional infrastructure for ecosystem service

  - **"multi-functional infrastructure integrated with the ecosystem services"**
  - mainstreaming ecosystem services function into existing infrastructure

Five suggestions for NEXUS approach

4. Investigation and research on socioeconomic behavior of humans

- Knowledge integration between scientific research and adaptation policy

  - ultimate purpose of integration in many scientific model : human sustainability
  - analysis of human behavior related to climate change and environment for the suitable policy and response

Five suggestions for NEXUS approach

5. Creative policy framework for integration

- Emergence of mutual communication for integration of different fields

  - communication to identify the problems
  - integrating local needs and alternative policies for problem resolution
  - **“open innovation process, ICT-based communication platforms”**

Conclusions

Human-oriented, problem-solving, and communication

- Focusing human-oriented and problem-solving integration through innovative communication

  - integration method focused on human-oriented and problem solving to manage climate change risk
  - **“co-existence and integration of humankind and nature”** through communicative and rational cooperation across fields

Thank you