

# Introduction to the session VI/VII and overview of recent research activities of Japanese AIM/Impact team

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Naota Hanasaki, Yoshimitsu Masaki, Yuko Onishi,  
Yonghee Shin, Takahiro Yamamoto, Yuji Masutomi

## Presentations in Sessions VI and VII

- Introduction to the session VI/VII and overview of recent research activities of Japanese AIM/Impact team, Dr. Kiyoshi Takahashi (NIES)
- Water sector analysis in the ISI-MIP project, Dr. Yoshimitsu Masaki (NIES)
- A global water scarcity assessment under Shared Socio-economic Pathways, Dr. Naota Hanasaki (NIES)
- Climate change impacts on food supply and demand based on SSPs/CMIP5, Dr. Tomoko Hasegawa (NIES)
- Introduction to APCC and climate change impacts on agriculture, Dr. Yonghee Shin (APCC, Korea)
- Local scale analysis of water resource and flood management, Dr. Takahiro Yamamoto (Nagaoka National College of Technology, Japan)
  - [Coffee Brake]
- Impact and adaptation studies in IEDA, Dr. Songcai You (IEDA., China)
- Land cover change and uncertainty assessment in China, Dr. Min Feng (IGSNRR., China)
- Climate change and local adaptation in Korea, Dr. Huicheul Jung, Dr. Seongwoo Jeon (KEI, Korea) and Prof. Dong Kun Lee (SNU, Korea)
- Climate change impact on extreme rainfall and the TN generation of a small New Zealand Lake catchment, Dr. Wei Ye (Waikato University, NZ)

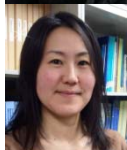
## NIES Climate change impact modeling team in 2012



**Dr. Hideo Harasawa (Leader)**, Director of Center for social and environmental system research center, Integrated assessment



**Dr. Yasuaki Hijioka**, National-scale impact assessment, Integrated assessment (In Oxford Univ., 2012.9-2013.8)



**Dr. Yuko Onishi**, National-scale impact assessment (Vegetation)



**Dr. Naota Hanasaki**, Global-scale impact assessment (Water)



**Dr. Yoshimitsu Masaki**, Global-scale impact assessment (Water)



**Dr. Kiyoshi Takahashi**, Global-scale impact assessment (Health, Agriculture)



**Dr. Yonghee Shin**, Global-scale impact assessment (Agriculture) [moved to APCC in Seoul on 1<sup>st</sup> Oct. 2012]

- ex-members : Dr. Yuji Masutomi and Dr. Takahiro Yamamoto
- collaborators: Dr. Tomoko Hasegawa, Dr. Shinichiro Fujimori and other emission team members

# Ongoing Research Projects on Impacts and Adaptation

## **NIES Climate Change Research Program**

- Project 2: Climate change and global risk assessment [Hijioka, Hanasaki, Masaki, Shin, Takahashi; 2011.4-2016.3]

## **The Environment Research & Technology Development Fund (ERTDF) funded by the MoE, Japan**

- S-10: Integrated research on the development of global climate risk management Strategies [Hanasaki, Hijioka, Shin, Takahashi; 2012.4-2017.3]
- S-8: Comprehensive research on climate change impact assessment and adaptation policies [Harasawa, Hijioka, Hanasaki, Masutomi, Takahashi; 2009.4-2014.3]
  - Assessment of climate change impacts in Japan considering feasibility of realizing a safe and secure climate change adaptive society

# Ongoing Research Projects on Water Resource

## **Grants-in-Aid for Scientific Research funded by Japan Society for Promotion of Science**

- Detecting drought and flood risks by real time simulation using a global water resources model [Hanasaki]
- Initiative of global water sustainability risk assessment using integrated hydrological and water resources model [Hanasaki]

## **Science and Technology Research Partnership for Sustainable Development (SATREPS) funded by the Japan Science and Technology Agency (JST) and the Japan International Cooperation Agency (JICA)**

- Integrated study on hydro-Meteorological Prediction and Adaptation to Climate change in Thailand [Hanasaki]

## **Core Research for Evolutional Science and Technology (CREST)**

- Development of long term vision for sustainable water use of the world process [Hanasaki]

## Contribution to International Academic Activities

- **Agricultural Model Inter-comparison and Improvement Project (AgMIP)** [Fujimori, Hasegawa, Masui, Shin, Takahashi]
  - Model inter-comparison with participation of multiple crop and world agricultural trade modeling groups around the world
- **IPCC**
  - SREX
    - LA of Ch. 4 (Changes in impacts of climate extremes: human systems and ecosystems) [Takahashi]
  - AR5 (WGII)
    - LA of Ch. 19 (Emergent risks and key vulnerabilities) [Takahashi]
    - CLA and CS of Ch. 24 (Asia) [Hijioka and Onishi]
- **SSPs**
  - Collaboration with CGE modeling, Introduction to SSPs for Japanese IAV researchers [Hijioka, Hanasaki, Takahashi]

## News and Noteworthy Activities

- Analyses of climate change impacts at global scale utilizing fresh products of the IPCC new scenario process (CMIP5 based on RCPs and/or SSPs).
  - Water resource analyses (Dr. Hanasaki and others)
  - Crop productivity analyses (Dr. Shin and others)
  - Food demand and supply analyses (Dr. Hasegawa and others)
- Contribution to international initiatives on inter-comparison of climate change impact models
  - AgMIP (Drs. Hasegawa Fujimori and others)
  - ISI-MIP (Drs. Masaki and Hanasaki)
- New team members from next spring
  - Dr. Xuanming Su (Ritsumeikan University) as a NIES postdoc researcher from April 2013
  - Ms. Akemi Tanaka (Hokkaido University) as a research assistant from February 2013