

Introduction to impact/adaptation studies in Japan and recent IPCC-AR5 related activities

Yasuaki Hijioka*, Hideo Harasawa*, Kiyoshi Takahashi*, Naota Hanasaki*, Yonghee Shin*, Yuji Masutomi**, Yuko Onishi*

*National Institute for Environmental Studies, **Center for Environmental Science in Saitama

1) Member

Dr. Hideo Harasawa (HH)(Leader), Integrated assessment, Dr. Kiyoshi Takahashi(KT), Global assessment (Water, Health, Agri.), Dr. Naota Hanasaki (NH), Global assessment (Water) , Dr. Yonghee Shin (YS), Global assessment (Agri.), Dr. Yuji Masutomi (YM), Global/Regional assessment (Agri.), Dr. Yuko Onishi (YO), IPCC AR5 Chapter Scientist, Regional assessment (Ecosystem), Dr. Yasuaki Hijioka (YH), Integrated assessment

2) Research activities in FY2011

a) Research project

- Climate Change Research Program (CCRP) in NIES
 - Project 2. Climate change and global risk assessment, 2011.4-2016.3, KT, NH, YS, YH
 - ◇ Evaluation of strategies for climate change risk management at global scale
- The Environment Research & Technology Development Fund (ERTDF) funded by the MoE, Japan
 - “S-5” Integrated research on climate change scenarios to increase public awareness and contribute to the policy process, 2007.4-2012.3, KT, YS, YH
 - ◇ Global scale sector impacts projections considering uncertainties in climate projection
 - “S-8” Comprehensive Research on Climate Change Impact Assessment and Adaptation Policies, 2009.4-2014.3, HH, KT, NH, YM, YH
 - ◇ Regional scale sector impact assessment considering the feasibility of realizing a safe and secure climate change-adaptive society
- Grants-in-Aid for Scientific Research funded by Japan Society for Promotion of Science <KAKEN>
 - Detecting drought and flood risks by real time simulation using a global water resources model
 - Initiative of global water sustainability risk assessment using integrated hydrological and water resources model
- 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
- Core Research for Evolutional Science and Technology (CREST)
 - Development of long term vision for sustainable water use of the world process
 - ◇ H08: An integrated model for the assessment of global water resources
 - ◇ Model validation, Real time simulation, Complex network theory, Input/Output data server, Distribute source code and manual, Technical support, NH

b) Contribution to IPCC activities

- IPCC-SREX, 2009.09 - 2011.11
 - LA of Ch. 4 (Changes in impacts of climate extremes: human systems and ecosystems), KT
- IPCC-AR5(WGII), 2010.06
 - LA of Ch. 19 (Emergent risks and key vulnerabilities), KT, CLA and CS of Ch. 24 (Asia), YH & YO
- Development of SSPs, 2010.12 - ,KT, NH, YH
 - Collaboration with CGE, Introduction of SSPs to Japanese IAV researchers,

c) Others

- Contributing international research activities
 - Agricultural Model Intercomparison and Improvement Project (AgMIP), KT
 - ◇ Distributed climate-scenario simulation exercise for historical model intercomparison and future climate change conditions with participation of multiple crop and world agricultural trade modeling groups around the world
- Contribution to Japanese IAV communities
 - Management of Task group for climate scenario utilization (TGfCS), 2008.05 - 2012.3, KT, NH, YH
 - ◇ Coordination for data and knowledge sharing between climate modeling community and impact
- Regional Impact assessment
 - A study on comprehensive assessment of climate change impacts in Tokyo (Tokyo), 2009.10 - 2012.3
 - ◇ Quantitatively grasping the impacts of climate change field in Tokyo Metropolitan Government Area, HH, YO, YH