Uncertainty of water demand and supply in a changing environment

Host : Seoul National University of Science and Technology *

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Description

Body

1) Short Description

With the population growth and social-economic development, the contradictions between water supply and water demand are rapidly increasing in the world, coupled with the impact of climate change and urbanization. Thus, future water resources shortage will become more severe due to the climate change and urban development, which will result in the conflicts among industrial, domestic and ecological users. In addition, the insufficient water supply can restrict the economic development in the country as well as city. Therefore, the risk from climate change and urbanization must be reduced using all available knowledge. Because the impacts from those risk are prevalent all over the world, many experts from many countries and various fields should work together to find a smart solution.

2) Objectives

This special session will make a space to share our experiences for the preparedness to the impacts of plausible climate change and urbanization. The requirements for the mitigation and adaptation to the climate changes consist of the various following issues which will be discussed at this special session.

- Robust use of multiple climate change scenarios in water resources planning and management
- Contradictions between water demand and supply in a changing environment
- Uncertainty of climate change impacts on hydrology, water quality and ecology
- Uncertainty of climate change mitigation and adaptation strategies
- Multi-users water demand forecasting in a changing environment

3) Justifications

Now we are facing the threats of climate change such as melting of glaciers, more frequent typhoons and extreme flood and more severe and longer drought. Thus, the climate change has been popularly agreed among experts as well as people in the world. The occurrence of climate change has not been spatially and temporally homogeneous. Some countries have already suffered from climate change impacts which might be supposed to happen in other regions. Therefore, various antecedent efforts to find solutions for climate change mitigation and adaptation strategies can be shared and then more innovative technologies and approached can be proposed through the international collaborative discussion.

4) Projected outcomes

- Formulation of international research group for the study of climate change impacts
- Development of international collaborative projects
- Article publications for special issue
- Continuing special session at the next IWRA conference

5) Alignment with Congress
- None