

## **Climate change and water: research needs**

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Freshwater resources are highly vulnerable to climate variability and climate change. Increased emissions and accumulation of greenhouse gases in the atmosphere will change the future climate and this will change the pattern of freshwater availability and alter the frequencies of floods and droughts. However the impact of climate change on water resources varies with the time and the region. Furthermore there are various kinds of uncertainties in modeling the climate change impacts on water resources such as uncertainty due to the nature of global climate projection and its use in forecasting the impacts on water resources at local scale etc. Therefore this presentation will provide some research issues on climate change and water. In addition some (ongoing) studies on climate change and water resources will be presented which addressed the issues discussed above. Some of these studies are: development of decision support system for climate change impact assessment at local scale; investigating the changes of river inflow to the dam with the climate change; examining the effects of climate change on irrigation water requirement and adaptation options; and community based adaptation measures to cope with water scarcity due to climate change.

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