Geophysical Research Abstracts
Vol. 18, EGU2016-3382, 2016
EGU General Assembly 2016

Future Prospects of Research on Extreme Floods & Droughts and Adaptive Management under Climate Change in East China Monsoon Region

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China is one of the 13 countries in the world that experience water scarcity, especially in East China Monsoon Region, with the obvious contradiction between water supply and demand and frequent droughts and floods. In the context of global warming over the past 30 years, increased droughts and the deterioration of water environment in northern China, and also increased extreme floods in the southern China, have seriously hampered the sustainable socio-economic development. This paper proposes several revisions and future prospects of research on water resources vulnerability and adaption measures under climate change combing with the project, that is impacts of climate change on water resources security and adaption measures in East China Monsoon Region, which is supported by the National Basic Research Program of China. This presentation will focus on the four parts: (1) the recognition for extreme precipitation and changes from drought and flood of non-stationary sequence. (2) The assessment of vulnerability status quo of water resources and the fact that floods and droughts exacerbate the vulnerability of water resources. (3) The trend of flood and drought disasters in China. (4) Adaptation strategies for flood and drought disasters under climate change. To put forward adaptive measures for reducing the impacts of flood and drought disasters on urban development, ensuring the food security and maintaining sustainable development of socio-economic, it is very important to carry on the interdisciplinary research to explore the trend of them under climate change scenarios. All above is to implement the most strict water resources management institution and achieve strategic goals of ecological civilization construction.