

## **Water Cycle in a Changing Climate**

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### **ABSTRACT**

Recent climate impact studies indicate that water resources in many regions of the globe can be strongly affected by climate change. The impacts of climate change on hydrological variables at regional and local scales can be evaluated using different methods and models. The first part of the presentation will be an overview of these techniques and several examples of recently projected change in water resources worldwide will be discussed. The second part focuses on evaluation of the hydrological performance of the Canadian Regional Climate model (CRCM). A comprehensive validation method of the water budget components at the basin scale will be presented. In addition, the sensitivity of simulated hydrological cycles to lateral boundary forcing, the complexity of physical parameterisation schemes, and internal variability arising from different model initial conditions will be discussed.

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Biljana Music is a climate specialist at the Ouranos Consortium on Regional Climatology and Adaptation to Climate Change. Her research aims to better understand the role of water cycle processes in governing climate and its response to an increase in greenhouse gases. The Canadian Regional Climate Model (CRCM) and various data coming from multiple sources of atmospheric and surface observations and reanalyses are the main tools used for this investigation.

#### Education:

Ph.D. in Environmental Sciences, University of Quebec in Montreal.

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