



Interactive lakes in the Canadian Regional Climate Model (CRCM): present state and perspectives

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Interactive lakes are introduced into the Canadian Regional Climate Model (CRCM), aiming at better simulation of regional climate, particularly for lake-rich regions, such as the Canadian Shield and the Laurentian Great Lakes region. During the first phase, two 1D lake models were interactively coupled with CRCM4, the current operational version of the model. Decadal simulations with the coupled model over a domain covering the Great Lakes are presented and compared with simulations that did not take into account lakes or used a simple mixed-layer lake model.

The lake coupling for both resolved and sub-grid lakes is currently being realised for the next (fifth) generation of the Canadian regional model (CRCM5), which is based on the GEM numerical weather prediction model. Preliminary simulation results are presented and compared with standard CRCM5 and with coupled CRCM4 simulations.