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Reanalysis-driven climate simulation over CORDEX North America domain using the Canadian Regional Climate Model, version 5: model performance evaluation.

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The Canadian Regional Climate Model, version 5 (CRCM5), has been used for simulating the climate over the North American continent for the 1989-2008 period, using the ERA-Interim reanalysis boundary forcing. The experiment was conducted within the CORDEX project framework aiming at model evaluation and preparation of consequent GCM-driven climate change simulations. The capacity of the CRCM5 model to reproduce the essential phenomena of the North American climate has been estimated, with emphasis on Low-Level Jets and North American Monsoon System. It was shown that the model simulates satisfactorily these climate features, in particular the wind and precipitation patterns, linked with the Great Plains Low-Level Jet (GPLLJ) and the monsoon-driven precipitation patterns over the Gulf of California region.