



## **The Canadian coupled multi-seasonal forecasting system**

Juan Sebastian Fontecilla (1)

(1) Juan Sebastian Fontecilla, Canadian Meteorological Centre, Dorval, Canada (juan-sebastian.fontecilla@ec.gc.ca), (2) Bill Merryfield, Canadian Centre for Climate Modelling and Analysis, Victoria, Canada (bill.merryfield@ec.gc.ca)

The Canadian coupled multi-seasonal forecasting system

Since a year now, the Meteorological Service of Canada has its first coupled operational multi-seasonal forecasting system. The Canadian Meteorological Centre (CMC) in collaboration with the Canadian Centre for Climate Modeling and Analysis (CCCma) has implemented a one-tier climate prediction system which has replaced the old two-tier 4 model forecasting system used for forecasts of months 1 to 4, and the CCA statistical forecasting system used for forecasts of months 4 to 12. The coupled atmosphere-ocean-sea ice system combines ensemble forecasts from the CanCM3 and CanCM4 versions of CCCma's coupled global climate model and provide dynamical atmospheric, oceanic and sea ice predictions for lead times out to 12 months. This system, developed under the second Coupled Historical Forecasting Project (CHFP2) will be described briefly. Forecast skill improvements will be shown. The implementation of this new system permits the issuance of ENSO and arctic sea ice forecasts, which were not possible before. The predictive skill of NINO<sub>3.4</sub> index from this new coupled system will compared against the skill from other centers.