Séminaire jeudi 8 mai 2014 11h TE
Seminar Thursday May 8th 2014 11h ET

Sujet/Subject :Implementation of GEM-NEMO in the Coupled Gulf of St. Lawrence Forecasting System

Conférenciers/Lecturers: François Roy (RPN) & Sarah Dyck (CMC)

Langue/language   : Français (François Roy)/Anglais (Sarah Dyck)

French (François Roy)/English (Sarah Dyck)

Résumé / Abstract :

A proposed update to the operational Gulf of St. Lawrence (GSL) coupled weather forecast system is presented including a new ocean-ice component (NEMO-CICE) and coupling methodology. The use of NEMO-CICE will facilitate future advances toward an increase in resolution and the introduction of new scientific developments. Indeed NEMO and CICE are supported by a large scientific community and are based on more efficient computing technologies than the current system. An ensemble of hindcasts over previous years demonstrate that recent developments in the NEMO-CICE model make it possible to meet the high quality standards of the ocean model by Saucier *et al.* (2009) used in the current operational system in terms of the tides, circulation and water mass properties. We present results from these hindcasts as well as from an experimental run for the winter of 2014 and compare them with the operational system. The experimental run includes a pseudo-analysis cycle producing daily initial ice-ocean conditions and their subsequent coupled atmosphere-ice-ocean 48 hr forecasts. We first examine extreme weather event cases, and then present results from a subjective evaluation as well as objective skill scores for SST analyses and for ice, surface air temperature and wind forecasts.