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Dynamical versus statistical projections of ocean wave heights

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This study compares statistical projections of ocean wave heights (seasonal means and extremes) with the corresponding dynamical projections obtained from running a state-of-the-art wave model (ODGP-2G), in terms of the projected climate, variability, and possible future changes. Both the statistical and dynamical projections are based on the same projections of the atmosphere (sea level pressure and surface wind fields) as simulated by the Canadian coupled climate model CGCM2 with the IPCC IS92a forcing scenario for three 20-year periods (1975-94, 2040-59, 2080-99). Non-linear trends were estimated from both types of projections and compared with each other. The comparison reveals some uncertainty of projection due to different “downscaling” methods used.