ArcticNet
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Climate analysis and scenario development for the Canadian Arctic and Subarctic

Summary

Project Leader
Brown, Ross

Analyzing climate variability and trends and constructing climate projection scenarios for the Canadian Arctic and Subarctic regions is more challenging than for southern Canadian regions. This is mostly due to the inconsistent and sparse observational datasets, to the complex regional setting and the interlocked physical processes involved in this environment. The main objective of this project is to supply information on observed and projected changes in key climate variables and indicators in support of the ongoing IRIS (IRIS 1-2-3) and AACA* Baffin-Bay-Davis-Strait activities. This requires 1) the acquisition, evaluation and analysis of in situ and reanalysis datasets in the Canadian Arctic; 2) tracking state-of-the-art developments in coupled cryosphere/atmosphere/ocean models and scenario construction methods; and 3) effective communication of scenarios and their uncertainties to users. The purpose of this project is to provide researchers, stakeholders, decision-makers and communities with robust knowledge of current and anticipated climate changes that can be used to support sustainable development in this complex and rapidly changing environment. *Adaptation Actions for a Changing Arctic (Arctic Council).

People

Network Investigators
Brown, Ross - Ouranos

Collaborators & Research Associates
Allard, Michel - Université Laval
Barber, David G. - University of Manitoba
Bell, Trevor - Memorial University of Newfoundland
Chaumont, Diane - Ouranos
de Elia, Ramon - Ouranos
Frigon, Anne - Ouranos
Gaden, Ashley - University of Manitoba
Lemay, Mickaël - ArcticNet Inc.
Markovic, Marko - Ouranos
Stern, Gary A. - Fisheries and Oceans Canada - Freshwater Institute

Technical Staff
Barrette, Carl - Université Laval
Gennaretti, Fabio - Université du Québec à Rimouski
Grenier, Patrick - Ouranos

Project Staff
Rapaic, Maja - Ouranos

Partners

Environment Canada - Science and Technology Branch
Ouranos

Publications

Articles Published in Refereed Publications

Rapaic, M., Brown, R., Markovic, M. and Chaumont, D., 2015, An evaluation of temperature and precipitation surface-based and reanalysis datasets for the Canadian Arctic, 1950-2010, Atmosphere-Ocean, , Accepted

Non-Refereed Contributions

Barrette, C., Brown, R., Grenier, P. and Chaumont D., 2013, Initial climate change projections for the Eastern Arctic, IRIS 2 region, ArcticNet Internal document, 26, Published

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Barrette, C., Grenier, P., Brown, R. and Chaumont, D., 2013, Initial climate change projections for the Western and Central Canadian Arctic, IRIS 1 region, ArcticNet Internal document, 28, Published

Barrette, C., Grenier, P., Chaumont, D. and Brown R., 2013, Climate scenarios in support of ArcticNet IRISs, Oral presentation, ArcticNet ASM, 1, Published

Barrette, C., Lemay, M., Grenier, P., Chaumont, D. and Brown, R., 2014, The IRIS Umbrella report: toward a better understanding of the changing Canadian Arctic climate, Arctic Change 2014, na, Published

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Markovic, M. and De Elia R., 2013, Evaluation of recent North American Arctic climate from a suite of CMIP5 simulations, Oral presentation, ArcticNet ASM, 1, Published

Markovic, M., De Elia, R., Brown, R. and Rapaic, M., 2014, Progress report of the climate research in the Canadian Arctic, ArcticNet perspective, Ouranos, science du climat, Progress report, 18, Published

Rapiac, M., Brown, R., Markovic, M. and Chaumont, C., 2013, Evaluation of data-sets for climate analysis and climate model evaluation over the Canadian Arctic, Poster presentation, ArctNet ASM, 1, Published