

Analysis of Past Hydro-Climatic Variations in Nunavik

Summary

Project Leader(s)

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Nunavik is one of the areas of the Northern hemisphere where climate change was the most important during the thirty last years. Precipitations diminished by about 15% in Central Québec over this period. The situation could have serious socio-economic consequences insofar as nearly 50% of the hydroelectric production of the province comes precisely from this area. It is important to be able to locate the recent trend of the hydro-climatic conditions from the long-term point of view. The short weather registers available do not allow such assessment of a trend. This project proposes to reconstruct the natural variability in the long term, especially the hydroclimatic variables used in modeling precipitations and runoff. Using an extended network of tree-ring chronologies, the project consists in studying temporal and geographical hydroclimatic variations over the past 250 years and, at some locations, over the last millennium at a yearly resolution. This project is fully supported for 5 years through a CRD program by NCERS, Hydro-Quebec and Ouranos. The contribution of ArcticNet aims at bringing the ARCHIVES project leaders within the network in order to share their research results with other Northern researchers. The records and the reconstructions of climatic variables will be used to get a picture of the climatic variations over the pre- and post-industrial period. We intend to share our results with other work done in other IRISes to detect any regional differences in climatic trends, as suggested by the recent literature.

People

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