Northern weather and climate: Impacts on end-users

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Weather in the North is a major regulator of activities across human sectors. Much of northern life revolves around transportation – to support subsistence activities, travel to and from communities and hunting sites, shipment of supplies, and activities to maintain infrastructure. Groups such as northern communities, Coast Guard, and industrial operators need weather and climate information to support their activities, but it must be provided in specific ways that work for them. I have spent my academic life thinking about this question, and will overview the directions I have explored along the way to address parts of this overarching theme. In general, my efforts may be broken into several categories.

1) New methods to improve representation of weather elements at local scales.

2) Measurement of physical parameters to address local scale links to large scale weather.

3) Work with end-user groups to ask the question “How does weather affect what you do?” and to then use information they have provided to perform tailored analyses of specific weather occurrences.

4) Analyses of local- and regional-scale weather and weather-related phenomena.

I will talk about work I have done in these areas, and will also step through how I got to where I am now, so the new grad students can see that life does not need to be fully mapped out at this stage!