



Inuit experiences of climate change and the development of community-based environmental monitoring

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Abstract

Scientists have been successful at gathering recent and paleo data to document the modern raise in global temperature and changes in planetary climates. Understanding the impact of these changes on the environment and on human being is challenging and requires fine-scale investigation. The knowledge held by local users of the environment (hunters, fishers, farmers) can be utilized as a complementary source of information to better understand environmental changes at local and regional scales.

In Arviat, Nunavut, Inuit own tremendously valuable information of the environment they have gathered throughout their lifetime observations. Patterns in the wind, snow formation, rainfall, sea ice thickness and sun heat have been scrutinized by local observers back to several decades and many linkages has been drawn between these observations and changes in the living (plants, animals and humans).

In an attempt to gain more information on the observed and on the potential impacts of climate changes on the living in the region of Arviat, we have examined observations from Inuit (Inuit Qaujimagatuqangit) and scientific assessment gathered since 2000. Our main objective was to determine what is known and what needs to be known in order to improve the community's ability to adapt to climate change.

We observed that the most accurate understanding of the impact of climate change on the environment in the region of Arviat came from Inuit observations over the last seven decades. These observations covered a very large spectrum of topics, from the shift in dominant winds and its impact on hunter's orientation on the land to the increased in the dryness of the tundra and its impact on plant growth and animals' health. Interestingly, the few scientific documents found have unanimously identified the need to gather more data at fine-scale. They also pointed out the importance of merging the knowledge from both Inuit and scientists.

Recognizing the need to collect more local observations and scientific data on the general topic of climate change, we have created a community-based monitoring procedure to timely document weather parameters, environmental parameters, living species and human health. In order to start running and fueling-up this local programming, we wish to create partnership with



scientists. We would need help in the gathering and the analysing of data as well as in the mentoring of local students. We encourage any interested person to contact us.