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THE IMPORTANCE OF TRADITIONAL KNOWLEDGE RECOGNITION AND INVOLVEMENT INTO THE SCIENTIFIC RESEARCH.

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There are several independent studies that produce evidence stating the arctic is warming. The Intergovernmental Panel on Climate Change (IPCC) is reporting data of a rising atmospheric temperature. The resulting higher surface air temperatures are driving changes in the cryosphere. The Arctic summer has been warmer during recent decades. This can be illustrated through ice cores, tree rings and sediments found in lakes. IPCC has reported on the warming oceans and its changing currents, as well as the change in weather pattern.

Now the western world is beginning to notice these detrimental changes in nature, transformations seen by the indigenous people at an early stage. Researchers that live for the land, its nature and the weather have been collecting data regarding the patterns of such changes for centuries. This information is crucial for the survival of the people, as well as the advancement of scientific research. In this regard, greater knowledge would provide scientists with a deeper understanding of nature, how to adjust to such drastic changes and further, how to prevent these adaptations in the environment from occurring. Such shifts in the climate has been caused, primarily, by anthropogenic activity and pollution.

Predicting the response of the environment and ecosystem in the arctic during a period of rapid change is an enormous challenge, and to this date, has failed. Adequate knowledge of the past and present changes is of valid importance. Unfortunately, one of the complications that arises when trying to produce knowledge that will help the environment involves much collaboration. To do so, multidisciplinary scientific areas and the involvement of local and traditional expertise must be combined. Today, the scientific studies are dependent upon various facilities' satellites, land based stationery monitoring stations, gliders and unmanned aircrafts. Despite the scientific effort, there are many models that are struggling to develop accurate adaption strategies. Recognition of the knowledge systems of arctic cultures and the full engagement of local people throughout the process are key elements that would help to quickly identify any changes that occur.

Reindeer herder's traditional way of responding to changes in both the natural and the socio-economic environments have been dependent on herding practice flexibility. However, this is currently being negatively affected by several non-climate factors. Not only are the people forced to adapt because of the arctic shifts, but the inhabitants are also contrived to transitioning lifestyles due to the negative impacts of the nature surrounding us. The reindeers have shown great capacity for adaptation and the reindeer herders are collecting such relevant information regarding these impacts.

This paper will highlight how the role of traditional knowledge and local observations are placed within the world of science. Examples of the reindeer herding communities' observations and the reindeers adaptation to climate change will be presented.