



## Northern Contaminants Program 2017-2018 – Synopsis of Research

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### Abstract

Traditional country food is vital to Inuit culture and it has provided high-quality resources for millennia. With the event of industrial development, natural contaminants concentration (*e.g.* mercury) has constantly increased in the Atmosphere and Oceans and have accumulated in ecosystems and living organisms to reach the most remote Arctic regions, and many adverse effects of contaminants on animal and human health have been identified. Balancing the benefits that country food represents to Arctic residents (body health, mental health, and culture) with the risks associated with the utilization of country food that contains contaminants is not an easy task.

In this NCP project, we monitored contaminants; mercury, trace metals and Persistent Organic Pollutants in different tissues of ringed seal, and documented local observations and knowledge in order to better understand this species as well as the exposure of the community to contaminants. One of the most unique aspects of this project was that it was community-based under the lead of a local researcher and hunter, James Simonee, who teamed up with research mentors from university and research centres for training and guidance.

We harvested and sampled 30 ringed seal in the spring and fall of 2017, and across 3 different areas. Contaminants and stable isotopes results are not yet available and still pending. We interviewed a total of 9 local participants; active hunters, elders and women on ringed seal about traditional uses, biology and ecology, population trends, and environmental changes. Interview results indicate a global decline in the ringed seal population of the Eclipse Sound region along with some observations of changes in blubber and pelt quality. Several causes to a declining seal population were discussed and included the rise of predators, shipping disturbance and contaminants.

Based on the success of this baseline study and local capacity developed, we intend to pursue and expand this project to other marine wildlife in the years to come.