Community-based seawater monitoring for organic contaminants and mercury in the Canadian Arctic

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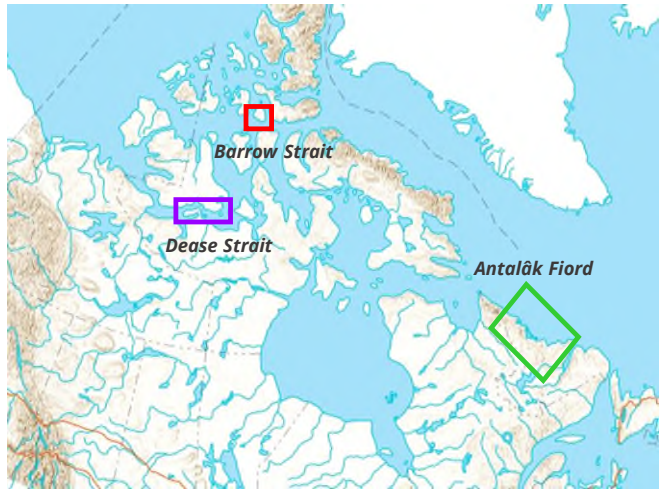

Figure 1. Sampling areas, **community**, *region*: Antalâk Fiord (**Nain,** *Nunatsiavut*); Resolute Passage/Barrow Strait (**Resolute Bay**, *Nunavut*); Dease Strait (**Cambridge Bay**, *Nunavut*)

Purpose: To report contaminants in Arctic seawater

Why is this important? Contaminants in seawater move into organisms and can increase in food webs

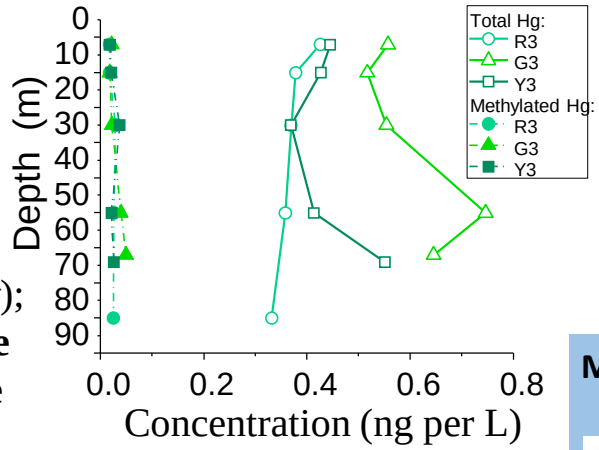

Figure 3. (left) Concentrations of methylated mercury (filled symbols) and total mercury (open symbols) in three areas of the Dease Strait (August 2018 data).

Where do they come from?

Contaminants can:

- Travel through air and water currents
- Come from snow and ice melt
- Come from human activity in the area (ship traffic, waste dump, runoff)

Mercury moves from Seawater into Fish and other Animals

THg – Total mercury: all forms of mercury

MeHg – Methyl mercury: toxic form of mercury

Figure 4. (right) Concentrations of perfluoroalkyl substances (PFAS) in seawater (2019 data). PFAS are used as stain repellants and fire fighting foams.

Figure 2. Sampling methods: a) active sampling by van dorn and b) passive samplers