

Podcast transcript: Food Security, Nutrition, and Indigenous Health in the Arctic

[Theme music]

Ashley Ahearn (Narrator): You're listening to Environmental Health Chat – a show from the National Institute of Environmental Health Sciences that explores the connections between our health and our world.

I'm Ashley Ahearn.

[Music fades out]

For the Inuit – an Indigenous people of the Arctic – there are not four seasons, there are six. And they're defined around temperature, sea ice vs. open water, and hours of daylight. But you might also say they're defined around what's on the menu...

Sappho Gilbert: So up here, you'll see a lot of caribou, musk ox, seal, narwhal, or even beluga whale, berry picking in the summertime, which is a great and favorite pastime. And I myself have enjoyed a number of these delicacies. I've had seal. I love boiled seal, in particular the intestine, which really took me by surprise.

AA: Sappho Gilbert has spent a lot of time in the Canadian Arctic Territory of Nunavut. She's doing her Ph.D. at the Yale School of Public Health with a predoctoral fellowship at the Yale Center on Climate Change and Health. She wants to understand how Inuit diet is shifting and what that could mean for their health and culture.

SG: Traditionally, Inuit lived off the land, and were nomadic in that they moved around the land and on sea ice in the winter and on open water in the summer. And they would harvest continually for subsistence. And so, in certain seasons, you will be going out and harvesting more caribou versus other seasons when you might be harvesting more narwhal or beluga.

AA: The Arctic is an important place to study if you want to explore the connections between climate change and health – which is a focal area of research for the NIEHS. The region is warming more rapidly than anywhere else on the planet – and that is having major implications for the people who live there.

SG: The sea ice that is used as an extension of the land for many of the cold winter months is thinning and is less stable. So, when you want to go out and hunt, you're very much reliant on the thickness and the concentration of ice available to you, to go out and hunt. And as that becomes more volatile and thinner, and those seasons kind of shrink in the calendar, harvesting also becomes more complicated.

AA: ... and more dangerous.

With funding from the NIEHS, Gilbert has developed what's called a "trail safety model." It was originally developed by one of her advisors, James Ford, and his colleagues. The model brings together data on ice concentration, wind, visibility, temperature, and interviews with hunters to assess whether conditions on a particular day are safe to hunt or not.

And there's another really interesting layer to her research. Gilbert is combining data from the trail safety model with data from one of the grocery store chains that serves communities in Nunavut. By doing so, she'll be able to analyze what people are buying in the store during periods when it's too risky to hunt. Do grocery sales go up? Do people buy animal protein from stores if they can't harvest it from the land and sea?

SG: If they can't go out and hunt because it's unsafe, where do they turn in the store to feed themselves and their families? So, my dissertation overall looks at the dietary shift at the population level from traditional staples – which are called country food up here – toward store bought foods. And that shift has been rapidly occurring in recent decades. And we see that there are nutritional implications of that. And as a result, health impacts.

AA: Dietary assessments of Arctic communities in recent decades have revealed that the shift from country food to store bought food has meant that people are getting more energy-dense or high-calorie food, but they're not getting as many nutrients. Think: more processed food and less whole foods and proteins.

Nunavut has also seen increases in chronic conditions and diseases like obesity and diabetes. Anemia rates are also on the rise, in part because people aren't harvesting as much caribou as they used to.

SG: We do see that there are health implications of the shift away from these very nutrient rich country foods toward more store bought foods that are nutrient poor, but energy dense. This is the double burden that is talked about sometimes in nutrition research of being overfed but undernourished.

AA (on tape): And it's not cheap to shop at the grocery store up there, right?

SG: No, definitely not. Groceries are notoriously expensive in the Arctic. I'm sure many listeners will have seen photos at some point in popular media of \$20 spaghetti sauce in Alaska, or a baby watermelon I once saw in a community several years back that cost 23 Canadian dollars. So, we do know that store bought food is quite expensive, so the shift from country food to store bought food has nutritional implications, but also economic ones.

AA: But beyond the nutritional and economic implications lie the cultural loss that can occur when Indigenous peoples move away from subsistence harvesting and all the traditional ecological knowledge that goes with those practices. That can include observations about the natural world and how to steward its resources – knowledge that has been gathered and passed down for generations.

Gilbert has conducted many interviews with hunters and harvesters in communities across Nunavut. She's also made friends with people there who have invited her out to hunt and fish.

On one of her earlier trips to Nunavut she stayed with a host family in Rankin Inlet and they took her to the cabin of some family friends one weekend. Some of the group went off to hunt caribou – and they were successful.

SG: And they started carving up the caribou for different parts of meat and also for the fur. And it was an incredible process to watch. I was seeing in real time, what subsistence means, what it means to survive and to thrive off of the land. And I was also able to taste different cuts and

pieces. And then later also, when the meat was ground for some portions or chopped up for stews, I was able to taste it raw, in an almost like a carpaccio style. And later on got to taste it in stew form and roast form, so it really is incredible to witness firsthand how many people that can feed and how nutrient dense it is and how delicious.

AA: Fish is also a staple of arctic diets. Arctic char is a fatty nutritious member of the salmonid family that many enjoy. Gilbert got to taste it with one of her first friends she made in Nunavut.

SG: She had a day off of work. And so she came by the house and asked me if I wanted to impromptu join her for a day out fishing. And I ended up agreeing and she taught me the ropes when it comes to fishing, I had never gone out fishing. And she took the fishing rod and was teaching me how to swing the line and position yourself along the current and it was so fascinating, all of this traditional knowledge that she held and was applying. And so, it was really cool to see that in real time and to be the beneficiary of a delicious meal later.

AA: It was an important learning experience for Gilbert. Her friend didn't just share the catch with Gilbert. She also shared it with others in the community.

SG: That is tradition. There is a very strong sharing culture here and that extends beyond just one's family and extended family, it goes to the community level, in particular, elders are well regarded and so tend to receive country food from hunters and from other households.

AA: Country food is also shared *between* communities, so if there are leftovers of a certain harvest folks will post on Facebook and the food will be delivered – often by plane to other remote communities.

Through her research, Gilbert has conducted many interviews with Inuit in communities all across Nunavut to try to understand not just what people there eat, but what it means to them.

SG: Country food to them is so much more than just eating healthily and nutritiously, which were major themes around diet and health. They also talked about the meaning of country food to their spirit, their spirituality, they described it as soul food and their identity. So, losing country food and the diet really does impact numerous dimensions of wellbeing.

AA: Gilbert says conducting research in the Arctic has been both challenging and inspiring – and she wouldn't be where she is if weren't for her collaborators. She's partnered with the Nunavut government as well as local organizations focusing on poverty reduction, nutrition, food security and health policy. The Nunavut Research Institute has been her academic home in the Arctic – and has helped connect her with folks in the community like hunter and trapper groups.

For Gilbert, it's not just about parachuting into remote Inuit communities and gathering data. It's about really getting to know people outside of the research – and building trust.

SG: To just meet people in day-to-day conversations and interactions, go to karaoke night or wing night, play on a softball team in a summer league. And in doing so you end up really immersing yourself in the community and in the context, and that actually comes back and enriches the science that you're doing. So, I think that the trust comes very naturally, if you have that time. And then being able to do your research activities in the territory also becomes more seamless, because you have shown up not just for the purposes of your scientific endeavors, but also to be part of the community and hang out.

AA: Gilbert hopes her research can, in turn, help the people who have helped her conduct it.

By unpacking the dietary shift that is taking place in Inuit communities she hopes her findings can inform policies that promote food sovereignty and support traditional harvesting practices – as well as promote better access to nutritious food in stores.

SG: Either we invest the time now to understand that phenomenon and the shift and the potential health implications of it short- and long-term, or we wait until the issue has already scaled and country food is in effect depleted in the local diet, and we try and fix that at a much higher cost in terms of health care, and health policy, and also the cultural loss that will have happened, which is absolutely irreplaceable.

[Music comes up]

I'm Ashley Ahearn. Thanks for listening to Environmental Health Chat.