

Researching a Commercial Fishing Future for Great Slave Lake

Great Slave Lake fish are not only “huge and massive, they’re the best tasting fish I’ve ever eaten,” says Patrick Riley, the environmental program manager for Kát’odeeche First Nation in Hay River, Northwest Territories.

Unfortunately for the many Dene communities in the region, there is very little commercial fishing at present. However, that may soon change as community members collect reams of scientific data about the variety, abundance and health of the various fish species found in Great Slave Lake, one the world’s largest lakes and the deepest in North America.

“The inconnu and other stocks have been in decline the last 30 years, but lake trout are rebounding,” said Riley. Inconnu or Coney is an oily-fleshed salmonid that can reach 25 kilograms and is in high market demand. “We’d like to find out why there have been declines using both western science and traditional knowledge.”

Riley runs the community-based, capacity-building and collaborative aquatic resource management activities for Kát’odeeche First Nation using funding from DehCho AAROM and the Aboriginal Fisheries Strategy program. AAROM is the acronym for Aboriginal Aquatic Resource and Oceans Management departments that are supported in part by Fisheries and Oceans Canada to address local concerns and issues impacting fish and the aquatic environment.

For Kát’odeeche’s activities, crews of harvesters are trained to collect and process a variety of fish samples in Great Slave Lake and local rivers to help assess the productivity, genetics and population numbers. Typically, a DFO biologist is involved in this work, but this year the community’s collection crews did the work on their own says Riley. “They like the work and are happy to have a pay cheque while getting some fish for the pot.”

Meanwhile, the DehCho AAROM program has trained approximately 30 members to manage subsistence,

recreational and commercial fisheries in the DehCho communities around Great Slave Lake says Mike Low, the AAROM coordinator. Many are also Indigenous guardians who Low says are “the backbone of the communities.” DehCho AAROM has 10 First Nation community members, which are situated along and around the lake.

Until this technical work began little was known about the health of the lake’s fish stocks. “We’ve played a big role in changing this,” says Low. The work and the training have been very good for the community and the harvesters are quite knowledgeable. “Catching and consuming fish are very important in lowering the cost of living and for health reasons,” he says.

Under the DehCho AAROM program, Deh Gah Gotie First Nation runs a creel survey for the recreational pike fishery to collect data that is used to manage the stock. They are also involved in a monitoring project on the Horn River, which collects stock information on the walleye population. Another DehCho AAROM community, Sambaa K’e First Nation, has its guardians monitoring world-class walleye, lake trout and pike on a deep, cold water lake that is being affected by climate change.



Photo credit: Xinhua Zhu, Fisheries and Oceans Canada



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DehCho AAROM is also involved in collecting fish from all subsistence lakes for mercury analysis. For example, Jean Marie River First Nation has found high mercury levels in subsistence fish stocks in locally fished lakes and, as a consequence, the community has been heavily involved in an ongoing research project.

In addition to managing fish stocks, DehCho AAROM runs fish enhancement projects, holds country food workshops, coordinates biomonitoring projects, participates in youth ecology camps, and conducts harvest surveys. They also collaborate with the Government of Northwest Territories to administer a DehCho community-based water quality monitoring program.

As for the future of commercial fishing, that is still a work in progress says Low. The few commercial fish harvesters are getting older and quota issues still need to be addressed. New fish harvesters will have to be recruited and the science must support the potential for long-term commercial livelihoods. “But our work is playing a big role in filling those gaps.”



Best Practise:
Indigenous Collaboration