

Media Release

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Alert Bay, BC – First Nations' local knowledge and concern leads to discovery of mercury in rockfish near BC fish farms

A study published on-line today in Environmental Science and Technology revealed elevated levels of mercury in rockfish living near salmon farms in the territories of three British Columbia First Nations' groups (<http://pubs3.acs.org/journals/esthag/index.html>).

Rockfish were sampled near salmon farms in the territories of the Ahousaht, Kitasoo/Xaixais and the Musgamagw Tsawataineuk Tribal Council (MTTC). The study concludes that elevated levels of mercury in rockfish, up to three-fold in some cases (near farms only), was attributable to food web changes and higher mercury levels in rockfish prey near farms. The fish and invertebrates eaten by rockfish obtained mercury via waste feed and fish feces, and through the action of bacteria which transform elemental mercury under farms into methylmercury, a form of mercury that accumulates in aquatic food chains.

Chief Bob Chamberlin, speaking on behalf of the MTTC, said that the study "is yet another example of traditional ecological knowledge being supported by peer-reviewed science." Chamberlin also said that "this study and the MTTC concerns about clams are clear evidence of the wide-ranging impacts of salmon farming in the MTTC's Broughton Archipelago territory."

MTTC observations of discoloration of clams near Broughton salmon farms directly led to the scientific investigation of farm contaminants and the discovery of elevated levels of mercury in rockfish (see attached background).

Dr. Adrian deBruyn, the lead author of the study said, "Our findings show that we need to pay more attention to the contaminants issues related to fish farms. If we're going to work toward truly sustainable aquaculture, we must know a lot more about contaminant releases and changes to contaminant cycling around farms."

Under guidelines set by Health Canada, the observed mercury levels near farms would require slightly restricted consumption of rockfish by children and women of child-bearing age. But the joint First Nations-academic study concluded that it is unknown how mercury levels would respond with fish farm expansion, and that, "while some ecosystemic effects of fish farming may be transitory," the effects on mercury cycling are likely persistent.

Contacts

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Backgrounder: Mercury discovery rooted in traditional ecological knowledge

The discovery of mercury in rockfish reported today in Environmental Science and Technology owes its origin to traditional ecological knowledge and First Nations' concerns. Brian Wadhams and Connie McIvor were employed as local stewardship coordinators by the Musgamagw Tsawataineuk Tribal Council (MTTC) in 2004 when clam diggers approached them concerned about the health of the area's clams. The clam diggers believed that salmon farms were harming the clam gardens of the Broughton Archipelago. They told Connie and Brian that there were not as many clams left in some areas, and that many clams were also darker than anyone had ever seen.

Connie and Brian accompanied the diggers to the clam gardens and saw the same dark clams and smelled the same "foul smell" reported by the diggers. Several letters were written to government requesting they send someone to study the problems. When no one responded, Connie and Brian invited Prince Rupert filmmaker Twyla Roscovich to document the problems they were seeing. They also brought the MTTC's concerns to the BC Aboriginal Fisheries Commission which in turn approached contaminant specialists at the University of Victoria. Connie and Brian also helped collect the fish samples reported in the first peer-reviewed science paper to emerge from this broad, cooperative study. A major scientific discovery of ecosystemic and health concerns linked to salmon farming is thus rooted in traditional ecological knowledge and concern.