

## **If Fishes were Wishes, the ELA would survive**

Last year the federal government decided that it will close the world-renowned Experimental Lakes Area (ELA) in March 2013. This is not the wish of freshwater scientists around the world. In January, the Society of Canadian Limnologists added their voice to numerous scientific organizations, individual scientists and other supporters who have asked the government to reconsider their decision. At the annual meeting of the Association for the Sciences of Limnology and Oceanography in New Orleans earlier this month, the president-elect stated, "The theme of the meeting is 'Learning for the Future'. How can we learn and thus assure the future of lakes without the ELA?"

Since 1968, the ELA, located near Vermillion Bay, has conducted research that has identified environmental problems, provided solutions and guided policy. Researchers at the ELA conducted groundbreaking research on algae blooms and acid rain. Some areas of current research include freshwater aquaculture, endocrine disrupters and mercury levels in fish.

Fish in northern Ontario lakes, like lakes around the world, contain the toxin methylmercury and consumption is limited. The Ontario Fishing Guide has recommendations for the maximum number of servings. From Whitefish Lake for example, no more than 8 servings per month from pickerel less than 18 inches in length are advised. The numbers are less for women of child bearing age or children.

There are both natural and human sources of mercury. The burning of wood in forest fires releases mercury. The burning of coal, waste and other industrial processes also releases mercury into the atmosphere. Global mercury contamination has tripled since preindustrial times. Long-range atmospheric transport of mercury emissions results in increased mercury levels in lakes. Bacteria in lakes convert the mercury to methylmercury which accumulates through the food chain.

In December 2011 the United States set new rules for coal plant mercury emissions. Just last month in January 140 countries, including Canada, signed onto a legally binding treaty setting new limits for global mercury emissions. Some of the difficulties in determining appropriate emission levels had been due to insufficient knowledge regarding impacts of recently emitted atmospheric mercury on fish methylmercury concentrations. Research from the ELA helped fill in some of the knowledge gaps and guide policy decisions.

The Mercury Experiment to Assess Atmospheric Loading in Canada and the United States (METAALICUS) began at the ELA in spring 2001. This project is investigating the concentration of methyl mercury in a whole ecosystem, including fish, in response to deposition of atmospheric mercury.

One study from the project demonstrated that methyl mercury concentrations in fish increased quickly after depositing the mercury to the lake and watershed. Within two months the newly deposited mercury was found in several fish species. Almost all of the increase in methylmercury in the fish was from mercury deposited directly into the lake as opposed to the watershed. From their research the authors predict that the effect of reductions of mercury emissions would result in a fairly rapid reduction, within years, in fish methylmercury concentration as a result of reduced atmospheric deposits into lakes. There would be a subsequent reduction over centuries as the mercury accumulated in watersheds is slowly released into the lakes.

This study and many others depend on conducting their research within complete ecosystems. This type of research is only possible at the ELA.

So far the federal government has not reconsidered their decision. They are responsible for the operating costs, only 2 million dollars annually. The International Institute on Sustainable Development based in Winnipeg could take over the ELA but nothing is certain. Environment North believes this remarkable facility should continue providing cost-effective valuable independent research. It is unfortunate that the federal government no longer wishes to support the ELA.

Please contact your member of Parliament and let them know about your wishes for the ELA. Some communities in the region have declared March 5<sup>th</sup> as “Save the ELA Day”. For more details see [environment.north.ca](http://environment.north.ca). *Kerstin Muth is a member of Environment North.*