Every Drop Is Life

IISD Experimental Lakes Area

CASE FOR SUPPORT

Protecting Our Most Valuable Resource: Water

As Canadians, it can be easy to take our abundant freshwater resources for granted. In a world where two billion people are forced to drink contaminated water daily, few would deny that fresh water is our most precious resource and in most need of protection.

With ever-increasing pollution and the intensifying impacts of climate change, there is clear urgency for research and evidence-based solutions to these problems. Canada is home to 20 per cent of the world's freshwater supply. With this gift also comes a great responsibility to actively understand and protect our most valuable resource.

The World's Freshwater Laboratory

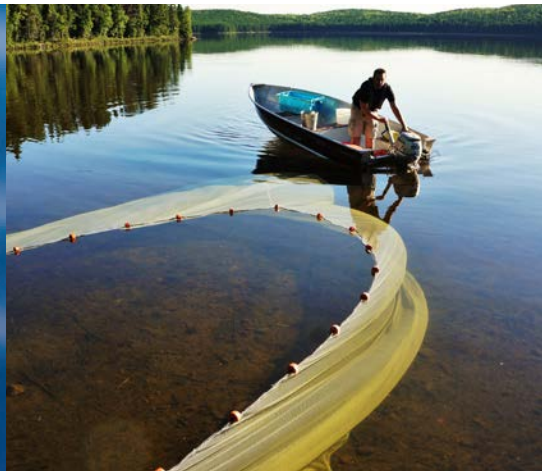
IISD Experimental Lakes Area (IISD-ELA)—the world's freshwater laboratory—is celebrating over 50 years of groundbreaking freshwater research and science that has uncovered evidence-based methods to combat threats against our fresh water while rewriting environmental policy, here in Canada and around the world. Located in a remote area in northwestern Ontario, the research site consists of 58 small lakes and their watersheds set aside for scientific research. Researchers come from all over the world to undertake "whole-ecosystem experiments," where entire lakes or watersheds are manipulated over long periods of time. Scientists are able to examine how all aspects of the ecosystem—from the atmosphere to fish populations—respond, yielding real-world results; these experiments are often much more accurate than those from research conducted at smaller scales, such as in laboratories.

Thanks to IISD-ELA's research findings, we are all able to benefit from air pollution regulations for reducing acid rain, hydroelectric reservoir design to minimize greenhouse gas fluxes and mercury contamination, proposed measures to lower mercury contamination in fish, and reduced algal blooms and water pollution. In addition, researchers at IISD-ELA have amassed one of the largest and most complete datasets in the world on long-term changes in small lakes, and our research activities are described in more than 1,000 peer-reviewed scientific publications.

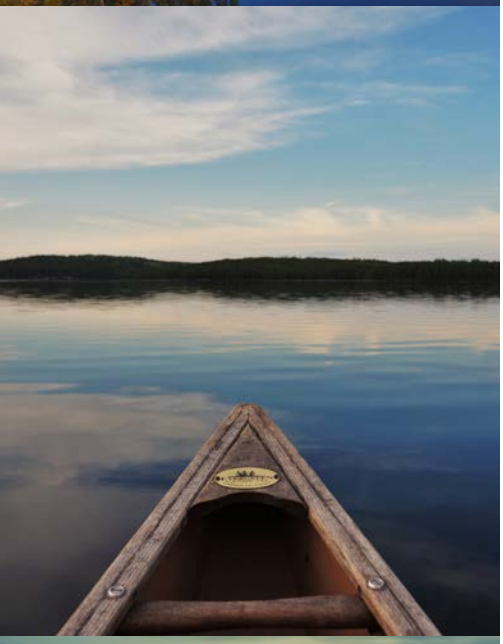
Fifty years on, IISD-ELA is enjoying the new era as a non-profit organization. We are building stronger relationships with the northwestern Ontario community and bolstering our education program to train the freshwater stewards of tomorrow. Situated on Treaty 3 traditional territory, IISD-ELA also recognizes the rights and spiritual beliefs of the Indigenous community and is actively working to strengthen collaboration and offer programming that includes education, youth engagement and traditional ecological knowledge.

Our Mission Statement

IISD-ELA's mission is to conduct ecosystem-based research that improves our understanding of human impacts on the environment and to provide science-based solutions for clean water and healthy ecosystems. IISD-ELA is committed to using our research and facility to provide a platform for science education and innovation.



Making a Positive and Lasting Impact



A Place like Nowhere Else on Earth

IISD Experimental Lakes Area's approach to freshwater research is completely unique and is one of the few places on Earth you can experiment on real ecosystems. Thanks to our unique research, we can:

- Better understand global threats to the environment through whole-ecosystem experiments.
- Monitor and demonstrate the impacts of human activities on watersheds and lakes.
- Develop solutions and strategies for the preservation, restoration and enhancement of ecosystems.
- Educate and promote freshwater science and environmental protection, inspiring the next generation of scientists and decision makers.

An important ancillary benefit of IISD-ELA research programs has also been the advanced education and training of thousands of students who have since moved into careers in aquatic science and environmental management.

A Unique Approach to Understanding Fresh Water

IISD-ELA experiments involve whole-lake manipulation. Various pollutants and stressors are added to lakes, and occasionally their surrounding watersheds, to mimic human activities. The effects are measured over time—sometimes over decades. Data about all aspects of the ecosystem are collected throughout the experiments to determine impacts and best practices. A key principle of the research at IISD-ELA is that lakes are returned to their natural state at the end of every study, enabling an understanding of ecosystem recovery and recommendations for management options.

After 50 years, IISD-ELA's database of information about unimpacted lakes is widely recognized as one of the largest and most comprehensive collections of longitudinal environmental data on freshwater lakes in the world. With these data and its scientific capabilities, IISD-ELA is in a unique position to develop sorely needed models of how ecosystems will change over time, especially as a result of climate change.

Our History

Understanding and protecting our fresh water has been the goal of the Experimental Lakes Area (ELA) since its founding by the Government of Canada in 1968. In early 2014, due to federal funding cuts, the International Institute for Sustainable Development (IISD) took over management of the research facility, and IISD-ELA gained charitable status as a Canadian not-for-profit. IISD has almost 30 years of non-partisan Canadian leadership in championing global sustainable development, which has allowed whole-ecosystem research to continue without interruption and IISD-ELA to pursue a new and expanded vision for research, education and policy impact.

Protecting our Fresh Water for Generations to Come

While we do receive some core funding from the governments of Canada and Ontario, there remains so much untapped potential in the world's freshwater laboratory that requires stronger funding. If you support the Every Drop Is Life Campaign, your contribution will:

- Host exceptional students to develop core skills in freshwater research.
- Provide support to continue the collection of long-term data tracking climate change and atmospheric contaminants.
- Allow researchers to investigate and interpret ecological relationships, which can then be used to influence policy.
- Develop models to demonstrate the impacts of human activities on the environment.
- Support researchers dedicated to environmental concerns.

GIVE TODAY!

IISD Experimental Lakes Area is one of the most fascinating places in the world. There is nowhere else in the world where researchers can manipulate, study and evaluate the impacts of pollution over several years on lakes and watersheds, and report definitively to scientists and policy-makers how the pollution has affected this invaluable resource.

A sustainable Earth means we all need to work together—individuals, communities, government and business. Your gift will help ensure that the cutting-edge research at IISD-ELA continues in perpetuity, and that fresh water can be preserved for future generations to come.

Contact us today and help safeguard the world's freshwater supplies through:
Every Drop Is Life Campaign: IISD Experimental Lakes Area - Case for Support

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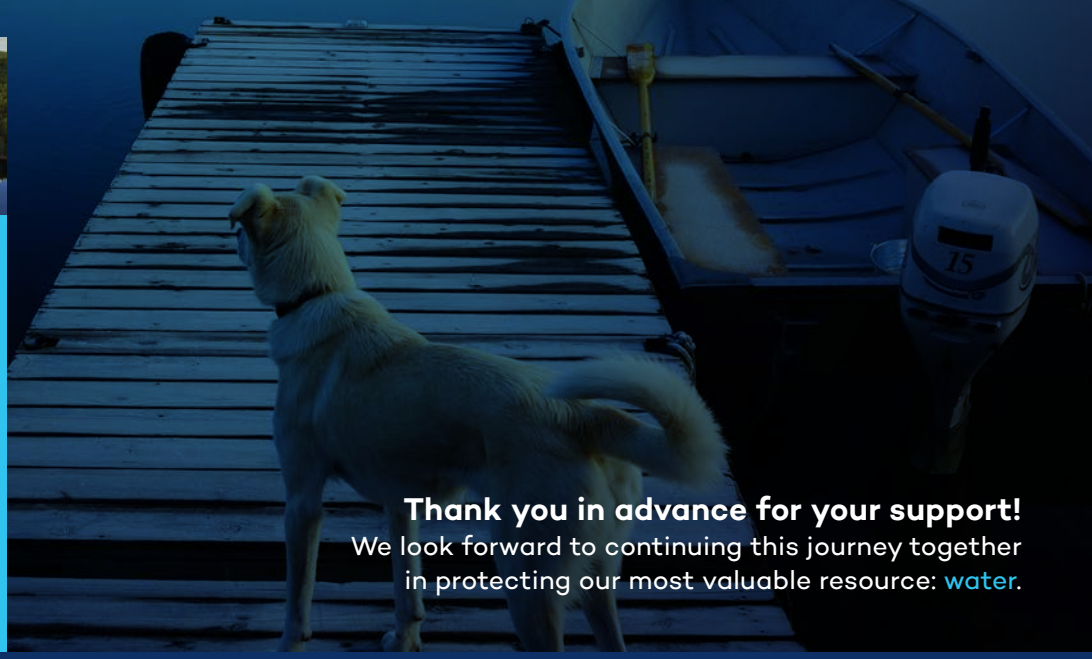

Thank you in advance for your support!
We look forward to continuing this journey together in protecting our most valuable resource: water.

IISD Experimental Lakes Area

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