WATERLOO CLIMATE INSTITUTE

Accelerating the transition to a just, resilient, low-carbon future.

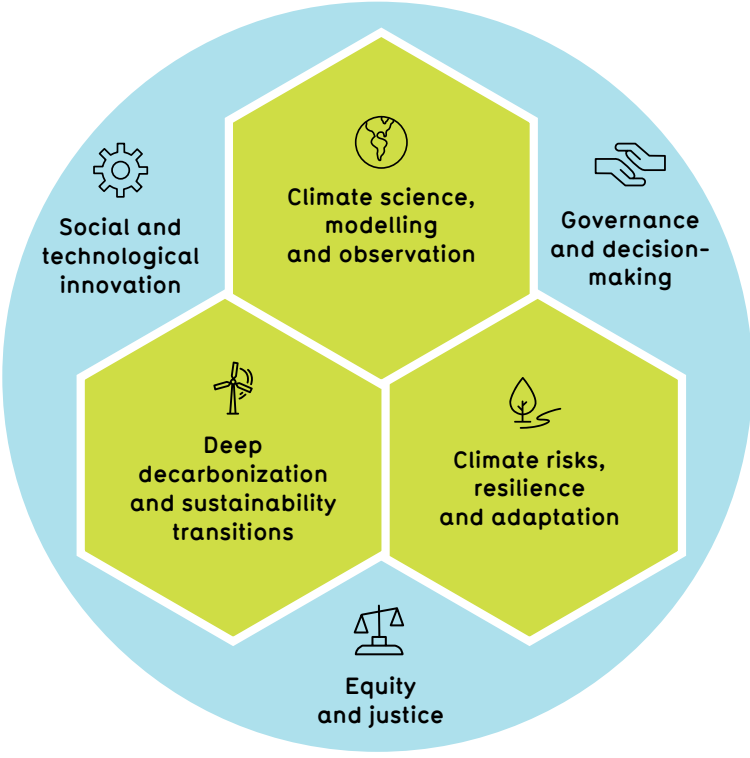
uwaterloo.ca/climate-institute

UNIVERSITY OF WATERLOO | WATERLOO Climate Institute

ADVANCING RESEARCH FOR GLOBAL IMPACT

The Waterloo Climate Institute is the focal point for climate change research, training and knowledge mobilization at the University of Waterloo.

Through our **six interconnected research themes**, we tackle interdisciplinary research to make real progress toward solutions.



ENGAGING GLOBALLY TO LOCALLY

Our experts engage extensively with partners to advance climate change policy, practice, technologies and strategic planning.

INTERNATIONAL ENGAGEMENT

Our members participate in international advisory roles, collaborations and research opportunities, including with the Intergovernmental Panel on Climate Change (IPCC), UN Framework Convention on Climate Change (UNFCCC), the World Health Organization (WHO) and the World Bank.

The Climate Institute is home to the highest number of Canadian IPCC authors (AR6)

NATIONAL LEADERSHIP

Our experts contribute advice and science to assessments and consultations, including Canada's National Adaptation Strategy, reports, like "Health of Canadians in a Changing Climate, 2022" and organizations like the Canadian Climate Institute, that help shape Canada's climate planning and solutions.

LOCAL ACTION

Many of our researchers support climate change mitigation and adaptation planning in Canadian municipalities through community assessments, local advisory roles and research collaborations.

100'S OF STUDENTS
engaged in climate change research and education

130+ members from all six faculties

LARGEST UNIVERSITY-BASED CLIMATE RESEARCH INSTITUTE IN CANADA

EXCELLENCE IN CLIMATE CHANGE RESEARCH

Tackling the climate crisis from every angle, our members are using multidisciplinary skills, knowledge, and research to understand and respond to the changing climate.

CLIMATE OBSERVATION

Collecting data through remote sensing to track greenhouse gas (GHG) emissions and changes in surface temperatures, polar regions and ice and snow conditions.

CLIMATE MODELLING

Characterizing drivers of climate change, using artificial intelligence (AI) and machine learning to inform climate projections and oceans and atmosphere dynamics.

EARTH SYSTEMS MONITORING

Studying climate conditions and variability by tracking biodiversity, ecosystem health and land use change.

ENERGY TRANSITIONS

Exploring pathways to sustainable energy solutions through renewables and electrification, energy efficiency, policy and finance.

CARBON REMOVAL AND GEOENGINEERING

Studying technological and nature-based climate interventions and their environmental, social and political impacts and risks.

NATURE-BASED SOLUTIONS

Understanding the role of natural environments, like natural carbon sinks and green infrastructure, that support a low-carbon future.

RESILIENT SYSTEMS

Designing ways to build resilient, inclusive communities and economies that are protected from extreme weather and ecosystem changes.

HEALTHY COMMUNITIES

Researching the connections and impacts of climate change on health systems, infectious diseases, air and water quality and mental health.

RISK ASSESSMENT

Preparing for climate impacts through sector- and impact-based risk modelling, community vulnerability assessments and disaster and recovery planning.

SHAPING FUTURE CLIMATE LEADERS

51 STUDENT DELEGATES
at COP19 through to COP27

The Waterloo Climate Institute facilitates experiential training for the climate leaders of tomorrow.

EXPERIENTIAL EDUCATION

We offer students unique learning, professional development training, and entrepreneurship opportunities, such as climate change courses and degrees, annual pitch competitions, virtual exchanges and international conference experiences, including the United Nations global climate negotiations (COP).

PROFESSIONAL AND LIFE-LONG LEARNING

UWaterloo and the Climate Institute provide life-long learning opportunities for management, business, finance, administration, natural resource, science and other sectors.

The University of Waterloo is home to Canada's largest Faculty of Environment and the first Masters of Climate Change (MCC) in North America with more than 170 alumni.

illuminate

Scan to learn more about our climate change simulation game

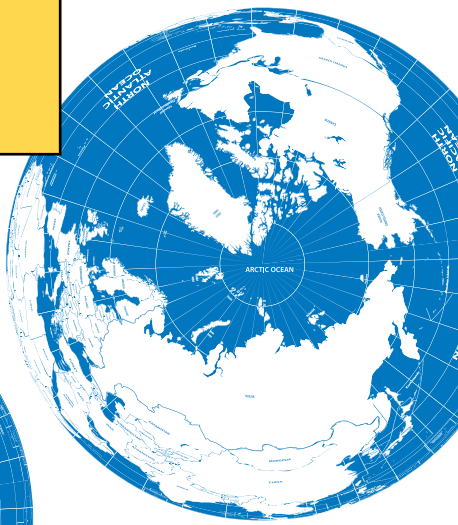
CLIMATE DATA

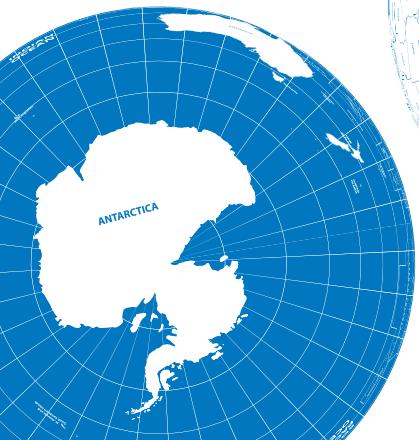
The Climate Institute is host to local, national and international data collections that support climate and sustainability research and decision making. Bringing together decades of experience in mobilizing climate data, our team of data scientists, developers and technicians provide expert data management and visualization solutions for our researchers and partners.

POLAR DATA CATALOGUE (PDC)

Through the PDC, the Climate Institute provides access to a repository of diverse metadata and datasets generated by Arctic and Antarctic researchers.

POLAR DATA CATALOGUE





Advancing innovative transdisciplinary research and education that empowers business, government and civil society to respond effectively to the climate crisis.

Contact us to explore partnership opportunities, to connect with researchers and students and to subscribe to our news and events.

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UNIVERSITY OF WATERLOO

Waterloo is committed to acting on the climate emergency and is working toward carbon neutrality and zero waste in our own practices. The paper this publication is printed on contains post-consumer fiber and is Forest Stewardship Council® (FSC®) certified.

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