

WATERLOO CLIMATE INSTITUTE

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

uwaterloo.ca/climate-institute



UNIVERSITY OF
WATERLOO



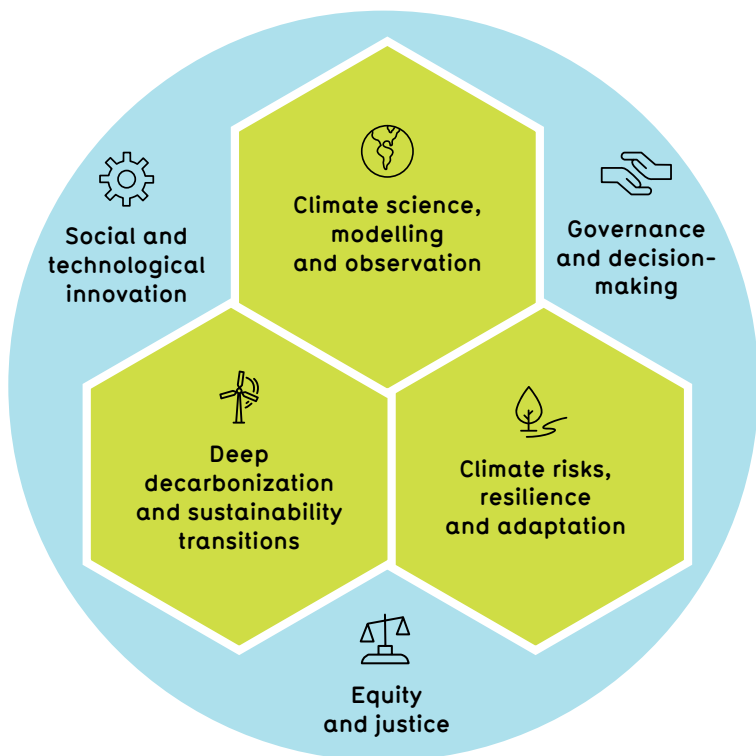
WATERLOO
Climate Institute



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.

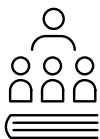
HEALTHY COMMUNITIES



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

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

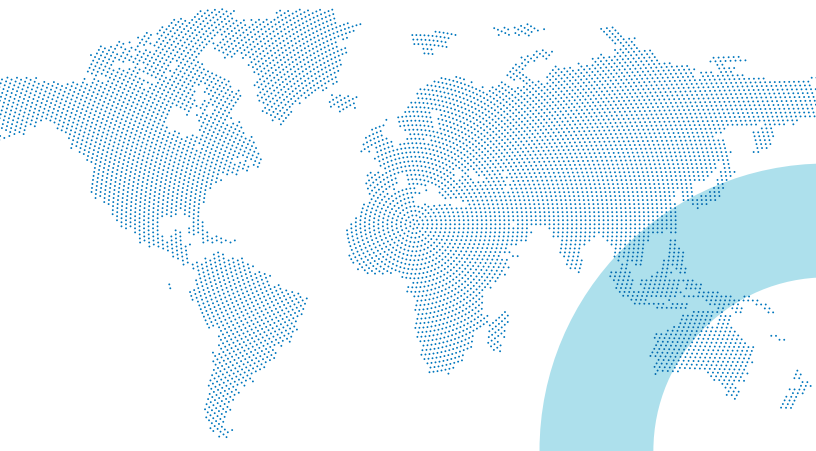
EXPERIENTIAL EDUCATION

We offer unique learning, professional development training, and entrepreneurship opportunities, such as climate change courses and degrees and annual pitch competitions, for undergraduate and graduate students.

51 STUDENT DELEGATES

at COP19 through to COP27

Our students broaden their perspectives and knowledge and build networks with researchers at universities around the world through virtual exchanges and attending the United Nations global climate negotiations (COP).



PROFESSIONAL AND LIFE-LONG LEARNING

Canada and countries around the world face growing skills gaps in sectors critical to achieving net-zero targets and climate change adaptation strategies.

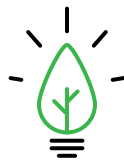
UWaterloo and the Climate Institute are building on strengths in continuing education and deep climate change expertise to provide new, flexible and accessible life-long learning opportunities for management, business, finance, administration, natural resource, science and other sectors.



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.

TEACHING RESOURCE

Check out our Climate Change simulation game, **Illuminate**, used in classrooms across Canada to highlight the many policy and technology solutions needed to tackle this global crisis.



illuminate

Scan to learn more
about Illuminate



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.

uwaterloo.ca/climate-institute

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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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