



THE UNIVERSITY OF BRITISH COLUMBIA

Climate Solutions Research Collective

CLIMATE SOLUTIONS
RESEARCH COLLECTIVE
2023-24 SUMMARY REPORT



CLIMATE SOLUTIONS RESEARCH COLLECTIVE INTRODUCTION

We acknowledge that UBC’s campuses are situated within the traditional territories of the Musqueam, Squamish and Tsleil-Waututh, and in the traditional, ancestral, unceded territory of the Syilx Okanagan Nation and their peoples.

Climate change is here. The year 2023 was the warmest year since weather stations began recording data; it may even have been the warmest year since the end of the last ice age. Climate science, including research from the UBC community, has concluded that rapid and deep action is necessary to ensure that the impacts of climate change are manageable, and to help communities around the world adapt.

In 2019, spurred by student advocacy, UBC declared a climate emergency. This declaration recognized UBC’s fundamental responsibility to foster a culture of engagement and advocacy on climate action. Among the nine strategic priorities identified by the Climate Emergency Task Force were: “expand, strengthen and coordinate climate research at UBC” and “establish a body to expand, strengthen and coordinate comprehensive, cross-campus and interdisciplinary climate research.”

To explore actions towards the identified priorities, a climate change research working group was formed, made up of faculty from across the two campuses, and a two-day online Climate Change Research Symposium was hosted by the Office of the Vice-President, Research and Innovation in October 2021.

A first step towards better connecting UBC climate researchers across Faculties and campuses, the UBC Climate Research Symposium illustrated that the university has a myriad of students, faculty members and programs working, often disparately, on climate change and its impacts and possible solutions. Many are also exploring the relationship between climate change and other sustainability and social justice challenges. The symposium also revealed that much of the community is hoping to engage in solutions-oriented research that can help British Columbia, Canada and the world prepare for and mitigate the worst effects of climate change.

Based on lessons from the symposium, the research working group began exploring how additional support might help facilitate and support new research connections and collaborations across students and faculty particularly towards solutions, ultimately leading to the creation of the Climate Solutions Research Collective (CSRC).

Why a collective? Climate change is the largest collective action problem in the history of the planet. No individual, no

community, no nation, and no department or faculty can solve it on their own. We need people across all fields and all lines of research to contribute.

Coordination is key. In a large, leading research institution like UBC, there are many different people and groups working on different aspects of climate change. The goal of the CSRC is to create a network, a way for people to connect and engage, and a way to spur new solutions-directed research that will help us respond to the climate emergency. Simply put, a core aim is to facilitate a “whole being greater than the sum of its parts” approach within UBC.

Supported initially for two years, through funds from nine Faculties at UBC-Vancouver (Applied Science, Arts, Education, Forestry, Land and Food Systems, Law, Medicine, Sauder School of Business and Science), two Faculties at UBC-Okanagan (Arts and Social Sciences, and Management) and matching funds from the Office of the Vice-President, Research and Innovation, the CRSC aims to:

- foster engagement and improve connections between climate researchers, especially across disciplines and Faculties,
- encouraging new collaborative research on climate solutions, and
- support students and faculty in applying research and expertise towards climate solutions.

The CRSC welcomes everyone at UBC—students, faculty, staff and alumni alike—who share an aim and interest in collaborative research and climate solutions, to engage with us.

Managed by a steering committee with deep climate research experience (with members from eleven Faculties), through seminars, workshops, and a graduate student Solutions Scholars program, the CRSC aims to connect people across UBC and to spur new collaborative research on climate change mitigation, adaptation and education.

This report shares the scope of UBC climate research, summarizes the activities of the CSRC in its first year, and looks towards the future.

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CLIMATE RESEARCH AT UBC

The climate emergency is a challenge that transcends conventional disciplinary boundaries and requires university researchers to reach beyond campus to work together and with communities, government and businesses beyond UBC. In response, UBC climate research has evolved. Thirty years ago, it was largely a scientific endeavour and limited to a small group of faculty and students in the physical and natural sciences with a focus on defining the problem and predicting impacts. Today, there is a broad array of climate-driven and climate-relevant research stretching across the entire university and involving collaborations around the globe, including a visible focus towards UBC campus GHG emissions and climate action.

During its first year of operation, the CSRC assessed the depth and breadth of climate research at UBC. Across our two campuses is an array of new and established centres, institutes and programs which tackle different aspects of climate science, climate justice, clean energy and other dimensions of climate change.

Researchers in almost every Faculty—including more than 500 continuing faculty and 85 research groups—are actively conducting research and applying their expertise to focus on some aspect of climate change and climate solutions. And these numbers continue to grow.

Climate solutions, energy transitions and climate justice are the focus of many new UBC faculty members, including Assistant Professor Alex Moore (Botany; Forestry and Conservation Sciences) whose research group focuses on inclusive conservation, and Assistant Professor Holly Caggiano (School of Community and Regional Planning) who studies the social dimensions of the renewable energy transition. Increasingly, faculty members are forming research collaborations that address climate change adaptation and mitigation, such as the Faculty of Medicine's world-leading initiatives in evidence-based adaptation to wildfire smoke and extreme heat.

Members of the UBC research community are also engaged with climate policy processes at provincial, national and international scales. Faculty like William Cheung (Institute for the Oceans and Fisheries) and Kai Chan (Institute for Resources, Environment and Sustainability) were among the government-appointed lead authors on recent assessments led by the Intergovernmental Panel on Climate Change, and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services Reports, which are the United Nations bodies charged with assessing the state of knowledge on climate changes its impacts, and the solutions.



UBC HOSTS MANY CENTERS, PROGRAMS AND INITIATIVES

that touch on different aspects of climate research, covering justice, clean energy, law, wildlife, technology, biodiversity, agriculture, forestry and more. The following are examples of the innovative initiatives that support research and programming around climate solutions at both Vancouver and Okanagan campuses.

- Biodiversity Research Centre
- Canada Climate Law Initiative
- Centre for Climate and Business Solutions
- Centre for Climate Justice
- Centre for Culture and Technology
- Centre for Law and the Environment
- Centre for Interactive Research on Sustainability
- Centre for International Forestry Research
- Centre for Migration Studies
- Centre for Sustainable Food Systems
- Centre for Wildfire Coexistence
- Clean Energy Research Centre
- Green Construction Research Training Centre
- Okanagan Institute for Biodiversity, Resilience, And Ecosystems Services
- Sustainability Hub (UBCV) and Sustainability Office (UBCO)

UBC PROVIDES SUPPORT FOR EMERGING RESEARCH NETWORKS AND CROSS-DISCIPLINARY COLLABORATION

at both campuses, catalyzing research activities beyond traditional disciplinary, departmental or faculty boundaries. Many of the research clusters funded over the past two years are focused on addressing aspects of climate change and climate solutions, including key societal issues such as energy storage, disaster resilience, diversifying agroecosystems and questions of future minerals.

- Battery Innovation Center
- Climate Change Health Effects, Adaptation, and Resilience (HEAL)
- Climate Justice Partnerships
- Cluster of Research Excellence in Living with Wildfire in the BC Southern Interior
- Cluster of Research Excellence in Solar Energy for Net Zero
- Cool Tools Warm World Research Cluster
- Decision Insights for Business & Society (DIBS)
- Disaster Resilience Research Cluster
- Diversified Agroecosystem Cluster
- Future Minerals Initiative
- Future Packaging Research Cluster
- Governance and Innovation for a Sustainable Maritime Supply Chain
- Wine Production and Climate Change

Faculty like Kathryn Harrison (British Columbia Climate Solutions Council; Political Science), Kevin Hanna (Technical Advisory Committee on Science and Knowledge of the Impact Assessment Agency of Canada; Earth, Environmental and Geographic Sciences), Simon Donner (Canada's Net-Zero Advisory Body; Geography / Institute for Resources, Environment and Sustainability) and David Boyd (outgoing United Nations Special Rapporteur on human rights and the environment; School of Public Policy and Global Affairs / Institute for Resources, Environment and Sustainability) are also directly advising governments on climate and environmental policy.

Converting research into local climate action has long been a strength of UBC. In 2002, the university initiated the Campus as a Living Lab program, which uses the campus itself to support applied research projects that provide an operational benefit, advance research, and create learning and knowledge exchange opportunities within and beyond the university. As well, UBC is now a member of the University Climate Change Coalition (UC3), a group of 23 research universities throughout North America committed to accelerating climate action.

The focus on local research and action has accelerated further in recent years, prompted by student and faculty interest in community-engaged research, the needs of British Columbia communities affected by extreme weather and the energy transition, and the goals and opportunities created by the climate emergency declaration. The restrictions during the COVID-19 pandemic also increased the local focus, as international research opportunities and exchanges were limited.

There is now an opportunity to expand and promote the contribution of UBC research to climate solutions at national and international scales. The CSRC's assessment of the state of climate research reveals that UBC students and faculty are already engaged in climate-driven and climate-relevant research in dozens of countries around the world, stretching across all seven continents. Even more expressed interest in developing the connections and the relationships necessary to engage in research that will contribute to mitigation, adaptation and justice challenges beyond our local communities. In the next section, we provide a sample of the global diversity of UBC climate-driven and climate-related researchers and groups.

REACH OF CLIMATE RESEARCH AT UBC

With over 500 UBC researchers engaged in work that has relevance to climate change, it is not possible to showcase all in this report. The examples below are a selection that showcase the geographic and disciplinary reach of UBC climate-driven and climate-related researchers and groups.

TEAM SHRUB — CANADIAN NORTH AND CIRCUMPOLAR ARCTIC

Team Shrub, led by Dr. Isla Meyers-Smith (Professor; Forestry), focuses on climate change's effects on tundra systems. They conduct much of their field research in the Yukon and work with datasets from around the circumpolar Arctic. Team Shrub examines how warming is creating 'greening' in the Arctic, working with Indigenous communities to understand the impacts of climate change on landscapes and the habitats for wildlife.

JEMIMA NOMUNUME BAADA — MALAWI, GHANA, KENYA AND ETHIOPIA

Dr. Baada (Assistant Professor; Geography) studies how climate change, migration and development processes shape the lives of rural communities, particularly women. She seeks to ensure that policy, theory and practice create opportunities for marginalized groups affected by climate change.

ADENIYI P. ASIYANBI — GHANA, NIGERIA AND CANADA

Dr. Asiyambi (Assistant Professor; Community, Culture and Global Studies) uses critical geography and political ecology to analyze how forests are seen within the climate change discourse as both a natural climate solution (e.g. through REDD+ and carbon forestry), and as a source of 'climate-related risks' (e.g. through wildfires).

PASANG YANGJEE SHERPA — HIMALAYAS

Focusing on the Himalayas, Dr. Sherpa (Assistant Professor; Critical Indigenous Studies and Asian Studies) studies the human dimensions of climate change, advocating for the Indigenous Sherpa community, and all Indigenous peoples, to be recognized as equal decision makers in climate change discourse. She is working towards creating sustainable futures for all with climate justice as an integral part of climate adaptation.

JOCELYN STACEY — CANADA

Dr. Stacey (Associate Professor; Faculty of Law) researches environmental law, disaster law, climate law and public law as a means of protecting those most vulnerable to climate change. She documents how environmental crises are created, regulated and prevented by the law. She works closely with First Nations on legal issues related to Indigenous jurisdiction, emergency powers and environmental disasters.

CHANGING OCEAN RESEARCH UNIT

Led by Dr. William Cheung (Professor; Institute for the Oceans and Fisheries), the unit predicts how future oceans will react to climate change, and the resultant effect on marine ecosystems and fishers globally. Focusing both on biophysical and socio-economic aspects of oceanic change, they create sustainable solutions for adaptation and mitigation.

LAB FOR ENVIRONMENTAL ASSESSMENT AND POLICY (LEAP)

Led by Dr. Amanda Giang (Assistant Professor; Institute for Resources, Environment & Sustainability, and Mechanical Engineering), LEAP develops models and tools to assess environmental and social impacts of technology and policy. They examine how environmental action affects marginalized groups, to inform the design of policies on air pollution, climate change, and energy that advance environmental justice.

COASTAL ADAPTATION LAB

Directed by Dr. Kees Lokman (Associate Professor; School of Architecture + Landscape Architecture), the lab researches coastal adaptation to sea level rise. Utilizing community values and Indigenous partnerships, they create plans and policy solutions aimed at addressing coastal erosion, biodiversity loss, water and food shortages, and displacement. The lab uses the lens of climate and spatial justice and brings together insight across disciplines.

SOLARSPEC: SOLAR ENERGY CONVERSION AND SPECTROSCOPY GROUP

Led by Dr. Robert Godin (Assistant Professor; Chemistry), SolarSpec seeks to create renewable energy technologies through leveraging advanced time-resolved optical spectroscopy techniques to understand the key processes that take place in semiconductor materials. Taking inspiration from plant photosynthesis, they explore paths to high efficiency renewable energy production with low-cost photocatalytic materials.

TARUN KHANNA

Dr. Khanna (Assistant Professor; School of Public Policy and Global Affairs) researches the economics of the energy sector: the incentives, behaviors, and market structures needed to transition to low carbon energy systems. His wider research interests include evidence synthesis, policy evaluation, and the role of clean energy in development.

THE WORK OF THE COLLECTIVE

PARTNERSHIPS AND FUNDING

The CSRC is a true pan-university initiative. With equal financial support from nine Faculties at the Vancouver campus (Applied Science, Arts, Education, Forestry, Land and Food Systems, Law, Medicine, Sauder School of Business and Science), two Faculties at the Okanagan campus (Arts and Social Sciences, and Management), the VPRI has matched each contribution. Steering committee membership represents the diverse disciplines of climate research across both campuses.

Faculty partners:

- Faculty of Applied Science (UBCV)
- Faculty of Education (UBCV)
- Faculty of Arts (UBCV)
- Faculty of Forestry (UBCV)
- Faculty of Science (UBCV)
 - Faculty of Land and Food Systems (UBCV)
 - Allard School of Law (UBCV)
 - Faculty of Medicine (UBCV)
 - Sauder School of Business (UBCV)
 - Faculty of Management (UBCO)
 - Faculty of Arts and Social Sciences (UBCO)

12
STEERING
COMMITTEE
MEMBERS
cross-campus
initiative

11
FACULTIES
provided
financial support

60%
PROGRAM
BUDGET
student research
support

\$110K
MATCHING
FUNDS
from VPRI for
first year of
programming

EVENTS

Through the first eight months of the program, the CSRC hosted twenty-five events, using a range of formats and featuring different topics, to connect diverse members of the UBC research community. The number of participants illustrates the deep interest of the research community in connecting with one another. The CSRC showcases climate-oriented activities being hosted by other units through an online events calendar and newsletter.

See more about our events on page 12.

25
EVENTS
hosted and
coordinated by
the CSRC over 8
months

29
EVENT
HOSTS
expertise across
disciplines

700+
PARTICIPANTS
faculty, students,
staff and
community
members

FIND-A-RESEARCHER TOOL

An important aspect of the first year of the CSRC has been developing a picture of the breadth of research being undertaken across the university that is of relevance to climate change and climate solutions. The CSRC is developing a tool to “Find-A-Researcher” who is actively conducting research that is relevant to climate change or climate solutions. To better understand the needs of various potential users, the CSRC has sought advice and feedback from a number of units across campus including the Sustainability Hub, the Indigenous Research Support Initiative, the Centre for Climate Justice, as well as VPRI and media relations offices at both campuses.

Launching in fall 2024, this tool will showcase the diverse expertise across UBC, ranging from the natural sciences to visual arts to health. UBC researchers looking to connect with one another, various UBC units seeking out climate expertise, and potential external partners will be able to use the searchable database using climate specific key words and labels.

500+
RESEARCHERS
actively conduct
climate change-
relevant
research

85+
RESEARCH
GROUPS
formal and
informal climate
change-relevant
research

SOLUTIONS SCHOLARS

The Solutions Scholars program was designed to engage graduate students in scholarly research projects related to climate change solutions and to engage faculty from different disciplines as co-supervisors. The 2023/24 cohort was made up of eight graduate students from UBC Vancouver and two from UBC Okanagan, whose research project proposals related to either wildfires and/or extreme heat, urban transformations, or the links between both.

Through the program, the eight doctoral students and two masters students received support to spend part of the academic year working on a solutions-oriented research project while receiving mentorship in interdisciplinary research and knowledge exchange. The scholars participated and, in some cases, led online professional development programming that was open to all graduate students.

These interdisciplinary projects have highlighted the opportunity for cross-disciplinary research, bringing together research mentors from various backgrounds, including: Applied Science with the Institute for Resources, Environment and Sustainability; Economics with Health; Earth, Ocean and Atmospheric Sciences and Forestry with Indigenous research perspectives; Forestry with Community and Regional Planning and Population and Public Health; and Sociology with Atmospheric Science.

See more about our Solutions Scholars on page 10

10
SOLUTIONS
SCHOLARS +
PROJECTS

\$120K
GRADUATE
STUDENT
STIPENDS

SOLUTIONS SCHOLARS

MITIGATION OF POST-WILDFIRE DEBRIS FLOWS NEAR SMALL WATERSHED OUTLETS

Kaushal Gnyawali (UBCO, Applied Science) was supervised by Professor **Dwayne Tannant** (Applied Science) and worked with First Nations in south-central BC and BC Ministry of Forests to examine how a combination of berms and ditches could be designed to protect communities from hazardous debris flow after wildfires.



BUILT ENVIRONMENT FACTORS AND BARRIERS IN ADAPTATION TO EXTREME HEAT EXPERIENCED BY OLDER ADULTS IN METRO VANCOUVER

Katherine White (UBCV, SPPH) was supervised by Professor **Michael Brauer** (Medicine) and Assistant Professor **Liv Yoon** (Kinesiology) to explore the role of the built environment and housing characteristics, on both indoor heat exposure and social isolation, to better understand vulnerability to adverse heat-related health outcomes in older adults.



photo: unsplash

EVOLUTION OF MICROMOBILITIES AND IMPLICATIONS FOR CLIMATE CHANGE AND STREET DESIGN

Amir Hassanpour (UBCV, Applied Science), supervised by Associate Professor and Associate Head **Alexander Bigazzi** (Applied Science) and Assistant Professor **Julia Harten** (SCARP), investigated the rise in micromobility devices such as electric bikes and the implications for decreased CO₂ emissions.



photo: unsplash

UNDERSTANDING PROJECTED HEATWAVE IMPACTS ON DEMOGRAPHIC GROUPS IN DIFFERENT CLIMATE CHANGE STORYLINES

Cuiyi Fei (UBCV, EOAS), with guidance from Assistant Professor **Rachel White** (EOAS) and Assistant Professor **Ethan Raker** (Sociology), explored how future heatwave projections would affect groups based on age, gender, and race demographics.

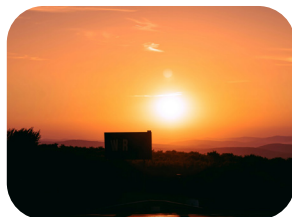


photo: unsplash

TOWARDS A COLLABORATIVE AND CO-PRODUCTIVE URBAN GREENING PRACTICE

Through a suite of qualitative and co-creative methods, **Daniel Sax** (UBCV, Forestry) explored the relationship between dominant notions of urban greening in Vancouver, Canada and Medellín, Colombia and the experiences of community stewards engaged in greening at the grassroots scale. He was supervised by Assistant Professor **Lorien Nesbitt** (Forestry) and Professor **Michael Brauer** (Medicine).



COLLABORATIVE CO-CREATION OF KNOWLEDGE TO SUPPORT INDIGENOUS CULTURAL BURNING FOR CLIMATE RESILIENCE IN THE OKANAGAN VALLEY, BC

Miah Godek (UBCV, Forestry) examined how researchers could work with Indigenous communities to support sustainable cultural burning of forests, with supervision from Assistant **Danielle Ignace** (Forestry) and Assistant Professor **Shandin Pete** (EOAS).



photo: unsplash

RE-WILDING THE CITY: APPLYING THE MIYAWAKI METHOD TO SMALL URBAN SPACES

Kylie Clark (UBCV, SCARP), supervised by Assistant Professor **Holly Caggiano** (SCARP) and Associate Professor **Melisa Mchale** (Forestry), studied the potential for Miyawaki method mini forests planted in small urban spaces to improve urban green equity, climate resilience in marginalized neighbourhoods, and residents' well-being.



WATER DISTRIBUTION NETWORK (WDN) MODELLING IN THE FACE OF CLIMATE CHANGE

Amit Sinha (UBCV, Applied Science) was supervised by Professor **Barbara Lence** (Applied Science) and Professor **Stephanie Chang** (IRES and SCARP) on research of how to improve the resilience modelling of water distribution networks as part of climate adaptation.



photo: unsplash

AFTER THE FIRE: RAPTORS RECOLONIZE BURNED FORESTS



Steffani Singh (UBCO, Irving K Barber Faculty of Science) was just beginning her first year of an MSc in Biology under the supervision of Professor **Karen Hodges**, with co-supervision by Adjunct Professor **Frank Doyle** when she became a Solutions Scholar. Her master's research aims to uncover if and how owls in the Okanagan Valley use burned forests of varying post-fire ages. The Solutions Scholars program enabled Steffani to expand the reach of her research, undertaking more field work and including a broader range of raptors. Through Solutions Scholars workshops, seminars, and meetings, Steffani was connected with faculty and other graduate students, which she says taught her how to incorporate interdisciplinary perspectives into her research. Her initial findings show that raptors recolonize burned areas as soon as two years post fire and that they are more likely to occupy post-burned forests the longer it has been since burning. She found that cutting down dead stands from burned out areas, known as salvage logging, leaves raptors with nowhere to perch. By examining how these post-fire features affect raptor occupancy, policy makers and researchers can learn how to preserve the features that raptors need to live in our wildfire-affected landscape, and by extension maintain the ecosystem services these birds provide.

"I am passionate about wildlife conservation, especially concerning biodiversity loss caused by climate change. I aim to produce research that uncovers practical solutions to maintain biodiversity, bridging the gap between conservation science, land management, and policy."

HEALTH BURDEN OF FOREST FIRES IN THE BRAZILIAN AMAZON

Tiago Bonomo, (UBCV, Vancouver School of Economics), under the supervision of Professor **Claudio Ferraz** and Assistant Professor **Patrick Baylis**, studied the effects of fires in the Brazilian Amazon on hospital admissions and mortality rates. He explains how unlike fires in Canada, fires in the Amazon are primarily human-caused and economically driven, and their economic benefits can sometimes complicate their overall outcomes especially for low-income communities. He used variation in wind direction to find that upwind fires significantly increase mortality and hospitalizations due to air pollution. He also found that access to public healthcare services helps reduce the adverse effects of fires on health, "suggesting an essential role for healthcare delivery in mitigating the impacts of climate change." Tiago hopes this research will provide valuable insight on the harms that low-income communities in developing countries face due to forest fires and show how public health services can be of great importance to impoverished communities. Tiago brought an economics perspective to the Solutions Scholars Program, which helped complement other's learning, and the program helped him factor in other discipline's points of view when formulating climate solutions.

"Being a Solutions Scholar was very important for my academic formation in many ways, especially connecting with Scholars and people from different areas, learning about what they are doing and making me present my research to people outside Economics. It constantly made me think outside the standard "economics box" and consider the implications of my research for the international community that is worried about climate change."



photo: unsplash

*UBCV = UBC Vancouver and UBCO = UBC Okanagan

EVENT FORMATS

Over the 2023-24 academic year the CSRC hosted twenty-five events, many of which were components of our three ongoing event series: graduate student webinars, climate cafes and research dialogues.

GRADUATE STUDENT WEBINAR SERIES

This series, designed to cover a range of professional development topics related to the implementation of climate solutions research, was offered online to enable participation by graduate students across both campuses. The series covered topics including Research Communication and Knowledge Exchange, Unpacking Policy, Developing Research Partnerships, Climate Solutions and Behaviour Change, and Transdisciplinary Research. Through these events, students were connected to UBC resources such as the UBC Knowledge Exchange Unit, the Innovation Partnerships team, *alumni UBC*, and researchers from different academic units and Faculties, from Arts to Forestry and from Applied Science to Education.

CLIMATE CAFES

These in-person events were hosted to facilitate discussion and learning around a climate topic as well as to encourage the development of research connections. Hosts provided a primer around a specific topic, with discussion encouraged through open question and answer periods. Topics were driven by participant interests identified through the CSRC's launch event and included Connecting Research and Policy, Innovations in Energy Transition, Human-Climate Interactions, and Student Perspectives on Climate Justice.

RESEARCH DIALOGUES

This series was designed to bring together two panelists to discuss a particular climate topic from their unique expertise. These experts provided primers from their own disciplinary perspective to facilitate the dissemination of research expertise, showing possible connections and linkages across the climate topic central to the event. These events were hosted in multiple formats (online, hybrid and in-person) on a range of topics including research updates from Solutions Scholars, Collaborative Research Approaches, Innovations in the Energy Transition, a Conversation About the Warmest Year in Recorded History, and Sensemaking Climate.



Simon Donner (Director, CSRC) leads a discussion during the Climate Conversations series.

EVENT HIGHLIGHTS

The event highlights presented below exemplify the CSRC's objective of bringing people together to share knowledge on climate solutions, develop connections and networks, and work towards collaborative research.



Miah Godek (Solutions Scholars) explains her research at a training session for the inaugural cohort.

WELCOME AND LAUNCH EVENT

Approximately 100 attendees came together for the Climate Solutions Research Collective Welcome & Launch, held at UBC Vancouver and UBC Okanagan simultaneously. This event introduced the CSRC to UBC's research community and gave attendees an opportunity to contribute ideas to the CSRC's themes, projects and workshops. This event initiated the CSRC's goal of bringing diverse groups together across disciplines.

HUMAN CLIMATE INTERACTIONS: INSIGHTS FROM HISTORY

Twenty-seven participants joined Solutions Scholars Host Cuiyi Fei at UBC Vancouver for a discussion around how humans have interacted with climate across different time scales. Bringing together researcher Associate Professor Tracey Heatherington (Anthropology), Assistant Professor Kendra Chritz and Assistant Professor Rachel White (Earth, Ocean and Atmospheric Science) and Professor Andrew Jorgenson (Sociology), the discussion led participants across multiple timescales and through different lenses.

UNPACKING COP28: A PANEL DISCUSSION

Before COP28, alumni Jeffrey Jianfeng Qi, Professor Philippe Le Billon (Geography), Professor Michael Brauer (Population and Public Health), Professor Milind Kandlikar (Public Policy and Global Affairs), and Professor Kathryn Harrison (Political Science) came together to discuss what to expect from the conference. Approximately 130 individuals attended both in-person and online, and questions helped illuminate the complexity of COP28 and expand attendees' awareness of important climate issues and solutions. The panelists brought their disciplinary knowledge and combined experiences having attended many previous COP events.



Addressing the climate emergency requires coordination and collaboration across and beyond UBC. During the inaugural year of the CSRC, the most frequently asked questions at our events were variations on either “How do I connect more with others?” and “What can I do to make a difference?”. Many faculty and units across UBC are engaging in climate research by adding a climate change dimension to their existing research portfolio. The next step for UBC is to catalyze and promote climate-driven research, aimed directly at addressing the intersecting challenges of climate change mitigation, adaptation, justice and education.

The CSRC will continue to engage and connect researchers to help launch UBC into this new era of solutions-oriented climate research. Building on the successes and learnings from the first year of operations, the CSRC’s Steering Committee and staff are developing an exciting set of programming for the 2024/25 academic year and beyond.

This began in April of 2024, when we held a pitch event in which teams of UBC researchers proposed new interdisciplinary projects for the next cohort of Solution Scholars. With this adapted format, the intention is to promote greater interactions across scholars and supervisors through joint projects. The 2024/25 cohort of scholars will work in teams on the following four selected projects, under the guidance of faculty mentors:

- Enhancing Heatwave Forecasting and Public Uptake (collaboration with the UBC Departments of Earth, Ocean and Atmospheric Sciences; Occupational Science & Occupational Therapy; and Environment and Climate Change Canada)
- Advancing Climate Mitigation and Adaptation through Agroecological Transitions (collaboration between UBC’s Institute for Resources, Environment and Sustainability; Faculty of Land and Food Systems; and the Departments of Math and Computer Science)
- Carbon Offsets: Climate Action or Sustainability Illusion? (collaboration with Faculty of Forestry, Sauder School of

Business, and Department of Political Science)

- Using Large Language Models to ‘chat’ with the IPCC reports (collaboration between School of Public Policy and Global Affairs, Institute for Resources, Environment and Sustainability, and Faculty of Applied Science)

To further build community, catalyze research, and share UBC’s expertise with the world, we are also developing several interactive events for the 2024/25 academic year, including:

- **Annual kickoff event:** Following the success of last year’s launch, this September event will be an opportunity for the UBC research community to share perspectives on key directions for climate solutions research and develop new collaborations.
- **Election and Policy Series:** The fall of 2024 features a provincial election in British Columbia, the pivotal US federal election, as well as COP29 in Azerbaijan. We will host a series of public-facing panel discussions on the implications of these pivotal events for climate policy action.
- **Climate Solutions Research Symposium:** Drawing on the experience of the symposium that spurred the creation of the CSRC, we are planning a solutions-focused research symposium for spring 2025. This event will include presentations and facilitated discussions on new and existing priority research areas or questions, including those identified during the annual kickoff event.
- **Graduate Student Programming:** In concert with the new cohort of Solutions Scholars, we will provide professional development programming aimed at preparing the next generation of climate researchers to develop solutions to interdisciplinary problems. All UBC graduate students are welcome to participate.

This is only the beginning. Join us!

STEERING COMMITTEE

- Simon Donner, Professor, IRES (Science) and Geography (Arts) - Director
- Sally Aitken, Professor, Forest and Conservation Sciences (Forestry)
- Werner Antweiler, Associate Professor, Strategy and Business Economics Division (Sauder School of Business)
- Michael Brauer, Professor, School of Population and Public Health (Medicine)
- Naoko Ellis, Professor, Chemical and Biological Engineering (Applied Science)
- Robert Godin, Assistant Professor, Chemistry (Irving K. Barber Faculty of Science)
- Sumeet Gulati, Professor, Food and Resource Economics (Faculty of Land and Food Systems)
- Kathryn Harrison, Professor, Political Science (Arts)
- John Janmaat, Professor, Economics, Philosophy and Political Science (Irving K. Barber Faculty of Arts and Social Sciences)
- Milind Kandlikar, Professor, IRES (Science) and School of Public Policy and Global Affairs.
- Carol Liao, Associate Professor, Peter A. Allard School of Law
- Robert VanWynsberghe, Professor, Educational Studies (Education)

PROGRAM SUPPORT

- Faculty of Applied Science (UBCV)
- Faculty of Education (UBCV)
- Faculty of Arts (UBCV)
- Faculty of Forestry (UBCV)
- Faculty of Science (UBCV)
- Faculty of Land and Food Systems (UBCV)
- Allard School of Law (UBCV)
- Faculty of Medicine (UBCV)
- Sauder School of Business (UBCV)
- Faculty of Management (UBCO)
- Faculty of Arts and Social Sciences (UBCO)
- Office of the Vice-President, Research & Innovation

ADDITIONAL FUNDING

- Collaborative Research Mobility Awards
- UBC Work Learn Program

