

# Climate Change Research Month

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*York University | 2023*



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# ABOUT THE COVER



## **Along Highway 1, California. June 2019.**

Winding between cliffs and the Pacific ocean, California's famed Highway 1, is increasingly damaged by the effects of climate change. Wildfires, atmospheric rivers and rising sea levels create the conditions for more frequent and potent landslides.

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**Laurence Butet-Roch** is a PhD student in Environmental Studies at York University in Toronto. Her research, supported by a Joseph Armand-Bombardier SSHRC scholarship, pays attention to the images used to report on polluted spaces. It aims to unsettle mainstream representation of industrial contamination in Canada through participatory visual discourse analysis and collaborative photographic approaches. This focus draws on her professional experience as a writer and photographer focusing on environmental justice issues. Thanks to the National Geographic COVID-19 Emergency Fund for Journalists, she recently collaborated with award-winning photographers Amber Bracken and Sara Hylton on a project exploring the ways that the fossil fuel industry in Canada furthered their agenda despite, and, at times thanks to the pandemic.

# CALENDAR OF EVENTS

## MARCH 1

1:00PM - 2:00PM

**"Modelling the Health  
Impacts of Global  
Warming in Malawai"**

*with James Orbinski*

**Organized by the  
Dahdaleh Institute for  
Global Health Research**

## MARCH 2

6:00PM - 7:00PM

**"Labour and the Climate  
Crisis: Developing a  
Worker-and-Equity  
Centred Clean Energy  
Economy"**

*with Lara Skinner, Marjorie  
Griffin Cohen & Nath  
Zamisa*

**Organized by the Global  
Labour Research Centre**

## MARCH 7

12:00PM - 1:00PM

**"A Climate for Change?  
A History of Political  
Response to Climate  
Change in Canada"**

*with Evangeline Kroon*

**Organized by the  
Robarts Centre for  
Canadian Studies**

## MARCH 8

12:00PM - 1:30PM

**"Book Launch: The End  
of This World: Climate  
Justice in So-Called  
Canada"**

*with authors Angele  
Alook & David Gray-  
Donald*

**Organized by the  
Global Labour  
Research Centre**

## MARCH 9

12:00PM

**"Smudging in Sharm El-  
Sheikh: Experiences  
from Indigenous  
Peoples at COP 27"**

*with Angele Alook &  
Graeme Reed*

**Organized by the  
Centre for Indigenous  
Knowledges and  
Languages**

## MARCH 10

3:30PM - 4:30PM

**"Terrestrial"**

*with Seylon Stills and a  
trio of Archer  
Pechawis, Grace  
Grothaus & Joel Ong*

**Organized by  
Sensorium: Centre for  
Digital Arts and  
Technology**



**MARCH 16**

12:00PM - 1:00PM

**"Fire and Floods in Our Own Backyard: Examining Climate Change Displacement and Internal Migration in Canada"**

*with Yvonne Su*

**Organized by the York Emergency Mitigation, Engagement, Response, and Governance Institute**

**MARCH 20**

9:00AM - 4:00PM

**"World Water Day Research Celebration"**

with presentations & exhibitions featuring dozens of speakers

**Sponsored by the Faculty of Science and the Office of the Vice President Research & Innovation**

**MARCH 20**

1:00PM - 4:00PM

**"Moving from Academia to the Water Industry; Improving the Resilience of Water Infrastructure to Climate Change"**

Organized by *Stephanie Gora* for the **International Water Association, Young Water Professional, Canadian Association of Water Quality & One WATER Institute**

**MARCH 20**

4:00PM - 5:30PM

**Screening: "Omiwatari" and Conversation**

*with Filmmaker Zeesy Powers*

**Organized by the One WATER Institute & the York Centre for Asian Research**

**MARCH 22**

10:00AM - 11:00AM

**UNDERGROWTH: Photography and the Colonial Gaze on the Natural World**

*with Sara Angelucci*

**Organized by Laurence Butet-Roch**

**MARCH 23**

1:00PM - 3:30PM

**Climate Risk/Change Day**

*with Jennifer Winter, Marcos Pelenur, Madanmohan Ghosh & Andrew Hobbs*

**Organized by the Risk and Insurance Studies Centre**

**MARCH 29**

1:00PM - 2:00PM

**A Planetary Health Advocacy Framework**

*with Carol Devine & Yasmin Al-Sahili*

**Organized by the Dahdaleh Institute for Global Health Research**

**MARCH 30**

4:00PM - 5:00PM

**The Science, Social Science and Art of Climate Change**

*with Laura McKinnon, Joanna Robinson, Shabnam Sukhdev & Byomkesh Talukder*

**Organized by the Centre for Feminist Research**

# Modelling the Health Impacts of Global Warming in Malawi

— James Orbinski

Professor, School of Global Health, York University  
Director, Dahdaleh Institute for Global Health Research

**Date: Wednesday, March 1, 2023**

**Time: 1–2 p.m. ET**

**Location: Online**

Register: [www.yorku.ca/dighr/events/](http://www.yorku.ca/dighr/events/)



**DAHDALEH  
INSTITUTE  
SEMINAR SERIES**  
— 2022-2023

## Modelling the Health Impacts of Global Warming in Malawi, with James Orbinski

The Wellcome Trust-funded project involves a transdisciplinary team that includes researchers, policymakers, practitioners, and community stakeholders, with capacity to use evidence to drive climate action. From the outset, the research team has engaged community members and policy decision-makers. They use Agent Based Modelling and Systems Dynamics Modelling, evidence, and simulations to empower community-led adaptation to the health impacts of climate change.

The impacts of climate change include changing patterns of infectious diseases such as cholera, schistosomiasis and malaria, and food security impacts, nutritional impacts such as malnutrition, growth stunting and kwashiorkor secondary to the decreasing quantity and quality of crop yields. For over three years, researchers have focused on engaging localized knowledge, experience and community valuations of health priorities, infrastructure and other needs, in determining the expressed needs and choices of people in the Chilwa Basin of Malawi.

In this seminar, Dr. Orbinski will explore the partnership between York University, University of California, and University of Malawi to expand dialogic and iterative engagement of the affected communities in the Chilwa Basin – with the objective to help further the understanding of policy makers and/or practitioners in the framing, delivery, and communication of our research on the health impacts of global warming.

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**Dr. James Orbinski** is a professor and the inaugural Director of York University's Dahdaleh Institute for Global Health Research. As a medical doctor, a humanitarian practitioner and advocate, a best-selling author, and a leading scholar in global health, Dr. Orbinski believes in actively engaging and shaping our world so that it is more just, fair and humane.

# CLIMATE CHANGE AND PLANETARY HEALTH \*

The United Nations' conference on climate change, the COP 27, held in Egypt in November 2022, was a massive failure. The Climate Finance Delivery Plan, established in 2009, for instance, promised 100 billion American dollars per year to support climate change mitigation and adaptation in the developing countries. This promise remains largely unfulfilled. This failure to come to a global agreement will have consequences for our planetary biosphere, and so for human health, argues the Director of the Dahdaleh Institute for Global Health Research, Professor James Orbinski.

There is already massive human suffering directly linked to ongoing failures to take up the climate change, which is the existential crisis of our times. Food security is a major crisis worldwide, Orbinski said, so that about 800 million people today are not able to meet their basic food needs. He noted that famine-like conditions exist in 43 countries today, directly caused or accelerated and exacerbated by global warming. For other forms of life, climate change is causing the sixth great extinction and this time, unlike the extinction that killed off the dinosaurs, the cause is not a meteorite hitting the earth, but global warming and



ecological degradation, caused by human beings.

Given the crisis, action is required. Locally, this demands responses that are community based and that take up the complexities of the ecosystem upon which all life, including human life, depends.

In the Chilwa Basin in Malawi, Orbinski's team is taking an approach that seeks to engage the community and policy makers together. The aim is to produce research that can inform practices that will help local actors mitigate and adapt to the human health impacts climate change. This demands a careful understanding of the realities of a particular community, for instance, including gender dynamics and differences in health status across different age groups. Housing, fishing, animal husbandry, access to the water and the quality of water, and an appreciation of what is held sacred, Orbinski emphasized, all matter to creating meaningful models of complex local ecosystems.

Combining community knowledge with other sources of data from across different ministries, Non-Governmental Organizations (NGOs), United Nations

Agencies, and satellite-based data, and across different disciplines, is another challenge. This is necessary for better understandings of local ecosystems, Orbinski argues, but there are political, logistical and technical solutions that have to be found to make that knowledge compatible, analyzable and then usable.

In the Chilwa Basin, one concern is that fuel needs are met through charcoal burning, which contributes to global warming and local deforestation. The deforestation then leads to soil erosion, which in turn, with its high nitrogen content, causes eutrophication of lake water, leading to the proliferation of disease-causing pathogens, making people sick. If alternative, nature-based, sustainable solutions to meeting fuel needs can be found, Orbinski observed, then local community health can be improved and climate change can to some extent, be mitigated. Creating effective and equitable solutions to these kinds of practical problems are at the heart of the institute's pragmatic approach to climate change and planetary health.

Another example of modelling climate change


events in the Chilwa Basin is the successful development of models around flooding, Orbinski noted. For that project, the team used satellite data, and data from governments, community organizations, NGOs and others, to map and quantify relationships across a wide range of variables. Graphic representations of those relationships were then mapped onto the relationships of other sub-systems, enabling a new understanding of complex correlations across sub-systems. The aim is then to develop applications that can be used by local people and policy makers in health adaptations, early warning and disaster management.

In all cases, Orbinski emphasized, it is critical to recognize that how a given variable is valued depends on who is looking at it. A community actor may understand a piece of land as especially significant, while the same land may be seen as relatively unimportant by an engineer from outside the community seeking to modify a flood plain. When modelling outcomes or simulations, attentiveness to the community partner and to the range of values is important, if solutions are to be effective, equitable and

politically acceptable.

There is a global governance process that includes the COP conferences, that aims to mitigate climate change. Those processes are failing, but must succeed if we are to take up climate change as the existential crisis of our times. But there are immediate, local needs that must be addressed, Orbinski remarked, since climate change is already here. These demand community-based local solutions that recognize the complexity of local, life sustaining ecosystems.

Ultimately, the solutions to climate change are not technical. For those of us who grew up with the Enlightenment narrative about human beings' dominion over nature, Orbinski emphasized, we need a new story: "We need a new way of relating to each other and to our biosphere on which we depend, which is not extractive, which it is not about power over nature and power over others. Finding and creating that story is not declarative. Instead, it is a dialogical process that emerges across cultures, across communities, and across time, and it begins with looking to our responsibilities now and to future generations." ●



***"The global health impacts of climate change and ecological degradation demand adaptation. Interventions should be highly effective, practical, and equitable."***

***—James Orbinski, Director of the  
Dahdaleh Institute for Global  
Health Research***



York University's Global Labour Research Centre (GLRC) presents:

2023 John Eleen Annual Lecture in Global Labour

***LABOUR AND THE CLIMATE CRISIS:  
DEVELOPING A WORKER- AND EQUITY-  
CENTERED CLEAN ENERGY ECONOMY***

**Thursday, March 2, 2023**

**6:00 - 7:30 pm ET**

**Virtual**

KEYNOTE SPEAKER

**Lara Skinner**  
*Cornell University*



RESPONDENT

**Marjorie Griffin Cohen**  
*Simon Fraser University*



## **Labour and the Climate Crisis: Developing a Worker- and Equity-Centered Clean Energy Economy**

**Keynote Speaker Dr. Lara Skinner** is the Executive Director of Cornell ILR's Climate Jobs Institute. Dr. Skinner is a nationally recognized expert in the labour and employment impacts of climate change, clean energy policy, and the transition to a low-carbon economy. Under Lara's direction, Cornell has designed jobs-led climate programs for eight U.S. states and helped form coalitions composed of labour unions, elected leaders, environmental organizations and industry experts in states like Texas, Illinois, New York and Rhode Island.

**Respondent Dr. Marjorie Griffin Cohen** is an economist who is a professor emeritus of Political Science and Gender, Sexuality and Women's Studies at Simon Fraser University. She has written extensively in the areas of political economy and public policy with special emphasis on issues concerning, labour, the Canadian economy, women, electricity deregulation, energy, climate change and labour, and international trade agreements.

**Moderator Nathi Zamisa** is completing an M.A. in Black Studies: Theories of Race and Racism in the Department of Social and Political Thought at York University. Nathi is currently the President of the York University Graduate Students Association, the Chair of the York Community Housing Association, a Board Member of the Global Labour Research Centre, and a Member of the York Senate's Academic Planning, Policy, and Research Committee.

# FROM AMBITION TO ACTION: LABOUR, EQUITY, AND CLIMATE JUSTICE

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**NATHI  
ZAMISA**

For the last decade, the Executive Director of the Cornell Industrial and Labour Relations School's Climate Jobs Institute, Dr. Lara Skinner, has been working to launch union-led climate jobs coalitions. Together with labour unions, elected leaders, environmental groups, and industry experts, she has worked in states like Texas, Illinois, New York, and Rhode Island to transform the way labour engages with equity and climate justice.

Her presentation at the Global Labour Research Centre's 2023 John Eleen Annual Lecture in Global Labour, "Labour and the Climate Crisis: Developing a Worker- and Equity-Centred Clean Energy Economy," taught us how union-led coalitions contribute to climate justice.

The United States' (U.S.) Inflation Reduction Act, 2022 calls for an injection of \$370 billion to accelerate the transition to a clean energy

economy. The U.S. Environmental Protection Agency calls this the “most significant climate legislation in U.S. history.” This is an opportunity to create scalable projects that create well-paying and unionized climate jobs, for racialized and frontline communities impacted by climate change and historical inequities. But the move from policy to practice, or in Dr. Skinner's words, the move “from ambition to action,” requires a massive update of American infrastructure and of the US economy.

“Let’s talk about why this is a challenge,” proposes Dr. Skinner. First, unionization rates in fossil fuels industries are twice as high as those in renewables energies. Second, green energy jobs are not paying well when compared to similar jobs in fossil fuels industries. Third, frontline communities hit hard by climate change and historically marginalized communities face significant barriers to accessing clean energy jobs.

In meeting the challenge, Dr. Skinner’s New York Climate Jobs Program developed climate, energy, and labour market analyses for cities and states. The aim was to identify challenges and

opportunities for a green energy jobs transition. Quickly, the Program moved from research to policy advocacy and to training, and education on how to maximize emissions reductions and create new union jobs. The program’s ‘labour-only’ grounded approach relied on “building trades and energy unions working in these coalitions.” This is because, Dr. Skinner explains, “unions already have tremendous experience and expertise in making this transition.”

The result? Think equity-based, well-paying green jobs led by unions, Dr. Skinner suggests, working to develop science-based solutions to climate change and designed to help labour and climate movements navigate the transition to a clean energy economy.

The Program’s success laid a foundation for the Climate Jobs National Research Centre. The Centre focusses on forward-looking proposals to identify what needs to be built to realize a green energy transition, all while working to ensure the active participation of unions, equity-deserving groups, and frontline community members in developing a plan. From there, Dr. Skinner



says that “unions formed their own coalition, Climate Jobs New York, and they ran a campaign promoting offshore wind” using the Climate Jobs Institute’s proposal. In response, New York committed to securing 50% of its power from offshore wind, and to setting wage requirements for wind and solar projects above one megawatt.

Today, the lessons learned in New York have spread to eight other U.S. states that are now homes of union-led climate jobs coalitions. Dr. Skinner plans to “expand the initial solar study to an annual study of the U.S. clean energy workforce, looking at all parts of the clean energy economy, and then conducting similar studies in other states and at the national level.”

For those of us in Canada, the question remains: why don’t we see this move “from ambition to action” in our country?

According to feminist economist Dr. Marjorie Griffin Cohen, the respondent for the event, it is a matter of economic priorities and political perspective. Despite the push amongst trade unions for clean energy jobs and a ‘just transition’ through groups like Blue-Green

Canada, Canada’s transition “is not happening that way: we’re increasing our oil exports, and we’re increasing our oil production.” While unions and workers advocate to change our understanding of the economy, growth, and productivity, governments are stuck greening a small proportion of jobs to make them “compatible with Canada’s path to net zero emissions,” while increasing fossil fuels production.

Like Dr. Cohen, we are left to ask “How can we expand the areas of the economy that are already relatively low contributors to climate change problems, but also shift the focus to meet people’s real care needs?”

The answer is to shift employment away from carbon-intensive jobs to employment in care-giving, Dr. Cohen suggests, contributing to the economy, improving human well-being and protecting nature.


From an organizing perspective, Dr. Skinner had her own answers.


For Skinner, greening the economy in a labour friendly, equitable way starts with expanding union-based training infrastructure and establishing mandated targets for diversifying

employment cohorts. And by connecting labour to clean energy by way of project labour agreements, Climate Jobs Coalitions can set up direct-entry, pre-apprenticeship programs. These can help to redirect money from low-quality piecework projects to high quality and high impact union-led clean energy projects.

But this kind of work needs a clear definition of the value and importance of union climate jobs, and these projects need to help frontline and historically marginalized communities achieve a higher quality of life to maximize their impact.

Dr. Skinner's climate jobs coalition success story is compelling.

Start with unions. Learn from workers. Help them to propose, organize, and develop clean energy projects in cities and regions to create high quality, unionized jobs for those most in need. That is how we collectively move "from ambition to action." 



***"In a time of intensifying ecological devastation and social fracture, how do we forge space between despair and denial – space for collective hope, resolve and action? We see the entanglement of time in the climate crisis, as we are living through past decisions and exploits in the here and now that will extend far into the future. Immediate worries (for the economy and jobs, for example) will lose meaning over time. Our collective response must move beyond a binary framing of short-term vs long-term priorities, “blue” vs “green” interests, or economic vs environmental concerns. The past and future are now, demanding our recognition and effort."***

***— Luann Gingrich, Director of the  
Global Labour Research Centre***



# THE CAUSE OF LABOUR IS THE HOPE OF A JUST AND DECARBONIZED WORLD / VINCENT COLLINS

Endless dire headlines about the threat of climate collapse highlight the high stakes of the moment we are in. At the same time, the mudslinging and polarization seen in mainstream politics is relentless and risks derailing progress to tackle climate change. Therefore, one could be forgiven for thinking that hope is waning or non-existent when it comes to our path out of this crisis. However, away from the silos and echo chambers of mainstream politics, something interesting is occurring on the ground that offers the potential for major climate action. And labour is leading the way.

To overcome the climate crisis, we need swift political action. So, what will force governments to take this action? When asked what people can do to fight the climate crisis, climate justice advocate Bill McKibben quipped, "The most important thing an individual can do is be a little less of an individual and join together


with others in movements large enough to make change." I want to expand on this idea to argue that in this moment of intersecting crises of climate, racism, and inequality, the best thing we can do is join a labour union, organize, and collectively build worker power to pressure governments to take action.

Why labour unions? Crucially, labour unions have leverage to force concessions from states through their unique ability to withhold their labour via strike action. The labour movement can bring capitalist production to a halt in order to demand concessions from the state. Collective bargaining is also a key tool which has been used to ensure environmental considerations and climate action is secured in the collective agreement, such as pushing the employer to take action on reducing emissions and implementing workplace environmental policies, or environmental regulations in the supply chain. These strategies have been employed successfully to build coalitions with environmental and other social movements, such as the example of union leader Tony Mazzocchi who is believed to have conceptualized the Just

Transition after seeing firsthand the damage that polluting industries were having on his community. His union's fight ultimately resulted in the Occupational Safety and Health Act in 1970.

One contemporary example of labour securing climate action by building power and using this power to pressure governments is Climate Jobs New York (CJNY). Unique in that it was propelled by a policy and research initiative at the Worker Institute at Cornell University, the organization brought together labour unions in New York to determine how climate action could deliver good unionized jobs. This laid the grounds for the labour coalition, which, with the support of the Worker Institute, produced a report outlining what building a decarbonized society in New York would entail, and quickly got to work mobilizing and campaigning on a plethora of climate actions, ultimately securing hard-fought victories.

The labour coalition won a union jobs guarantee for an offshore wind project that will deliver half of New York's energy needs by 2035. They did this by building power across key sectors such as



the building trades and then they campaigned, strategically targeting then-governor Andrew Cuomo who was in a tight primary race with progressive Cynthia Nixon. This approach is being widely heralded as a success and has already spread to other states in the U.S. For example, Connecticut passed legislation to guarantee prevailing wage and benefits are provided to workers on clean energy projects. This unique and transformative organizing has the potential to act as a blueprint for securing climate action elsewhere and highlights the impact labour can have when it leads on climate.

Despite the promise of labour, it is important not to paint a romanticized picture of the challenges ahead. Often seen as a blocker of climate action, the labour movement's role as an important site of such action has frequently been overlooked. And to be clear, some labour unions are guilty of blocking climate action, particularly those in the fossil fuel industry. Some have bought into, or fuelled, the environment versus labour debate, which pits workers against the environment rather than recognizing the significant role of labour in decarbonizing our economy.

Furthermore, the current trajectory of low-paid, precarious jobs in the so-called green economy has workers worried for their future. Unions need to deliver victories and demonstrate that governments, when pushed, can act in the interest of people. Bringing workers along in their decarbonization efforts, and following through with good, unionized climate jobs are steps in the right direction. The challenges are substantial, but labour has proven it can lead in a crisis and must again lead by being proactive in securing climate action.

As the old adage goes, "The cause of labour is the hope of the world." Except maybe now, the cause of labour is the hope of a just and decarbonized world. **UC**

## A Climate for Change? A History of Political Response to Climate Change in Canada

Within the context of the current global discussion on climate change, Canada's political response to the ongoing climate crisis effects how our country is perceived on the international stage. Canada's historical and contemporary position as an energy extraction state is key to the nation's identity and economy, influencing its political decisions and it disproportionately contributes to, and suffers from, the consequences of global warming, and this tension is observable in current political discourse. This discussion begins with brief a global analysis of Green parties in EU and Australasia parliamentary systems. Several key themes were found to contribute to the emergence and success of Green parties globally and these themes are then compared to the history of the Green Party in Canada to analyze where the similarities and differences lie. This presentation, by examining the relationship between human concern surrounding climate change and its iteration in political support, will add to important conversations surrounding Canada and the rise of concern at home and abroad about the issue of global climate change.

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**Evangeline Kroon** is a PhD candidate in political science at York University specializing in women in politics and Canadian politics. Her current research centers on political expressions of climate anxiety with a focus on the federal and provincial Green parties in Canada. Previously she has published on narratives of female violence in post-apocalyptic pop culture, and this research interest has remains relevant in her current research as she examines our understandings of future-oriented imaginaries through the lens of climate crises. This research also blends seamlessly with her personal love of nature, quest for ecological sustainability and feminism. She lives and works and tries to keep plants alive in her apartment in Tkaronto, which has been care-taken by the Anishinabek Nation, the Haudenosaunee Confederacy, and the Huron-Wendat. It is now home to many First Nation, Inuit and Métis communities and she acknowledges the current treaty holders, the Mississaugas of the Credit First Nation.



The poster features a blue background with a large circular image of a flooded street in a residential area. In the top left corner, the 'ROBARTS CENTRE FOR CANADIAN STUDIES' logo is displayed. The top right corner has a yellow banner that reads 'CLIMATE CHANGE RESEARCH MONTH'. A circular inset on the right side shows a portrait of Evangeline Kroon. The title 'A Climate for Change?' is written in large, bold, orange letters, with the subtitle 'A History of Political Response to Climate Change in Canada' in smaller white text below it. The event details, 'Tuesday, 7 March 2023 | 12:00 to 13:00 EST' and '7th Floor Lounge, Kaneff Tower (in-person event)', are listed in white. A paragraph of text describes the presentation's focus on the relationship between human concern and political support for climate change. Below this, the speaker's name and affiliation are provided. At the bottom, the sponsors 'Environmental Research Group, Robarts Centre for Canadian Studies' and a photo credit are listed.

**ROBARTS**  
CENTRE FOR CANADIAN STUDIES

CLIMATE CHANGE RESEARCH MONTH

**A Climate for Change?**  
A History of Political Response to Climate Change in Canada

**Tuesday, 7 March 2023 | 12:00 to 13:00 EST**  
7th Floor Lounge, Kaneff Tower (in-person event)

This presentation, by examining the relationship between human concern surrounding climate change and its iteration in political support (focusing on the Green Party), will add to important conversations surrounding Canada and the rise of concern at home and abroad about the issue of global climate change.

Speaker: **Evangeline Kroon** is a PhD candidate in political science at York University specializing in women in politics and Canadian politics.

Sponsored by the Environmental Research Group, Robarts Centre for Canadian Studies

Photos: 2017 Quebec Floods-Montreal, by A Disappearing Act (Flickr), and by Jon Olav Eikenes

# CARING ABOUT CLIMATE: THE CATALYST TO POLITICAL CHANGE?

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**EVANGELINE  
KROON**

Is caring about climate change enough to make political change?

My research takes up this question by looking at Guelph, Ontario where, in 2018, the riding elected Green Party candidate Mike Schreiner. The Green Party's success was significant, since this election marked the first time a Green Party candidate was ever elected in Ontario.

Was this a turning point for Canada?

Thinking back to 2018, it felt like a watershed moment for the environment. There were Climate marches worldwide. Fridays for Future saw students walking out of classrooms on a weekly basis to protect inaction about climate change. Trudeau banned plastic straws, as a small step to curbing plastics pollution.

Was the election of Ontario first-ever Green Party MPP in Guelph the beginning of a political movement that was going to spread across the country? And if so, why there, and why then?

To answer this question, I traced the history of Green parties in parliamentary systems, in Europe and



Australasia, that are similar to Canada. Since Green parties have existed and been successful since the early 1970s, there was much to be learned from experiences elsewhere.

I found a range of factors mattered for Green parties' election success, including a strong economy, guaranteed government funding for registered political parties, and competition among political parties for Green Party votes.

But what about the Green Party in Ontario?

Ontario has a unique history, rooted in an economy built on extraction and manufacturing but now more dependent on finance and services. It is a very wealthy province, and a politically powerful one. Ontario has high levels of education, compared to other provinces. From 1985 to today, Ontario has had a competitive three-party system, where the Conservative, Liberal, and New Democratic parties have each formed majority governments.

Together, these factors are hopeful for those who support Green parties, since the province does not depend on the fossil fuel

industry, it has a strong economy, a highly educated population and a competitive party system.

Gains are possible, especially in cities like Guelph, which boasts a relatively wealthy, highly educated citizenry, motivated to address climate change. Since Ontario is a powerful province, the election of a Green official in Ontario could signal a shift in broader political norms across the country.

But many questions remain.

How do Green parties strategize in Ontario's first past the post voting system? What happens if current economic uncertainties worsen and deepen? How do voting districts that favour the suburban and rural vote play into Green party success across Ontario?

One thing is certain.

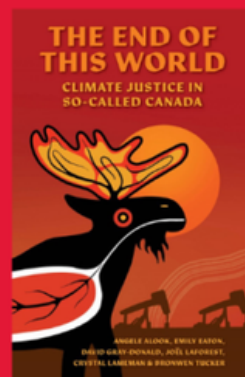
Caring about climate change and Green politics is not enough to ensure a Green Party win. But making climate change a major electoral issue is necessary, if there is to be any chance at all. **EK**

Book Launch

## ***The End of This World: Climate Justice in So-Called Canada***

Wednesday, March 8, 2023  
12:00 - 1:30 pm ET

Join the **Global Labour Research Centre** at York University for a book launch and conversation of *The End of This World: Climate Justice in So-Called Canada*, with authors **Angele Alook** (York University) and **David Gray-Donald** (The Grind).



### **Book Launch: The End of This World: Climate Justice in So-Called Canada with authors Angele Alook and David Gray-Donald**

The climate crisis is here, and the end of this world—a world built on land theft, resource extraction, and colonial genocide—is on the horizon. In this compelling roadmap to a livable future, Indigenous sovereignty and climate justice go hand in hand.

Drawing on their work in Indigenous activism, the labour movement, youth climate campaigns, community-engaged scholarship, and independent journalism, the six authors challenge toothless proposals and false solutions to show that a just transition from fossil fuels cannot succeed without the dismantling of settler capitalism in Canada. Together, they envision a near future where oil and gas stay in the ground; where a caring economy provides social supports for all; where wealth is redistributed from the bloated billionaire class; and where stolen land is rightfully reclaimed under the jurisdiction and sovereignty of Indigenous peoples.

Packed with clear-eyed analysis of both short- and long-term strategies for radical social change, *The End of This World* promises that the next world is within reach and worth fighting for.

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**Angele Alook** is an Assistant Professor in the School of Gender, Sexuality, and Women's Studies at York University. She is a proud member of Bigstone Cree Nation in Treaty Eight territory, where she has carried out research on issues of sociology of family and work, resource extraction, school-to-work transitions, Indigenous identity, and seeking the good life (miyo-pimatisiwin) in work-life balance. Her current research examines a just transition away from fossil fuels. She is an active member of the labour movement and a former labour researcher in the movement.

**David Gray-Donald** is a media worker, fundraiser, and climate justice advocate living in Toronto. He was the publisher of Briarpatch Magazine in Treaty Four (Regina, Saskatchewan) until 2019, and co-founded Resource Movement, a group of young people with class privilege or wealth working toward the redistribution of wealth, land, and power. He is an editor with the Media Co-op and recently co-launched a free alt magazine in Toronto, The Grind.

# INDIGENOUS SOVEREIGNTY, CLIMATE JUSTICE AND WATER PROTECTOR

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**ELAINE  
COBURN  
WITH  
ANGELE  
ALOOK**

Indigenous peoples have inherent rights to the lands on which they have lived since time immemorial. That is the message from Professor Angele Alook, member of the Bigstone Cree Nation and faculty in the School of Gender, Sexuality and Women's Studies. These rights, Alook emphasizes, bring responsibilities to protect the land and the water.

Violation of Treaty rights by the colonial state interferes with these sacred responsibilities to the natural world. This is a matter of sovereignty. It is also a matter of climate justice.

Fossil fuel companies operating on Indigenous lands destroy the land and water. It is against this destruction that First

Nations take up their Treaty Rights, Alook explains, led by Water Protectors, who are responsible for the sacred duty to protect the Earth.

Water Protectors became known to international publics in the movement to challenge the Dakota Access Pipeline on the lands of the Standing Rock Sioux Tribe. Fulfilling traditional and ongoing responsibilities, Alook explains, Indigenous women and 2SLGBTQQIA+ people led the way in honouring their responsibilities to the land and standing against settler colonial ecological violence.

When Water Protectors at Standing Rock were sprayed with hoses and violently detained by the police, their steadfast defense became a stand against settler colonial dispossession, against violence targeting Indigenous women and genderqueer people, and for Indigenous survivance.


As Anishinaabe intellectual Gerald Vizenor explains in his book, *Survivance: Narratives of Native Presence*, such moments refuse settler colonial attempts to reduce Indigenous peoples to victims. In Alook's words, survivance means that, "Indigenous peoples have

always been here, we are here now, and we will be here for future generations."

Protecting the water participates in the creation of new futures for Indigenous peoples, for their cultures and for their knowledges.

In Alook's home territory of Treaty 8, Cree and Dene people are fighting to protect the Lower Athabasca River system, which includes the Peace-Athabasca Delta. This water system is critical, Alook explains, if First Nation members are practicing their Treaty rights and maintain relationships with the river and the land that sustain their distinctive ways of living and being. A 2010 study on the Athabasca River done by the Firelight Group, Athabasca Chipewyan First Nation, and Mikisew First Nation, called *As Long as the River Runs* emphasizes that the Athabasca river is at the very heart of their Traditional lands.

In keeping with this report, Alook emphasizes that without enough clean water in the river system, "we cannot access areas that matter to us culturally and spiritually and we cannot sustain our families on the traditional foods that keep us healthy." Similarly, *As Long as the River Runs* explains,

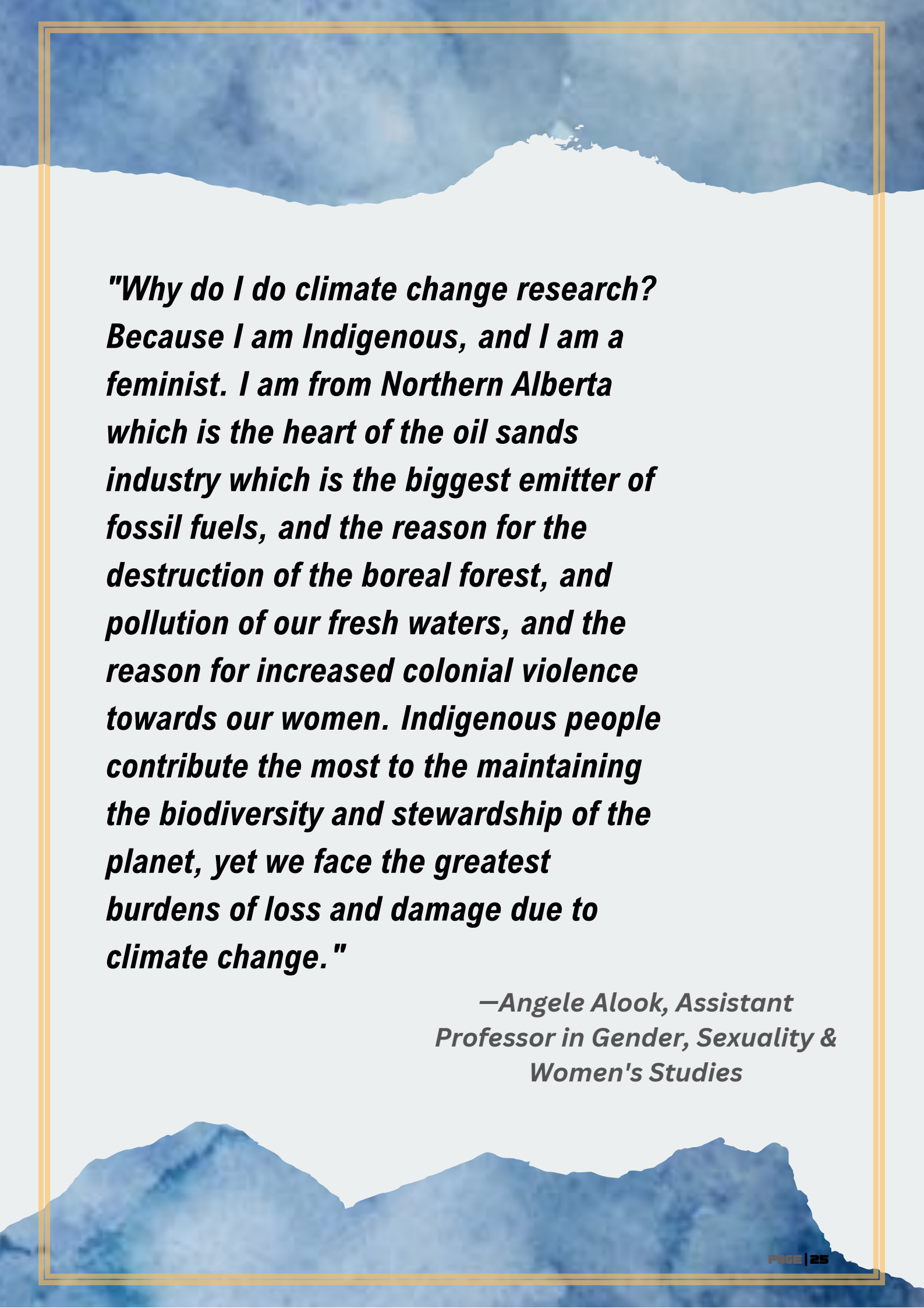


“Losing the ability to access creeks, side channels and tributaries by boat means losing access to the land. Losing access to the land means lost opportunities for language and knowledge transmission, and for maintaining connections between generations, as well as between people, animals,” and “waters that are at the heart of being Dene and being Cree.”

Protecting the river water from climate change is about protecting Indigenous futures. Water protectors enact Indigenous sovereignty by carrying out responsibilities to sacred lands. They delink from settler colonialism and provide gendered relinking to Indigenous knowledges. This renews land-based practices, which are necessary to fight climate change.

Alook concludes, “Our land-based knowledge’s are vital to Indigenous peoples but in an era of climate change, they matter to everyone. There will be no sustainable future without us.” **EC & AA**





***"Why do I do climate change research?  
Because I am Indigenous, and I am a  
feminist. I am from Northern Alberta  
which is the heart of the oil sands  
industry which is the biggest emitter of  
fossil fuels, and the reason for the  
destruction of the boreal forest, and  
pollution of our fresh waters, and the  
reason for increased colonial violence  
towards our women. Indigenous people  
contribute the most to the maintaining  
the biodiversity and stewardship of the  
planet, yet we face the greatest  
burdens of loss and damage due to  
climate change."***

***—Angele Alook, Assistant  
Professor in Gender, Sexuality &  
Women's Studies***

## Smudging in Sharm El-Sheikh: Experiences of Indigenous Peoples at COP 27

Drs. Angele Alook and Graeme Reed as they discuss their experiences attending the twenty seventh session of the Conference of the Parties (COP 27) to the UN Framework Convention on Climate Change, held in Sharm El-Sheikh, Egypt. COP 27, heralded as an implementation COP, saw the greatest number of Indigenous Peoples representatives since the signing of the Paris Agreement in 2015. Despite the growing representation, decision texts referring to Indigenous Peoples declined compared to COP 26 in Glasgow. Professor Alook and Dr. Reed will unpack this reality, describing more about participating in the Indigenous Peoples caucus, key negotiation and political outcomes for Indigenous Peoples, and outlining some of the tensions of showing up as Indigenous in a non-Indigenous, colonial process. The presentation will end with some updates on their research focusing on uplifting Indigenous self-determined climate leadership.

### SMUDGING IN SHARM EL-SHEIKH: EXPERIENCES OF INDIGENOUS PEOPLE AT COP 27

**Angele Alook (York University)  
& Graeme Reed (York University)**

Thursday, March 9 12:00PM- 1:30PM  
Zoom ([Register here](#))

Join Drs. Angele Alook and Graeme Reed as they discuss their experiences at COP 27 the UN Framework Convention on Climate Change, held in Sharm El-Sheikh, Egypt. COP 27 saw the greatest number of Indigenous Peoples representatives since 2015. Despite the growing representation, decision texts referring to Indigenous Peoples declined. Alook and Reed will unpack this reality, describing more about participating in the Indigenous Peoples caucus, key negotiation and political outcomes, and outlining the tensions of showing up as Indigenous in a colonial process. The presentation will end with some updates on their research focusing on uplifting Indigenous self-determined climate leadership.



Organized as part of York  
University's Climate Change  
Month Event Series.



# SMUDDGING IN SHARM EL-SHEIKH: EXPERIENCES OF INDIGENOUS PEOPLES AT COP 27

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**NATHALIE**

**ELIZABETH LACOSTE LING**

In November 2022, the twenty seventh session of the Conference of the Parties (COP 27) to the United Nations (UN) Framework Convention on Climate Change, was held in Sharm El-Sheikh, Egypt. The aim of this annual event was to bring countries together to take action towards climate goals established under the Paris Agreement and the wider Convention. Both Drs. Angele Alook and Graeme Reed travelled to Egypt to participate.

In the event hosted by the Centre for Indigenous Knowledges and Languages on March 9, 2023, Drs. Alook and Reed shared their experiences attending COP 27 as Indigenous Peoples. The conversation was moderated by Dr. Sean Hillier, Interim director of CIKL.

Both seasoned attendees of COP, Alook and Reed reflected on the changes they have observed and experienced over the different conferences they attended. Dr. Alook, Assistant Professor in the School of Gender, Sexuality and Women's Health at YorkU and a member of Bigstone Cree Nation in Treaty 8 territory, had previously travelled to COP 25 as part of the RINGO (Research and Independent Non-Governmental Organizations) delegation sent by York University and as part of the Indigenous caucus at COP 26. This year, she travelled as a researcher with the primary aim of conducting interviews with Indigenous climate leaders and activists as part of her research project, Indigenous Climate Leadership and Self-Determined Futures.

Dr. Reed has been participating in the UN Framework Convention on climate change for 5 1/2

years. He has been to five COP meetings to date. Most recently, he attended as part of his work with the AFN (Assembly of First Nations) and the International Indigenous Peoples Forum on CLimate Change, the Indigenous Peoples Caucus. He has played an integral role in establishing Indigenous spaces at COP. As a postdoctoral fellow at YorkU, Dr. Reed worked with Dr. Alook in conducting interviews which coincides with his ongoing research that investigates the intersection of Indigenous governance, environmental governance, and the climate crisis.

COP27 marked the first time there was a dedicated space for ceremony and an self-funded Indigenous Peoples Pavilion, supported by NDN Collective. All events at the pavilion were live-streamed, and the space included a media zone and an Elders lounge. Dr. Reed emphasized that in addition to increases in the amount of physical space for Indigenous Peoples, there were also more Indigenous participants than past years, over 270 in total. He also noted the number of knowledge keepers in attendance, hosted by the Facilitative Working Group as part of the workplan of the

## Local Communities and Indigenous Peoples Platform.

The importance of community was raised by Dr. Alook. She explained how Indigenous Peoples “have to act as a community when we are there.” She shared how intimidating the conference can be for many Indigenous Peoples. Some have never travelled such a long distance before. Some have faced incredible challenges in sharing their stories. Some continued to face discrimination at COP despite being invited guests.

While positive changes were identified at COP27, the impact of Indigenous voices were not always captured in larger policy negotiations, according to Reed and Alook. The institutionalization of how the climate problem is articulated was raised by Dr. Reed. He emphasized that while representation of Indigenous Peoples has grown, decision texts that refer to Indigenous Peoples has declined since COP26. He suggested that more work needed to be done to examine the federal and international institutional structures that limit the inclusion of Indigenous voices, calling for decolonized climate policy.

Despite laying out the critical work that needs to be done and the challenges of dismantling a deeply colonial system, the event ended on some positive words. Two key pieces of advice were shared (1) Get involved in local organizations. Several exist at YorkU, to advocate for decolonial approaches to climate change. (2) Learn more. Dr. Alook shared her new book, *The End of This World*, which goes more in-depth on how we can make radical social changes.

Both Alook and Reed intend on travelling to COP28 in Dubai, United Arab Emirates in November. **NELL**



## Terrestrial: Sound Art Performances

On March 10th, Sensorium organized a set of two live sound art performances exploring immersive soundscapes both inspired and generated by elements of the natural world for the purpose of heightening a sense of interconnectedness between participants and their surroundings. The pieces were held at the Allan Gardens and began with a 30-minute improvisational performance *To Breathe in the Sky*, followed by musical performances by invited guest artist Seylon Stills.

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### **To Breathe in the Sky by Archer Pechawis, Grace Grothaus, Joel Ong**

This meditative performance combines traditional Cree song, wind data, tuning forks, and electric guitar to connect participants with the natural world. By emphasizing the daily circadian rhythm of life, the artists aimed to remind us of the importance of being attuned to the natural cycles and rhythms of the world around us. The piece encouraged audiences to slow down and take the time to appreciate the invisible phenomena that are all around, and to reconnect with the natural world in a profound and meaningful way.

**Archer Pechawis** was born in Alert Bay, BC. He has been a practicing artist since 1984 with particular interest in the intersection of Plains Cree culture and digital technology, merging "traditional" objects such as hand drums with digital video and audio sampling. His work has been exhibited across Canada, internationally in Paris and Moscow, and featured in publications such as Fuse Magazine and Canadian Theatre Review. Archer has been the recipient of many Canada Council, BC Arts Council and Ontario Arts Council awards, and won the Best New Media Award at the 2007 imagineNATIVE Film + Media Arts Festival and Best Experimental Short at imagineNATIVE in 2009. Archer has worked extensively with Native youth since the start of his art practice, originally teaching juggling and theatre, and now digital media and performance. He is an Assistant Professor of Indigenous Performance at York University and a member of Mistawasis Nêhiyawak, Saskatchewan.

**Grace Grothaus** is a computational media artist whose research questions center around ecosystemic human and plant relationships in relation to the present global climate crisis and speculative futures. Her artworks have been exhibited widely throughout North America and abroad on five continents including at Cité Internationale des Arts (Paris, FR), the World Creativity Biennale (Rio de Janeiro, BR), Environmental Crisis: Art & Science (London, UK), and the International Symposium of Electronic Art (Barcelona, ES & Durban, SA).

**Joel Ong** is a media artist whose works connect scientific and artistic approaches to the environment, particularly with respect to sound and physical space. He is Associate Professor in Computational Arts and Director of Sensorium: The Centre for Digital Art and Technology at York University

## Connected by Seylon Stills

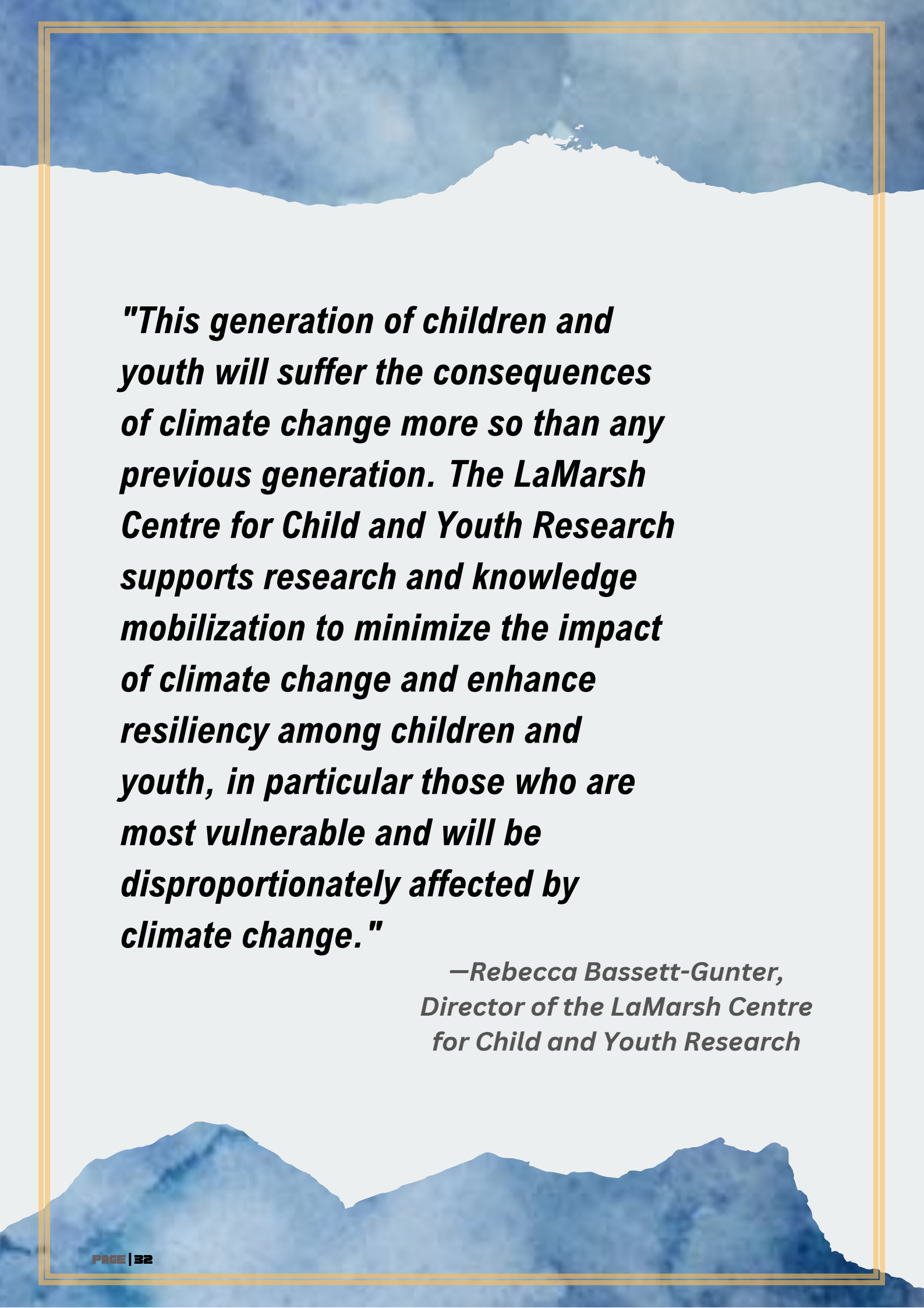
Invited musician and sound artist Seylon Stills presented the works *Interspace*, that integrated the individual cell phones of each audience member; *Halo*, that featured field recordings of the white throated sparrow recorded in the cabin in the woods where she resides; *Do you Wanna Ride*, where Seylon Stills collected field recordings of crickets to create an immersive and interactive soundscape which laid the foundation for the upbeat pop song, and *Laki's Birds*, that featured field recordings of the wood thrush collected by Seylon Stills the day the acclaimed artist and naturalist, Laki Senanayake passed away. She wrote *Laki's Birds* in his memory by using the cell phones of the audience to bring the sounds of the forest to life.

To experience Seylon Stills' performances is to experience a deeper sense of connectedness. Her interactive, original media art creates a new sense of togetherness using the very technology often criticized for pulling us away from the present moment (our smartphones). Her innovative exploration of proprioception guides participants into experiencing a new sense of their identity in relation to others. Her nature-inspired soundscapes and immersive sonic textures build a new frame for community. For more information about Seylon Stills and her music please visit [SeylonStills.com](http://SeylonStills.com)

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**Seylon Stills** is a composer, artist, and innovator, heavily influenced by the natural beauty of the island of Srilanka, her birthplace. Her performances, installations, and artist talks have been presented by The University of New Mexico, Albuquerque Museum, Cole Art Center, Currents New Media Festival, Contemporary Austin, UTOPIafest and Stephen F. Austin State University.





***"This generation of children and youth will suffer the consequences of climate change more so than any previous generation. The LaMarsh Centre for Child and Youth Research supports research and knowledge mobilization to minimize the impact of climate change and enhance resiliency among children and youth, in particular those who are most vulnerable and will be disproportionately affected by climate change."***

***—Rebecca Bassett-Gunter,  
Director of the LaMarsh Centre  
for Child and Youth Research***

# EMERGING & SYSTEMIC RISKS MONTHLY LECTURES

## EMERGING & SYSTEMIC RISKS MONTHLY LECTURES

York University's Climate Change Research Month Special Session

### Fire and Floods in Our Own Backyard Examining Climate Change Displacement and Internal Migration in Canada



**Dr. Yvonne Su**  
Assistant Professor  
Department of Equity Studies  
Faculty of Liberal Arts and Professional Studies  
York University

**Y-EMERGE**

YORK EMERGENCY MITIGATION, ENGAGEMENT  
RESPONSE AND GOVERNANCE INSTITUTE



VIRTUAL SESSION 5 | MARCH 16, 2023 (THURSDAY) 12PM-1PM  
REGISTRATION: [www.yorku.ca/research/yemerge/lectures](http://www.yorku.ca/research/yemerge/lectures)



Organized by:

**Y-EMERGE DHEUSer CIFAL York**

## Fire and Floods in Our Own Backyard: Examining Climate Change Displacement and Internal Migration in Canada

Within Canada, climate displacement manifests in various ways in the face of recurrent sudden events such as floods and wildfires yet the topic has received very little scholarly attention in the country. While some are forced to move either permanently or temporarily, others choose to move to safer areas to mitigate future hazard risks. Whether we talk about evacuation, displacement, relocation, planned retreat, migration, or even the symbolic use of the term “refugee,” all these cases refer to human mobility induced by climate change, a phenomenon that an increasing number of people face.

**Dr. Yvonne Su** is an Assistant Professor in the Department of Equity Studies at York University. Dr. Su is a specialist on forced migration, queer migration, migrant remittances, climate change-induced displacement, social capital, and post-disaster recovery. She holds a PhD in Political Science and International Development from the University of Guelph and a Masters in Refugee and Forced Migration Studies from the University of Oxford. Dr. Su’s research is supported by four SSHRC grants that examine Brazil and Colombia’s response to Venezuelan LGBTQI+ asylum seekers, the impact of COVID-19 on Venezuelan LGBTQI+ asylum seekers in Brazil and impact of COVID-19 on disaster-affected households in resettlement areas in Tacloban City, Philippines.

# FIRE AND FLOODS IN OUR OWN BACKYARD:

**EXAMINING CLIMATE CHANGE  
DISPLACEMENT AND  
INTERNAL MIGRATION  
IN CANADA / TESNI ELLIS**

During Climate Change Research Month, at the March 16 lecture hosted by the York University's Emergency Mitigation, Engagement, Response and Governance Institute (Y-EMERGE), listeners were invited to draw our attention inwards to proactively consider the "fire and floods" in our own backyard.

Dr. Yvonne Su began her talk by sharing a selection of photographs of devastating wildfires, from Australia to Greece to California to Lytton, British Columbia. With their vivid oranges and reds and their smoke-filled skylines, the scorching images reminded us, in Dr. Su's words, that "climate change fuels the fires, and the fires fuel climate change."



Climate change is predicted to increase the frequency and intensity of natural disasters worldwide, Dr. Su explained. Several threats to Canada were recently outlined in a climate change report by the Canadian Security Intelligence Services (CSIS)' outlines threats to Canadians, including water and food security, Arctic sovereignty, and coastal security.

A proactive turn inwards, Dr. Su observed, is essential for generating community-based plans and solutions, in the face of climate disaster locally as well as globally.

But this requires us to challenge common myths, Dr. Su underlined, especially the alarmist narrative dominating news today – the idea that the Global North needs to prepare for mass numbers of climate refugees and migrants coming from the Global South. Informed by a colonial mindset, such fear-mongering feeds into unfounded ideas that displaced peoples will move across continents as they flee climate change.

The research tells a different story, Dr. Su explained, one that is closer to home. Most displaced peoples seek to return to their homes and rebuild, so migration due to


climate change is local and regional, not international. Further, we can learn from community-based solutions enacted worldwide when developing our own preparedness plans.

In a context where climate change is happening in our own country, Dr. Su observed, we must focus on proactive, practical solutions. These solutions will centre:

- community-based, planned relocation;
- multi-year and multi-hazard prevention plans;
- cooperative, multi-level governance and resources;
- and preparation and support for host communities.

We need to ask ourselves hard questions, Dr. Su suggests, and consider internal migration “so we can be sensitive to the tensions that might rise up, and be proactive for what may come, so we can be prepared.” Questions like, “If a disaster was to strike Toronto, for instance, where would we go?”

“How many of us are having these conversations?” Dr. Su urged. We need to “start with ourselves and then expand beyond our own household

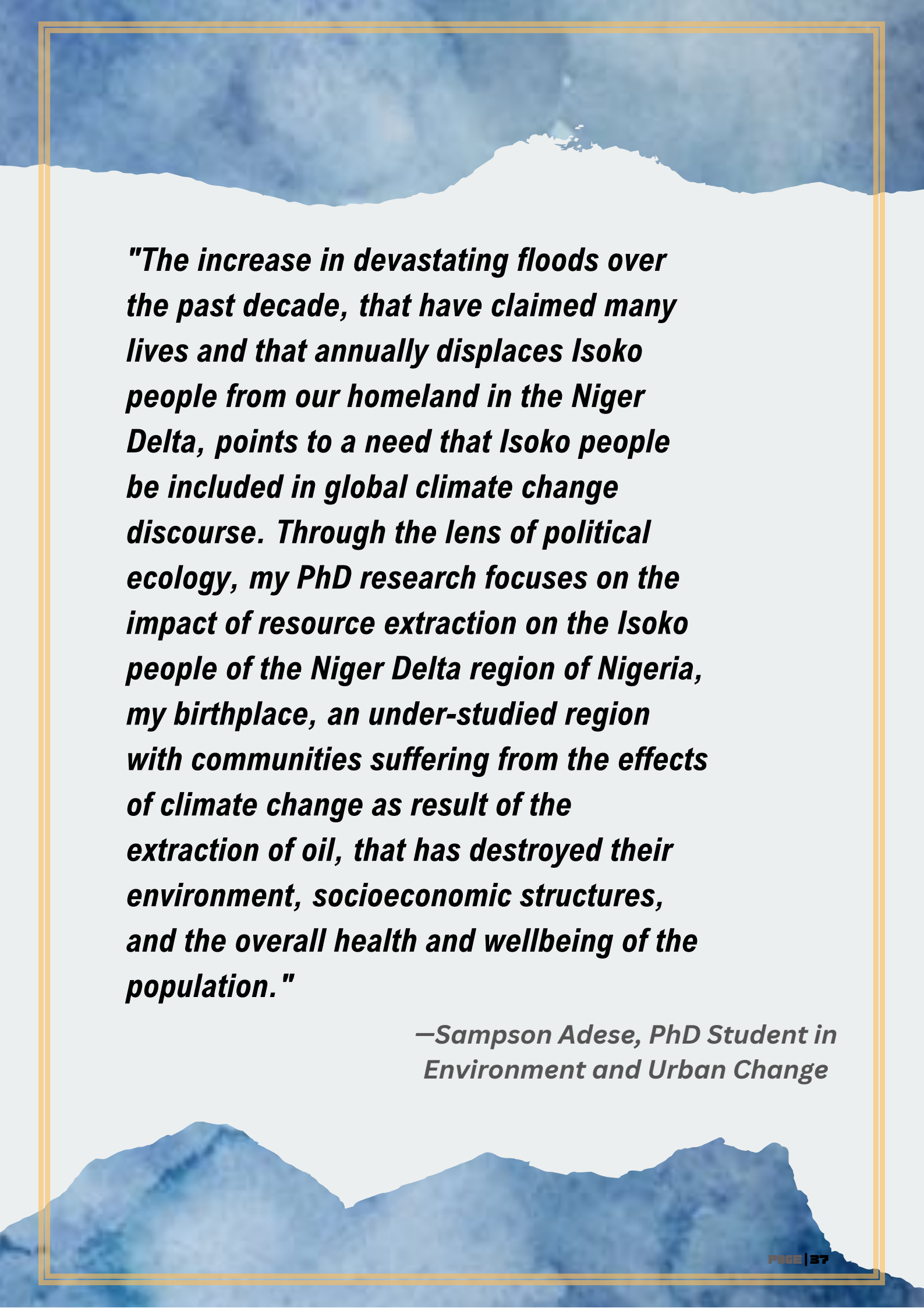


with empathy towards those who may be displaced now or in the future.”

All of this demands a politics of preparedness, engagement, and listening to communities. It means, too, that we must take politics seriously. Dr. Su explains:

“There is a need for us to push our politicians to think proactively, to show them that we care and that climate change is a priority for us. We need to make it clear that Canadians care about living in a good environment and that we care about living in a nation that is free of significant natural hazards due to climate change.”

When election time comes around, we must advocate for policies that address the serious challenge climate change represents, for all who live in Canada and beyond, beginning in our own backyards. **TE**



***"The increase in devastating floods over the past decade, that have claimed many lives and that annually displaces Isoko people from our homeland in the Niger Delta, points to a need that Isoko people be included in global climate change discourse. Through the lens of political ecology, my PhD research focuses on the impact of resource extraction on the Isoko people of the Niger Delta region of Nigeria, my birthplace, an under-studied region with communities suffering from the effects of climate change as result of the extraction of oil, that has destroyed their environment, socioeconomic structures, and the overall health and wellbeing of the population."***

***—Sampson Adese, PhD Student in  
Environment and Urban Change***

Climate justice is a central priority of the Harriet Tubman Institute, which “focuses on the struggles in current lives of African peoples and diasporic communities to achieve social justice and covers contemporary forms of exploitation.” (HTI Mandate).

Africans, who make up about 17% of the global population, have contributed only 2-3% of the CO2 and other emissions which cause climate change. But

# CLIMATE CHANGE AND AFRICAN DIASPORA

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**PATRICIA ELAINE PERKINS**

Africa is the most vulnerable continent to climate change impacts.

Africa’s climate is warming faster than the global average, and sea level rise along African coastlines is faster than the global mean, increasing the frequency and severity of coastal flooding and erosion, and agriculture-endangering salinity in low-lying areas. Droughts, fires, floods, and increasingly variable weather drive agricultural crises and jeopardize food sovereignty and health across Africa. An estimated 140 million people in Africa are food insecure, and 20% of the population faces chronic hunger; a growing emergency in the Horn of Africa this year threatens more than 37 million people. Climate impacts are particularly severe for the more than 14 million people who are internally displaced in sub-Saharan Africa (WMO 2022, WHO 2022).

New international research demonstrates the extent to which the

fossil fuel era was founded on deep racism, which continues to permeate mainstream and especially right-wing approaches to the post-fossil future (Malm et al. 2021; Yeampierre 2019; Achiume 2022).

African activists and researchers both on the Continent and in the diaspora are fighting for climate justice, and helping to lead global movements for stronger climate action and global climate funding. (Louw 2021, Reddy 2022, Akina Mama Wa Afrika 2018, Climate Justice 4 Africa 2023, PACJA 2023).

York University faculty and graduate students who are contributing to Africa-focused climate justice research include recent Environmental and Urban Change (EUC) PhD graduate Dr. Balikisu Osman, who researches climate risk and food (in)security in northern Ghana; Sampson Adese (EUC PhD student) who works on the political ecology of post-Shell oil extraction in Isokoland, Nigeria; Tatiane Reis (PhD student in Women and Gender Studies) whose research includes gender, extraction, and climate in Southern Africa; Dr. Adeyemi Owusola (EUC geographer) researching impacts of

climate change on rivers; Dr Mahtot Gebresselassie (EUC transportation planner) focusing on transport equity and extreme weather events; and Hillary Birch (EUC PhD student) researching sanitation, global health, and climate change in South African cities.

African and Afro-descendant scholars from Kenya, Mozambique, Cameroon, Nigeria, South Africa, and Brazil are contributors to the 2023 book *Climate Justice and Participatory Research: Building Climate-Resilient Commons*, edited by HTI Fellow and EUC professor Dr. Patricia E. (Ellie) Perkins. **PEP**

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## One Water World Water Celebration

World Water Day is an annual United Nations observance day held on 22 March that highlights the importance of fresh water. The day is used to advocate for the sustainable management of freshwater resources.

This year York University will celebrate World Water Day on March 20th as many community members are attending the UN Water Conference which will start on Water Day. One WATER Institute is grateful to its members for organizing and participating in these events to celebrate World Water Day.

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### DAY ONE

#### **World Water Day Art & Science Exhibition Presentations**

Date & Time: March 20th 9am to 4pm

Event Sponsors: Faculty of Science and YorkU Vice President Research and Innovation's office.

Undergraduate students, graduate students and faculty members doing water related research at YorkU will be presenting their work and will engage with YorkU community. Please come meet with us!

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#### **Panel: "Moving from academia to the water industry; Improving the resilience of water infrastructure to climate change"**

Date & Time: March 20th 1pm to 4pm

Organizer: Stephanie Gora for The International Water Association, Young water professional, Canadian Association of Water Quality and One WATER Institute.

Event sponsors: Lassonde School of Engineering, University of Toronto, Toronto Metropolitan University

## DAY TWO

### Water Quality Research Symposium

With opening remarks by **Stephanie Gora**, Assistant Professor at York University and keynote presentations by **George Nakhla**, Professor and Salamander Chair in Environmental Engineering, Chemical and Biochemical Engineering at University of Western Ontario and **Stephanie Loeb**, Assistant Professor at McGill University

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# 58<sup>th</sup> Annual Central Canada Water Quality Research Symposium

*in partnership with*  
**York's One Water World Water  
Day Celebration**



-  **Research presentations and posters**
-  **Film screening of "Omiwatari"**  
and conversation with the filmmaker, Zeesy Powers.
-  **Water industry panels:**  
Moving from academia to the water industry:  
Improving the resilience of water infrastructure to  
climate change.

 **March  
20 & 21,  
2023**  
 **SECOND  
STUDENT  
CENTRE,  
York University**

## Keynote speakers



**Dr. Stephanie Loeb**  
McGill University

**Light Driven Processes at the  
Water-Energy Nexus**



**Dr. George Nakhla**  
University of Western Ontario

**A Novel Vacuum-Driven Anaerobic Digestion  
Intensification Technology For Enhanced  
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- CAWQ retired member: **\$50**
- Non-member (registration includes CAWQ membership): **\$250**

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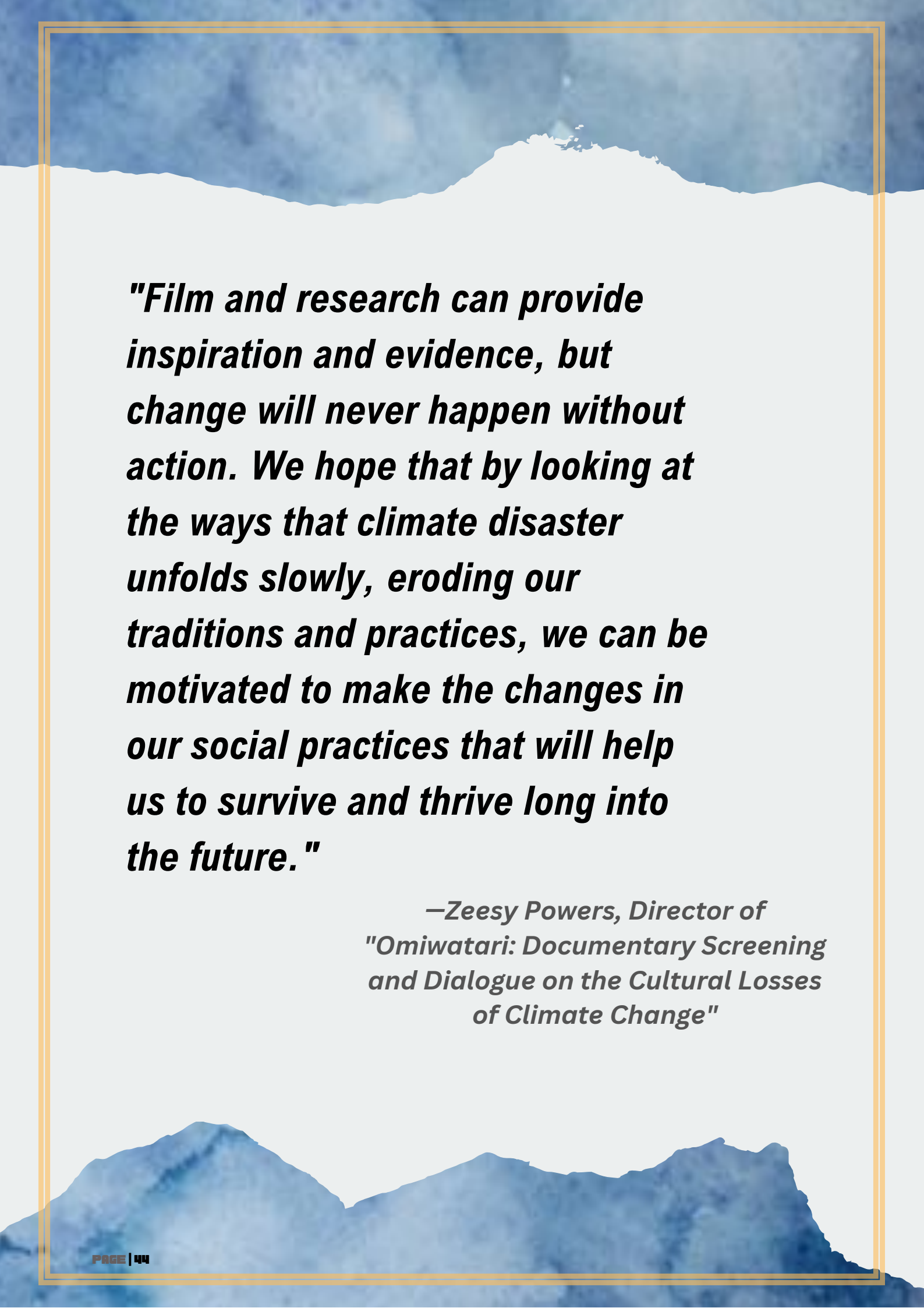
## **Omiwatari: Documentary Screening and Dialogue on the Cultural Losses of Climate Change**

Omiwatari depicts the first year in memory that Lake Suwa, site of a millennia-old phenomenon, remained ice-free all winter. The post-industrial landscapes of Japan's rust belt bear witness to the price we pay for progress and our remaining possibilities to adapt to those losses. Within the next 50 years, the gods of this lake, whose annual reunion across the ice brought good fortune and balance between humans and nature, will never meet again. We are the cause, and it is up to us to find a way forward for ourselves.

Omiwatari is based on the research of Dr. Sapna Sharma and in collaboration with Mr. Kiyoshi Miyasaka, chief priest of the Tenaga Jingu shrine.

A discussion on the cultural losses of climate change and a Q&A will follow. This event is being held in partnership with the 58th CENTRAL Canadian Symposium on Water Quality Research and One Water World Water Day celebration at York University as well as York University's Climate Change Research Month.


The Canadian premiere of the film is presented with the support of the Sharma Lab, Department of Biology, Lassonde School of Engineering and YCAR.



***"Film and research can provide inspiration and evidence, but change will never happen without action. We hope that by looking at the ways that climate disaster unfolds slowly, eroding our traditions and practices, we can be motivated to make the changes in our social practices that will help us to survive and thrive long into the future."***

***—Zeesy Powers, Director of  
"Omiwatari: Documentary Screening  
and Dialogue on the Cultural Losses  
of Climate Change"***





# CLIMATE CHANGE AND JOYFUL POSSIBILITY

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**ELAINE COBURN**

In the struggle for a livable world, for each of us and for all of us, there are many from whom we draw strength. Some are close to us and some we know only through their words. Hermann Levin Goldschmidt, a German Jewish survivor of the Holocaust, is one who speaks directly across a half-century.

In the long shadow of the Shoah, Goldschmidt wrote *Contradiction Set Free*, first published in German in the 1970s and only recently translated into English. He wrote about his times, but they are familiar to us: he describes false prophets, genocidal violence, totalitarian dreams of domination and fascist hopes for supremacy, nihilistic despair and state surveillance and militarization. He warns of atomic and ecological destruction that

threatens the end of human life and the end of much of the natural world. In surveying so much death and so many dangers, Goldschmidt wrote plainly about the “far greater pervasiveness of evil in relation to good.”

And yet Goldschmidt did not counsel despair. Instead, he issued a passionate and anguished call for each of us to respect the singularity of every Other. He reminds us of our profound responsibilities to each human being and to the natural world, in their distinctive differences from ourselves:

*Every human being counts, and that means every human being without exception, of every age and of both (sic) sexes, weak and strong, sick and healthy; just as every human being of every skin colour counts and every human being of every faith and every knowledge! And just as every human being has [their] own dignity and value, so does the environment of the human being, from nature to culture, have its own dignity and—especially as nature—its own literally irreplaceable value.*

—Hermann Levin  
Goldschmidt

In a world whose diversity is known to us, Goldschmidt enjoins us to “hold our ground!” by living up to our responsibilities. This means that our own freedoms must serve the freedoms of others, allowing the contradictions among us to be free. This is not inevitable. It is a political and ethical choice we make to put our own freedoms in the service of others, to allow other human beings and the natural world to express their own particular, irreplaceable qualities. This gives life meaning, “as something more than its own existence”. For Goldschmidt, this act is an expression of love and it is upon this love that our survival depends.

In an era of climate change, we might follow Goldschmidt in seeking “a fundamentally new way” of being together with each other and with nature. This will require us to embrace all the distinctive ways that we know, together and as singular individuals, while holding ourselves accountable to each other. This demands scientific studies that root observation of climate change in systematically gathered evidence, spiritual and existential appeals that remind us of our duties to protect all life, immediate actions to mitigate and adapt



to local effects of climate change, and artistic expressions that stir our imaginations and help us realize the urgency of transformation. As Goldschmidt reminds us, commitment to the Other, both human others and the others of the natural world, means embracing the irreducible and irreplaceable plurality of ways of being, knowing and doing.

Yet even in the act of writing, Goldschmidt worried that his arguments might not persuade anyone to action. “[W]ords” he observed, may “lead only to more words whose protest fails to eradicate the oppression against which they are aimed”. The possibility of failing to act against the oppression and destruction of other human beings, and of the earth, is always there. There are powerful actors who prefer profitable self-interest to the survival of many forms of life, including human life and the earth which sustains all of us. Many others suffer in circumstances of conflict and hunger that leave them with little beyond the immediacy of struggles for survival. The urgencies and exigencies of everyday life, even for the relatively more privileged,

often loom larger than the most pressing existential questions.

Goldschmidt knew all of this from the agony of his own experience. He knew both the costs of inaction and the costs of standing against the destruction of human others and the other of nature. And yet he insisted, in an unashamedly moral and theological vocabulary, upon the possibility that each of us might act to turn away from evil towards the good. As the most profound and serious commitment, he asked us to respect the distinctive forms of life in other humans and in nature. He called upon us to be accountable, to each other and to the earth that sustains us, not only in our sameness but in our distinctive differences. When freely chosen, taking up this responsibility for new, more livable ways of being all together is an act of love—and so our most serious duty and our most joyful possibility. **EC**

\*The reflections in this contribution draw from a paper, for a special issue of *Philosophy Today* (67.3, Summer 2023), on the recent English translation of Hermann Levin Goldschmidt’s *Contradiction Set Free* (Bloomsbury 2020).

# UNDERGROWTH: Photography and the Colonial Gaze on the Natural World

Organized by Laurence Butet-Roch, a photographer, writer, educator, and PhD student in environmental studies at York University, where she focuses on environmental visual communications and decolonial approaches to photography.

Artist Sara Angelucci will unpack the ideas behind, Undergrowth, her ten-year exhibition survey currently on view at the Varley Art Gallery in Markham, which examines the ways in which photographic practices have contributed to the divide between humans and nature. The exhibition is on view until April 30th.

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## About the Exhibition

Sara Angelucci transforms found photographs and creates images exposing the cultural and historical conditions outside the image frame, bringing attention to the social forces that generate the language of photography. Undergrowth brings together several bodies of work produced over the last decade that examine the ways in which photographic practices have contributed to the divide between humans and nature. This direction found its impetus in her series *Aviary* (2013), which morphs extinct and endangered birds with nineteenth-century carte-de-visite portraits to reveal the colonizing role the camera has played in capturing animals for consumption. This focus continues across an expansive body of work that culminates in *Nocturnal Botanical Ontario* (2019–ongoing) in which images of entwined native, introduced, and invasive plants made with a digital scanner consider the history of botanical photography through the study of species that exist in the artist's immediate proximity. These complex botanical compositions point to the impacts of settler colonialism and global trade on our ecology. Through acts of empathy, embodiment, and envisioning, Angelucci's practice seeks to examine and reconcile our relationship with the natural world.

## About the Artist

Sara Angelucci is a Toronto-based artist working in photography, video, and audio. She has exhibited her work across Canada in solo exhibitions at the Art Gallery of York University, Le Mois de la Photo in Montreal, VU in Quebec City, the Toronto Photographers Workshop, the MacLaren Art Centre, the Art Gallery of Hamilton, the Richmond Art Gallery, and Saint Mary's University Art Gallery in Halifax. Internationally, she has had solo exhibitions at the Canadian Cultural Centre in Paris, the Lianzhou Foto Festival, and the Halsey Institute of Contemporary Art in Charleston. Her work has been featured in numerous group shows in the US, Europe, and China at the Pingyao and Beijing Biennales. She completed her BA at the University of Guelph and her MFA at the Nova Scotia College of Art and Design. Angelucci is an adjunct professor in photography at the School of Image Arts, Metropolitan University, Toronto. She is represented by Stephen Bulger Gallery in Toronto.

The artist would like to thank the Toronto Arts Council, the Ontario Arts Council, and the Canada Council for the Arts for their support of the work included in this exhibition.

## CLIMATE RISK / CHANGE DAY

As part of our commitment to the United Nations Sustainable Development Goals, Risk and Insurance Studies Centre is delighted to invite everyone to a virtual workshop that brings together renowned international scholars and influential industry leaders. The workshop aims at generating awareness of climate change risks and mobilizing the community to take action.

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### Presentations

#### **Jennifer Winter, University of Calgary on "Energy Affordability and Net Zero Transition"**

Canada's net zero target requires changes in energy use and types of energy used by households and businesses and has the potential to reduce households' ability to afford energy services. While Canada has an official poverty line, there is no official measure of energy poverty – households' inability to afford energy services or maintain adequate living conditions – which is a correlate of income-related poverty. However, we have limited understanding of how environmental policy interacts with poverty, and households at risk of poverty, in Canada. This presentation will discuss the issue of energy affordability through the lens of electricity-sector net-zero investments and the effect on electricity rates, including distributional consequences.

**Jennifer Winter** is an Associate Professor in the Department of Economics and the School of Public Policy, University of Calgary. Her research evaluates climate policies and examines the consequences and trade-offs of government regulation and policy on energy development. She has testified to the Senate of Canada and House of Commons on emissions pricing policies and has advised governments in Canada in numerous capacities. Dr. Winter is actively engaged in increasing public understanding of energy and environmental policy issues, and she serves on several boards and advisory committees.

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#### **Marcos Pelenur, The Behavioural Insights Team, Americas on "Using Behavioural Insights to Support a Net Zero Society"**

Delivery of Net Zero isn't just a technological or economic challenge. It represents and ultimately relies on social transformation and behaviour change. This presentation discusses the key behaviours – and their barriers – required for decarbonisation across the major emitting sectors of Energy, Transport, Food and Material Consumption, and introduces a framework for thinking about transformative behaviour-change, moving from the conventional focus on nudging individual action in discrete settings to expanding the behavioural lens to include the systemic changes required to combat climate change.

**Marcos Pelenur** holds a PhD and MPhil in Engineering for Sustainable Development from the University of Cambridge and is a Chartered Professional Engineer with Engineering New Zealand and a Chartered Engineer and Member of the Institution of Engineering and Technology UK. Dr. Pelenur is the Head of Sustainability and Decarbonization at the Behavioural Insights Team, Americas. The Behavioural Insights Team are global pioneers in the use of applied behavioural science, who improve lives and communities by helping all levels of government, the private sector and philanthropies tackle their biggest challenges. Previously, Dr. Pelenur was the Group Manager, Strategy, Insights and Regulations at the Energy Efficiency and Conservation Authority and has worked across a range of senior policy leadership positions in the NZ Government.

## **Madanmohan Ghosh, Economist, Bank of Canada on "Economic Modeling of Climate Change and Mitigation Policies for the Macroeconomy: Current Status and Some Analysis"**

Economic modeling of climate change mitigation policies, including the analysis of transitional and physical risks, are still evolving. A wide range of modeling approaches are used in the literature, each with its own strengths. These include integrated energy system models (IESM), computable general equilibrium (CGE) models, integrated assessment models (IAM), dynamic stochastic general equilibrium models (DSGE) and other macroeconomic models. Recognizing these strengths, the Bank of Canada uses a suite of models in analyzing the impacts of transition risks in Canada. The simulated scenario outcomes from MIT's Emissions Projection and Policy Analysis (EPPA), a recursive-dynamic CGE model, are used as inputs in the Bank of Canada's DSGE models to analyze the macroeconomic implications of transitioning to low carbon economy for Canada. The illustrative stressed scenario results suggest there are significant economic risks from climate change and the move to a low-carbon economy in Canada. The potential loss in terms of GDP from delayed action could exceed as much as 10% in 2050 under stressed scenario. Given the uncertain nature of the climate change and the pace of technological development, future work will look into enhancing the current state of modeling as well as exploring plausible technology scenarios and emissions pathways and its macroeconomic implications based on new information.

**Madanmohan Ghosh** is Principal Economist of the Canadian Economic Analysis Division, Bank of Canada. His primary research interests include climate change policy analysis using large-scale simulation models such as computable general equilibrium and dynamic stochastic general equilibrium models. He also published extensively in the areas of international trade and foreign direct investment, public finance, poverty, and economic development. Previously, Madan worked as a Senior Advisor and Chief of the CGE Modeling Section at the Economic Analysis Directorate, Environment and Climate Change Canada. He has previous experience as a Senior Policy Advisor, Department of Finance and at the Department of the Innovation, Science and Economic Development of the Government of Canada.

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## **Andrew Hobbs, University of San Francisco on "Machine Learning with Satellite and Survey Data for Index Insurance"**

Smallholder farmers in developing countries have always been adversely affected by year-to-year variation in weather patterns. Low rainfall, high temperatures, floods, and other disasters can wreak havoc on their livelihoods. Crop insurance has the potential to partially solve this problem, but traditional indemnity-based insurance is generally too costly to administer for smallholder agriculture. Index insurance, which provides payouts based on regional satellite, weather, or crop cut data offers a potential low-cost solution. However, developing accurate indices requires ground-truth data, which itself is costly to collect. This paper explores a new solution to this problem by combining existing household survey data from the World Bank's Living Standards Measurement Survey (LSMS) with satellite data to develop a hypothetical index for maize production. We show that by combining remotely sensed data and machine learning techniques, we can construct an accurate crop production index. We compare regularized regression, neural networks, and random forests, and are able to obtain reasonably good yield predictions with neural networks and random forests. This method is a promising new approach for developing accurate index insurance products at low cost with large potential benefits for smallholder farmers and governments seeking to address climate risk.

**Andrew Hobbs** is an Assistant Professor of Economics, University of San Francisco. He studies how droughts, floods, and other disasters affect people, and develops tools to reduce the impact of climate change on farmers. Dr. Hobbs focuses in particular on how the costs of climate shocks are distributed within households. He is currently working on combining machine learning and satellite data for faster and more accurate detection of disasters and on insurance to sustain women's businesses through droughts in Northern Kenya.

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# Climate Risk / Change Day

As part of our commitment to the United Nations Sustainable Development Goals, Risk and Insurance Studies Centre is delighted to invite everyone to a virtual workshop that brings together renowned international scholars and influential industry leaders. The workshop aims at generating awareness of climate change risks and mobilizing the community to take action.

March 23, 2023, 1:00 pm - 3:30 pm EST

## PRESENTERS

**Jennifer Winter**  
University of Calgary

**Marcos Pelenur**  
The Behavioural Insights Team

**Madanmohan Ghosh**  
Bank of Canada

**Andrew Hobbs**  
University of San Francisco

Please RSVP:



## Contact Information

**Shamira Davidov**  
Research and Academic Grant Coordinator  
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DAHDALEH  
INSTITUTE FOR  
GLOBAL  
HEALTH  
RESEARCH

# A Planetary Health Advocacy Framework

— Carol Devine

Community Scholar, Dahdaleh Institute for Global Health Research  
Lead, Médecins Sans Frontières' Humanitarian Action on Climate and Environment  
Advisor, Climate Smart MSF

with Yasmin Al-Sahili

Research Assistant, Dahdaleh Institute for Global Health Research

**Date: Wednesday, March 29, 2023**  
**Time: 1–2 p.m. ET**  
**Location: Hybrid**

Register: [www.yorku.ca/dighr/events/](http://www.yorku.ca/dighr/events/)

## DAHDALEH INSTITUTE SEMINAR SERIES

— 2022-2023

## A Planetary Health Advocacy Framework, with Carol Devine and Yasmin Al-Sahili

The Planetary Health Advocacy Framework aims to visualize key advocacy principles, actors and actions for humanitarian, global health and climate actors and beyond. Please join this interactive session for an overview of the crowd-sourced updated framework and contribute your feedback to the final (but living) version.

**Carol Devine** is a Community Scholar, Dahdaleh Institute for Global Health Research working on a framework for health and humanitarian actor climate action and a related framework for Planetary Health Advocacy. She leads Médecins Sans Frontières' (MSF) HACE, Humanitarian Action on Climate and Environment and advisor to Climate Smart MSF. Carol co-authored MSF's Humanitarian Policy Briefs in the Lancet Countdown and was a member of MSF's COP27 delegation in Egypt in Nov 2022.

**Yasmin Al-Sahili** joined the Dahdaleh Institute as a research assistant working on equity, diversity, inclusion, and decolonization projects in 2021 and collaborating in 2022 with Carol on the Planetary Health Advocacy Framework. She recently completed her fourth year in the global health program, specializing in health policy, management, and systems.



# THE PLANETARY HEALTH ADVOCACY FRAMEWORK AND THE IMPORTANCE OF DIALOGUE

On March 29th, the Dahdaleh Institute for Global Health Research held a collective discussion, led by Carol Devine and Yasmin Al-Sahili.

**/ LILIANA  
ANTONYSHYN  
& ALYSSA  
RAMOS**

Devine is a Community Scholar at the Dahdaleh Institute working on a framework for Planetary Health Advocacy. Al-Sahili worked on the Planetary Health Advocacy Framework, as a research assistant, with Devine.

The question that animated the group is: how do we build strategies to frame and communicate knowledge about planetary health? The aim is to develop principles that further advocacy in the areas of humanitarianism, global health, planetary health, and climate change.

What began as a framework has evolved, Devine and Al-Sahili emphasize, more into a "tool for advocacy" that explores the impacts of climate change on health. The tool is meant to inform operational programs to mitigate climate change and advocacy for new ways of living that are sustainable for humans and for other life on earth.

As a living tool, it is constantly and sometimes rapidly changing in response to dialogue from a wide range of actors. This dialogue is vital. As Devine paraphrases Indigenous Planetary Health leader Dr. Nicole Redvers, climate change will not be

resolved by technical fixes. Instead, "what will solve the climate crisis is language and dialogue."

While developing the tool, a major question is figuring out how to effectively communicate knowledge to diverse audiences. A circular design with multiple rings, for instance, seeks to show the interconnectivity of different elements. This recalls the relationships between human health and the wellbeing of the natural world, as well as known solutions among and across different actors.

Indigenous peoples and local communities are especially important, Devine emphasized, to biodiversity stewardship and knowing climate change solutions.

Al-Sahili echoes this view. She emphasizes the importance of understanding colonialism and colonial practices in exacerbating climate change-associated health consequences. Those who have been subject to colonialism suffer the most immediate effects of climate change," Al-Sahili observes, "but they have contributed the least to global warming. The voices of those with non-western worldviews, and specifically Indigenous knowledges, perspectives,

and ways of doing, are critical to decolonizing planetary health tools."

This means recognizing that we live in a pluralistic world, where many different ways of knowing co-exist.

Many Western-trained scientists understand the world in terms of systems and variables. This may be very different from how other communities and cultures make sense of themselves and their environments. Despite the diversity across and within their communities, many Indigenous peoples, for instance, understand the world as embedded in strong, even sacred responsibilities to the lands that have been theirs from time immemorial. Indigenous scientists may bring their Indigenous knowledges to problem-solving as they seek to understand and mitigate climate change.[1]

The framework must respond to competing paradigms. As a living tool, it always has room for change, updates and improvements.

Participants at the seminar had many ideas they contributed to the conversation.

Some suggested that it would be useful to add stories to the tool to illustrate and communicate knowledge to broad audiences. Stories represent us and are central to who we are as human beings. As Professor Orbinski observed, "While we have a lot of science about climate change, we don't have many stories".

Compelling narratives, as much as or in combination with science, are necessary to help us to understand the challenges that climate change represents.

Others proposed developing a certificate program within the Institute for Global Health Research to share knowledge within academia about the critical importance of planetary health.

In addition, the tool for planetary health needs to be relevant beyond academia. To be meaningful, participants emphasized, the tool has to be understandable for many people. Some participants suggested building a website to make the tool interactive, dynamic and accessible to a wide range of users.

Out of the lively discussion,

the relationship between global health and well-being and planetary health was emphasized again and again. We will only become healthy, as communities, when we live in healthy ecologies. That demands that we do what we can to mitigate climate change and prevent more negative impacts, suffering and loss, while simultaneously advocating to secure more ecologically sustainable and equitable futures. **LA & AR**

## The Science, Social Science and Art of Climate Change

Climate change is the existential crisis of our times. We will need all the ways that we know -- through the arts, sciences and social sciences -- to take up the climate emergency, for human beings and for the natural world that sustains us all. In this one hour panel, we bring together a scientist, a social scientist, an environmental studies scholar, and a film director to talk about how their work takes up climate change and the challenges it presents. The aim is to invite reflection on how we can understand and mitigate climate change, from the perspective of two scientists, a social scientist and a filmmaker working on climate change.

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### Panel

**Dr. Laura McKinnon** (Biology, Glendon) examines the ecology and evolution of migratory birds. Her work examines how the potential reproductive benefits of migration may be threatened by climate change, in studies of the growth and survival of offspring in a changing arctic climate.

**Dr. Joanna Robinson** (Sociology, Glendon) is an expert in environmental politics, climate change and social movements. Among other works, she recently co-edited the Routledge Handbook on the Green New Deal, which examines this major policy initiative across different national contexts and in the global economic system.

**Shabnam Sukhdev** is an Indo-Canadian filmmaker and educator with a double major in psychology and sociology in her undergraduate studies, and a B.Ed in special education. Driven by a strong social conscience, her films revolve around core issues of identity and culture, feminism and sexuality, migration and mental health. Her film *Earth Crusader* highlights the sustainability ideology of self-taught architect and environmentalist Didi Contractor.

**Dr. Byomkesh Talukder** is the inaugural Planetary Health Fellow (Dahdaleh Institute for Global Health Research), where he works at the intersection of health, sustainable development, climate change, food and agriculture. His research models the health impacts of climate change related extreme weather events.

Chaired by **Dr. Elaine Coburn**, Director of the Centre for Feminist Research

# THE SCIENCE, SOCIAL SCIENCE AND ART OF CLIMATE CHANGE\*

"Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred. Human-caused climate change is already affecting many weather and climate extremes in every region across the globe. This has led to widespread adverse impacts and related losses and damages to nature and people. Vulnerable communities who have historically contributed the least to current climate change are disproportionately affected."

This is one of the sober assessments in the 2023 Intergovernmental Panel on Climate Change synthesis report. How can we grapple with these changes in climate, and the consequences for nature and for people, especially the most vulnerable among us?



As an ecologist who is interested in the effects of climate change on migratory birds, Dr. Laura McKinnon's research aims to document how the warming of the Arctic and sub-Arctic regions are affecting arctic birds. Effects of climate change are not always easy to detect. Though global warming may result in changes in availability of food sources for birds, Dr. McKinnon explained, the warmer weather could also reduce energy requirements. Not only are birds facing potential changes in resources, they are also facing potential changes in predation pressure as some predators, such as the red fox, expand their range further north. Researchers can collect data to provide insight into how bird species may cope with these changes, but "If we want to challenge climate change and protect migrant bird populations," Dr. McKinnon emphasized, "it will take more than scientists studying what is happening to them. We need collective conservation efforts that tackle the social, political and environmental aspects of climate change."

For Dr. Byomkesh Talukder, climate change has effects that can be measured in changes to nature and to

human communities, where his own research in Bangladesh, shows the wide-ranging consequences of rising oceans and the salination of fresh water rivers. Fresh water fish, once important to local diets, do not survive in the salinated water. High blood pressure in adult men and women, as well as miscarriages in women, are some of the more immediate health consequences. But communities are affected in other ways. "In particular, women are suffering from miscarriages" Dr. Talukder notes, "and their mental health is also suffering, since they now must travel and wait long hours for access to fresh water, which we all need to survive." Grappling with climate change means taking up these complexities, which affect both local ecological systems and the human communities that depend on them for survival.


In her work on the Green New Deal, sociologist Dr. Joanna Robinson emphasizes that taking up the challenges of climate change is necessary for life to continue: the stakes cannot be overstated for human beings and for many other forms of life. There are solutions, however, especially as the consensus shifts to recognize the urgency of climate change. "We can

support a shift to a greener economy, not just through new technologies” Dr. Robinson argues, “but by expanding those parts of the economy that have always been green, like the caring and service professions.” Best practices from around the world can be taken up anywhere, for instance, through policies that centre measures of well-being as central to political decision-making, as in Aotearoa/New Zealand, rather than a narrow focus on economic growth. At its best, climate change movements can bring about transformations that will enable a livable planet, but also a more equitable one. “In places like Canada, Indigenous knowledges are a critical to challenging climate change” Dr. Robinson emphasized, “and to creating more just relationships.”

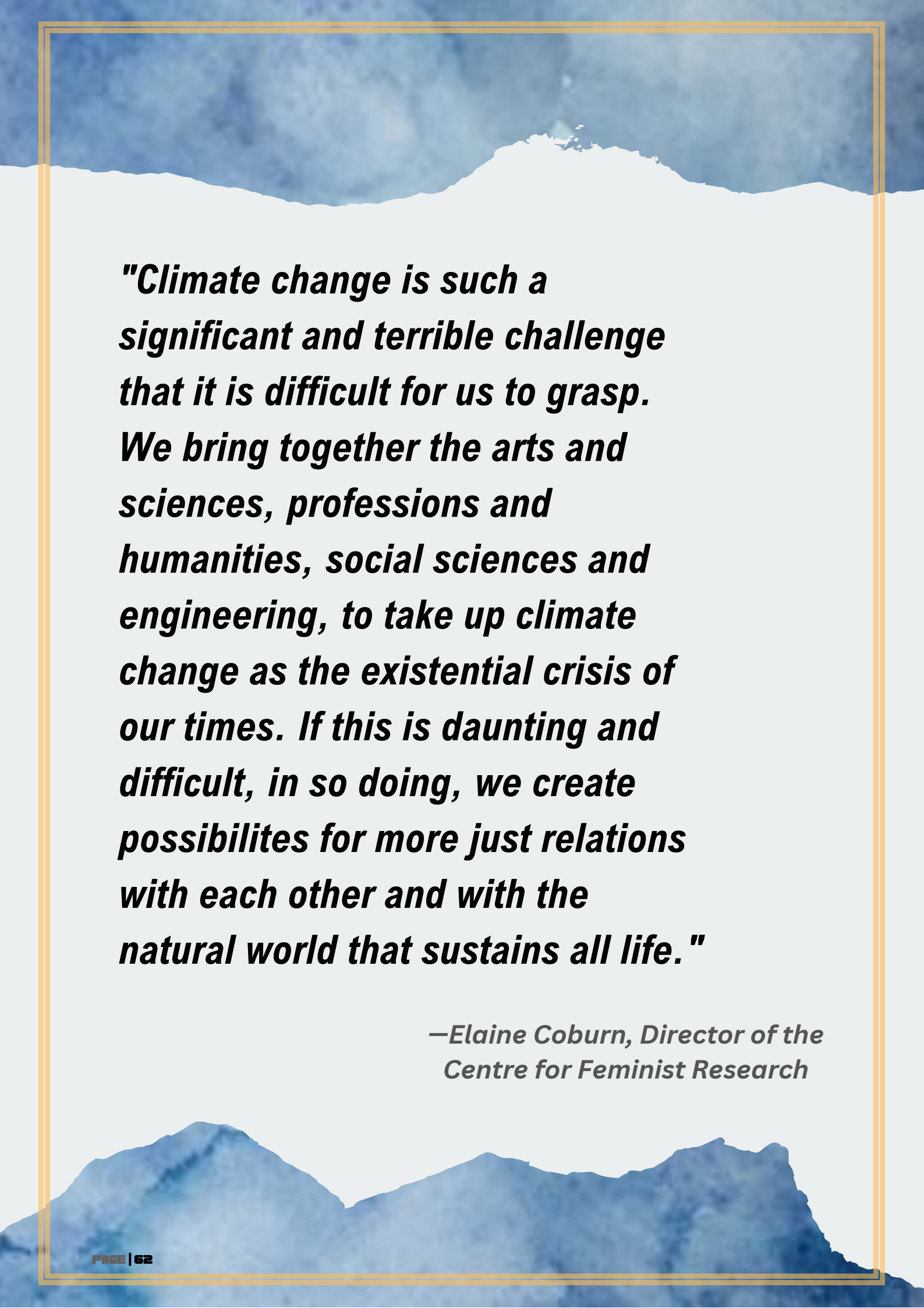
Filmmaker Shabnam Sukhdev presented a short clip from her film, *Earth Crusader*, which invites us to listen to the late Didi Contractor. A German American urban designer who lived most of her life in India, Contractor lived her ecological commitments in the buildings that she created and in her own home. Contractor is blunt in her assessment of

the challenges of living ecologically, “It’s very difficult to walk your talk, because it’s set up against you.” Nonetheless, sustainable ways of living are worth striving for, she emphasized, in work and in life. Contractor created beautiful, functional and ecological buildings and lived her own life without waste, to be respectful to the planet and to future generations. “A place in heaven, for me, is the here and now” Contractor added, “And it is in doing small things carefully that we learn to do large things”. For Sukhdev, Contractor is a vital reminder that we have choices and that we can choose to live, not just for immediate needs and wants, but in ways that are responsible to life now and in the years to come. As Contractor observed about Mahatma Gandhi: “He made his decision keeping in mind the weakest members of society, and to me, the weakest members are those who are yet unborn.”

As the latest IPCC report reminds us, climate change is already with us and creating serious harms to nature and to people. Given the crisis we face, all four of the speakers emphasized the importance

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of acting where you are and with what you know. We can do this through the sciences, the social sciences and the arts, and by listening to and working across disciplines and knowledge traditions. Given the complexities of climate change, all the different ways we understand the world must be mobilized, not for knowledges sake but to galvanize meaningful action now. ●



***"Climate change is such a significant and terrible challenge that it is difficult for us to grasp. We bring together the arts and sciences, professions and humanities, social sciences and engineering, to take up climate change as the existential crisis of our times. If this is daunting and difficult, in so doing, we create possibilities for more just relations with each other and with the natural world that sustains all life."***

***—Elaine Coburn, Director of the  
Centre for Feminist Research***