

# UBC President's Roundtable on Climate Action

*Summary Report of Ideas from the July 18<sup>th</sup> Roundtable*

November 2018



# UBC President’s Roundtable on Climate Action: Summary Report of Ideas

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# Message from Prof. Santa J. Ono

Dear friends and collaborators,

It was a pleasure meeting you at the *UBC President's Roundtable on Climate Action* earlier this summer. Thank you for joining us, for sharing your perspectives, and for your dedication to achieving climate action in our region.

The Roundtable focused on how we can work together across sectors – universities, businesses, non-profits, and governments – to build resilient partnerships for climate action. It followed a commitment UBC made earlier this year as a member of the University Climate Change Coalition, or UC3. Alongside a growing coalition of 18 universities from across North America, we pledged to convene local actors and work to advance multi-sector collaboration.

The Roundtable was a first step in that process. On July 18<sup>th</sup>, experts and practitioners from UBC and across Metro Vancouver came together to surface common challenges and explore and activate collaborative solutions. This report seeks to capture the major themes of our discussion, and to forecast next steps we can take together.

On Page 12, we share UBC's plans to move the conversation toward action. For its part, the University commits to:

- Convene the region on pressing climate-related topics to advance cross-sectoral alignment and collaboration;
- Strengthen existing opportunities and identify new pathways to support research partnerships and knowledge mobilization;
- Support the student-led Climate Hub project, which will map and connect actors and projects at UBC and across Metro Vancouver; and
- Continue to share regional models, successes and learnings with other jurisdictions through the University Climate Change Coalition (UC3).

I look forward to continuing this important work together.

Sincerely,



Prof. Santa J. Ono  
President and Vice Chancellor, University of British Columbia

# Background

On July 18<sup>th</sup>, 2018, UBC President and Vice-Chancellor Santa J. Ono hosted the *UBC President's Roundtable: Building Resilient Partnerships for Climate Action*. The Roundtable convened business, government, utility and non-profit leadership, climate researchers, and UBC students and senior leaders to explore barriers to and new opportunities for collective action on climate change across the Metro Vancouver region.

The Roundtable was facilitated by Peter Robinson, owner of Hedgerow Farms, former Executive Director of the David Suzuki Foundation, and former CEO of Mountain Equipment Co-op and BC Housing. More than forty participants attended from UBC and across the region (see Appendix II for full participant list).

The conversation unfolded in three parts:

Part I. Perspectives: From your perspective, what key challenges or barriers does the Metro Vancouver region face in achieving its climate action commitments?

Part II. Partnerships: How can partnerships help overcome these challenges and barriers? In what areas are partnerships needed? Who needs to be at the table?

Part III. Connect: Given our discussion so far, how can UBC support strong regional partnerships and increase capability to address these challenges?

This report seeks to capture the voices and ideas of Roundtable participants, all respected experts in their own right. It is intended to be a high-level summary of the conversation that was had, to inform both individual and collaborative planning for next steps.

The report also forecasts a path forward for UBC and the many partners and collaborators present. It contains five commitments from UBC for next steps, and ends with three appendices: a list of research topics and ideas shared by Roundtable participants; a full list of Roundtable participants; and an index of UBC's climate-related researchers by faculty.

# What we Heard: Ideas from the Roundtable

## Part I. Perspectives

### “What key challenges or barriers does the Metro Vancouver region face in achieving its climate action commitments?”

#### Challenge #1 Attracting capital and incentivizing investment

*Some specific elements of this challenge, as expressed by Roundtable participants, included:*

- New revenue sources needed to fund the implementation of clean technologies. For example, there is currently insufficient private investment or public funding available to build out the electric charging infrastructure needed to transition public transit fleets to low- or no-emissions vehicles.
- Tension between achieving targets in existing climate plans and ensuring British Columbia is an attractive place to invest.
- Need to better understand what is driving capital in the global economy, so we can avoid stranded capital assets.
- Need to better understand the effectiveness of policies aimed at regulating production (versus managing consumption), especially their impacts on the cost of business in the province.

#### Challenge #2 Shifting individual and business understandings and behaviour

*Some specific elements of this challenge, as expressed by Roundtable participants, included:*

- Motivating individuals, businesses and organizations to change their behaviour and adapt more sustainable habits and lifestyles.
- The economic burden of reducing emissions, including lack of incentive funds for small and medium-sized business.
- Dominant frames of climate change and climate solutions not working to motivate behaviour change. (“Crisis” frame fails to motivate over time and may scare people away; “Return on Investment (ROI)” frame puts focus on the cost of action while ignoring the cost of inaction.)
- Need for new and more effective ways to share examples of solutions and communicate a strong, inclusive vision of where we’re going.
- How to alleviate transition anxiety, especially for workers who fear job losses and businesses/industries that fear instability.
- Increasingly polarized debate (e.g. economy vs. environment) that discourages the collaborative solutions we need.

**Challenge #3**  
**Election cycles,**  
**jurisdictional**  
**challenges, and**  
**political will**

*Some specific elements of this challenge, as expressed by Roundtable participants, included:*

- Election cycle disincentivizes risk-taking and bold action among publicly elected officials.
- The large number of municipalities within the Metro Vancouver region makes it difficult to pursue a unified regional vision.
- Metro Vancouver mandate and policy effectiveness need to be strengthened.
- Disagreement about jurisdictional authority between different levels of government.
- Varying policy landscapes and priorities across Federal, Provincial and Municipal jurisdictions.
- Policymakers tend to respond on a crisis-by-crisis basis, rather than planning for climate change as the “new normal.”

**Challenge #4**  
**Working together**  
**across regions,**  
**jurisdictions and**  
**sectors**

*Some specific elements of this challenge, as expressed by Roundtable participants, included:*

- Decision-making in silos. The Lower Mainland being perceived as disconnected from the rest of the province, Canada and beyond, despite economic, policy, and environmental interdependence.
- How to mitigate the environmental impact of neighbouring regions that are not aggressively pursuing climate action.
- How to support or influence climate action in other regions/ jurisdictions.
- Potential for our climate action goals to negatively impact industries, economies and workers in rural B.C.
- How to tackle the problem without alienating a portion of our population.
- In Metro Vancouver, difficulty coordinating and collaborating across and within sectors.
- Partnerships are often ad-hoc and project-based, making it hard to see the big picture.
- How to get from partnership to action.
- Government, industry and non-profit partners often need research and information faster than universities can produce it.

**Challenge #5**  
**Managing**  
**concurrent and**  
**competing regional**  
**priorities**

*Some specific elements of this challenge, as expressed by Roundtable participants, included:*

- How to achieve our climate action goals without negatively impacting B.C.'s economy, especially natural resource sectors and related jobs.
- How to ensure increasing energy costs do not make BC industries and businesses uncompetitive in national and global markets?
- How to communicate the costs of *not* taking climate action. British Columbia's business and resource industries are affected by the impacts of climate change (e.g. impact of wildfires on tourism and overall economy).
- Population growth: How to respond to increased demand for buildings, transportation and energy, without increasing emissions?

- **Affordability:** How to attract talent to achieve climate goals when the cost of living is so high. How to change individual behaviour when many are struggling to get by financially.

## Part II. Partnerships

### “How can partnerships help overcome these challenges and barriers?”

In Part II of the conversation, Roundtable participants considered how partnerships could help solve the challenges and barriers facing Metro Vancouver. Opportunities identified are summarized below.

#### *Partnerships could allow for...*

- Risk to be shared across multiple partners, especially risk associated with capital investment.
- Greater cross-jurisdictional and cross-sector coordination of climate action goals and plans.
- Stronger teams with more diverse skillsets and perspectives.
- The efforts of individual organizations to be connected and thereby strengthened.
- Advocacy efforts to be amplified, particularly for favorable public policies or regulatory regimes.
- New pathways for Indigenous knowledge to inform public and private decision-making processes and outcomes.
- Links to be formed between different regions (e.g. rural and urban, national and international).
- Links to be formed within sectors, to make partnership with other sectors more straightforward (e.g. an alliance of local universities to coordinate research partnerships with external organizations).
- Unified, inclusive action, mitigating alienation of certain populations and interest groups.
- The inclusion of youth to mobilize action.
- Solutions that reduce inequalities rather than widen the gap, recognizing that climate change has disproportionate impacts on marginalized communities, both locally and globally.

### “In what areas are partnerships needed?”

Participants were then invited to consider the areas in which partnerships are most needed. Five core areas were identified. Within each core areas, participants began to explore specific opportunities and, in some cases, necessary players and potential partners.

#### *Partnerships are needed to...*

#### **1. Strengthen investments in clean technologies (by sharing risk across multiple sectors)**

##### *Suggested opportunities in this area included:*

- UBC developing further partnerships to **test business models** for clean technology.
- Developing new **funding for electric vehicle charging infrastructure.**



## 2. Reduce emissions at their sources

*Suggested opportunities in this area included:*

- Working with TransLink to develop and implement the **Regional Transportation Strategy**.
- Working collaboratively with Metro Vancouver to update the **Regional Growth Strategy** and the **Climate 2050 Strategic Framework**.
- Working with regional airports to **reduce air travel emissions**, which are not currently counted towards regional emissions. (See Dr. Simon Donner's [recent PICS study](#) on this topic).
- Work with Climate Smart to understand the impacts and potential of **engaging small- and medium-sized business**.
- Exploring ways to enact **economic incentives** for emissions reduction.
- Building awareness among and influencing the **behaviour of consumers**.
- Considering new innovation and partnership opportunities with the **natural gas industry**.

## 3. Support collaborative research and innovation

*Suggested opportunities in this area included:*

- More support for **research partnerships** between universities and private, public, and non-profit partners, including funding, partnership development support, and better information for young researchers and for external partners.
- **Coordinating local universities** to streamline partnership opportunities and information for non-academic partners.
- Improving supports for and extending the work of **existing partnerships and projects**; for example, research on sea level rise to support work of Fraser Basin Council.
- **New collaborative research** to support the needs and priorities of community-based actors (see *Appendix I for some research ideas that were suggested by Roundtable participants*).

## 4. Better understand how to shift human behaviour, and operationalize effective strategies

*Suggested opportunities in this area included:*

- Helping individuals and decision-makers **comprehend climate change**.
- **Changing the frame** from the cost of action the cost of *inaction*. Help people understand the cost of *inaction*
- Working with K-12 schools and universities to **educate children and youth about climate solutions**.

## 5. Align regional priorities and coordinate efforts across sectors

*Suggested opportunities in this area included:*

- **Convening the region** to align priorities and coordinate action. UBC was suggested as a potential convener of cross-sectoral partners, including other regional universities. Some suggested themes were:
  - **Sea level rise.** UBC was identified as a potential convener, with participation from key stakeholders including the Fraser Basin Council, Musqueam and other local First Nations, municipal governments, and UBC researchers. (A particular study relevant to this topic is [Dr. Kees Lokman's](#) living breakwater study.)
  - **Food security.** (Important to engage UBC Land and Food Systems and local first nations.)
- Establishing the **UBC Climate Hub** – a dedicated space for climate change work that connects UBC staff, faculty, students, and multi-sector actors from the broader community. An initial Climate Hub project is to build an **asset map** of climate-related activities at UBC and across the region. (The Climate Hub is led by the UBC Student's Sustainability Collective with support from UBC and regional partners).

### “Who needs to be at the table?”

Roundtable participants agreed cross-sectoral collaboration with public, private and NGO partners is key to advancing the region's climate action goals. Participants stressed the importance of including and working with specific communities within these sectors: Indigenous communities and governments, youth, universities, global partners and networks (e.g. the International Energy Agency, or efforts from the COP in Bonn), urban and rural British Columbians, nation-wide partners, and small and medium-sized business.

Within UBC, participants stressed a need for multidisciplinary action with expertise represented from the sciences and applied sciences, arts, humanities, and professional schools.

### Thoughts about effective partnerships

While the question was not explicitly asked, many participants also offered their perspectives on what elements are needed for a partnership to be effective; in other words, *how to work together*.

*According to the insights of Roundtable participants, effective and mutually beneficial partnerships are often...*

- Action-oriented and focused on solutions
- Built on relationships, collaborations and partnerships that are already in place (rather than starting something completely new)
- Communicative
- Coordinated (rather than ad-hoc)
- Deliberative and thoughtful about process
- Focused on incremental change
- Galvanized around clear goals and outcomes
- Inclusive of many different perspectives, sectors, and communities
- Inclusive of all partners at every stage, from project scoping right through to solutions
- Open to changing plans
- Accepting of and receptive of different perspectives
- Composed of “unlikely allies” with a common goal (e.g. Transit Plebiscite “yes” campaign)

## Part III: Connect

### “How can UBC support strong regional partnerships and increase capability to address these challenges?”

Participants offered suggestions for how UBC could support partnerships and help advance the region’s climate action goals. These suggestions fell across six general categories:

#### Convene the Region and Beyond

UBC could convene further cross-sectoral conversations aimed at increasing regional alignment and collaboration in particular areas. Such conversations could be in part focused on contributions that UBC can make to support the ongoing work of regional partners, and/or identifying research areas and partnerships.

UBC could leverage its unique position as a leading post-secondary research institution to connect with and coordinate other local universities, to connect regional players with youth, and to bridge action on clean energy and climate action across the province.

#### Engage beyond the region and province

Of Canada’s total emissions in 2015, Metro Vancouver comprised only two per cent. The region must engage nationally and internationally to have a significant impact. For UBC, this could involve participating in policy consultations, educating and engaging the university community to be active global citizens, engaging in cross-Canada and international partnerships, and divesting from fossil fuels.

#### Map and Connect the Region’s Assets

UBC could help map the connections to better understand who is doing what? Who should be doing what? Where are the gaps? This process will help identify promising partnerships and create new pathways for citizen engagement.

#### Mobilize Knowledge

UBC could do more to help students and the public understand promising solutions, such as renewable natural gas in Surrey or sustainable demonstration facilities and buildings at UBC. UBC must communicate and connect its climate solutions work underway with the rest of the region.

#### Provide funding, support and resources for partnership development

UBC could develop new supports, funding and resources to facilitate and sustain effective partnerships. For example, see German government program “Giz,” which supports multi-stakeholder partnerships for the UN Sustainable Development Goals.

#### Research & Test

UBC can produce research that supports innovation and implementation across the region and beyond, including the work of existing partnerships. Because it is larger than many Metro Vancouver municipalities, but doesn’t have the pressures of the electoral cycle, UBC can take risks and test promising solutions. UBC can test anything from technologies to business models, and ensure regional priorities inform our research agendas. *(See Appendix 1 for research ideas shared at the Roundtable; see Appendix 3 for index of UBC researchers by topic area.)*

## Next steps: UBC's Commitments

Informed by the challenges, needs and opportunities identified at the Roundtable, UBC is committing the following four actions. We welcome your feedback, and will communicate opportunities for collaboration and involvement as next steps unfold.

1. Convene the region on pressing climate-related topics to advance cross-sectoral alignment and collaboration

- Within the next year, UBC will host three topic-specific convenings open to Roundtable participants and additional UBC- and community-based actors (including from other universities) .
- Proposed topics for the first year are: (1) Transportation; (2) Adaptation and resiliency; (3) Cross-jurisdictional resource mobilization.

2. Strengthen existing opportunities and identify new pathways to support research partnerships and knowledge mobilization

- UBC will review opportunities to better support partnerships for climate-related research and demonstration projects.
- UBC will share outcomes of climate research, including research from its demonstration facilities, to inform future projects and policy.
- UBC will develop a communications strategy to promote opportunities for partnership and collaboration.

3. Support the student-led Climate Hub project, which will map and connect actors and projects at UBC and across Metro Vancouver

- UBC will support the establishment of the student-led Climate Hub, with a financial contribution and through mentorship and guidance for student leaders.

4. Continue to share regional models, successes and learnings with other jurisdictions through the University Climate Change Coalition (UC3)

- UBC will continue to share Roundtable outcomes and regional strategies with UC3 members (18+ universities across North America).
- UBC delegation including President Ono will attend the Sept 2018 Global Climate Action Summit in San Francisco.
- UBC will explore opportunities to host future UC3 gathering, including opportunities for regional partners to participate.

# Appendix I: Research Ideas and Suggestions

Below is a list of research areas noted to be of interest to Roundtable participants. In some cases, extensive research is already available – the true need is for accessible and effective communications of research findings and products. In other cases, there is a need for new research projects to emerge.

## *Ideas for research included...*

- How GHG emissions are accounted for, particularly an analysis of consumption-based emissions and trade-offs associated with policy focus on production-based emissions.
- Effective messaging about climate change. (See Yale [research on climate communication](#).)
- Messaging around crisis and how to motivate people in crisis mode.
- How to help policymakers and the public not just see climate change but *comprehend it*. (See California example. California no longer implements ‘emergency’ response to forest fires and floods, but rather considers it part of regular operations. Is this an indicator that they comprehend the scale of change that is coming? What are indicators of comprehension in BC?)
- Practical, pragmatic, incremental solutions that make a difference.
- Mobilize knowledge about climate innovations.
- How does/will climate change affect Indigenous communities’ lifestyle, rights, and culture, with specific focus on food security?
- Using traditional Indigenous knowledge to understand impacts of climate change and resource industries, e.g. forestry practices; rising sea levels.
- Modeling future costs of inaction, for example, a model that offers business and community insight into future scenarios.
- Do policy proposals have confirmation bias? (See University of Calgary Public Policy School analysis of production and consumption confirmation and accounting.)
- How to account for land use in positive/negative emissions counts in BC and Canada (see Norway example)?
- Smart and Connected Cities: How to create smart mobility, smart energy use.
- Detailed studies of cycling routes and improved cycling routes are needed. Would covered bike routes improve the number of winter commuter cyclists?
- More research and work on green buildings and construction.
- Consider the cumulative costs of taxes and regulations and new policy, and their effects on the economy.
- How can we actualize a “just transition” to a green economy (the idea that the transition to renewable energy should accommodate fossil fuel workers in securing good jobs in the new economy)?
- More research and knowledge mobilization on the impacts of climate change on human health.

# Appendix II: List of Participants

Representatives of the following organizations were active participants at the Roundtable:

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BC Business Council
BC Hydro
City of Surrey
City of Vancouver
Clean Energy BC
Climate Smart Business Inc.
David Suzuki Foundation
First Nations Energy and Mining Council
FortisBC
Metro Vancouver
Musqueam Indian Band
Pacific Institute for Climate Solutions
Province of British Columbia
TransLink
UBC Campus + Community Planning
UBC Clean Energy Research Centre
UBC Faculty of Applied Science
UBC Faculty of Land and Food Systems
UBC Faculty of Science
UBC Institute for the Oceans and Fisheries
UBC School of Public Policy and Global Affairs
UBC Sustainability Initiative
UBC Sustainability Student Collective
UBC Provost & VP Academic
UBC Research + Innovation
Urban Development Institute

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**Representatives of the following organizations were present in active listening seats:**

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- BC Hydro
- 
- City of Vancouver
- 
- FortisBC
- 
- Metro Vancouver
- 
- Pacific Institute for Climate Solutions
- 
- Pembina Institute
- 
- Province of British Columbia
- 
- TransLink
- 
- UBC Campus + Community Planning
- 
- UBC Community Engagement
- 
- UBC Energy and Water Services
- 
- UBC External Relations
- 
- UBC Government Relations
- 
- UBC Infrastructure Development
- 
- UBC Sustainability Initiative
- 
- UBC Sustainability Student Collective / UBC 350
-

# Appendix III: Index of UBC's Climate Researchers by Faculty

## Faculty of Arts

### Patrick Baylis (Economics)

pbaylis@mail.ubc.ca | 604-704-4129

<https://economics.ubc.ca/faculty-and-staff/patrick-baylis/>

*Research Areas: Climate Changes and Impacts; Economic Planning of Energy; environmental economics; climate change economics; energy economics*

### Michael Byers (Political Science)

michael.byers@ubc.ca | 604-822-3049 |

<https://politics.ubc.ca/persons/michael-byers/>

*Research Areas: Human rights, civil liberties, arms control, nuclear, treaties, environment, climate change, Global politics, international law*

### Andreas Christen (Geography)

andreas.christen@ubc.ca | 604-822-6620

<http://ibis.geog.ubc.ca/~achristn/christen.html>

*Research Areas: Greenhouse gas emissions in complex ecosystems; energy and water exchange in urban ecosystems; sustainable design and management practices for cities*

### Simon Donner (Geography)

simon.donner@ubc.ca | 604-822-6959

<https://www.geog.ubc.ca/persons/simon-donner/>

*Research Areas: Climate Changes and Impacts, Prediction and Climatic Modeling, Marine Environment; Climate change science, Climate policy, Science communication, Coastal Ecosystems*

### Brett Eaton (Geography)

brett.eaton@ubc.ca | 604-822-2257

<https://www.geog.ubc.ca/persons/brett-eaton/>

*Research Areas: Rivers and climate change*

### Kevin Fisher (Classical, Near Eastern and Religious Studies)

kevin.fisher@ubc.ca | 604-822-9139

<https://cnrs.ubc.ca/people/kevin-fisher/>

*Research Areas: Ecological impact of human activities, the socioeconomic and political impact of climate change, the long-term health consequences of human dietary practices and subsistence strategies, and the role of cultural conflict in affecting social and political change*

### Kathryn Harrison (Political Science)

kathryn.harrison@ubc.ca | 604-822-4922

<https://politics.ubc.ca/persons/kathryn-harrison/>

*Research Areas: Environmental politics, environmental policy, climate change, global warming, climate change policy*

### Gregory Henry (Geography)

greg.henry@ubc.ca | 604-822-2985

<https://www.geog.ubc.ca/persons/greg-henry/>

*Research Areas: consequences of environmental change, driven by the changing climate, on Arctic tundra ecosystems; help Arctic communities to understand and interpret observations of environmental change by elders through shared field and class experiences and participation in science-based projects on berry producing shrub species*

### Michele Koppes (Geography)

michele.koppes@geog.ubc.ca | 604-822-4896

<https://www.geog.ubc.ca/persons/michele-koppes/>

*Research Areas: Climate change, glaciers, natural hazards, landscape change, polar regions, ice-ocean interactions*



### **Renisa Mawani (Sociology)**

renisa@mail.ubc.ca | 604-822-6494

<https://soci.ubc.ca/persons/renisa-mawani/>

*Research Areas: Colonial Legal History; Critical Theory; Race and Racism; Oceans and Maritime Worlds; Focused on global food production, climate change, and forms of war, this project draws from anticolonial writings and postcolonial theory and places them in conversation with the philosophy of time, movement, and change in the work Henri Bergson.*

### **Guy Stecklov (Sociology)**

guy.stecklov@ubc.ca | 604-822-2660

<https://soci.ubc.ca/persons/guy-stecklov/>

*Research Areas: Impacts of development and climate change on age-specific migration patterns in sub-Saharan Africa; the relationship between inequality and an array of social and demographic outcomes*

### **Lisa Sundstrom (Political Science)**

lisa.sundstrom@ubc.ca | 604-822-6331

<https://politics.ubc.ca/persons/lisa-sundstrom/>

*Research Areas: Democratization, human rights, gender politics, the politics of international democracy assistance, and NGO activism in both domestic and transnational politics; comparative climate policy*

### **Yves Tiberghien (Political Science)**

yves.tiberghien@ubc.ca

<https://politics.ubc.ca/persons/yves-tiberghien/>

*Research Areas: Global governance, global climate change politics, and on the governance of agricultural biotechnology in China and Japan; trade-offs between economic policy goals and public goods such as biodiversity protection, transparency in food policy, and climate change issues*

### **David Tindall (Sociology)**

tindall@mail.ubc.ca | 604-822-2363

<https://soci.ubc.ca/persons/david-tindall/>

*Research Areas: Environmental movement, social movements, environmental protest, social protest, social networks, social aspects of climate change, Aboriginal protest about natural resources and environmental issues, environmental politics, environmental attitudes, environmental values, opinion about the environment, protest about pipelines, protest about oil sands, protest about tar sands, wilderness, wilderness preservation, use of social media in social protest, use of social media in social movements, social media and social networks, social aspects of forestry, climate change policy, news media, social psychology of environmental issues, environmental sociology, social research methods, aboriginal forestry, social science*

### **Jennifer Williams (Geography)**

jennifer.williams@geog.ubc.ca | 604-827-1592

<https://www.geog.ubc.ca/persons/jennifer-williams/>

*Research Areas: Ecological and evolutionary processes that shape population dynamics and species interactions, particularly in a spatial context; process-based understanding of the conservation and management of threatened and invasive species; spread of populations through fragmented landscapes and life history evolution of reproductive strategies under changing climates*

## **Faculty of Applied Science**

### **Stephanie Chang (Community and Regional Planning)**

stephanie.chang@ubc.ca

<https://scarp.ubc.ca/people/stephanie-chang>

*Research Areas: Disaster and risk management planning; Natural hazards, climate change; Community resilience; Urban infrastructure systems*

### **Amanda Giang (Engineering)**

amanda.giang@ubc.ca

<http://ires.ubc.ca/person/amanda-giang/>

*Research Areas: Atmospheric Pollutants; Climate Changes and Impacts; Chemical Pollutants; Social and Cultural Factors of Environmental Protection; Public Policies*

### **Kees Lokman (Architecture and Landscape Architecture)**

klokman@sala.ubc.ca | 604-827-3143

<https://sala.ubc.ca/people/faculty/kees-lokman>

*Research Areas: Design challenges related to water and food shortages; depleting energy resources; climate change; ongoing urbanization*

### **Maged Senbel (Community and Regional Planning)**

maged.senbel@ubc.ca | 604-822-9158

<https://scarp.ubc.ca/people/maged-senbel>

*Research Areas: Urban design; environmental planning; climate change planning; public engagement; urban agriculture; multi-media; social media and youth engagement*

### **Mark Stevens (Community and Regional Planning)**

mark.stevens@ubc.ca | 604-822-0657

<https://scarp.ubc.ca/people/mark-stevens>

*Research Areas: Land use planning efforts, sustainable development; plan-making and implementation, growth management, natural hazard mitigation; municipal climate change planning in BC; environmental policy adoption*

### **Naomi Zimmerman (Engineering)**

nzimmerman@mech.ubc.ca | (604) 822-9433

<http://mech.ubc.ca/naomi-zimmerman>

*Research Areas: Development and application of real-world-based tools to quickly and quantitatively assess the impact of our policy and technology decisions on air pollution and climate outcomes, and to use the knowledge gained to support better environmental policy planning; climate change; air pollution; Understanding the impact of renewable energy technology in developing countries (e.g. solar*

*microgrids) on combined air, climate and socioeconomic outcomes*

## **Faculty of Forestry**

### **Sally Aitken (Forest and Conservation Sciences)**

sally.aitken@ubc.ca | 604-822-6020

<http://profiles.forestry.ubc.ca/person/sally-aitken/>

*Research Areas: Climate change; Ecological genetics; Conservation genetics*

### **Allan Carroll (Forest and Conservation Sciences)**

allan.carroll@ubc.ca | 604-822-3360

<http://profiles.forestry.ubc.ca/person/allan-carroll/>

*Research Areas: Role of climate change in the population dynamics and impacts of eruptive forest insects; Integrated management of forest insect populations*

### **Susan Grayston (Forest and Conservation Sciences)**

sue.grayston@ubc.ca | 604-822-5928

<http://profiles.forestry.ubc.ca/person/sue-grayston/>

*Research Areas: Climate change and soil C sequestration; Soil microbial community structure and function related to GHG emissions*

### **Robert Guy (Forest and Conservation Sciences)**

rob.guy@ubc.ca | 604-822-6023

<http://profiles.forestry.ubc.ca/person/robert-guy/>

*Research Areas: Climate change, ecology, forest biology, genomics, plant physiology, Forest regeneration and stock quality*

### **Shannon Hagerman (Forest Resources Management)**

shannon.hagerman@ubc.ca | 604-827-2625

<http://profiles.forestry.ubc.ca/person/shannon-hagerman/>

*Research Areas: Environmental Values; Politics of Knowledge; Social-Ecological Systems; Human-Dimensions of Conservation; Environmental Decision-Making and Policy; Climate Change Adaptation*

### **John Innes (Forest Resources Management)**

john.innes@ubc.ca | 604-822-3542

<http://profiles.forestry.ubc.ca/person/john-innes/>

*Research Areas: Plants and Forests, Climate Changes and Impacts; Forestry*

### **Harry Nelson (Forest Resources Management)**

harry.nelson@ubc.ca | 604-827-3478

<http://profiles.forestry.ubc.ca/person/harry-nelson/>

*Research Areas: Analyzing natural and environmental resource policy with an emphasis on forestry; developing new policy options that can help enhance the long-term sustainability of Canadian forests and the communities and businesses that rely upon them; Ecosystem Services could provide as an alternative business model for indigenous groups managing forest lands in BC; impacts of climate change on how we manage our forests and exploring adaptation options.*

### **Stephen Sheppard (Forest Resources Management)**

stephen.sheppard@ubc.ca | 604-822-6582

<http://profiles.forestry.ubc.ca/person/stephen-sheppard/>

*Research Areas: Climate change planning, outreach, and community engagement; visioning methods and visualization of climate change causes, impacts, and mitigation/adaptation; low-carbon future scenarios visualized in the CIRS' BC Hydro Decision Theatre; community energy planning, renewables, and energy literacy; public perceptions, aesthetics and sustainability; social aspects of forestry*

### **Guangyu Wang (Forest Resources Management)**

guangyu.wang@ubc.ca | 604-822-2681

<http://profiles.forestry.ubc.ca/person/guangyu-wang/>

*Research Areas: Business management, climate change, conservation, forest management, forest policy, land-use change*

### **Tongli Wang (Forest and Conservation Sciences)**

tongli.wang@ubc.ca | 604-822-1845

<http://profiles.forestry.ubc.ca/person/tongli-wang/>

*Research Areas: Developing climate models; modeling climatic niches of forest ecosystems and tree species, and projecting their shift under a changing climate; building climate response functions for tree populations; developing climate-based seed transfer systems based on genecology and genomics*

## **Faculty of Land and Food Systems**

### **Sumeet Gulati (Food, Nutrition and Health)**

sumeet.gulati@ubc.ca | 604-822-2144

<http://sumeetgulati.landfood.ubc.ca/>

*Research Areas: Tax Incentives for Hybrid or Electric Vehicles, Carbon Tax, Cap and Trade, Effectiveness of environmental policy, political economy of environmental and trade policy, international trade and its effect on the environment*

### **Jim Vercaemmen (Food, Nutrition and Health; Jointly appointed with the Sauder School of Business)**

james.vercaemmen@ubc.ca | 604-822-5667

<https://www.landfood.ubc.ca/jim-vercaemmen/>

*Research Areas: Agri-food markets, agri-environmental contracts, agri-risk and insurance, commodity futures markets, carbon markets*

## **Peter A. Allard School of Law**

### **Stepan Wood (Law)**

wood@allard.ubc.ca | 604-827-0441

<http://www.allard.ubc.ca/faculty-staff/stepan-wood>

*Research Areas: corporate social responsibility, sustainability, globalization, transnational governance, voluntary standards, climate change, environmental law*

## Faculty of Medicine

### William Bowie

bowie@mail.ubc.ca | 604-875-4147

<https://id.med.ubc.ca/person/william-bowie/>

*Research Areas: Climate change, environmental degradation, inequities and infection, Social, economic and environmental factors which put people at risk for infection*

## Sauder School of Business

### James Tansey (Centre for Sustainability and Social Innovation)

james.tansey@sauder.ubc.ca | 604-827-4443

[https://www.sauder.ubc.ca/Faculty/People/Faculty\\_Members/Tansey\\_James](https://www.sauder.ubc.ca/Faculty/People/Faculty_Members/Tansey_James)

*Research Areas: Emerging markets and institutions for carbon trading, Social determinants of health, GM crops and animals*

### James Vercaammen (Jointly appointed with the Faculty of Land and Food Systems)

james.vercaammen@ubc.ca | 604-822-5667

<https://www.landfood.ubc.ca/jim-vercaammen/>

*Research Areas: agri-food markets, agri-environmental contracts, agri-risk and insurance, commodity futures markets, carbon markets*

## Faculty of Science

### Amy Angert (Botany)

amy.angert@botany.ubc.ca | 604-827-3892

<https://www.botany.ubc.ca/people/amy-angert>

*Research Areas: Biodiversity and Biocomplexity, Biogeography, Ecological and Ecophysiological Processes; evolutionary ecology, population biology, biological responses to climate change, Conservation Biology*

### Allan Bertram (Chemistry)

bertram@chem.ubc.ca | 604-822-2113

<https://www.chem.ubc.ca/allan-bertram>

*Research Areas: Chemical and physical processes important in the atmosphere; atmospheric aerosol particles and the role they play in urban air pollution, climate change and atmospheric chemistry; to better understand the role of human activity on the Earth's atmosphere*

### Wai Cheung (Institute for the Oceans and Fisheries)

w.cheung@oceans.ubc.ca | 604-827-3756

<http://oceans.ubc.ca/william-cheung/>

*Research Areas: Impacts of fishing and climate change on marine ecosystems and their goods and services*

### Villy Christensen (Institute for the Oceans and Fisheries)

v.christensen@oceans.ubc.ca | 604-822-5751

<http://oceans.ubc.ca/villy-christensen/>

*Research Areas: Ecosystem modeling, global ocean, IPBES, Ecopath, Ecosystem modeling of aquatic ecosystems, management systems that are resilient to climate change, policy*

### Gregory Dipple (Earth, Ocean and Atmospheric Sciences)

gdipple@eos.ubc.ca | 604-827-0653

<https://www.eoas.ubc.ca/people/gregorydipple>

*Research Areas: Carbon sequestration, mitigation of greenhouse gas emissions*

### Hadi Dowlatabadi (Institute for Resources, Environment and Sustainability)

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<http://ires.ubc.ca/person/hadi-dowlatabadi/>

*Research Areas: Energy Production, Economic Planning of Energy, Climate Changes and Impacts, Transportation Systems; The systematic study of systems at the interface of humans, nature, technology and policy*

**Roger Francois (Earth, Ocean and Atmospheric Sciences)**

rfrancois@eos.ubc.ca | 604-822-6355

<https://www.eoas.ubc.ca/people/rogerfrancois>

*Research Areas: Climate Change; Application of geochemistry to problems of paleoceanography; carbon and nitrogen isotope geochemistry, and trace element proxies; Water column radiochemistry to constrain abyssal circulation and scavenging*

**Christopher Harley (Zoology)**

harley@zoology.ubc.ca | 604-827-3431

<http://www.zoology.ubc.ca/person/harley>

*Research Areas: Community ecology, climate change*

**Mark Johnson (Institute for Resources, Environment and Sustainability)**

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<http://ires.ubc.ca/person/mark-johnson/>

*Research Areas: Hydrological Cycle and Reservoirs, Land and Soil, Climate Changes and Impacts, Agriculture, Ecology and Quality of the Environment, Running Water Hydrosystem, Fresh Water, Ground Water and Water Tables; Ecohydrology, Carbon cycle, land use, Water and Sustainability, Biogeochemistry, data science*

**Milind Kandlikar (Institute for Resources, Environment, and Sustainability | Public Policy and Global Affairs; Jointly appointed with the Faculty of Arts)**

mkandlikar@ires.ubc.ca

<http://ires.ubc.ca/person/milind-kandlikar/>

*Research Areas: Climate Change, Air Pollution, Extended Producer Responsibility, Human Development, Agricultural Biotechnology, human development and global environment*

**Mary O'Connor (Zoology)**

oconnor@zoology.ubc.ca

<http://www.zoology.ubc.ca/person/oconnor>

*Research Areas: Climate change, ecology, environment*

**Evgeny Pakhomov (Earth, Ocean and Atmospheric Sciences)**

epakhamov@eoas.ubc.ca | 604-827-5564

<https://www.eoas.ubc.ca/people/evgenypakhomov>

*Research Areas: Biological oceanography; species ecology; ecosystem structure; variability and responses of marine ecosystems to climate change using stable isotopes, large-scale and retrospective analyses; land-sea interface*

**Navin Ramankutty (Institute for Resources, Environment, and Sustainability | Public Policy and Global Affairs; Jointly appointed with the Faculty of Arts)**

navin.ramankutty@ubc.ca

<http://ires.ubc.ca/person/navin-ramankutty/>

*Research Areas: Environment and Society, Agriculture, Climate Changes and Impacts; Global food security, Sustainable agriculture, Climate impacts, Land use change*

**Brian Wetton (Mathematics)**

wetton@math.ubc.ca | 604-822-5784

<https://www.math.ubc.ca/~wetton/>

*Research Areas: Modelling hydrogen fuel cells; computational models for an electro-dialysis system being designed for environmental clean-up; simulation tools to help in the exploration of designs and in the feasibility of scale-up and to explore things that can't be measured directly, such as the long-time climate change effects of global warming.*