

THE UNIVERSITY OF BRITISH COLUMBIA sustainability



# Annual Sustainability



# **ABOUT UBC**

The University of British Columbia (UBC) is a global centre for teaching, learning and research, consistently ranked among the top 20 public universities in the world and recently recognized as North America's most international university.

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

Our Indigenous Strategic Plan 2 advances our vision of becoming a leading university globally in the implementation of Indigenous peoples' human rights, and alongside UBC Okanagan's Declaration 2 is our response to the Truth and Reconciliation Commission's 94 calls to action.

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#### FOREWORD

UBC is an agent of change for sustainability, urgent climate action and a just society. As a public institution, UBC has a duty to act on scientific knowledge as a catalyst to accelerate sustainability and climate action in our communities.

This year, that responsibility reached our doorstep in the Okanagan. The McDougall Creek wildfire led to dangerously poor air quality, extreme heat, and eventually a full evacuation of our nearby Okanagan campus.

In response, our operational efforts to support the community demonstrated the same kind of care and attention we pay to teaching—by educating and empowering the sustainability leaders of tomorrow, and through research by exploring multiple avenues of enquiry into wildfire resilience. Our 'Living with Wildfire in the BC Southern Interior' research cluster is just one example among many included in this year's report.

### "As a public institution, UBC has a duty to act on scientific knowledge as a catalyst to accelerate sustainability and climate action in our communities."

UBC forged a global leadership position on sustainability because of our steadfast commitments over the past 20 years. So as we plan the decades ahead, sustainability and climate action are now infused as core principles: fundamental to Campus Vision 2050, UBC's long-term plan for the Vancouver campus; central to the Neighbourhood Climate Action Plan for residential communities at UBC Vancouver; at the heart of UBC's Climate Action Plan 2030 for both campuses; and embedded in the Okanagan Campus Plan Update, a new public planning process that will inform how the Okanagan campus will use its land over the next 20 years.

UBC occupies a unique position to advance sustainability and climate action, as an anchor institution in the community, a living lab for solutions, a beacon of hope for future generations, and a catalyst for positive change.

We look forward to working with you—students, faculty, staff, and community partners—to make a difference in our rapidly changing world.

LINDA NOWLAN Senior Director, Sustainability Hub

MICHAEL WHITE Associate Vice-President, Campus+Community Planning

ROB EINARSON



Associate Vice-President, Finance & Operations (UBC Okanagan)

#### SUSTAINABILITY PRIORITIES AND FRAMEWORKS

Sustainability is a broad topic, spanning and interconnecting a diverse range of ambitions, ideas, and disciplines. Below are some of the key priorities and frameworks through which UBC is advancing sustainability both on its campuses, and across society.

### Sustainable Development Goals

The UN 2030 Agenda for Sustainable Development provides a shared blueprint for peace and prosperity for people and the planet. At its heart are the 17 Sustainable Development Goals (SDGs); an urgent call for action by all countries in a global partnership. These goals are embedded within UBC's academic, operational, and community activities, and on each page of this report, a small banner of SDG 'icons' provide a visual reference to the connections between UBC's work, and one or more of the global goals.

### **UBC's Climate Emergency Response**

In response to the urgency of the climate crisis and student-led advocacy, UBC declared a Climate Emergency, developed a Climate Emergency Task Force (CETF) report, and assigned the Sustainability Hub to coordinate and convene the University's response. Look for ongoing updates at the following website. **DBC VANCOUVER | UBC OKANAGAN** 





### **UBC's Indigenous Strategic Plan**

Identifies reconciliation as a collective responsibility, a thread that runs through all areas of the university. In pursuit of sustainability, climate action and climate justice, UBC understands that protecting Indigenous rights is indelibly woven into the fabric of environmental protection and sustainability. As guests and settlers on Indigenous lands, we share an important responsibility for learning with and about our host Nations and strengthening these relationships.

### Justice, Equity, Diversity, Inclusion

Decisions about sustainability and climate action may (intentionally or not) exclude or underrepresent individuals or groups, denying them equitable access to power and resources. UBC's Strategic Equity andAnti-Racism (StEAR) Framework guides the implementation of existing equity and anti-racism plans, which intersect with sustainability at UBC across academic, operational, and community activities.

#### Wellbeing

### **Climate Action Plan 2030**

UBC has committed to a bold course of action to reduce greenhouse gas (GHG) emissions and increase resilience at both Vancouver and Okanagan campuses. Climate Action Plan 2030 encompasses both Operational Emissions, and the Extended Emissions related to commuting, food, business air travel, waste, and embodied carbon. Updates are embedded within this report. CUBC VANCOUVER | CUBC OKANAGAN

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Guided by the Okanagan Charter, UBC's Wellbeing Strategic Framework demonstrates an integrated commitment to embedding wellbeing across the university through culture and action, locally and globally. <sup>(2)</sup> UBC VANCOUVER | UBC OKANAGAN

### Land Use Plan, Biodiversity

UBC Vancouver's provincially-approved Land Use Plan includes commitments to identify, enhance and manage campus ecology and biodiversity, as well as other critical aspects of climate action, mitigation and adaptation. C UBC VANCOUVER

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### **UBC'S CLIMATE EMERGENCY RESPONSE**

The climate emergency is now, and UBC is committed to bringing our community together to confront this crisis. In particular, by highlighting urgent demands for climate justice. While this is a shared responsibility across UBC, the Sustainability Hub is responsible for coordinating, convening, and collaborating with climate action leaders across UBC and beyond. Some of the major cross-campus initiatives on climate at UBC are highlighted on this page.

# 30

events and workshops during Climate **Emergency Week** 

VANCOUVER

# 3rd

annual teach-in event on interrelated climate and justice issues

**OKANAGAN** 

### STRATEGIC PRIORITIES

- Climate Emergency Task Force Report features 9 strategic priorities based on input from 3,900+ students, staff, faculty, alumni, community members. C UBC VANCOUVER | UBC OKANAGAN
- Climate Action Plan 2030 targets a reduction in operational emissions of 85% in Vancouver and 65% at UBC Okanagan, and a 45% reduction in extended emissions at both by 2030. <sup>C</sup> UBC VANCOUVER | **UBC OKANAGAN**



### **UBC Sends Delegation to COP28**

### Centre for Climate Justice

Inaugural Annual Report and 2024 Strategic Plan describe the progress so far and roadmap ahead for the Centre for Climate Justice. C UBC VANCOUVER | UBC OKANAGAN

### Climate Solutions Research Collective

Created to support research collaborations across students and faculty. Read the first Climate Solutions Research Collective Annual Report. 🖸 UBC VANCOUVER | UBC OKANAGAN

### **IDCC Toolkit Launch!**

A summary of advice and reflections from people at UBC who have mobilized climate action in their units or departments. Features seven case studies from committee members who join forces to collaborate as part of the Inter-Departmental Climate Committee. C UBC VANCOUVER



Ten UBC students, faculty and staff attended the UN Climate Change Conference of the Parties (COP28). Following an open competitive process, the delegates were provided with 'Official Observer' badges. Read their reactions to the latest climate deal. 🗹 UBC **VANCOUVER | UBC OKANAGAN** 

# **Climate Emergency Week Features** Fire, Photography, and Furniture

Activities during the week sought to convene and energize communities of climate action at UBC. This year 30 events on campus hosted by 32 partners attracted students, faculty, staff and community partners. See highlights C UBC VANCOUVER

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# Climate Hub Facilitates Workshops, **Guest Lectures**

The student-staff led, campus-wide climate justice initiative delivered or supported:

- Peer workshops to 600+ youth
- Climate justice projects for local organizations including Tsawwassen First Nation, Environmental Youth Alliance, Sierra Club BC

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- 14 guest climate lectures
- New extreme weather wellbeing resources in five languages

Learn more. C UBC VANCOUVER

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### **CLIMATE EMERGENCY: MONITORING, EVALUATION AND LEARNING**

The Monitoring, Evaluation and Learning (MEL) framework supports accountability, transparency, and informed decision-making in UBC's efforts to address the climate emergency and advance climate justice through its core functions of teaching and research, and by reducing operational emissions. It encompasses quantitative and qualitative measures, and recognizes the need for ongoing learning and adaptation.

### RATIONALE

Conventional evaluation approaches are well-suited in assessing progress where outcomes are i) clearly defined, ii) there are limited number of variables influencing these outcomes, and iii) where causal linkages between a project's interventions and the goals are well understood. However, when measuring progress on a complex concept such as climate justice, conventional measurement can fail to predict the complicated and critical pathways for transformation.

One way to benefit from the rigour and transparency of conventional evaluation, while addressing its limitations, is to pair monitoring and evaluation with intentional and ongoing learning. This is the foundation of the MEL framework.

### **PROCESS: A CROSS-INSTITUTIONAL APPROACH**

The MEL framework was developed through an extensive literature review, survey of international best practices, analysis of university and local government frameworks on climate action and climate justice, regulatory commitments, and UBC's strategic plans. It integrates student, staff and faculty viewpoints through advisory committee feedback, surveys, consultations, and key informant interviews conducted over the past three years.

An ongoing outcome of this process was the formation of a **crossinstitutional Working Group** consisting of staff units, faculty representatives and student-led groups. These representatives support monitoring and evaluation data collection, share relevant climate-related knowledge and expertise, and contribute to analysis, interpretation, presentation, and sharing of findings.

Current Working Group members represent the following academic, operational, and community groups:

- Campus + Community Planning
- Canada Climate Law Initiative
- Centre for Climate Business Solutions
- Centre for Climate Justice
- Centre for Community Engaged Learning
- Centre for Law and Environment
- Climate Solutions Research Collective
- Climate VENTURE Studio



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- Institute for Resources, Environment and Sustainability
- Interdepartmental Committee on Climate Change (IDCC)
- Planning and Institutional Research Office
- UBC Climate Hub
- UBC Community Engagement
- UBC Office of Wellbeing Strategy
- UBC Sustainability Hub

### **RELATED RESOURCES**

- MEL Working Group Terms of Reference for a working group of staff units, faculty representatives and student led groups working on climate at UBC.
- MEL Methodology Detailed definitions for each Climate Emergency Task Force Report recommendation, related indicators, and performance metrics.

# TEACHING, LEARNING AND RESEARCH

Across UBC, faculty and students are teaching, learning and exploring sustainability through hundreds of courses, programs, and research projects. UBC's ambitious goals include providing each student, regardless of degree program, with access to sustainability education opportunities; creating diverse learning and co-curricular engagement opportunities for students; and global leadership in applied research on sustainable behaviour, infrastructure, and communities.



### **TEACHING AND LEARNING**

Each year, thousands of students learn about human and ecological health, social justice, secure livelihoods, climate action, community wellbeing, and solutions for a better world. UBC promotes a wide range of learning opportunities through course listings, programs, and events, and catalyzes interdisciplinary teaching and curriculum innovation through grants, cohort-based programs, and other resources.

# **\$137K**

distributed by Sustainability Hub to support 18 new curriculum projects

VANCOUVER OKANAGAN 17

departments received support for 4,000 + students

VANCOUVER OKANAGAN

### STRATEGIC PRIORITIES

• UBC's 20 Year Sustainability Strategy — aims to provide each student, regardless of their degree program, with access to sustainability education. ☑ UBC VANCOUVER | UBC OKANAGAN

### **KEY ACTIONS**



### Sustainability Education Fellows Develop Six New Areas of Curriculum

Supported by over \$70,000 in funding from the Sustainability Hub, 13 faculty members collaborated this year on new sustainability curriculum. Topics included climate communications; immersive media, justice; equity, diversity, decolonization, indigenization, and inclusion; increasing student accessibility in field courses; and co-designing curriculum with First Nations.

### **'Climate Math' Project Increases Climate Science Literacy**

A two-year project led by the Department of Math with support from the Department of Earth, Ocean and Atmospheric Sciences and the Sustainability Hub. Connects math to real-world topics, and increases climate science literacy among students by integrating concepts such as the carbon cycle and climate anxiety. Project activities reached over 3,000 students in the first year. I UBC VANCOUVER

### Third Annual Teach-In on Climate and Justice Highlights Community

Opened by Bill Cohen, PhD., Assistant Professor and Indigenous scholar from the Okanagan Nation, sessions highlighted community research at the intersection of climate justice, including wildfire risks and disproportionate exposure of marginalized communities to environmental hazards. **C UBC OKANAGAN** 



### \$60k in New Climate and Wellbeing Education Grants

A partnership between the Sustainability Hub and the Office of Wellbeing Strategy, the program hosted faculty from 11 departments and seven faculties working on integrating climate change and wellbeing content and pedagogies into their courses. New teaching content includes themes such as pandemics and climate change, linking climate action to nutrition, integrating planetary health into politics, climate in children's literature, kinesiology, and more. I UBC VANCOUVER

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### Integrating Planetary Health into Pharmacy Education

New module introduces planetary health and climate change, healthcare systems impacts, and medication waste management. <sup>(2)</sup> UBC VANCOUVER

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"UBC students and faculty are responding to the urgency of the climate crisis with amazing energy and great ideas. The Sustainability Hub is helping to bring their ideas to life by funding and facilitating new educational initiatives and innovative applied research that addresses critical climate and sustainability challenges."

- Dr. Tara Ivanochko, Academic Director, UBC Sustainability Hub; Professor, Department of Earth, Ocean and Atmospheric Sciences



### **COURSES AND PROGRAMS**

UBC faculty deliver hundreds of courses and programs every term to prepare students for the sustainability challenges facing our world today. To encourage participation by students of all levels from every faculty, the Sustainability Hub provides interactive resources to promote learning opportunities that match their interests.

### **KEY ACTIONS**

### New course! Climate Change Communications and Engagement

In this graduate-level seminar, students learn about the psychological, social, and systemic dimensions of climate communications, as well as the various ways that climate change practitioners, scientists, and communicators carry out engagement. Students reflect critically on the trend towards polarization and the possibilities for 'deep relationalism' in Canada. <sup>(2)</sup> UBC VANCOUVER 829

sustainabilityrelated courses

VANCOUVER

121

sustainabilityrelated programs

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"By expanding our definition of place, acknowledging diverse lived experiences, and prioritizing belonging and safety, we can enrich our understanding of the intricate relationships between people and their surroundings and work towards a more inclusive and sustainable future."

- Haida Gaede, recent Master of Social Work and FEELed Lab alumna



# New program: Climate Risk and ESG for Corporate Governance and Decisionmaking

For directors, officers, in-house and external legal counsel, offered by the Peter A. Allard School of Law and Canada Climate Law Initiative ☑ UBC VANCOUVER



### FEELed Lab Field Course: Weaving Sustainability and Inclusivity in Place-based Learning

A collaborative project led by Dr. Astrida Neimanis and a team of interdisciplinary students and faculty is blending sustainability and inclusivity to create new and more accessible learning opportunities.

### \*Just Launched\* Micro-certificate in Climate Action Planning

A new credential for policymakers, planners and industry professionals to gain the knowledge, skills and tools to put climate action planning into practice within their organization. Developed by a team of faculty and experts associated with UBC's Institute for Resources, Environment and Sustainability, the Sustainability Hub, and Campus + Community Planning, this part-time online program is designed for mid-career professionals to become climate action champions. C UBC VANCOUVER

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259 sustainabilityrelated courses

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The project aims to create a state-of-the-art field course within the Bachelor in Sustainability program, along with open access materials and resources for a diverse range of academic and community partners.

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### STUDENT ENGAGEMENT AND LEADERSHIP

UBC offers a variety of immersive, transformative, and experiential student engagement programs that help build leadership skills and professional competencies. In addition, students are leading change by self-organizing and speaking out on issues like the climate emergency, social and racial justice, and student wellness. 1,000+

attended workshops and events organized by Sustainability Ambassador

VANCOUVER

**\$48K** 

in funding raised by Sustainability Ambassador students to support projects

#### VANCOUVER

280

enrolled in the Catalyst program since inception

VANCOUVER

### **KEY ACTIONS**



### Improved Sustainability Orientations

Updated training for peer leaders, sustainability campus tours, and a new online course, "Introduction to Climate Action", free to all incoming undergraduate and graduate students. **CUBC VANCOUVER** 

# Sustainability Ambassadors Focus on Climate Action

In the program's most ambitious year ever, 60 student leaders supported eight partner organizations to

# Sustainability Course Student Union

By organizing educational, career and social events, the Bachelor of Sustainability Course Union strives to empower members to become effective change-makers promoting environmental stewardship and sustainability within their academic pursuits, and beyond. <sup>C2</sup> UBC OKANAGAN

### Sustainable Clubs Program

Revamped with a new look and framework, the program will relaunch this year to encourage participation in CAP2030 and UBC's Climate Emergency Response. **UBC VANCOUVER** 

# **Catalyst Program**

UBC's free certification program for sustainability engagement and leadership. This year 146 new students and staff enrolled. **○ UBC VANCOUVER** 

# Solution State State

Student led sessions, part of a national conference on the Sustainable Development Goals (SDGs), focused on cross-cutting themes of Decolonization, Climate Justice, Education, and Just Transition. ☑ UBC VANCOUVER

deliver 17 sustainability and climate action projects.

• **Climate cohort** — Delivered a creative and justicefocused 'Transformative Solidarities Festival'.

• Climate action cohort — Supported community pop-up climate events, and created new resources for migrant, racialized, and lower-income communities.

• Food systems cohort – Developed a series of short educational videos connecting food and climate.

• Emotional resilience cohort — Facilitated a week-long Climate Camp for youth ages 12-16.

• Climate Action Plan 2030 cohort — Developed communications and engagement activities related to the Circular Economy and Biodiversity.

• Climate and Movement cohort — Focused on connecting students to nature through mental, physical, and emotional Wellbeing Breaks.

#### **UBC VANCOUVER**



# Watch! Student-run Food Security

An eight-minute video about student organized projects that address food security at UBC and build community among participants. 🖸 UBC VANCOUVER



"My experience as a Sustainability Ambassador was truly such an insightful and meaningful time to develop, (un)learn, and dive into a variety of topics regarding sustainability and climate justice....it has been such a privilege and welcoming avenue to continue my interest in sustainability."

- Sustainability Ambassador program participant





#### STUDENT RESEARCH

Through both curricular and co-curricular research, UBC provides opportunities for students to engage in applied research that advances sustainability at UBC, and in organizations across the region.

### Climate Solutions Research Collective Launches 'Solutions Scholars'

Program encourages graduate students to work on 'solutionsoriented' research. This year focused on two major themes: Wildfires and/or Extreme Heat, and Urban Transformations. 🗗 UBC VANCOUVER | UBC OKANAGAN

### SEEDS SUSTAINABILITY PROGRAM

Advances UBC's own sustainability and wellbeing plans via applied research and interdisciplinary collaborations.

### Two New Collaborative Interdisciplinary Research Clusters



The Food Systems Committee is a new hub comprising students, staff, community partners, and researchers working to catalyze transitions towards sustainable, healthy, and just food systems. The Circular Economy Action Team comprised of students, faculty, and staff informs applied student research and collaborations to advance UBC's Zero Waste Action Plan 2030: Towards a Circular Economy. C UBC VANCOUVER | UBC OKANAGAN

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### Enhancing Campus Biodiversity Through Student Research

SEEDS student researchers gathered data on campus trees, green infrastructure, ecological connectivity, wildlife and more to build knowledge of the quality and functioning of campus green networks that can inform UBC's emerging Biodiversity Strategy. <sup>C</sup> UBC VANCOUVER

### Supporting CAP2030 Focus on Food-related GHG Emissions

Evaluating and communicating the impacts of over 1,200 menu items, UBC's Climate-Friendly Food Label was expanded. The initiative helps the campus community better understand how food choices can reduce the university's climate impact. **CUBC** VANCOUVER

### SUSTAINABILITY SCHOLARS PROGRAM

Matches graduate students with regional organizations to work on applied sustainability and climate action research. <sup>C</sup> UBC VANCOUVER

# Vital Reports Explore Ways to



### **Protect Fraser Estuary Watershed**

In the second year of the Sitka Foundation and Bullitt Foundation funded, "Fraser Estuary Research Collaborative," student research explores complex issues, including:

- Analysis of strategies to mitigate styrofoam pollution
- Extending critical habitat protection for Southern Resident Killer Whales
- Visualizations for an estuary restoration project

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### **UBC VANCOUVER**

# New Workshop on Fostering Relations Between Researchers and Indigenous Communities

Supported by the Pacific Institute for Climate Solutions, and in collaboration with the Indigenous Research Support Initiative, Sustainability Scholars program staff developed a workshop for students to deepen knowledge of practices that enable meaningful and ethical research partnerships. <sup>C</sup> UBC VANCOUVER

### Research for 41 Regional Organizations Impacts Wide Range of Sectors Across BC

Applied research projects for 41 organizations across multiple sectors, and on a wide range of topics, has served to support significant progress on sustainability priorities across the region. <sup>C</sup> UBC VANCOUVER

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#### STUDENT RESEARCH: FEATURED PROJECTS



### **Public Scholars Initiative: Research by 11 Sustainability** and Climate Focused PhD **Students**

Topics included urban climate action, flood mapping, fire, fungi, and cultural plants, Indigenous seed and more. C UBC VANCOUVER

### New Sustainability Scholars Report Shows **Dire Link Between the Climate Crisis** and Homelessness

UBC's Sustainability Hub and Union Gospel Mission released a new report prepared by Sustainability Scholar Taryn Plater that shows unhoused people in Vancouver's Downtown Eastside experience significantly more detrimental health impacts when facing extreme heat and extreme cold. Calling for actions such as decreasing exposure to the elements, increasing access to water, and making emergency spaces inclusive and inviting, the report will help enable better health outcomes for unhoused community members. C UBC VANCOUVER

### Sustainability Scholar's Findings Show **City of Burnaby How Buildings Can** Withstand Extreme Heat

Old buildings, especially poorly insulated and without air conditioning, intensify heat wave effects. 🖸 UBC VANCOUVER

### **SEEDS Research Saving Birds on Campus**



Bird collisions with windows are a leading cause of avian mortality across North America. Among other factors, windows can reflect vegetation and appear as open space, leading to collisions. Compiling years of SEEDS supported research collaborations, the Bird-Friendly Policy Backgrounder and the Bird-Friendly Toolkit explains the risk of window collisions and introduces strategies to mitigate impacts to birds. Student research on bird-friendly landscapes, habitat enhancement and ongoing collision monitoring projects informs mitigation strategies including building design, window treatments, maintaining urban tree canopy, and creating birdfriendly landscapes. The Toolkit shares accessible actions that anyone can take to sustain bird populations and habitats. All new buildings and major retrofits at UBC Vancouver campus should comply with UBC's Bird-Friendly Design Guidelines for Buildings. C UBC VANCOUVER



# 73

graduate students worked with 41 regional partners via Sustainablity Scholars program

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# 780

students, faculty, staff and community partners participated in 101 SEEDS applied research projects

#### VANCOUVER

### SEEDS Program Supports **Circular Economy Transition**

An interdisciplinary team of students, faculty, and staff are collaborating to advance UBC's Zero Waste Action Plan and support CAP2030. **UBC VANCOUVER** 

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#### FACULTY RESEARCH

UBC plays a leadership role among global post-secondary institutions that focus on researching, developing, and demonstrating sustainable practices. With over 500 faculty across two main campuses investigating sustainability, our goal is to excel across the spectrum of fundamental and applied research. The following examples of groups and projects are just a small selection from an incredible breadth of work across the university.

### Campus as a Living Lab Expands at Both Campuses

A collaborative framework for researchers, students, staff, community and external partners to use UBC campuses to explore, develop and test new ideas that address urgent global sustainability challenges.

This year a Grand Challenge competition across both campuses provided \$600k—more funding than ever before—to support UBC's Climate Emergency Response.

The successful projects were:

- Bioenergy from Commercial-Municipal Organic Waste: \$250K
- Resilience Hubs for UBC Campus Communities: \$250K
- Smart Fire Detection Systems to Improve Wildfire Resilience of UBC Okanagan Campus: \$100K

In addition, at UBC Okanagan, the following projects received a total of \$100k in seed funding through an annual competition:

• Clean UBC Okanagan's Air through Wall-mount Air Filtering Devices

• Improve the Efficiency of the Energy System for the Campus's Legacy Academic Buildings

#### ☑ UBC VANCOUVER | ☑ UBC OKANAGAN

# **\$700K**

in Campus as a Living Lab funding distributed to new projects

# 10

Research Excellence Clusters addressing sustainability and



### Centre for Sustainable Food Systems Launches New Strategic Plan

Uniquely positioned to connect the resources and expertise at UBC with networks of farmers, policymakers, and local and Indigenous communities.

The Centre for Sustainable Food Systems' new strategic plan focuses on achieving a vision of resilient, thriving, and socially just food systems for all through four impact goals.

- Improve Regional Food Security
- Adapt to and mitigate climate change
- Enhance biodiversity
- Decolonize our approach

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# 506

faculty researching sustainability

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climate action

# 164

faculty researching sustainability

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### Roots Are Taking Shape for UBC Okanagan's Indigenous Micro-Forest

New space will serve as a focal point for learning about Indigenous culture and language. **C UBC OKANAGAN** 

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### FACULTY RESEARCH: FEATURED GROUPS



### Living with Wildfire in the BC Southern Interior Research Cluster

Team members with expertise in visual art history, wildfire imagery, spatial ecology and mapping, sustainability, cultural and philosophical analysis and biodiversity are collaborating with Indigenous partners to address the wildfire challenge in the BC Interior.

### Advanced Wildfire Research Could Save Billions, Protect Vital Power Supply

Improved wildfire prediction models and better data access needed to mitigate or prevent future wildfire.

# Solar Energy for Net Zero Research Excellence Cluster

A team of interdisciplinary researchers collaborating to develop solutions to harness, convert and store the sun's abundant energy. 🖸 UBC OKANAGAN

### New Smart Infrastructure and Construction Research Cluster

A diverse team of experts from material and structural engineering, robotics, computer science, construction management, and infrastructure. **UBC VANCOUVER** 

### Canadian Foundation for Innovation Supports New 'Materials for Net-Zero' Research Group

Advancing the hydrogen economy, reducing and converting carbon dioxide into useful products, and efficient batteries and materials for electrification. **UBC VANCOUVER** 

"Food insecurity, can affect all levels of society. In undeveloped regions, war or political instability might disrupt agricultural operations or supply systems. While in richer nations, rising grocery prices or local crop failures due to climate change can compromise general access and availability."

- Dr. Pratap-Singh, Director of the Food and Beverage Innovation Centre



### Food and Beverage Innovation Centre

Collaboration between Faculty of Land and Food Systems, industry, and government to tackle complex food security challenges; features collaboration with Musqueam on the sustainability of traditional foods and medicines. COUVER

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### Okanagan Institute for Biodiversity, Resilience & Ecosystem Services (BRAES)

Over 30 researchers working in ecology, biodiversity, conservation and environmental sustainability. **CUBC OKANAGAN** 

### **O** West Campus Lands

Land-based research and conservation initiatives grounded in sustainable practices and Syilx Okanagan knowledge to protect agricultural values and the unique saline ecosystem around Robert Lake. I UBC OKANAGAN

### Merida Labs Launches Hydrogen Spin-off Venture VulcanX

Breakthrough pilot to produce hydrogen from natural gas with no CO<sub>2</sub> emissions now being scaled up through a start-up overseen by the lab. **UBC VANCOUVER** 

### New Centre for Climate and Business Solutions at Sauder School of Business

Hub for climate-focused business education and research, featuring smallmedium enterprize climate clinics and industry partnerships. **C** UBC VANCOUVER

### FACULTY RESEARCH: FEATURED PROJECTS



### How Can We Co-construct a Mutualistic City, a Future Vancouver That Supports People and Nature?

Cities are at the frontlines of the ecological crisis: urban and surrounding green spaces are shrinking, which comes at a cost for non-human nature and for more than half of the world's people, who rely on such spaces for emotional, spiritual, and physical benefits. To address this, a trio of graduate students supervised by Dr. Kai Chan at UBC's Institute for Resources, Environment and Sustainability are working with the City of Vancouver, via support from a first-of-its-kind collaborative fellowship with the UBC Public Scholars Initiative.

### UBC Sauder's SME Climate Clinic Supports Businesses to Achieve Climate Goals

Exemplifies the school's commitment to bridging academic research with practical business applications. The Clinic partners students with SMEs, providing tools for identifying and reducing their carbon emissions. This initiative not only translates academic expertise into actionable environmental solutions, but also offers tangible support to SMEs that lack the necessary resources. At the same time, students gain practical, handson skills in carbon accounting and sustainability metrics, preparing them to champion climate action and lead change. **COUNCOUVER** 

### Sowing the Seeds for Resilient Production

"We designed and piloted a workshop aimed to include multiple ways of knowing and types of expertise into urban biodiversity planning for the City of Vancouver."

 Jo Fitzgibbons (PhD), supervised by Dr. Kai Chan, professor in the Institute for Resources, Environment and Sustainability

### Drought Solutions for Producers Start Small

Understanding and addressing agriculture's biggest climate change challenges starts at the microscopic level for Dr. Thorsten Knipfer. C UBC VANCOUVER



### **Battery Innovation Research Excellence Cluster**

New funding will empower UBC researchers to advance

### Systems

Dr. Riseman's latest research aims to redesign intensive multi-trophic production systems—envisaging a system that reunites plant and animal production. <sup>I</sup> UBC VANCOUVER



### Studying Pollinators on the Frontline of Resiliency

Many of the world's smallest and most vulnerable critters are on the frontlines of some of our biggest and most pressing resiliency challenges.

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battery innovation in the province. 🗹 UBC OKANAGAN

# Climate Change Engineers Harness the Power of Green Infrastructure to Manage Stormwater

Climate change and varying rainfall patterns require more resilient ways to retain and use stormwater. **CUBC OKANAGAN** 

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### FACULTY RESEARCH: FEATURED PROJECTS

### New UBC Research Facility Accelerates Innovation in BC's Hydrogen Energy Sector

B.C.'s hydrogen infrastructure entered a new era with the launch of the \$23-million Smart Hydrogen Energy District (SHED) at UBC. Equipped with a hydrogen fueling station, this facility is expected to pave the way for breakthroughs in critical energy research. SHED will produce hydrogen using solar and hydro power to operate a water electrolyser, making the process completely green and renewable. It is one of the first initiatives in Canada to combine hydro, solar and hydrogen energy at a single site, connecting these renewable energy sources to a unified micro-grid. **C UBC VANCOUVER** 

### "Using macroalgae percent cover as an indicator of local human disturbance may lead scientists to misidentify the reefs most in need of interventions."

 Dr. Sara Cannon, postdoctoral research fellow, Centre for Indigenous Fisheries.



### Macroalgae Tell Complex Tale About Coral Reef Health

For decades, scientists have used macroalgae cover as a proxy for the health of underlying coral reefs; it is quicker and easier to measure. The assumption since the 1970s has been that local human impacts lead to increased growth of macroalgae, and—simultaneously—more reef damage.

### Solution Carbon Flux of Life

Professors Cindy Prescott and Sue Grayston in the Faculty of Forestry have identified a previously underestimated carbon flux between trees and soils that has implications for forest operations and long-term ecosystem health. **DBC VANCOUVER** 

### An Equitable World Can Have Sustainable Fashion, Art and Wine



In the vibrant worlds of art, fashion and wine, sustainability is no longer a mere trend but a fundamental necessity for cultivating a globally conscious and responsible marketplace.

### Climate, Housing, and Compounding Health Vulnerabilities for Senior Tenants

Dr. Liv Yoon and her team in the Faculty of Education have been awarded new funding for research in climate change adaptation and mitigation.

### Grasslands Key to Burrowing Owl Expansion Amid Climate Change

New research underlines the urgent need to prioritize the conservation of grasslands across western North America. 🖸 UBC OKANAGAN

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However, this approach has been misleading and may even have hidden signs of reef stress, according to lead author Dr. Sara Cannon, postdoctoral research fellow at the Centre for Indigenous Fisheries, who recently completed her PhD in the Department of Geography. A new large-scale study is one of the first to evaluate the impact of human activity on a wide range of macroalgae, and provides compelling evidence that scientists need to move towards a more localized understanding of coral reef health. **C UBC VANCOUVER** 

### Research Shows How Healthy Plants Help Rivers Meander @ubc okanagan

Preserving and Restoring Okanagan Syilx Plants and Endangered Regional Seeds ©UBC OKANAGAN

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# With the Planet Facing a 'Polycrisis', Biodiversity Researchers Uncover Major Knowledge Gaps



Dr. Jonathan Davies, Faculty of Science, highlights need for studies investigating the mechanisms linking infectious disease spread, biodiversity loss and climate change. **C**UBC VANCOUVER

# **OPERATIONS AND INFRASTRUCTURE**

As a large, research-intensive university, with considerable land, assets and utilities in Vancouver and the Okanagan, UBC is in a unique position to use our campuses as test beds for sustainability. Our goals are to enhance the efficiency of our operations, improve environmental performance, and achieve cost savings, while leveraging our campus infrastructure and built environment to demonstrate innovative sustainability solutions at a municipal scale.



#### **ENERGY AND EMISSIONS**

UBC is responsible for reducing the GHG emissions directly produced by operational activities, as well the extended emissions related to commuting, food, business air travel, waste, and the embodied carbon associated with the lifecycle of goods and services. In response, UBC has set extremely ambitious and specific Climate Action Plans for both Vancouver and Okanagan campuses.

### STRATEGIC PRIORITIES

• UBC Vancouver Climate Action Plan 2030 — targets a reduction in operational emissions of 85%, and a 45% reduction in extended emissions by 2030. C UBC VANCOUVER

• UBC Okanagan Climate Action Plan 2030 — targets a reduction in operational emissions of 65%, and a 45% reduction in extended emissions by 2030. ☑ UBC OKANAGAN

# 35%

reduction in offsetable GHG emissions since 2007

VANCOUVER

# 30%

reduction in absolute GHG emissions since 2013

OKANAGAN

# **54%**

reduction in GHG emissions per student since 2007

VANCOUVER

# 51%

reduction in GHG emissions per student since 2013

OKANAGAN

# ey thing, ith ons by **S Interactive CAP2030**

### Interactive CAP2030 Dashboard

View GHG emissions by category, progress to targets, and explore insights about future areas of focus. ☑ UBC VANCOUVER

### Strategic Energy Management Plan Updated for CAP2030 Targets

The updated plan is designed to achieve deep decarbonization. Energy demand will be reduced in both existing buildings via retrofits, and new buildings. In addition, actions will be taken to decarbonize supply via the centralized district energy system.

### New Heat Pump Project Will Advance Decarbonization of District Energy System

In partnership with a local cleantech company, a onemegawatt  $CO_2$  Air Source Heat Pump project is now approved for installation at the UBCO Geothermal District Energy Building. This new heating and cooling solution is expected to reduce GHG emissions by over 700 tCO<sub>2</sub>e annually. **UBC OKANAGAN** 

### **KEY ACTIONS**

# CAP 2030 Invests in Bioenergy to Replace

### Natural Gas; Focuses on Commuting, Food, and Business Air Travel



By using a super-efficient hot water heating system, expanding on-site biomass energy production, and increasing hydro-electric power consumption, the campus is rapidly shifting from fossil fuels to renewable energy.

As operational emissions fall, progress is being made on reducing the Scope 3 emissions associated with food systems, material and resources, commuting and business air travel. UBC VANCOUVER

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Energy Savings Via Lighting Upgrades, Building Ventilation Optimization, and Heating System Improvements

- Occupancy sensors installed to enable demand control ventilation in multiple locations
- Variable frequency drives added to reduce energy consumption of boiler pumps at the Campus Energy Centre

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C UBC VANCOUVER

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"Humanity is now confronted with an existential crisis on three fronts; climate, biodiversity and health. UBC has the potential to differentiate itself as a leader to forge innovative solutions using its campus as a living lab that leverages its intellectual and institutional capacities to help confront these challenges."

> John Madden, Director, Sustainability and Engineering, Campus + Community Planning, UBC Vancouver



#### WASTE

UBC's ambitious goals include reducing waste in Vancouver (by 50%) and the Okanagan (by 50% per capita) by 2030. Achieving this requires ongoing updates to infrastructure and operational processes, the commitment of the campus community, leveraging student and faculty research, and collaboration with industry partners and government.

### **STRATEGIC PRIORITIES**

Zero Waste Action Plan 2030: Towards a Circular Economy — Focuses on waste and materials-related GHG emissions reductions, expanding circular economy opportunities related to procurement and reuse, and applied research to advance related policies, plans and practices.
 UBC VANCOUVER | C UBC OKANAGAN

### **KEY ACTIONS**

### New Pilot Residence Waste Reduction Program

Initiated to audit waste sorting in residences and test design interventions to improve waste diversion. Results are currently being analyzed to assess the effectiveness of the interventions, and to identify best practices to scale-up in other residences. **UBC VANCOUVER** 

### Single Use Item Fees Maintained, Cup and Container Share Services Coming Soon

UBC's Zero Waste Food Ware Strategy is focused on transitioning to reusable food serviceware, and discontinuing items such as foam cups, plastic straws and plastic bags, and single use food containers. <sup>(2)</sup> UBC VANCOUVER



# 16%

reduction in operational waste disposal vs. 2019

VANCOUVER



overall waste diversion rate

OKANAGAN



# Plastic Waste Destined for Landfill or Incineration Diverted to Closed-loop Recycling

Hard to recycle plastic lab waste, including pipette tips, pipette tubes, and personal protective equipment, was targeted for reduction by a new initiative. Efforts made by 10 labs and two operational departments diverted over 300 kgs of hard-to-recycle plastic material from the landfill saving 200kgs of GHG emissions. I UBC OKANAGAN

### 12,000 Cups Saved in Let's Choose to Reuse Challenge

Approximately 400 students, faculty and staff engaged in a series of sustainability challenges to win travel mugs and replace single-use beverage cups. The campaign resulted in a diversion of 12,000 single-use cups, a 124% increase vs. the previous year. UBC OKANAGAN

### Say Hello! Automated Waste Data and Talking Recycling Bins

Detailed data on the quantity of waste collected from each building will enable reduction efforts to focus on areas of greatest potential impact, and support optimization of UBC's waste collection system. **UBC VANCOUVER** 

### Million Dollar Milestone: Celebrating the Furniture Reuse Program

UBC has saved \$1,000,000 in furniture purchasing costs and avoided tons of waste from releasing GHGs via landfill.



#### WATER

To manage climate change impacts related to water—including increasing drought periods, heavy rainfall events, and potential disruptions to water supply due to emergencies—multiple departments across both campuses are collaborating through interdisciplinary research, innovative buildings and infrastructure design, and an increasing focus on climate adaptation and resilience.

# **16%**

reduction in operational waste disposal vs. 2019

VANCOUVER

# 56%

overall waste diversion rate

OKANAGAN

### STRATEGIC PRIORITIES

• Water Action Plan — Focuses on advancing water conservation and efficiency practices; encouraging innovative, alternative water system solutions; building water supply resiliency.

• Integrated Rainwater Management Plan — Supports the natural hydrological cycle, provides climate resilience, mitigates cliff erosion risks, and pursues social and ecological benefits through green infrastructure and nature-based solutions. Currently being updated at UBC Vancouver, and implemented at UBC Okanagan. C UBC OKANAGAN

### Protecting Campus Wetlands

Located in the driest woodland region of BC, the Okanagan campus is home to sensitive woodland and wetland ecological communities.

A Campus Ecological Report completed this year recommends the protection of existing wetlands and wetland-associated grasslands. These natural ecosystems actively sequester carbon through vegetation and carbon storage in healthy soils. I UBC OKANAGAN

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### **KEY ACTIONS**

### New Projects Target Significant Reductions in Key Labs and Residences

Implementation of the Water Action Plan this year focused on two large buildings with higher water use, one laboratory building and one student residence, using metering data analysis and on-site reviews. These projects aim to implement effective, economically feasible water conservation retrofits in the near future. **UBC VANCOUVER** 



### Achieving 100% Rainwater Diversion Now; Climate Modeling to 2070

In addition to diverting 100% of the rainwater that falls on campus from municipal systems through green infrastructure and low-impact development, minimum rainwater retention targets incorporate future climate modeling up to 2070 in order to protect the campus from flood risks. **UBC OKANAGAN** 

### New Landscaping Reduces Irrigation, Supports Pollinators with Indigenous Plants and Flowers

Teams are researching and implementing ways to incrementally transform campus outdoor spaces into more self-sustaining ecosystems. Staff recently updated greenspace adjacent to the Reichwald Health Sciences Centre to reduce irrigation requirements and reintroduce indigenous plants and flowers that support pollinators. C UBC OKANAGAN

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### Fan Upgrade Saves 15 Million Gallons of Water per Year

Learn how a recent energy conservation project at the Earth Sciences building saves the equivalent of 21 Olympic-sized swimming pools of water.

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#### **GREEN BUILDINGS**

UBC buildings create an exceptional and sustainable environment for teaching, learning and research, and places to socialize, live and play. As the campuses continue to grow, the way we design, construct and operate buildings will play a significant role in addressing the climate and biodiversity crises as well as enhancing ecological and human wellbeing. **25%** LEED certified building area of

the total area on

VANCOUVER

campus

68%

of buildings connected to the Low Carbon District Energy System

OKANAGAN

#### STRATEGIC PRIORITIES

• Green Building Action Plan — Policy framework outlining incremental improvements for new buildings, renovations and retrofits toward the vision that by 2035, UBC's buildings will make net positive contributions to human and natural systems. <sup>(2)</sup> UBC VANCOUVER

• Whole Systems Infrastructure Plan — An approach to energy efficiency, low carbon district energy, and climate adaptive design that supports a goal to achieve net positive performance in operational energy and carbon by 2050. C UBC OKANAGAN

#### **KEY ACTIONS**

### Ground-truthing UBC's Embodied Carbon Policy



Embodied carbon, a measure of the emissions associated with the lifecycle of a building from construction to decommissioning, is a specific area of applied research strength at UBC. This year, a series of workshops featuring staff

from both campuses, faculty experts, industry practitioners, and preliminary case studies established guidelines to reduce embodied carbon by 10% vs. a



### MacLeod Building Renewal Improves Seismic and Climate Resilience

Learn more about the project to transform a 1963 building into a future-focused, highperformance facility, guided by the Green Buildings Action Plan. **CUBC VANCOUVER** 

### Future-proofing Campus Buildings Against Climate Risks

Driven by local conditions, recent climate-related events, and rapid regulatory changes, staff initiated a collaborative Resilient Buildings Project to align with CleanBCs Climate Resilience Framework and Standards, in order to future proof new construction and building retrofits against climate risks while reducing GHG emissions. **UBC VANCOUVER | UBC OKANAGAN** 

### **UBCO** Downtown Construction Underway

Targeting LEED® Gold Certification and Step 3 of the BC Energy Step Code, sustainable design features include a solar wall to supply energy for preheating outdoor air. Will offer new academic and residential space while providing collaborative meeting and social amenities. <sup>I</sup> UBC OKANAGAN

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# baseline building. 🖒 UBC VANCOUVER | UBC OKANAGAN

# "Public Sector Leadership" Award Recognizes Role in Knowledge Exchange

Staff from Campus + Community Planning and the Sustainability Hub were honoured to receive a "Public Sector Leadership" award at the Second Annual BC Embodied Carbon Awards; recognizing UBC's significant role in emissions reductions throughout the province via knowledge exchange. **C** UBC VANCOUVER | UBC OKANAGAN



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The En'owkin Centre generously gifted the building a Nsyilxcn name, to recognize the building's purposes of innovation and collaboration. <sup>(2)</sup> UBC OKANAGAN

### **CAMPUS ENGAGEMENT**

Initiatives involving students, faculty, staff, and community members support the implementation of UBC's climate action and sustainability plans. The aim is to inspire and empower community members to take climate action that creates a more sustainable, just campus and world.

# 1,000+

VANCOUVER

attendees participated in 53 CAP2030 engagement events

# 600+

students, faculty, and staff engaged in sustainability campaigns and programs

OKANAGAN

#### STRATEGIC PRIORITIES

- UBC Vancouver Climate Action Plan 2030
- UBC Okanagan Climate Action Plan 2030 🗹

Both plans target that by 2030, 75% of UBC faculty, staff and students will be aware of UBC's climate action goals and participating in sustainability.

### **KEY ACTIONS**



### Sustainability Coordinators Program Redesigned, Participation up 118%

Empowers participants to lead impactful sustainability initiatives university-wide, through professional growth, leadership skills, and networking opportunities. <sup>C</sup> UBC VANCOUVER

# New Climate Action Campus Initiative

New pilot projects under development include:

- Staff and faculty Onboarding Learning Module.
- Climate Action Unit Guide, provides employees with a framework to implement climate action in their units.

• Mammoth Climate, a digital tool to engage UBC employees in climate action through behaviour changes. **UBC VANCOUVER** 

### Green Labs Fund Supports Monitoring Carbon Footprint of AI, Reuse of Materials at Museum of Anthropology

Both projects received new funding to support reducing emissions and waste.

### Climate Friendly Food Efforts Focus on Local, Plant-forward

Actions to connect the campus with nearby food growers and food providers resulted in an increase of 50% in local food procurement, and 55% more plantbased menu options at Pritchard Dining Hall. <sup>C</sup> UBC OKANAGAN

### **Engagement of Academic Buildings Occupants Saves Energy and GHGs**

Campaigns encouraged occupants to close windows when leaving a space unoccupied. Results included an 18% improvement overall, and up to 93% in one building. <sup>(2)</sup> UBC OKANAGAN

### Workplace Sustainability Fund Receives Fourfold Increase in Applications, Awards over \$20k

A diverse range of staff driven initiatives ranged from climate justice projects to procurement programs. <sup>C</sup> UBC VANCOUVER



### Green Labs Program Pilots Online Learning Module, Lab Certification

New 'Lab Sustainability Course' attracts 150 researchers, 81 have completed so far. Eight lab groups are participating in the 'My Green Lab' certification pilot. <sup>(2)</sup> UBC VANCOUVER

### Sustainability Walking Tours

Highlights include green buildings, the district energy system, composting station, wireless irrigation system, and natural retention pond. <sup>C</sup> UBC OKANAGAN

# A Conversation with Dr. David Suzuki

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A public talk by UBC Professor Emeritus and CBC broadcaster Dr. David Suzuki, presented by the Solar Energy for Net Zero research cluster and the Faculty of Applied Science. **DBC OKANAGAN** 

# COMMUNITY

UBC is home to a growing community of people that live, work, learn and take part in everything that UBC has to offer. Each year, we design and deliver quality programming and events that leverage our world class assets and public spaces. Our goal is to foster inclusive and welcoming campuses by sparking the imagination of our community members to join us.



### **CAMPUS PLANNING**

Campus plans set the long-term vision for UBC's physical campuses, and serve as a tool to guide growth that is consistent with the university's academic mission and strategic plan. Planning encompasses issues such as housing affordability, climate mitigation and adaptation, social inclusion, ecological health, transportation connections, and reconciliation.

### STRATEGIC PRIORITIES

• Campus Vision 2050 — Sets the overall direction for the Vancouver campus, and is supported by updated housing and land use plans. <sup>(2)</sup> UBC VANCOUVER

• UBC Okanagan Campus Plan Update — A new planning process to inform campus land use over the next 20 years. C UBC OKANAGAN

#### **KEY ACTIONS**



### Approved! Campus Vision 2050; Updated Land Use Plan and Housing Action Plan

# 13,000+

touchpoints during Campus Vision 2050

VANCOUVER

1,324

touchpoints so far during Campus Plan Update

OKANAGAN

# Campus Vision 2050 on Climate Mitigation and Adaptation

One of six 'Big Ideas' describes a climateresilient campus and a model for excellence and innovation in addressing the climate emergency. ☑ UBC VANCOUVER

Engagement for UBC Okanagan Campus Plan Update Highlights Biodiversity, Accessibility, Landscape, Parking, Recreational Opportunities

The UBC Okanagan Campus Plan Update is underway. The Campus Plan is the university's key land use policy and physical plan. It guides the physical development of the campus over the next 20 years and is based on seven guiding principles:

- Academic Mission
- Campus as a More Complete Community
- Honouring Place and Protocol
- Connectivity and Transportation
- Climate Action and Sustainability
- Landscape and Ecology
- Inclusivity, Accessibility and Wellbeing.

#### C UBC OKANAGAN

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Following two years of deep engagement with the UBC community, campus residents, First Nations and extensive technical work, the UBC Board of Governors approved Campus Vision 2050, alongside an updated Housing Action Plan. The Province of BC has adopted an amended Land Use Plan for the UBC Vancouver campus, enabling the university to begin implementing the ideas, policies and strategies developed with the community through the Campus Vision 2050 process. These plans will guide campus growth and change, and respond to the most urgent issues facing the university and its community.

A diversity of interests, needs and views emerged through the process. The result is a balanced approach to meeting multiple priorities over the next 30 years, including increasing rental housing and student housing, and supporting the academic mission, caring for the ecology and biodiversity of campus lands, and ensuring UBC continues to be a resilient and thriving place to learn, live, work and play.

Over the coming months and years, UBC will further engage the community and Musqueam, and will work with faculty experts and others on detailed implementation plans. <sup>C</sup> UBC VANCOUVER

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### Campus Vision 2050 on Restorative and Resilient Landscapes

Another 'Big Idea' imagines a future campus rich in natural surroundings and Indigenous knowledge, that integrates natural systems and supports increased biodiversity. **C** UBC VANCOUVER

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"I feel that [the approach] is ideal because it would take up less ground space. That would leave more space for green walkways, forest corridors and other preserved ecosystems... There needs to be a balance struck between the

# existing local ecosystem and the housing needs for communities at UBC."

— Campus Vision 2050 engagement participant, responding to draft recommendations for future neighbourhood development to occur through a mix of mid-rise and taller buildings.



### COMMUNITY PROGRAMS AND WELLBEING

UBC's campuses and neighbourhoods are vibrant, sustainable,connected communities. Our programs, events, and initiatives seek to spark imagination, support community building, and foster inclusion. We also recognize the foundational importance of wellbeing by taking a systemswide and settings-based approach to promoting health and wellbeing across our campuses.

# 1,400+

kids and their grown-ups enjoyed arts, culture at Kids Take Over UBC festival

VANCOUVER

# 37

projects supported by the Wellbeing Strategic Initiative Fund

VANCOUVER OKANAGAN

**Festival Breaks Records!** 

The largest ever day of arts, culture, music and more, featuring nitrogen ice

cream making, a youth talent show and

scavenger hunt. 🖸 UBC VANCOUVER

Kids Take Over UBC

### **KEY ACTIONS**

# Celebrating 10 Years of UBC Wellbeing

Events offered attendees the opportunity to connect and engage in interactive student-led activities, enjoy plant-forward refreshments, and hear inspiring stories.

# Wellbeing Strategic Initiative Fund Adds New Teaching, Learning and Research Environment Stream

Projects include exploring decolonizing approaches to classroom assessments and developing grief and compassion guides to support social connection. <sup>(2)</sup> UBC VANCOUVER | UBC OKANAGAN

### Joint Programming with the University Neighbourhood Association and Acadia Park

Including Project 529 bike registrations, a Youth Leadership Group, and a pop-up physical literacy program for kids. **UBC VANCOUVER** 

# Light Up Lee Square Features Glow in the Dark Playground

A design competition for community members, celebrated with a free event including DJ, hot chocolate and countdown to unveil the winning designs. C UBC VANCOUVER

### **Coast Salish Two-Spirit Mosaic**

This beautiful design was gifted to UBC by Musqueam community member Mack Paul (xwməθkwəýəm) as a visual representation of Coast Salish Two Spirit unity, dignity and respect, to recognize the land that the UBC Vancouver Campus is situated upon, and to acknowledge the historic role of 2Spirit/Indigequeer peoples. ☑ UBC VANCOUVER





### **Chef Challenge Returns**

Student-designed Wellbeing Breaks with a Climate Focus <sup>CUBC</sup> VANCOUVER

Nurturing Student Wellbeing and Community: UBCO Wellness Picnic <sup>I UBC OKANAGAN</sup>

Food Hub Market Expands Plantbased Protein Options C UBC VANCOUVER



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Outdoor culinary contest between four campus chefs competing for votes (and bragging rights), by preparing a tasty bite perfectly paired with a local brew for community members to sip, savour and socialize.

# **Inspiring Community Grants**

Small grants foster community building and connectedness on campus and in the Musqueam community. **C UBC VANCOUVER** 



### TRANSPORTATION

Commuting is one the largest sources of GHG emissions at UBC. In comparison, active transportation supports both human and environmental wellbeing, which is why UBC is working hard to promote sustainable transportation options to, from, and around both campuses.

### STRATEGIC PRIORITIES

• UBC Vancouver Transportation Plan — outlines transportation objectives and initiatives for improving the experience of moving to, from, and around campus.

UBC Okanagan Transportation Plan — high-level roadmap for meeting the transportation needs of the UBC Okanagan community through 2040.
 UBC OKANAGAN

# 54%

of all trips by sustainable modes of transport in 2023

#### VANCOUVER

# **43%**

of all trips by sustainable modes of transport in 2023

OKANAGAN

### **KEY ACTIONS**



of all trips to and from campus by transit in 2023

VANCOUVER

# 17%

of all trips by cycling and walking in 2023

OKANAGAN

# SkyTrain Business Case Underway

The Province's work on developing the business case for the Millennium Line UBC Extension continued this year. With



### e-bikes Arrive at UBC Vancouver

An integrated e-bike and bike share program supports targets to help reduce commuting-related emissions. <sup>C</sup> UBC VANCOUVER

### UBC Okanagan Focuses on Commuting to Reduce Total Emissions

Commuting currently represents 54% of UBC Okanagan's total GHG emissions. To reduce these, a greater proportion of trips must be made by sustainable modes of transportation. In 2023, 43% of trips to and from campus were made by walking, cycling and transit, up from 40% in 2021, demonstrating progress to achieving these reductions. COUBC OKANAGAN

### **Micro-mobility Ridership Surges**

UBC Okanagan's micro-mobility program offering e-scooters and e-bikes to the campus community, achieved over a 300% increase in ridership over the past year, with nearly 37,500 trips originating from



full project funding secured by 2025, UBC could see a SkyTrain connection by the mid-2030s, helping to reduce transit overcrowding and traffic congestion while achieving UBC's two-thirds sustainable mode share target for trips to and from campus. C UBC VANCOUVER

### Partnership Delivers Regional Bike Share

Supported by the Province and TransLink, UBC partnered with Mobi to install six bikeshare stations on the Vancouver campus in 2023, fully integrated with the City of Vancouver's program. Combined with the existing on-campus program (HOPR), up to 350 shared bikes are on campus at any given time. Discounted annual memberships are available to UBC students, faculty, and staff.

#### campus. 🖸 UBC OKANAGAN

### **ProPASS Continues to Encourage Faculty and Staff to Take Transit**



UBCO has partnered with the City of Kelowna and BC Transit to offer staff and faculty a 50% discounted bus pass (ProPass), with enrollment increasing year-on-year. C UBC OKANAGAN

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### HOUSING AND AMENITIES

UBC is building a vibrant community by providing housing options for students, faculty, staff and residents, and by developing community centres, parks, recreation, open spaces, and other amenities.

### STRATEGIC PRIORITIES

• Housing Action Plan 10 Year Update — Balances affordability, housing choice, and financial sustainability.

• Neighbourhood Climate Action Plan — Pathway to net-zero, climate resilient campus neighbourhoods.

**13,394** beds in student

VANCOUVER

residences

1,103

faculty and staff rental units in operation

VANCOUVER

beds in student residences

2,120

OKANAGAN

# 66%

planned increase in childcare spaces

OKANAGAN

### **KEY ACTIONS**

### **Approved!** Neighbourhood Climate Action Plan

As the campus community grows, and with the increased intensity and frequency of local climate events brought on by the climate crisis, the Neighbourhood Climate Action Plan identifies the additional immediate and long-term actions needed to reduce greenhouse gas emissions, and prepare as well as adapt for the impacts of a changing climate.



Housing Action Plan 10 Year Update; Higher

### UBC Child Care Services' \$10/day Success

The \$10 a Day ChildCareBC program ensures that UBC is able to offer affordable, accessible and inclusive child care. **C UBC VANCOUVER** 

### **Child Care Reaches 996 Spaces**

In the UBC Vancouver community and neighbourhood housing areas, including for ages 0-5 and out-of-school care. New spaces are currently under construction at Brock Commons, and are in the planning stage for Orchard Commons and a new site in the Wesbrook Place neighbourhood. C UBC VANCOUVER



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# New Facility to Add 37 Child Care Spaces

Sustainable features include incorporating wood, a lowcarbon material, throughout its structure, and electric heat pumps to provide heating and cooling.

16

### Targets for Student Beds, More Rental Choice

The 10-year update includes commitments to:

- Increase the target for future rental housing to up to 40% of new campus neighbourhood development
- $\bullet$  Increase the portion of future below-market faculty/staff rental housing to up to 25%
- Prioritize housing access for marginalized groups
- Provide at least 3,300 new student housing beds

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C UBC VANCOUVER

# Brock Commons: Phase 2 Student Housing Complete

Featuring nearly 600 new student beds, phase 2 is helping meet significant demand for oncampus student housing. **C UBC VANCOUVER** 

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# PERFORMANCE DATA | SUSTAIN.UBC.CA/DASHBOARD

Below is a snapshot of some of the metrics we use to measure sustainability performance. Access all the data. <sup>(2)</sup> UBC VANCOUVER | UBC OKANAGAN







### New! CAP2030 Dashboard

View GHG emissions by category, progress to targets, and explore insights about future areas of focus. ☑ UBC VANCOUVER





THE UNIVERSITY OF BRITISH COLUMBIA sustainability