

## Fall 2023 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Hub is pleased to offer current UBC graduate students the opportunity to work on funded sustainability internship projects. As a Sustainability Scholar, you work under the broad guidance of a mentor at one of our partner organizations. Through your project work you are immersed in real world learning where you apply your research skills and contribute to advancing the sustainability goals of your mentor's organization.

The program provides a unique professional and educational experience for UBC graduate level students. It is open to currently registered Masters (including JD) and PhD students from all academic disciplines.

- Visit the [Sustainability Scholars Program website](#) to learn [how the program works](#) and to [apply](#).
- Be sure to review the application guide on the [Apply page](#) to confirm your eligibility before applying.

**Applications close at midnight on Sunday September 17, 2023.**

---

### **Project title: Addressing heat-related vulnerability in marginalized communities: Research to identify best DIY cooling options for DTES residents in social and supportive housing**

#### **Project Background & Overview**

The project aims to contribute to addressing the larger problem of heat-related deaths and illnesses during extreme heat events, with a specific focus on marginalized populations. In the summer of 2021, Vancouver experienced a devastating heat dome that brought record-breaking temperatures, impacting various communities and exposing vulnerabilities, particularly in the Downtown Eastside (DTES), one of the city's poorest neighborhoods. Unhoused individuals faced severe challenges as they lacked access to cooling spaces and were disproportionately affected by extreme heat.

Research conducted on the 2021 heat dome highlighted alarming statistics, revealing that [people with schizophrenia](#) and [substance use disorders](#) faced higher mortality rates during the extreme heat event. The lack of tree cover in the DTES contributed to the "[urban heat island](#)" effect, [exacerbating temperatures in the area](#) during heatwaves. Despite most fatalities occurring indoors during the heat dome, the Downtown Eastside community played a crucial role in preventing deaths among the homeless population by providing support and resources.

One contributing factor to the vulnerability of marginalized communities during extreme heat events is the older housing stock lacking air conditioning and not being designed to withstand today's extreme weather conditions. Retrofitting such housing to include cooling systems is delayed due to the high costs and time needed for construction. This issue is particularly pertinent in social housing and Single Room Occupancies (SROs) in the DTES, where many residents face additional economic and health challenges.

The project seeks to address this problem by exploring short-term solutions, such as do-it-yourself (DIY) cooling options that can be implemented quickly and cost-effectively. Additionally, the project aligns with the mission of the Union Gospel Mission (UGM), a prominent organization in the area, which is

committed to supporting marginalized populations by providing essential services and advocating for their well-being.

By combining research, community engagement, and practical solutions, the project aims to enhance the resilience of vulnerable populations in extreme heat events, particularly those in the DTES. Collaborating with community stakeholders and leveraging UGM's expertise and network, the project seeks to identify and implement effective cooling strategies for individuals in older housing and those without adequate access to cooling facilities. By doing so, the project strives to reduce heat-related illnesses and fatalities in marginalized communities, ultimately fostering a more equitable and resilient urban environment in the face of climate change.

## **Project description**

The project's primary focus is to explore a range of do-it-yourself (DIY) cooling solutions that are applicable to residents of the Downtown Eastside (DTES) who live in social or supportive housing.

With a specific aim to address the challenges faced by individuals living in social housing, the project seeks to empower social housing providers like the Union Gospel Mission (UGM) with research on the efficacy of these cooling options. By providing evidence-based data on the effectiveness of these solutions, the project will enable social housing providers to promote and advocate for the most suitable and efficient cooling options for their residents. The ultimate goal is to enhance the well-being and safety of vulnerable populations during extreme heat events.

The project will involve compiling a comprehensive list of DIY cooling solutions, including details on their relative efficacy, benefits, costs, and parts lists. Moreover, step-by-step assembly instructions will be included to make it easier for prospective DIYers to implement these cooling strategies. To ensure the safe use and widespread adoption of these solutions, the project will also conduct research on best practices and recommendations for encouraging uptake among the DTES residents.

In addition to investigating DIY cooling options, the project will also conduct research to highlight the temporary nature of these solutions and emphasize the need for long-term strategies, such as passive and active cooling retrofits in all DTES residences. This research will provide context for the urgency of promoting DIY cooling as a stop-gap measure until more permanent cooling solutions can be implemented.

The City of Vancouver's [Extreme Heat Plan](#) and [Resilient Neighbourhoods Grants for Extreme Heat](#) will serve as valuable references for the project. Additionally, the project will seek information from other cities, community organizations such as the Aboriginal Friendship Centre, SRO-C, REACH, Watari, and the DTES Neighbourhood House, and health authorities that might have identified DIY cooling options not yet in use in Vancouver's DTES. By identifying such gaps, the project aims to ensure that no potential solutions are overlooked and that the most effective and accessible DIY cooling options are made available to the vulnerable communities in the DTES.

To further enrich the project's findings, the research will explore how DTES residents, particularly those living in UGM's housing, are currently utilizing existing cooling resources provided by the City of Vancouver. This will help identify potential gaps in the city's responses to providing DIY cooling options and reveal opportunities for improving communication and engagement strategies to promote greater utilization of existing resources.

# SUSTAINABILITY SCHOLARS PROGRAM

Through research, collaboration, and community engagement, this project endeavors to contribute to the larger effort of addressing heat-related vulnerabilities in marginalized populations living in social housing within the DTES. By equipping social housing providers with evidence-based knowledge and empowering residents with effective cooling solutions, the project aims to foster greater resilience and well-being during extreme heat events in the DTES.

## Project scope

- Research best practices in DIY cooling options from 3 to 7 jurisdictions around the world with similar housing, climate, and weather as Vancouver DTES.
- Compile and compare a ranked list of solutions applicable to DTES residents who are precariously housed or who mostly live in a low-income social housing context.
  - The comparison should include solutions available and in use in Vancouver and any additional solutions identified by the research that are not in use in Vancouver.
  - Ranking to be based on a number of factors including efficacy of cooling, recommended approaches from health authorities, cost, access to materials, ease of assembly, likelihood of uptake, practicality, etc.
- Research on best practices to promote and encourage adoption of the recommended DIY solutions to the intended audience of DTES residents.
- Time permitting: Literature review of federal, provincial, municipal, utility policy and programs to understand the timeline during which DIY and stop gap measures will need to be in place.

## Deliverables

- A final report containing a summary of the work completed including a ranked comparison of DIY solutions for passive cooling, emphasizing that these are all 'stop gap' measures, not solutions to systemic deficiencies resulting from climate change.
- A final report for the online public-facing [Scholars Project Library](#).
- Based on the best practices research on how to encourage adoption of DIY solutions, develop content or an action plan that UGM can use for future outreach.
- Time permitting: Summary document outlining current policy and timeline showing how long DIY solutions might be required before the housing crisis and enactment of building retrofits and retrofit policies are resulting in greater availability of heat resistant buildings.
- Time permitting: A brief glossary of terminology for a non-academic audience to understand concepts such as passive cooling, active cooling, etc.

## Time Commitment

- This project will take 250 hours to complete
- This project must be completed between October 16, 2023 and March 15, 2024
- The Scholar is to complete hours between 9 am and 5 pm, Monday to Friday, approximately 10 to 12 hours per week.

## Required/preferred Skills and Background

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Experience conducting stakeholder engagement events, including facilitation skills, is an asset
- Strong analytical skills
- Ability to work independently
- Deadline oriented

# SUSTAINABILITY SCHOLARS PROGRAM

- ☒ Demonstrated experience in reviewing, analysing and summarising policy
- ☒ Familiarity with the DTES community and housing situation/needs of marginalised communities
- ☒ Familiarity with passive home cooling an asset
- ☒ **NOTE: The successful candidate for this position must be located in the Lower Mainland and able to attend meetings in the DTES.**

## Additional information about the project.

The majority of housing in the Downtown Eastside (DTES) was constructed before 1975, making it less equipped to handle extreme heat events and climate challenges. Although there are incentive programs for climate-appropriate and energy-efficient retrofits, [tenants in the DTES rarely have access to these programs](#). When renovations are done, the [resulting rent increases](#) make it unaffordable for many residents, leading to displacement. This issue is particularly pronounced in low-income housing, such as single-room occupancy (SRO) units, where tenants have [long been excluded](#) in building governance.

The unhoused population in the DTES faces a significantly higher risk of heat-related mortality, [up to 200 times greater](#) than those with access to shelter. The lack of cooling spaces and resources for the homeless during extreme heat events exacerbates the vulnerability of this already marginalized population, leading to severe health risks and potential fatalities.

Applications close **midnight Sunday September 17, 2023**

Apply here: [Click here to apply](#)

Contact Karen Taylor at [sustainability.scholars@ubc.ca](mailto:sustainability.scholars@ubc.ca) if you have questions

## Useful Resources

Below are some links to useful resources to help you with your resume and cover letter (there are many more online). Some of these resources also provide information on preparing for your interview.

<https://students.ubc.ca/career/career-resources/resumes-cover-letters-curricula-vitae>

<https://www.grad.ubc.ca/current-students/graduate-pathways-success>

<https://www.grad.ubc.ca/cover-letter-cv-resume-templates-ubc-career-services>