## Fall 2022 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. Successful candidates work under the mentorship of a partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region.

* Visit the [Sustainability Scholars Program website](https://bit.ly/3lvRfeR) to learn [how the program works](https://bit.ly/33AHqWW) and to [apply](https://bit.ly/2KXzYPc).
* Be sure to review the [application guide](https://sustain.ubc.ca/sites/default/files/Sustainability%20Scholars/2022_Sustainability_Scholars/Application%20Guide%20Fall%202022%20v1.pdf) to confirm your eligibility before applying.

**Applications close at midnight on Sunday September 18, 2022.**

**Project title**

Research to understand the benefits of Density Transfer in land use planning.

**Project Background & Overview:**

The Coastal Douglas-fir Conservation Partnership (CDFCP) is looking to research planning tools that would help tackle the twin problems of climate change and biodiversity loss.

The focus of the study is on the Coastal Douglas-fir Biogeoclimatic Zone (CDF Zone), which is the smallest and most at-risk Biogeoclimatic zone in BC and provides ecosystem services that will help deliver climate change resilience including carbon storage and sequestration, temperature regulation and water storage (www.cdfcp.ca).

The CDF forest is at risk from two main pressures:

1. the demand for land for housing and associated building purposes (e.g., roads, commercial developments) to address expected population growth and the current housing crisis. Historically, land conversion within the CDF zone has led to:
   * 49% of the CDF zone being permanently converted to alternative land uses;
   * 1-3% of old growth remaining, mostly in parks, First Nations reserves and under government ownership; and
   * Most (80%) of the remaining forested land is held by small, private landowners.
2. the lack of financial and social incentives for private landowners to retain forest land due to high land and timber prices.

The value of this project will be identifying opportunities to achieving the protection of forested lands (and the species they support) and housing goals in the CDF zone.

**Project description**

The purpose of this project is to investigate the role that Density Transfer could have on incentivising the retention of forested land that provides ecosystem services and consequently climate resilience, while enabling housing for an increasing population.

The project will investigate how this tool has been applied by local governments and developers, how projects using this tool have contributed to climate resilience and social justice, the barriers to the implementation (perceived and actual), and whether implementation could have a perverse effect on land protection in the long term by propagating misunderstanding around ”development rights” under the Canadian constitution.

The primary beneficiary of the knowledge collected by this project will be local governments and First Nations due to their planning and zoning powers over land development. In addition, the project could help private landowners identify an economic and social incentive that will enable them to choose to retain their forested lands.

**Project scope**

Investigate the role of Density Transfer as a market-based approach to achieving two outcomes; climate resilience through the protection of forests that provide valuable ecosystem services and the provision of housing for an increasing population.

The hypothesis is that:

* this tool is either not understood by local governments (i.e., planners and politicians) and First Nations or it is considered inappropriate for use in BC,
* this tool, if used more broadly, could be an effective and low-cost, market-based means of achieving climate resilience through the protection of forest providing ecosystems services and by delivering on the housing goals of local governments, and
* implementation of density transfer avoids or lessens the need to use other options such as bylaw downzoning (with associated political and court challenges) or fundraising to purchase a desired parcel of land.

This project will require the student to undertake a desk-based review and interviews to understand how Density Transfer has been and could be applied in the region. The CDFCP will work with the student to identify a list of key people to interview (5-10 people) within local governments, First Nations, developers, Environmental Law Centre etc. to learn about the positive and negative outcomes (perceived or seen) of implementing Density Transfer.

The research and interviews will also consider the climate change benefits of these tools such as the delivery of nature-based solutions and the incentives these tools offer (financial, environmental, social etc.) to private landowners.

Below is a brief description of how Density Transfer works:

1. A transfer of existing sub-division (development) units (rights) from one parcel of land to another parcel of land – regardless of whether the owners are the same person or a different person;
2. The transferor would receive a financial payment from the transferee and would make a legal commitment that the land would be managed for conservation purposes. Examples of conservation outcomes include:
   1. Avoidance of habitat fragmentation;
   2. Larger parcels of protected land allow for more connectivity between parcels enabling movement of animals, birds, amphibians and fish;
   3. Larger areas for carbon sequestration and watershed protection;
   4. Ability to conduct fuel reduction activities to reduce the fire hazard and improve the resiliency of communities;
3. The transferee (assumed to be a developer) would be able to add the development units (rights) to an existing development, thus providing more units in a given area and reducing the servicing costs for both the developer and the local government.
   1. Items such as roads, sewer, power, nature-based and man-made civil engineering structures are in a concentrated area, thereby providing economies of scale and a reduction in green house gas emissions due to a reduction in transportation;
   2. The resulting development can be designed to be pedestrian friendly with the knowledge that other land parcels are being kept in a conservation regime.

**Deliverables**

* A report summarising the research, the climate and land use benefits, and recommendations on next steps that could be provided to Local Governments or First Nations.
* A final report for the online public-facing [Scholars Project Library](https://sustain.ubc.ca/scholarslibrary).
* Presentation of conclusions at one public webinar attended by local government / First Nations representatives.

**Time Commitment**

* This project will take 250 hours to complete
* This project must be completed between October 17, 2022 and March 15, 2023
* The scholars are to complete hours between 9 am and 5 pm, Monday to Friday, approximately 10 to 12 hours per week.
* Attendance at the CDFCP Steering Committee monthly meeting, for the duration of the project, to provide project update.

**Required/preferred Skills and Background**

Excellent research and writing skills

Demonstrated interest in sustainability

Excellent public speaking and presentation skills

Strong analytical skills

Ability to work independently

Deadline oriented

Comfortable interacting with strangers to conduct public/in person surveys

Experience with financial modelling and analysis, an asset

Familiarity with land use planning in BC, an asset

Applications close **midnight Sunday September 18, 2022**

Apply here: [Click here to apply](https://sustain.ubc.ca/teaching-applied-learning/sustainability-scholars-program/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>