Summer 2022 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Initiative (USI) 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 to learn how the program works and to apply.
- Be sure to review the application guide to confirm your eligibility before applying.

Applications close at midnight on Sunday January 30, 2022.

>> This is a Fraser Estuary Research Collaborative Project >>

The Fraser Estuary Research Collaborative (FERC) is focussed on advancing efforts to protect the Fraser River estuary in collaboration with key NGO and Indigenous partners. If you are interested in producing new knowledge and supporting Fraser estuary protection through scientific, technical, governance and policy innovations, the following project might be for you. Read on for more details.

Research Project Title: Developing an Indigenous-centric cumulative effects framework to protect the Fraser River estuary

Project Background and Overview

The Fraser River estuary continues to experience unprecedented environmental degradation and habitat loss. For example, only 15% of historic floodplain habitat remains accessible to salmonids and an estimated 1,700 km of stream length has been lost since the 1850s. An ever-increasing area of focus and concern for First Nation communities that reside within the estuary is how ongoing human disturbance, exacerbated by climate change, will impact ecosystem-level processes. The record-breaking forest fires and subsequent floods in the region within only a few months, are testimony to the severity of these changes.

Cumulative effects frameworks are the primary means by which we assess and monitor how a range of impacts may influence valued ecological processes. Conventional approaches to cumulative effects frameworks in BC and Canada are driven by a Western science philosophy. As such, cumulative effects assessments often compartmentalize ecosystems by sector (e.g., water, fish, wildlife), timeframe and jurisdiction. The potential for environmental harm is evaluated on a project-by-project basis and factors like climate change are often not contemplated. Additionally, effects to future generations and the incorporation of traditional Indigenous laws are generally absent. Indigenous perspectives in contrast to Western approaches are considerably more holistic and view ecosystems as an integrated, connected system that cannot be reduced by sector. Indigenous perspectives may thus provide a more intuitive approach for evaluating cumulative effects.

While Western government to Indigenous government collaboration in decision making has been pitched as an overarching objective of current assessments, this largely remains unrealized. At best, Indigenous knowledge is summarized as part of the cumulative effects assessment but is rarely, if ever, meaningfully

incorporated. The magnitude of on-going human disturbances and projected impact of climate change to the Fraser River estuary has led us to ask if an Indigenous-centric cumulative effects framework would lead to more sustainable decision-making, and ultimately enable better protection of valued resources.
The Salish Sea Indigenous Guardians Association (SSIGA) was formed by Kwantlen, Tsawwassen and Semiahmoo First Nations in 2021 to establish a fulsome Indigenous-centric cumulative effects approach for monitoring and management of resources. The Fraser River estuary is vital to the health, heritage, livelihood, and way of life for many First Nations in the region. This research will support SSIGA's vision of developing a centralized cumulative effects database and framework for member nations.

Project Description

The purpose of this work is not to blend Indigenous knowledge with the Western approach. Instead, we're seeking to develop an Indigenous-centric framework and methodology to protect and manage the Fraser River estuary. This project will explore the opportunities an Indigenous-centric cumulative effects framework would provide in guiding sustainable decision-making processes. We ask the central question: how do we "de-colonize" cumulative effects assessments? This is of particular importance in the face of unprecedented climate change causing further declines in species numbers and functionality of the Fraser River estuary.
This project has been divided into three specific goals; the student will:

1. Work closely with the Salish Sea Indigenous Guardians Association (SSIGA) participatory Nations to gain insight on the key components, methods and processes involved in an Indigenous-centric cumulative effects framework (this includes a literature review).
2. Examine Western cumulative effects frameworks and explore shortcomings to sustainable decision-making within the Fraser River Estuary.
3. Provide clear methods and steps on how to establish an Indigenous-centric cumulative effects framework, including monitoring and management.

The results of this project will be used by SSIGA, and other Indigenous communities, to advance a new approach to cumulative effects monitoring and management for the protection and sustainability of the Fraser River Estuary.
It is important to note that the student will be working closely with members of the three participatory Nations for guidance and feedback on the Indigenous perspective and to gain insight on an Indigenous-centric cumulative effects framework. The student will be directly mentored by PGL Environmental Consultants (providing environmental assessment and cumulative effects support) and Landmark Resource Management Ltd. (providing anthropology and traditional use support), with additional technical support and direction from external salmon, crab and bivalve experts. A kick-off workshop, bi-weekly meetings, and ongoing mentorship will be provided. For centralization official mentor will be the Executive Director of SSIGA, who would be setting up direct work with the leads from the consulting firms for the hands-on experience.

Project Scope

To address the goals of this initiative, we propose the following project scope and tasks[1].
1. Literature review and meetings with participatory Nations to record key components, methods, and processes of Indigenous-centric cumulative effects frameworks. Key questions to consider include:

- How could an Indigenous-centric cumulative effects approach for the Fraser River estuary be created?

[1] Note, we will maintain flexibility for the student to align this project in a direction that is meaningful to their interest areas as well.

- How is data collected through an Indigenous lens?
- How can biodiversity and interconnected aspects of the natural world be assessed in a cohesive way?
- How can climate change be incorporated into cumulative effects management?
- How can thresholds or limits be determined through an Indigenous lens?
- How would an Indigenous group determine if a project should be approved or not?

2. Evaluation of Western cumulative effects frameworks and identify limitations of this approach. Includes reviewing primary literature and policy frameworks (e.g., prepared by government), as well as meeting with SSIGA members to understand the limitations of existing frameworks. The focus will be on identifying loopholes and limitations in the current approach and how this has resulted in a failure to protect the Fraser River estuary to date.

Key considerations here include:

- What are the failures of cumulative effects frameworks in general and for the Fraser River estuary?
- How does the current approach align or misalign with Indigenous perspectives?

3. Provide clear methods on how to establish an Indigenous-centric cumulative effects framework, including monitoring and management. Key considerations when identifying actionable steps and methodologies of an Indigenous-centric cumulative effects framework include:

- What steps are required to establish a fulsome Indigenous-centric cumulative effects approach for monitoring and managing the Fraser River estuary.
- What methods should be used to determine Indigenous-centric limits or thresholds?
- What methods should be used to establish SSIGA's data collection program (consider Indigenous parameters, boundaries, seasonal references)?
- What Indigenous-centric considerations need to be included when monitoring or managing cumulative effects?

Deliverables

Four deliverables are anticipated from this work:

1. Interim report as a summary of the literature review, input from respective Nations, kick off workshop, and preliminary methodology proposed for Indigenous-centric cumulative effects management for the SSIGA team to provide feedback on.
2. Final report summarizing the work completed (including project objectives, background, research findings, analysis and recommendations), with feedback from SSIGA team incorporated.
3. A final report for the online public-facing Scholars Project Library (with Nation specific information removed as per SSIGA direction).
4. Presentation given to SSIGA Board and consulting team (presentation to be shared with SSIGA team).

Time Commitment

- This project will take 270 hours to complete.
- This project must be completed between May 2, 2022 and August 12, 2022
- The scholar is to complete hours between 9 am and 5 pm, Monday to Friday, approximately 19 to 22 hours per week.

Required/preferred Skills and Background

☒ Excellent research and writing skills
☒ Demonstrated interest in sustainability
☒ Strong analytical skills
☒ Ability to work independently
☒ Deadline oriented
☒ Project management and organizational skills
☒ Comfortable interacting with strangers to conduct public/in person surveys or interviews
☒ Familiarity with cumulative effects frameworks and/or impact assessments
☒ We welcome all candidates to apply for this position. We especially encourage applicants who have lived experience and/or strong knowledge of Indigenous ways of knowing and/or Indigenous culture.

Applications close **midnight Sunday January 30, 2022**
Apply here: Click here to apply
Contact Karen Taylor at sustainability.scholars@ubc.ca if you have questions

Useful Resources

We are holding a special **resume preparation workshop for prospective Scholars** on January 19. Click here for details and to register.
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