

THE FRASER RIVER ESTUARY RESEARCH COLLABORATIVE

RESEARCH HIGHLIGHTS 2021 - 2022



THE UNIVERSITY OF BRITISH COLUMBIA
Sustainability Hub

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RESEARCH HIGHLIGHTS 2021 - 2022

UBC Sustainability Scholars Program
Fraser River Estuary Research Collaborative
<https://sustain.ubc.ca/ferc>

A SPECIAL THANK YOU TO OUR FUNDER

Thank you to the Sitka Foundation for their generous and sustained support for the first year of the Fraser River Estuary Research Collaborative.



A MESSAGE FROM THE DIRECTOR

The Fraser River Estuary is a beautiful, biodiverse and life-giving intertidal watershed, fed by the Fraser's vast network of tributaries from its headwaters in the Rocky Mountains to where it empties past its low laying delta and into the Strait of Georgia. The estuary supports communities, shapes the many overlapping cultures of the Lower Mainland and provides key habitat to a stunning spectrum of wildlife species.

But the fate of the Fraser Estuary is uncertain due to threats from pollution, industrial projects, residential development and climate change. Many advocate for better care, stronger effort to enforce the numerous designations that apply to the estuary, and redefining the relationship with the estuary and the river by putting ecology and Indigenous stewardship at the centre, and by recognizing the rights of non-human beings.

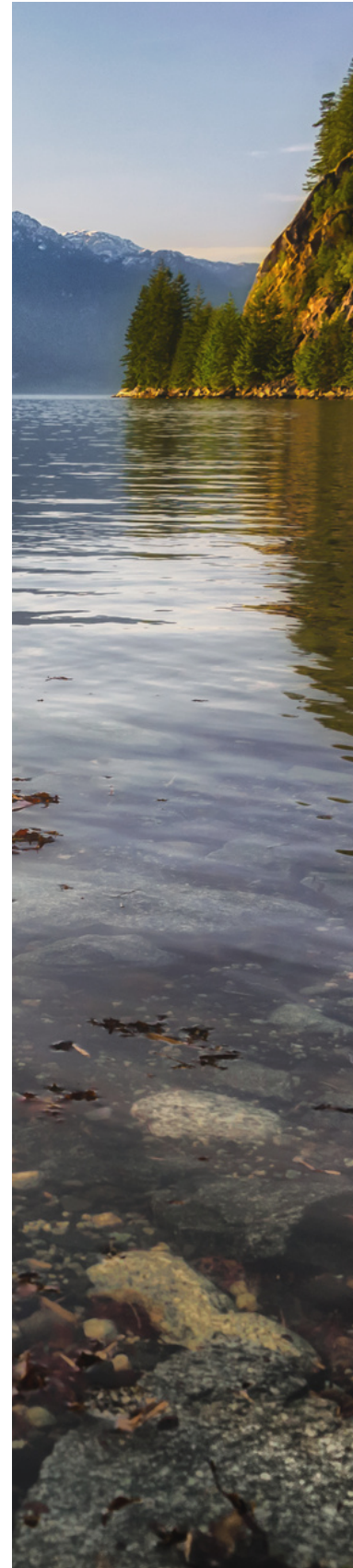
We are pleased to be a part of this growing global “nature positive” movement, and we are proud of what the first cohort of the Fraser River Estuary Research Collaborative (FERC) scholars have achieved. This three-year project aims to bring student researchers and high impact environmental NGOs together to find solutions to the range of challenges facing this vital watershed. This document is a summary of the first year of that important work. We hope that you will feel as encouraged as we are by these scholars and their important contributions towards revitalizing the health, abundance, diversity and resilience of the Fraser River Estuary for generations to come.



A handwritten signature in black ink that reads "Linda Nowlan". The signature is fluid and cursive.

LINDA NOWLAN

SENIOR DIRECTOR,
UBC SUSTAINABILITY HUB





ABOUT

THE FRASER RIVER ESTUARY RESEARCH COLLABORATIVE

This summer, 14 UBC Graduate students embarked on the first of a three-year collaborative research project to address a range of challenges facing the Fraser River Estuary.

The Fraser River Estuary Research Collaborative (FERC) represents an innovative new approach to collaborative research; where a group of graduate students work with partner organizations to focus on a shared outcome - restoring and protecting the endangered Fraser River Estuary.

These UBC graduate students cover a range of disciplines - from landscape architecture, law, geography and civil engineering and they were matched with a mentor from a local NGO with expertise in environmental law, advocacy, mapping, Indigenous-led conservation and habitat restoration projects happening in the Estuary. By synthesizing locally-held knowledge with cutting-edge scholarship, the Fraser River Estuary Research Collaborative is off to a powerful start in its 3-year plan; delivering cross-sectoral and cutting edge solutions to ecosystems challenges - and contributing to the development of an array of solutions to the challenges facing this vital watershed. Exciting project opportunities range from developing an Indigenous-led cumulative effects assessment, salmon habitat and traditional food lands restoration, to projects seeking enhanced flooding and watershed management to a graphic rendering of a restored estuary.

LAND ACKNOWLEDGEMENT

The Sustainability Hub office is located at the UBC Point Grey campus situated within the traditional, ancestral, and unceded territory of the xʷməθkʷə́yəm (Musqueam). As part of the larger UBC community, we are guests and settlers on the traditional, ancestral, and unceded territories of the xʷməθkʷə́yəm (Musqueam), Skwxwú7mesh (Squamish), Selílwitlh (Tsleil-Waututh) and Syilx (Okanagan) Nations. In our pursuit of sustainability, climate action and climate justice, we understand that protecting human 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. We will continue building on existing partnerships with our host Nations through mutual respect and reciprocity.

As part of UBC's on-going commitment to advance Indigenous rights, this research will draw from multiple ways of knowing and being, and bring together Coast Salish territorial and cultural interests, stewardship values and knowledge of the area - with the energy and passion of graduate students, UBC research expertise, and the active energy of the NGO sector.

OUR PARTNERS

FERC scholars in year-1 received the valued guidance from a long list of local partner NGOs from a cross-sector of environmental conservation initiatives who carry with them a broad scope of expertise on environmental legal-governance frameworks, community well-being and ecosystems health.

Our 2021-2022 partners include:

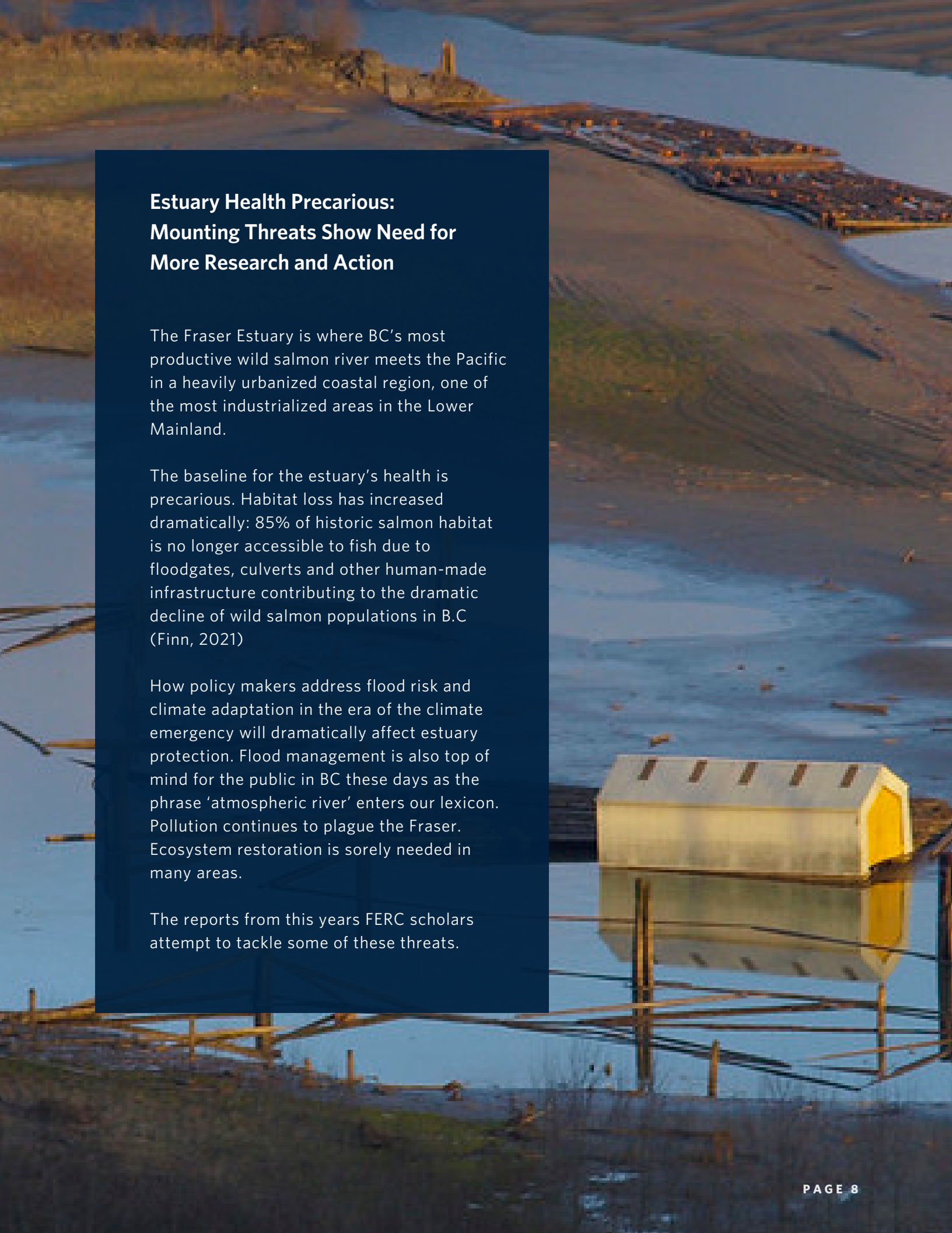
Birds Canada
Federation of British Columbia Naturalists
Lower Fraser Fisheries Alliance Society
Pacific Salmon Foundation
Raincoast Conservation Foundation
Resilient Waters
Rivershed Society of BC
Salish Sea Indigenous Guardians Association
Sierra Club of British Columbia Foundation
UBC Centre for Sustainable Food Systems
UBC Sustainability Hub
West Coast Environmental Law Association
World Wildlife Fund Canada



LIST OF PROJECTS

PROJECT MENTORS

Assessing the potential for flood risk mitigation and salmon habitat restoration in the Lower Fraser	
Challenges and opportunities to accelerate eelgrass and saltmarsh conservation and restoration in the Fraser River estuary	
Climate Change Indicators for Pacific Salmon in the Fraser River estuary	
Developing an Indigenous-centric cumulative effects framework to protect the Fraser River estuary	
Evaluating land use regulations in the Fraser River Estuary	
Exploring opportunities to accord the Fraser River Estuary legal personhood status	
Harnessing the Collective Power of Nature Clubs for Invasive Species Management	
Integrated flood management for climate, salmon, agriculture, and community resilience in the Lower Mainland	
Introduced Canada Geese in the Fraser River Estuary: A Conservation Challenge	
Re-storying Our Relationship: As We Journey On The Pathway	
Recommendations for Fine Scale Bird Monitoring to Inform the Impact of Wetland Restoration on the Fraser Delta	
Research on agricultural land use regulations in the context of Indigenous food security	
Traditional foodlands in the Fraser Estuary: Impacts of pollution, invasive species, and climate change on Indigenous food sovereignty	
Visualizing a Restored and Resilient Fraser Estuary: A Graphic Rendering of North Arm Intertidal Habitat Park	



Estuary Health Precarious: Mounting Threats Show Need for More Research and Action

The Fraser Estuary is where BC's most productive wild salmon river meets the Pacific in a heavily urbanized coastal region, one of the most industrialized areas in the Lower Mainland.

The baseline for the estuary's health is precarious. Habitat loss has increased dramatically: 85% of historic salmon habitat is no longer accessible to fish due to floodgates, culverts and other human-made infrastructure contributing to the dramatic decline of wild salmon populations in B.C (Finn, 2021)

How policy makers address flood risk and climate adaptation in the era of the climate emergency will dramatically affect estuary protection. Flood management is also top of mind for the public in BC these days as the phrase 'atmospheric river' enters our lexicon. Pollution continues to plague the Fraser. Ecosystem restoration is sorely needed in many areas.

The reports from this years FERC scholars attempt to tackle some of these threats.



ASSESSING THE POTENTIAL FOR FLOOD RISK MITIGATION AND SALMON HABITAT RESTORATION IN THE LOWER FRASER

Prepared by Sadia Ishaq for the Lower Fraser Fisheries Alliance (LFFA) | Emergency Planning Secretariat



This project aims to assess the potential of nature-based solutions (NBS) for reconnecting floodplains with rivers and offers benefits such as flood risk reduction and pacific salmon survival. The findings are based on a literature review and include recommendations for improving our understanding of the water storage capacity of multiple NBS, guidelines for stakeholder participation, and integrated decision-making tools that rank different NBS based on competing interests.




Photo credit- JMV 'Fraser river' Creative Commons

Find the full report here:
<https://sustain.ubc.ca/about/resources/evaluation-regulations-governing-human-activities-lower-fraser-relevant>



CHALLENGES AND OPPORTUNITIES TO ACCELERATE EELGRASS AND TIDAL MARSH CONSERVATION AND RESTORATION IN THE FRASER RIVER ESTUARY

Prepared by Anna Santo for WWF-Canada

This project gathered insights from a literature review and 31 practitioner interviews about the key challenges and opportunities that exist to accelerate eelgrass and tidal marsh conservation and restoration in the Fraser River estuary. The report includes summaries of challenges and opportunities that were salient to interviewees, 10 priority actions, and ideas for how an NGO like WWF-Canada could contribute to eelgrass and tidal marsh recovery in the Fraser River estuary.

Interviewees offered ideas for actions that could facilitate greater eelgrass and tidal marsh conservation and restoration. Salient suggestions were related to increasing coordination and collaboration, engaging in formal strategic planning and prioritization, and identifying and drawing upon new funding sources and human resources.

Find the full report here:
<https://sustain.ubc.ca/about/resources/challenges-and-opportunities-accelerate-eelgrass-and-saltmarsh-conservation-and>



“

I gathered, synthesized, and contextualized opinions and ideas about the key challenges and opportunities to accelerating eelgrass and tidal marsh conservation and restoration from a literature review and 31 semi-structured interviews. Interviewees included people working in diverse roles related to the conservation, restoration, or creation of eelgrass and tidal marsh habitat in and around the Fraser River estuary.

ANNA SANTO

My mentors Brianne Kelly and Jacklyn Barrs at World Wildlife Fund-Canada set me up for success and supported me at every stage of this project. They were kind, helpful, flexible, and very encouraging.

We had fun working together to accomplish the objectives we set out to achieve. Through this internship I gained a much more robust understanding of the importance of and strategies for recovering eelgrass and tidal marsh ecosystems in the Fraser River estuary and beyond. I also had an opportunity to learn directly from a wide array of organizations working on this issue across the region and share information back with them.

”

Anna presented the key findings/themes that emerged from her 31 interviews about challenges and future possible actions to accelerate eelgrass and tidal marsh conservation and restoration in the Fraser River Estuary. This special webinar webinar was hosted by WWF-Canada and took place on Thursday, September 8th

CLIMATE CHANGE INDICATORS FOR PACIFIC SALMON IN THE FRASER RIVER ESTUARY

Prepared by Ian Chambers for Pacific Salmon Foundation

This project aimed to identify how climate change will alter the Fraser River estuary and affect the Pacific salmon species that inhabit it. Climate indicators relevant to salmon populations were identified and analyzed for trends through time to understand the potential impact on salmon.

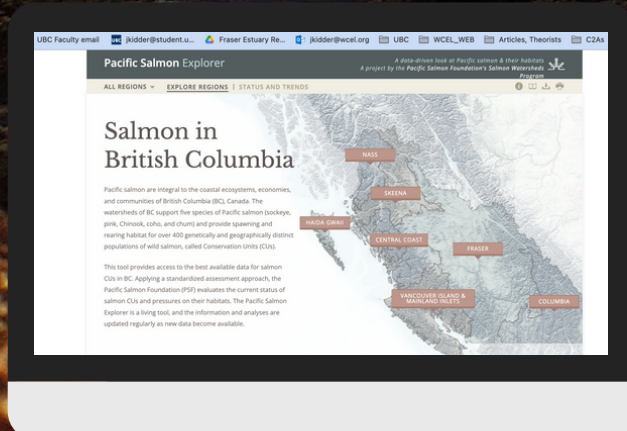
According to the report "The effects of climate change are already being experienced throughout British Columbia and pose a threat to the Fraser River estuary. In 2021, many heat records were broken across B.C. due to an unusual heat dome that affected the region for several days. The effects of the heat dome were compounded with a drought that occurred across much of the Pacific Northwest and contributed to many forest fires that burned over 860,000 acres in B.C. Following the hot dry summer, B.C. experienced historic flooding in November that wiped out highways and destroyed many communities such as Merritt."

Read the full report here:
<https://sustain.ubc.ca/about/resources/climate-change-indicators-pacific-salmon-fraser-river-estuary>



85%

of historic salmon habitat is no longer accessible to fish due to floodgates, culverts and other human-made infrastructure



Ian Chambers (whose research you can find [here](#)) integrated his research with the Pacific Salmon Explorer, a powerful tool that contains a plethora of data on salmon and their habitats and allows it to be visualized by users.

DEVELOPING AN INDIGENOUS-CENTRIC CUMULATIVE EFFECTS FRAMEWORK TO PROTECT THE FRASER RIVER ESTUARY

Prepared by Jennifer Cutbill for Salish Sea Indigenous Guardians Association (SSIGA)

This project unpacks failings of currently-dominant (colonial) approaches to cumulative effects assessment and management and explores Indigenous-centric alternatives to support the Salish Sea Indigenous Guardians Association (SSIGA) in developing an Indigenous-centric cumulative effects framework. One that supports sustainable decision-making for the long-term holistic health of the Fraser River Estuary, in ways that center and empower the laws, ways of knowing, being, doing and valuing of member Nations. Findings are based on integrative literature review and iterative workshops with experts.

Read the full report here:
[https://sustain.ubc.ca/about/
resources/developing-
indigenous-centric-
cumulative-effects-
framework-protect-fraser-
river](https://sustain.ubc.ca/about/resources/developing-indigenous-centric-cumulative-effects-framework-protect-fraser-river)





Photo credit- Robert Linsdell Creative Commons

EVALUATING LAND USE REGULATIONS IN THE FRASER RIVER ESTUARY

Prepared by Audrey Irvine-Broque for West Coast Environmental Law

This report focused on one component of “routine” planning and management in the estuary by examining existing land use designations and regulations for shorelines in the estuary. This was selected as one step towards building a better understanding of how human activities – outside of larger projects and developments that are subject to environmental assessment processes – are currently managed in the estuary. It contains an inventory of these land use regulations and related policies, including the characteristics of existing environmental protection, identification of the responsible authority, as well as a framework for how to evaluate the effectiveness of such policies in managing cumulative effects.

Overall, this report finds that current land use regulations do not strongly align with the restoration and protection of the health of the Fraser estuary. Crucially, very little shoreline within the study area is managed exclusively or primarily for habitat values. While much of the shoreline is recognized as ecologically sensitive, and some of this area is subject to policies protecting important ecological features, most of these areas overlap with those zoned for industrial or residential developments, leading to limited protections overall. Moreover, even where requirements do exist to protect ecological integrity through the development process, existing colonial land use policy has very weak protections that are hard to enforce on shorelines.

Read the full report here:
<https://sustain.ubc.ca/about/resources/evaluation-regulations-governing-human-activities-lower-fraser-relevant>



EXPLORING OPPORTUNITIES TO ACCORD THE FRASER RIVER ESTUARY LEGAL PERSONHOOD STATUS

Prepared by Avery Pasternak for Raincoast Conservation Foundation

This report explores the opportunities to grant legal recognition to the Fraser River estuary. This includes a global survey of rights-of-nature laws in other jurisdictions and an assessment of the feasibility of applying these models in the local context.

It is evident that the Fraser River Estuary ecosystem is declining at an unprecedented rate. Its degradation carries with it significant implications for the number of species that rely upon the ecosystem for shelter, food, and protection – including foundation species such as Pacific salmon and endangered species like the Southern Resident killer whale. It is equally apparent that the Canadian regulatory landscape is antiquated; incapable of and unwilling to prioritize restoration and conservation over short-term financial gains, even in the face of climate change and mounting evidence of the long-term health, economic, and social costs of the over-exploitation of nature. As many Indigenous Nations, environmental groups, and scientists have identified, urgent action is needed to restore a governance system over the estuary that prioritizes the long-term health of the ecosystem and the communities who rely upon it.

Rights of nature embodies a legal innovation that can facilitate this much needed shift in how the estuary is conceptualized and treated under the law. Imbuing the estuary with legal standing and personality, one that reflects the longstanding relationship that Indigenous Nations have with the region, captures the estuary's intrinsic value as a living organism, beyond what resources it can provide to support economic growth and industrialization. This global survey has demonstrated the diverse forms that rights of nature laws can take. A case study analysis of legal pathway indicates that there are several forms a rights of nature law could take if enacted to protect the estuary. Passing such a law could have a host of short, moderate, and long-term benefits to conservation and governance over the ecosystem. Ultimately, passing such a law is a necessary step to transform Canada's perspective on nature, from a set of resources to a whole, interconnected being.



HARNESSING THE COLLECTIVE POWER OF NATURE CLUBS FOR INVASIVE SPECIES MANAGEMENT

Prepared by Kephra Beckett for Nature BC

BC Nature is a federation of over 50 nature clubs throughout BC, and one of its main purposes is to support the work and goals of those clubs. Many of the clubs in the Lower Mainland conduct similar invasive species management activities, however, currently there is not enough communication and no collective strategy amongst them. This report identifies club actions that are benefiting species at risk and proposes collaborative projects with potential funding opportunities in the Lower Mainland



KEPHRA BECKETT

“

I really enjoyed working on this Sustainability Scholars project with BC Nature and the members of its federated clubs. I liked how I was given freedom to push the project where I felt it naturally needed to go, while also being supported at each step with advice and recommendations from my mentor I enjoyed getting to meet new people who are extremely passionate and knowledgeable about conservation, and being able to join in on hands-on invasive species removal with some of the clubs. It was also a great introduction to working at a non-profit organization, and has given me helpful experience and insight to bring to future work.

”

INTEGRATED FLOOD MANAGEMENT FOR CLIMATE, SALMON, AGRICULTURE, AND COMMUNITY RESILIENCE IN THE LOWER MAINLAND

Prepared by Saeed Mohammadiun for Resilient Waters

This study conducted a literature review and developed several examples of integrated and collaborative flood management governance regimes practising more holistic management approaches to obtain multiple benefits through wildlife-friendly and efficient solutions to floods.

Three case studies of Integrated Flood Management (IFM) were reviewed to elaborate on the development and implementation of IFM-based approaches and present some valuable experiences from real-world programs and Integrated flood management in the Lower Mainland.

Each of the case studies provided unique challenges and solutions that can inspire a new way of managing for floods in the Lower Mainland.

Find the full report here: <https://sustain.ubc.ca/about/resources/integrated-flood-management-climate-salmon-agriculture-and-community-resilience>



INTRODUCED CANADA GEESE IN THE FRASER RIVER ESTUARY: A CONSERVATION CHALLENGE

Prepared by Dominus Janus for UBC Sustainability Hub

This report provides a detailed summary of the conservation issue of introduced Canada Geese in the Fraser River Estuary. Background on the estuary and the introduced Canada Geese (CAGO) set the scene for a narrative on the ongoing impacts of CAGO on critical salmon habitats and ecological processes that affect many living organisms and people alike. The purpose of the report is to inspire ecological restoration and conservation work through collaborative stewardship.

Find the full report here:
<https://sustain.ubc.ca/about/resources/introduced-canada-geese-fraser-river-estuary-conservation-challenge>



RE-STORYING OUR RELATIONSHIP: AS WE JOURNEY ON THE PATHWAY

Prepared by Fiona Kelly for Sierra Club BC

The purpose of this project is to (a) Identify and create innovative approaches to research, knowledge sharing, storytelling and engagement by centring Indigenous and diverse lenses, and (b) Re-story and model how to implement "Walking A Pathway Together" collaboratively. Through respectful Indigenous and intercultural approaches, and centering the Coast Salish protocol, a holistic understanding of the interrelationships is invited. Re-storying our relationships through an older oral traditions lens models both knowledge translation and dissemination across diverse perspectives. Storytelling relays the rich nuanced cultural data being offered, encouraging connections between the Fraser River estuary, river, ocean and all who live within these communities, both human and non-human.



Image (right) © Copyright All Rights Reserved:
kQwa'st'not ~ Charlene George, 2022 Sierra Club BC

"The main image of house (thee lelum) representing community interconnection contains waves for the center of the work, Fraser River (staləw'). Central circular image is doubled headed sea-monster (s7i:łqəy) with both xʷməθkʷəy̍əm and intercultural communities balancing. Outside thee lelum (honored house) you will find to the right, orca and octopus. Following in Coast Salish direction (counterclockwise) fir tree flowing down to dragonfly, oyster, crab, herring, and orca. This description will become important as we move along through the communities of beings re-remembered and given voice through the body of this work,"

RECOMMENDATIONS FOR FINE SCALE BIRD MONITORING TO INFORM THE IMPACT OF WETLAND RESTORATION ON THE FRASER DELTA

Prepared by Bretta McCall for Birds Canada

Worldwide, bird populations are under severe decline. Climate change, human activity, habitat loss and prey loss are the main drivers of these declines. Shorebirds, commonly called waders due to their behaviour of wading and foraging in intertidal mudflats and beaches, are also in decline. The reasons for the decline of this charismatic and ecologically important order are unclear.

This trend necessitates large-scale and unified monitoring efforts in order to understand the reasons for and effects of decline. Several groups have initiated large-scale monitoring of shorebirds and water birds throughout the Americas. These groups have different environments, resources, and research questions and therefore different protocols for monitoring.

This document consists of a review of current shorebird and waterbird monitoring protocols employed in the Americas and compares and contrasts their methods. It also contains suggestions for a monitoring protocol for use by Birds Canada and other partners in studying shorebirds in the Fraser River Delta.

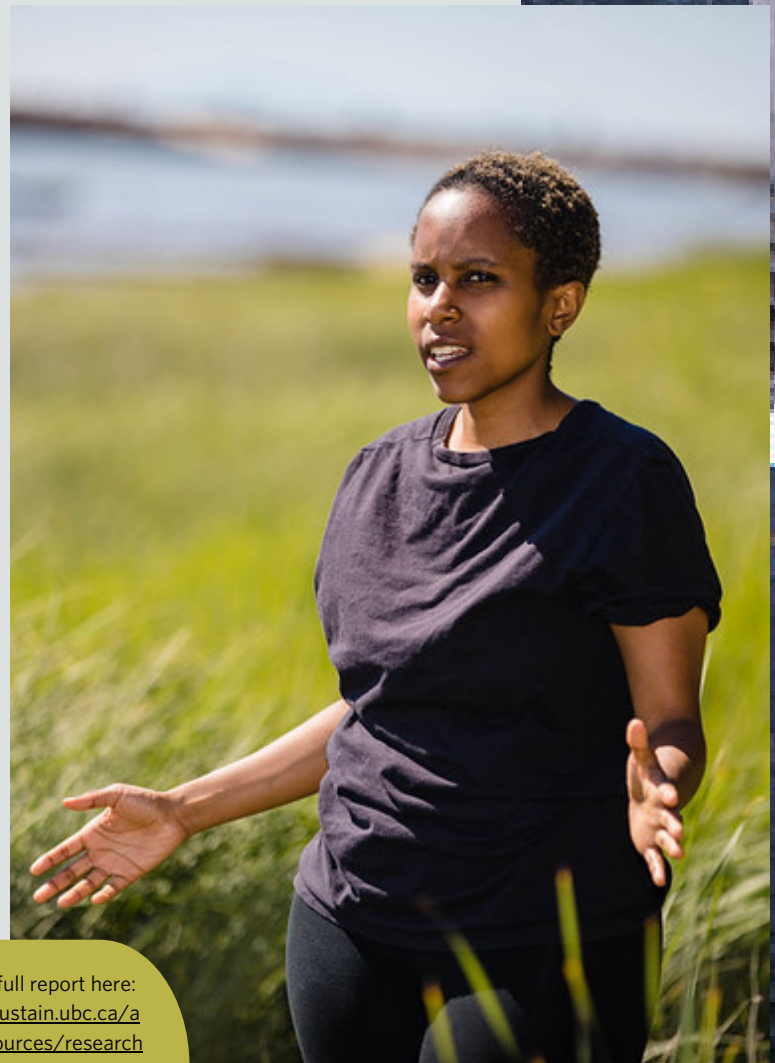
Find the full report here:
<https://sustain.ubc.ca/about/resources/recommendations-fine-scale-bird-monitoring-inform-impact-wetland-restoration-fraser>

RESEARCH ON AGRICULTURAL LAND USE REGULATIONS IN THE CONTEXT OF INDIGENOUS FOOD SECURITY

Prepared by Jessica Mukiri for West Coast Environmental Law

The overall objective of the report was to assess and synthesize using an Indigenous food security lens how colonial laws have been used to colonize, displace, and criminalize indigenous food and Indigenous food security from the perspective of agricultural land use in the Lower Fraser floodplain.

It is hoped that the results will help build a foundation for more transparent and inclusive dialogue around 'food security' in the Lower Fraser floodplain, by remembering and understanding the historical underpinnings and existing regulatory framework of current agricultural land use in the region in the context of the rich biodiversity, Indigenous economies and culture it displaced.



Find the full report here:
<https://sustain.ubc.ca/about/resources/research-agricultural-land-use-regulations-context-indigenous-food-security>

TRADITIONAL FOODLANDS IN THE FRASER ESTUARY

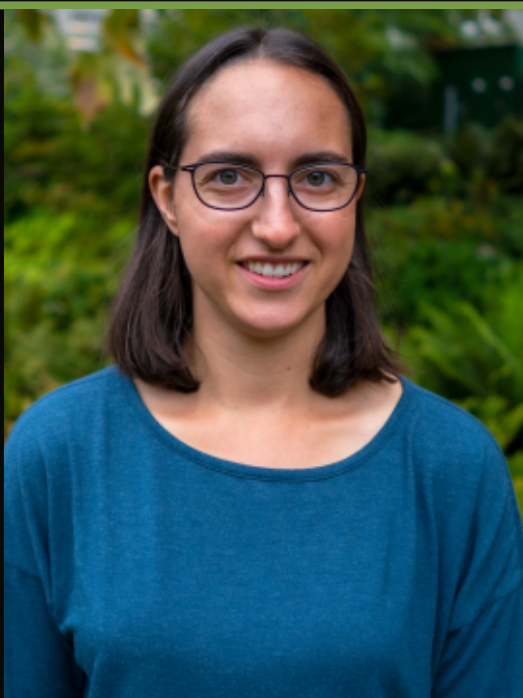
Impacts of Pollution, Invasive Species, and Climate Change on Indigenous Food Sovereignty

**Prepared by Katharine Baldwin for the Centre for
Sustainable Food Systems at UBC Farm**

Settler colonial-capitalist policies have reduced the ability of Indigenous peoples to harvest foods from and enact food sovereignty within the Fraser River estuary. This report explores the repercussions of environmental change on traditional foods in the estuary, focusing on pollution, invasive species, and climate change. The report culminates in recommendations to support healthy habitat for traditional food species and recommendations for collaborating with Musqueam on food sovereignty.



Soapberries - Photo Credit: Ian Glover Flickr Creative Commons 2013



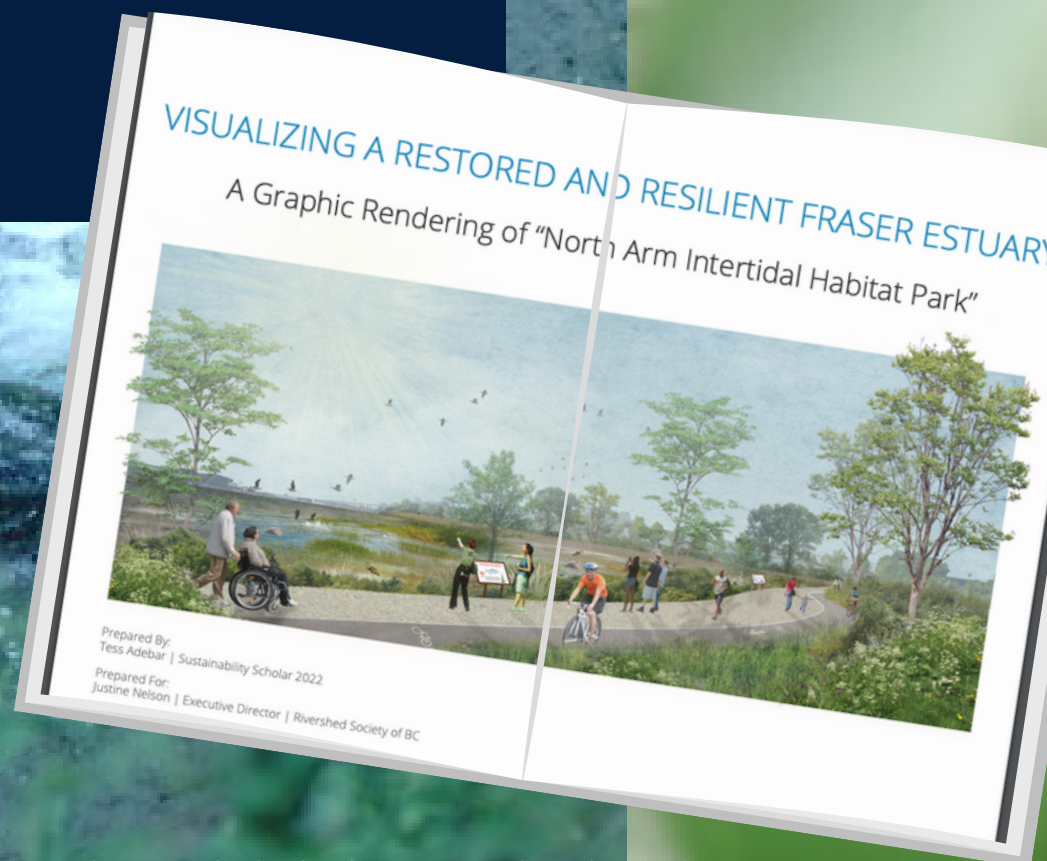
KATHARINE BALDWIN

"Working on this project with the Centre for Sustainable Food Systems at UBC Farm and the UBC Sustainability Hub gave me the opportunity to learn more about the history of Vancouver, the plants and animals that live here, and cultural connections to place. I love that I can now take a walk outdoors and feel surrounded by stories."

GRAPHIC RENDERING OF A RESTORED AND RESILIENT FRASER ESTUARY

Prepared by Tess Adebar for Rivershed BC

This project aims to visually communicate the importance of restoration work for the health of the Lower Fraser River. Graphic renderings raise awareness, generate public support and motivate investors, making them useful tools for achieving ecological enhancement. By visualizing the creation of "North Arm Intertidal Habitat Park" this project examines the importance of tidal marsh habitat, and proposes an opportunity for its restoration and protection within the Fraser River Estuary.



Sturgeon Bank Sediment Enhancement Pilot Project

“

Our Sustainability Scholars' projects were so important to us to actually have a sample of what restored tidal marsh areas in the estuary would look like rather than it just being a concept. It's exciting to be able to go into the estuary and see the rendering there on park signage. We are working on an overall vision for a restored Fraser estuary and help from UBC graduate student Scholars has been pivotal in helping us visualize success.

”

**JUSTINE NELSON
EXECUTIVE DIRECTOR,
RIVERSHED SOCIETY**

A 2020 Sustainability Scholar produced a visualization that is now being used on signage for the Sturgeon Banks Marsh Recession Pilot Project, part of Rivershed's work to visualize restoration of the entire estuary.



GATHERINGS ON AND ABOUT THE ESTUARY

Photo credit: Sara Race



July 14th 2022

Blue Cabin

Workshop & Discussion

On a cloudy day on the Fraser estuary in Steveston, a group of Fraser Estuary Research Collaborative (FERC) Sustainability Scholars and their NGO mentors met at the Blue Cabin floating artist residency to share progress on their projects. The group discussed the goal of human interaction with the severely degraded Fraser estuary, where the majority of wetlands have been lost.



Photo credit: Julia Kidder

Dom Janus at the Blue Cabin. Photo credit: Marina Dodis



August 19th 2022

How can (your) research support Indigenous-led initiatives?

Workshop, Storytelling & Discussion

This in-person dialogue with Vancouver-based Anishinaabe (Treaty 3) lawyer Rayanna Seymour-Hourie (WCELaw/ RELAW) and xʷməθkʷəy̓əm (Musqueam) knowledge-holder Victor Guerin brought FERC scholars and other guests together to discuss the role that Indigenous governance, story and protocol have in collaborative research projects. This event took place at the UBC Farm Yurt and Xʷcičəsəm Garden on the traditional, ancestral and unceded territory of the Musqueam people.



Photo credit: Julia Kidder

Photo credits (top & bottom): Sara Race

July 19th 2022

Marshland Tour

Walking Tour, Discussion & Site Visit

Scholars and their mentors were invited to a walking tour of the marshland area (part of the estuary) near the UBC Garden.

Special thank you to FERC Scholar, Dom Janus, who led the walking tour and offered insights on the marshland's unique vegetation, and how the ecology of intertidal marshes provides a special flyway for bird species, a home to fish, and a source of food for marine life.



Friday July 29 2022

Protocol of the land and waters with kQwa'st'not (Charlene George - cultural guide for the Sierra Club BC)

Following Coast Salish practice

The aim of this event was to encourage conversations between the Scholars and to make interconnections between their bodies of work. The Scholars were invited to think about how their projects are connected and to reflect on and offer insight that may help each others' work through re-storying as a reciprocal offering.

Holding the event on the traditional territory of the xʷməθkʷəy̓əm (Musqueam) encouraged deeper connections and a relational lens that might inform project work. The experience was a very small taste of what to consider when doing research that involves Musqueam or other Nations.





A SPECIAL THANK YOU

Thank you to Nadia Joe, Rayanna Seymour-Hourie, and Victor Guerin for the Indigenous law session.

To Sunshine Frere and Barbara Cole for organizing the Blue Cabin session and to kQwa'st'not (Charlene George) for the Protocol of Lands and Waters session. Thank you to Sustainability Scholar Dom Janus for the estuary walking tour.

Thank you to Marina Dodis and Sarah Race for their photography and to Julia Kidder for wonderful design, research and organizational assistance throughout.

And to each of the Scholars and their mentors for their hard work, collaborations and insightful contributions.



THE UNIVERSITY OF BRITISH COLUMBIA
Sustainability Hub

The mission of the Sustainability Hub is to inspire people to act upon the planet's most urgent challenges through UBC's academic and operational sustainability leadership. One of our goals is to build strong diverse supportive and reciprocal relationships with local and regional communities to mobilize for climate action and sustainability.

<https://sustain.ubc.ca/ferc>

