SFU FACULTY OF ENVIRONMENT




# SEA, LAND AND SKY: PROGRESS REPORT 2026

Dr. Sean Markey, Dean

Dr. Joanna Ashworth, Project Manager/Research Facilitator

**October 1, 2026**

# CONTENTS


1. INTRODUCTION 1

2. INDIGENOUS-CENTRED KNOWLEDGE EXCHANGE 2

3. LAND-BASED LEARNING FIELD SCHOOLS AND COURSE IN 2026 4

4. CURRICULUM ENHANCEMENT FUNDING 6

5. PATHWAYS AND LADDERS FOR INDIGENOUS STUDENTS 6

6. FACULTY HIRES 7

7. FACULTY AND STAFF LEARNING CIRCLES 7

8. ADVISORY GROUP AND PROJECT MANAGER/RESEARCH FACILITATOR 7

9. STRATEGIC ALIGNMENT AND RECONCILIATION COMMITMENTS 8

10. CONCLUSIONS 9




## 1. INTRODUCTION

The Faculty of Environment (FENV) has demonstrated leadership through the Sea, Land and Sky initiative, undertaking foundational actions to support reconciliation through land-based learning, Indigenous-centred research partnerships, Indigenous student pathways, curriculum innovation and faculty representation.

One of FENV's strategic priorities is to engage tomorrow's environmental leaders and deepen their understanding of land—and the wider environment—as a source of knowledge. In the context of reconciliation, the FENV is expanding learning experiences to include Indigenous and other place-based knowledges of land and water. It seeks to increase the presence of Indigenous knowledges and histories within its curricula, and have greater representation of Indigenous students, faculty and staff.

To realize this vision, FENV has been expanding Indigenous content in undergraduate courses and supporting continuous learning about Indigenous perspectives on environmental stewardship, resource management, decolonization, Indigenous rights and title, the duty to consult, language and culture, geography, history, archaeology, UNDRIP, and the TRC. Sea Land and Sky's plan for Indigenizing the Faculty's teaching, research and community engagement includes:

- Research - Indigenous-Centred Knowledge Exchange
- Teaching and Learning - Land-Based Learning and Curriculum Innovation
- Indigenous Faculty - Hiring more Indigenous faculty
- Student Recruitment - Increasing opportunities for Indigenous students through enhanced pathways and laddering
- Leadership - Contributing to university-wide reconciliation efforts
- Project Management and Advisory Committee

This report reflects on the work completed in the 2025-26 fiscal year — and each component of this strategy is described in terms of its activities and impacts.

## 2. INDIGENOUS-CENTRED KNOWLEDGE EXCHANGE

The Indigenous-Centred Knowledge Exchange (the Knowledge Exchange) is a collaborative project between SFU's Faculty of Environment and SFU's Community-Engaged Research Initiative (CERi) that facilitates meaningful partnerships with Indigenous communities by matching institutional research support with community-identified research priorities.

At a time of reconciliation and transformation, the resurgence of Indigenous-led research by BC's First Nations and Indigenous organizations is helping communities create their own archives, recover and protect their languages, and document their histories and ways of knowing. These efforts contribute to advancing their action and policy priorities related to land, water, food, ecosystems, health, climate solutions, and more.

The Knowledge Exchange supports partnership development between Indigenous-led organizations, First Nations and SFU researchers. Through an online matching portal and direct one-on-one support, it serves as a hub for making meaningful research partnerships. Its aim is to produce research with direct, positive impact by centring Indigenous communities' priorities, strengths and research questions and methodologies.

Through an umbrella agreement with Mitacs, CERi (SFU's Community Engaged Research initiative) and Vancity Community Foundation, together with additional Sea, Land and Sky funding, five graduate students were hired in the past 12 months to support five Indigenous-centred research projects. Additional projects are in development with the Métis Society of British Columbia and an Indigenous housing coalition. Applications for research are accepted on a rolling basis. We anticipate a minimum of 3 additional projects in 2027.

### Projects Supported — Completed/In Progress 2025–26

#### Laying the Groundwork for a Nation's Food Strategy

ɬaʔamın (Tla'amin) Nation (TN) partnered with the Indigenous-Centred Knowledge Exchange to support the development of a Food Plan. Graduate student Belinda Li worked collaboratively with TN to bring together and build on TN's long-standing food systems work. The project approach included a review of plans, programs, studies, data, and other documents related to food from TN, interviews with TN staff, an external scan of food initiatives from other Indigenous communities, a Food Workshop with TN staff and leadership, and a *Lands Advisory Group* meeting.

The graduate student researcher is Belinda Li, a PhD candidate in SFU's School of Resource and Environmental Management (REM) and a co-founder of the Food Systems Lab. Her research uses participatory design and data-driven approaches to create sustainable, just food systems, including reducing food waste and managing organic waste.

The community response to Belinda's work with the Nation has been enthusiastic: As Marie-Gabrielle Béchard, (MCRP, B. Env.) the Land Use Planner says, "Belinda's work has provided a strong foundation for the Nation to move forward with developing a Food Plan. Her approach reflects a clear understanding that research must be useful, accessible, and directly tied to decision-making. She has not only delivered high-quality analysis but has also contributed to building shared understanding across departments and practically advancing this work. She will continue to support the Nation in the next phase, translating this research into planning and implementation."

#### Understanding the Implications of LiDAR for Indigenous Data Sovereignty

British Columbia's transition to open-access LiDAR data creates a critical governance paradox for the Ḵwiḵwəsut'inuxw Haxwa'mis First Nation (KHFN). While this policy removes longstanding barriers to accessing high-resolution spatial data, it simultaneously weakens Indigenous control over how data about their territory is accessed and used by external actors. This research, developed in collaboration with the Nation by graduate student Nasir Tighsazzadeh, evaluates how the province's LiDAR policy shift, from a restricted, Crown-controlled model to an open-data regime, affects Indigenous data sovereignty and self-determined land use planning. Grounded in the OCAP® principles (Ownership, Control, Access, Possession) and informed by a Two-Eyed Seeing approach, the research employs a qualitative, policy-analytical, and community-engaged approach rooted in Indigenous data governance principles.



The graduate student researcher is Nasir Tighsazzadeh, a Ph.D. candidate in the School of Resources and Environmental Management in the Ocean Equity Lab at Simon Fraser University and a student fellow at the Ocean Nexus Center. His doctoral research focuses on equitable offshore wind energy planning in Nova Scotia, carried out in partnership with First Nations to support just and inclusive renewable energy futures.

The community response has also been positive. Andrea Lyall, (R.P.F., Ph.D.) CEO & Director of Ṫsek̲ame' Forestry Ltd notes that, "This was the first time we worked with a researcher in our Nation. And so that was positive Nasir's practical recommendations... are good baseline information that we are going to be putting on the ground right away."

### Knowledge Exchange — Research Projects in Process (2026–27)

#### Ancestral Foodways Collective Society (AFWCS)

This project seeks to develop a transferable model for biocultural heritage and climate resilience in urban settings. Much of the research has focused on a strategy for AFWCS to secure a long-term lease with the Vancouver Park Board, supporting continuity and security for the organization's cultural and agricultural work.

The graduate student research is Sophia Gregory, a planning student in SFU's MRM program. After completing her undergraduate degree in Agricultural and Environmental Sciences at McGill University, her passion for climate action, community engagement, and sustainable development led her from small-scale farming and co-founding Neighbourhood Farm Schools, to developing and managing environmental education programs across Canada. Her research focuses on leveraging connections between planning, Nature-based Solutions, and placemaking to support holistic, community-level climate action

#### The Impact of Climate Change on Water Security and Aquatic Life Along the Central Coast of British Columbia

This research is hosted by the Central Coast Indigenous Resource Alliance (CCIRA), an Indigenous-led organization established by the Heiltsuk, Kitasoo Xai'xais, Nuxalk, and Wuikinuxv Nations to collectively advance their stewardship responsibilities, inherent rights, and decision-making authority over lands and waters within their territories. The research they have proposed is to better understand future risks related to water security and aquatic life (especially Pacific salmon) along the Central Coast of British Columbia and to support land and marine management decisions.

The researcher is Alex Cebulski, a Postdoctoral Fellow in the CLIMB lab at Simon Fraser University's Faculty of Environment. He received his BSc in Geographic Information Science from Western University and his MSc in Physical Geography from the University of Toronto. He completed his PhD in February 2026 at the University of Saskatchewan, where his research focused on advancing models of snow and energy exchange in needleleaf forests in western and northern Canada. His current research investigates how climate change impacts interconnected ecological, hydrological, and biogeochemical systems using a coupled hydrological-land surface modelling framework.

### The Call to Action Towards Reconciliation on the Sunshine Coast: Exploring and Documenting the syíyaya Reconciliation Movement

The syíyaya Reconciliation Movement is a community-led reconciliation initiative on the Sunshine Coast. The Movement was founded in 2017 through the leadership of Hereditary and Former Elected Chief ?akista xaxanak Garry Feschuk and Sechelt resident Nancy Denham, in collaboration with the shíshálh Nation and the Municipality of Sechelt. The syíyaya Movement is seeking to document their work – currently found in their digital and published archive – and to make their experiences and lessons learned accessible more widely to other communities wishing to learn how to foster reconciliation. The output of this research will be a written guide to community-based reconciliation made available to communities across Canada.

The graduate student researcher is Kaumadi (Kaum) Kulatilake. She is pursuing a Master of Urban Studies at SFU. Her professional experience is in front-line food security work, low-barrier employment programs, urban farming, harm reduction, and other trauma-informed approaches to community capacity building and support services. Her academic background in Urban Studies is rooted in her experience working directly with communities experiencing complex challenges or barriers and her desire to understand how urban systems can better support people when they need it most.

## 3. LAND-BASED LEARNING FIELD SCHOOLS AND COURSES IN 2026

### REM 661/485 Place-based Learning on the Nanwakolas Member Nation Territories

The Nanwakolas Council, a non-profit Indigenous organization on Vancouver Island representing six member First Nations, partnered with SFU's Faculty of Environment to co-develop a for-credit, land-based course. Open to undergraduate and graduate students, the course created opportunities for Indigenous Guardians to earn university credit on their own territories while bringing Indigenous and non-Indigenous students together in a shared learning environment. **Nanwakolas Field School** involved **14 SFU students (graduate and undergraduate) and 5 Guardians**.



#### Special Admissions

SFU arranged a special admissions process for Indigenous Guardians wishing to participate in the field school for credit. A dedicated application window, waived application fees and no transcript requirement reduced administrative barriers. Field School instructor Julie Nielsen coordinated Guardian participation with the Nanwakolas Council. Madison Chad of SFU's Indigenous Admissions and colleagues in Admissions, IT and Student Services supported registration. Five Guardians successfully registered through the online portal.

SFU Student Affairs and advising staff provided enrolment and payment guidance and paid close attention in supporting the Guardians. This admissions process represented a successful collaboration between SFU and Nanwakolas to remove administrative barriers, enrol participating Guardians and establish a pathway to future educational opportunities.

#### Course Themes

The course explored social, environmental, cultural, economic, and governance issues identified as priorities by the member Nations. Assignments were grounded in community priorities and included engagement with Knowledge Holders and community members. Students experienced the integration of Indigenous and Western scientific approaches while learning directly on the land.



### Additional Field Schools

Other Indigenous-Centred, Land-Based learning courses supported in part by SLS in 2026 include two undergraduate courses in Geography, taught by Dr. Leigh Joesph, and an upper-level archeology field school on the North Coast of British Columbia led by Dr. Bryn Letham.

#### GEOG 267 'Indigenous Geographies'

This course introduces Indigenous land- and place-based knowledge and is taught by Indigenous scholar (Ethno-botany) Leigh Joseph. With support from SLS funding, this course initially ran with low enrollment numbers. However, this Fall the class is full (60 students), with 20 students on the wait list (which is capped at 20, so undoubtably there are more). Students are coming to the class from across campus, including many from outside FENV.

#### ARCH 435 BC North Coast Archaeology Field School (June 2026)

SLS supported this archeology field school. Students were highly engaged, respectful and serious. One of the highlights came as a result of hiring two young women from the community who took leadership roles and "not only seemed to fall in love with archaeology (one has signed up for Archaeology electives at TRU this fall) but also became genuine friends with the class (they were all the same age)" said Field Director, Dr. Bryn Letham. Several Metlakatla representatives were on site and community member candidly mentioned to their cultural heritage manager that, "SFU just seems to do all this stuff [i.e., community engaged research] better than everyone else."

#### Geography 467 The Sḵwx̱ wú7mesh (Squamish) Ethnobotany Field Course

This land-based course ran for the first time in spring 2026 with 17 enthusiastic students who spent a week on the land and in community in Sḵwx̱wú7mesh territory. They spent time learning from plants in estuarine, coastal rainforest and subalpine environments and met with elders to be part of a native plant knowledge exchange. Overall, it was a very successful first offering of this new field course.

### Conclusion

The Indigenous-centred land-based field schools and courses within FENV, supported by the Sea Land and Sky initiative, are gaining in popularity with students and opening opportunities for Indigenous community members to experience post-

### Nanwakolas Field School - Student Research

Students learning through their research projects emphasized that Indigenous stewardship sites are both **ecological systems and cultural heritage sites**. They also show the value of combining **Indigenous knowledge, student research, field data, and community priorities** into practical tools such as plant guides, survey manuals, monitoring frameworks, and future stewardship proposals.

#### WHITE RIVER FOREST GARDEN

Students, including three Guardians registered in the field school, documented the White River Forest Garden as a living Indigenous-cultivated ecosystem. A plant guidebook was developed with traditional names, scientific names, pronunciation, uses, and harvesting methods. The next step is a proposal for a community medicinal garden.

#### GUARDIAN TRAINING: GAPS AND PROFESSIONAL DEVELOPMENT

This project reviewed Guardian career pathways and training needs. It identified gaps in advanced training, credit transferability, recognition of prior experience, and long-term mentorship. The core recommendation is to strengthen Guardian training as part of stewardship, governance, and resilient community-based economies.

#### LARGE CULTURAL CEDAR: POST-HARVEST SURVEY MANUAL

This project focused on protecting Large Cultural Cedars after harvest. The team developed a practical survey manual for Guardians, including recommendations for assessing buffers, windthrow risk, tree health, harvest damage, and monitoring protection patches. The goal is to combine Guardian knowledge with academic methods in a simple, usable field tool.

## Student Research cont.

### CULTURAL AND WILDLIFE FORAGE PLANTS

This project examined culturally important plants that also support wildlife, especially bear and elk. Key species included devil's club, stinging nettle, Pacific crabapple, licorice fern, and salmonberry. The project emphasized forest gardens as important for food sovereignty, wildlife habitat, and climate resilience.

### BEAR–SALMON RELATIONSHIPS IN KWAKWAKA'WAKW TERRITORIES

This project looked at how bear activity relates to salmon abundance and timing. It recommended matching camera-trap bear data with salmon escapement data and weekly fish monitoring. The project could help Nanwakolas Council predict fishery and wildlife health, especially as DFO monitoring capacity is in decline.

### NANWAKOLAS CAMERA TRAPPING

This project analyzed camera-trap data on elk and wolves, including relative abundance and movement patterns. The findings may support future elk reintroduction planning and help understand animal movement, human interaction, hunting pressure, and predator-prey dynamics.

### INTERTIDAL STEWARDSHIP AND CLAM GARDENS

This project covered clam gardens, algae interactions, ocean acidification, Vibrio risk, baseline monitoring, and Indigenous stewardship of coastal food systems. It also noted tensions between species-at-risk protection, sea otter recovery, and First Nations access to traditional marine foods.



secondary education in their own territories. Working with the Office of Indigenous Admission ensured that the process for Indigenous students was done with care and attention. By offering land-based courses of relevance to Indigenous learners, we seek to create new pathways to post-secondary education.

## 4. CURRICULUM ENHANCEMENT FUNDING

The Faculty of Environment seeks to lead in offering courses that foreground Indigenous knowledges and perspectives as integral parts of the undergraduate curriculum. To this end, we invite faculty and lecturers to imagine how they might reinforce existing components or expand course learning for undergraduate and graduate programs.

Funding from the Sea Land and Sky initiative has supported faculty who have a project, program or lesson plan with an Indigenous focus that they would like to reinforce, develop or integrate into a current or future course. Additionally, funding supports the work of faculty interested in developing a course component, or adapting a current course, to highlight place- and/or land-based, and/or experiential learning that attends to issues, lived experiences and realities of Indigenous peoples. Enhancements include outdoor learning, field trips, media production, guest speakers, student materials, and case study development.

Funding is awarded to innovative proposals from across the FENV's four units. Upon completion, recipients prepare a brief report on activities and outcomes and share their findings with Faculty colleagues at a summative workshop. This year a field-based course held on the territories of the Squamish Nation has received funding to support site visits and contributions from Elders and Traditional Knowledge Holders.

## 5. PATHWAYS AND LADDERS FOR INDIGENOUS STUDENTS

In British Columbia, there has been a growing number of environmental stewardship programs, including Indigenous Guardian-specific initiatives, designed to strengthen First Nations members' knowledge and skills. These programs prepare participants for field- and laboratory-based work in archaeology, forestry, fisheries, wildlife, and environmental consulting. While this technical training is essential, it may not provide the broader conceptual foundation needed for Indigenous Peoples to assume leadership roles or to engage fully with issues of sovereignty, inherent rights, culture and stewardship.

Expanding educational opportunities through undergraduate and graduate studies can help Indigenous learners find educational pathways that allow them to build upon their technical experience to move into roles involving planning, management, research, and community leadership, should they choose. University credit courses delivered on partnering Indigenous Nations' territories or laddering existing courses within FENV offer important pathways to academic engagement and leadership development.

The Associate Dean is currently working on a laddering strategy for courses and program certificate opportunities what will be of strong appeal to Indigenous Guardians and community members from Nations around the province. It will also be important to continue to collaborate with Indigenous Admissions, Student Services and the Office for Indigenous Peoples to ensure the successful recruitment and retainment of Indigenous students.

## 6. FACULTY HIRES

The School of Resource and Environmental Management (REM) uses the university's B.C. Human Rights Commissioner exemption to conduct limited preferential searches for Indigenous scholars. For example, REM designated tenure-track openings for specialists in Indigenous Environmental Governance and Management. Most recently, REM has hired Dr. Jaimy Fischer, a Michif (Red River Métis) health geographer, educator, and knowledge mobilizer whose communityengaged research centres on healthy cities, sustainable transportation, and mobility justice.

## 7. FACULTY AND STAFF LEARNING CIRCLES

Faculty are encouraged to draw on the significant resources available provided by the Indigenous Curriculum Resource Centre (ICRC). Instructors are offered physical and online guides to Indigenize pedagogy that assist with faculty efforts to update their current course materials. Additionally, SLS supports access to FENVs faculty teaching fellow experienced in Indigenous pedagogies and teaching methods. Workshops and learning circles are active ways of fostering understanding and change such as offered by the Department of Geography and the Faculty Dean's Office on the political and cultural history of land acknowledgements, including relevant protocols and the distinction between performative acknowledgement and meaningful engagement with Host Nations, land and responsibility.

## 8. ADVISORY GROUP AND PROJECT MANAGER/RESEARCH FACILITATOR

The Advisory Group is composed of faculty from all four units of FENV. They include Sean Markey, Dean; Jonathan Boron, REM; Leigh Joseph, Geography; Shawn Chartrand, School of Environmental Science; Dana Lepofsky, Archeology and Joanna Ashworth, SLS Manager and Research Facilitator. Two of these representatives are Indigenous. All provide insight, input, and recommendations on the SLS activities on matters such as potential and ongoing Indigenous research partnerships, field schools, curriculum; and student learning circles among other activities.

The SLS manager/research facilitator has played a key role in maintaining momentum of the diverse offerings of the initiative. For example, work on the Knowledge Exchange involves promoting the program, meeting with Indigenous organizations, encouraging applications to the program, helping applicants to refine their research proposals, recruiting and hiring graduate student researchers, supporting the development of research plans, MITACS and ethics applications, and overseeing progress on the research projects.

Additionally, the SLS manager, under the director of the Dean, works closely to support land-based field school development and meeting with key staff and faculty within the Dean's Office regarding other aspects of the initiative i.e., Indigenous student recruitment, curriculum innovation grant proposals, faculty and staff learning as well as documentation and evaluation of each component of the Sea Land and Sky initiative.

## 9. STRATEGIC ALIGNMENT AND RECONCILIATION COMMITMENTS

Sea Land and Sky is best understood not as a collection of stand-alone projects, but as an integrated model for changing how FENV teaches, conducts research, builds relationships with Indigenous communities and creates pathways into the university. It seeks alignment with SFU's Academic Plan, the Strategic Research Plan and FENVs strategic plan as well.

### Alignment with SFU's Academic Plan (2025–2030)

The initiative advances the Academic Plan's focus areas in concrete ways: land-based field schools and curriculum grants support program development, curriculum renewal and experiential learning; the Knowledge Exchange deepens community-engaged research and increases its practical impact; Indigenous-centred teaching, research and hiring advance decolonization and Indigenization; and the special admissions process and pathway work remove barriers to participation, supporting inclusive excellence and access. Project coordination and evaluation also contribute to institutional effectiveness by connecting resources, activities and outcomes.

### Alignment with SFU's Strategic Research Plan (2023–2028)

Sea, Land and Sky reflects the Strategic Research Plan's emphasis on respect and reciprocity, Indigenous approaches and knowledge(s), interdisciplinarity, community partnership, student research training and knowledge mobilization. Community partners identify research priorities; graduate students work with Nations and Indigenous organizations; and findings are translated into practical plans, policies, guides and monitoring tools. Projects concerning food systems, climate resilience, forest gardens, wildlife, coastal stewardship and data sovereignty also contribute to community-centred climate innovation and to research on justice, equity and education

### Alignment with the Faculty of Environment Strategic Plan (2025–2030)

The initiative directly implements all three Faculty strategic priorities. It trains leaders and change agents by extending the Indigenization of curricula, expanding land-based learning and improving access to field schools. It creates, co-creates and upholds knowledge through Indigenous-initiated research partnerships, the Indigenous-Centred Knowledge Exchange and community-centred scholarship. It provides leadership by bringing learning opportunities into Indigenous communities, involving community members in research and field schools, supporting Indigenous faculty recruitment and sustaining the staff capacity needed to coordinate and evaluate this work.

### Response to the TRC (2015) and *Walk This Path With Us (2017)*

Sea, Land and Sky aims to turn reconciliation commitments into sustained practice. It responds to the education-focused spirit of the Truth and Reconciliation Commission's Calls to Action—particularly the need for culturally appropriate curricula, the integration of Indigenous knowledge and teaching methods, education about Indigenous histories and rights, and stronger relationships between educational institutions and Indigenous communities. Within SFU, it advances the four clusters of Walk This Path With Us: creating safer and more welcoming conditions through barrier reduction and relationship-based engagement; curriculum innovation and Indigenization through land-based learning and course enhancement; student pathways and support through special admissions and laddering; and administration, hiring and implementation through preferential faculty searches, learning circles and dedicated project coordination. The initiative's community-directed approach also reflects the principle that reconciliation work should proceed in partnership with Indigenous peoples, with Indigenous priorities shaping the questions, methods and intended benefits.





## 10. CONCLUSIONS

Sea, Land and Sky demonstrates that reconciliation becomes institutional change when commitments are embedded in curriculum, research practice, admissions, hiring, professional learning and sustained community relationships. The initiative supports FENVs students and emerging researchers while engaging Indigenous communities through field schools and community-directed research opportunities. It works toward increasing post-secondary access for Indigenous students and creates pathways for continued study and leadership. But there is more work to be done. And it is ongoing and iterative. Continued investment will allow FENV to consolidate what has been learned, deepen reciprocal partnerships, expand access and strengthen evaluation of outcomes.

## CITATIONS


- Simon Fraser University, Academic Plan 2025–2030;
- Simon Fraser University, Strategic Research Plan 2023–2028;
- SFU Faculty of Environment, Strategic Plan 2025–2030;
- SFU Aboriginal Reconciliation Council, Walk This Path With Us (2017);
- Truth and Reconciliation Commission of Canada, Calls to Action (2015)