

## Connecting Communities Through Research on Vancouver Island

### PLANTING KELP TO REHABILITATE MARINE HABITAT

CARTI has partnered with M.C. Wright and Associates Ltd. and BC Timber Sales to plant kelp at log handling/storage sites off the coast of Vancouver Island. The goal of the project is to reduce the environmental impact of logging on marine habitat. Kelp naturally provides food and habitat for many different species, while improving water quality, and thus holds significant potential to rehabilitate marine habitat that has been degraded through logging or other industrial activities.

Researchers are testing different species of kelp and different planting techniques to provide recommendations on the best habitat rehabilitation strategies. In addition, site conditions such as water current, salinity, and temperature are being closely monitored to help identify sites that will or will not support kelp production.



Industry partner, Mike Wright holds up a sugar kelp test line at one of the research sites.



Fish roe on a sugar kelp line.

### SEAWEED AS A CATTLE FEED ADDITIVE

A new CARTI project will investigate how seaweed can help improve the health and sustainability of cattle farming, while also reducing methane gas levels emitted from cows.

Thanks to a \$25,000 Natural Sciences and Engineering Research Council of Canada Engage grant, the project will see NIC creating a new partnership with Beaver Meadow Farms in Comox. The six-month project will be led by NIC faculty member Dr. Spencer Serin.

"We've seen anecdotal evidence that adding a specific variety of kelp to cattle diets has resulted in increased weight gains and reduced greenhouse gas emissions," said Serin.

"Through this research, we're hoping to quantify that data to determine what effects the kelp has and whether it would be of benefit to the cattle industry."

This research has an opportunity to create a new industry on Vancouver Island surrounding the harvest, processing, and research of the abundant red seaweed.

Additionally, the technical skills learned by two NIC students, who will be hired for the project, will be directly transferable to the Canadian beef and milk sectors.

### Student Researcher

The Raising Student Nurses project employed four students over the course two years.

Jennifer Spurr is one of the BSN student researchers who worked on the project which evaluated the outcomes of first-year-nursing students experiencing an immersive learning collaboration with remote First Nations communities.

"Working with Elders, Knowledge Keepers and mentors throughout the project, I have experienced profound personal and professional learning and growth about the way I walk in this world, and the type of nurse I aspire to be," says Spurr.



**Jennifer Spurr, BSN Student**

Jennifer is a fourth year student in the NIC BSN program and co-explorer on the Inquiry Team.

ARE YOU INTERESTED IN  
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OUR NEWSLETTER?  
PLEASE CONTACT  
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### MAPPING WILD KELP BEDS

NIC's Centre for Applied Research, Technology and Innovation (CARTI) is collaborating with the Kwikwaka'wakw First Nation to conduct wild kelp bed research.

Kwikwaka'wakw First Nation is the second smallest First Nation in BC with 23 registered members. The core of their traditional territory includes the Phillips and Frederick Arm region, about an hour's boat ride north from downtown Campbell River.

The goals of the collaboration are two-fold: to create a detailed map and measurements of the wild kelp beds and to research the role of kelp in carbon sequestration from the ocean.

"We're very excited to work with Frank and Kwikwaka'wakw on this project," said Allison Byrne, lead researcher. "We're constantly learning more about the benefits and complexities of ecosystems supported by wild kelp. Taking inventories like this one help us monitor how those wild beds change over time."

Frank Voelker, who leads Band Management and Economic Development for the Kwikwaka'wakw First Nation, approached NIC with concerns about the status of wild kelp beds in the territory and the impact of commercial harvest of wild ocean plants.

"Kelp and other ocean plants are crucial for a functioning marine ecosystem in Kwikwaka'wakw's territory," said Voelker.

The project is funded by Tides Canada and Coast Funds. Surveys will begin this summer and will be completed by December 2020.



*Wild bull kelp will be surveyed and measured through a new CARTI research project.*

### Food Processing Equipment Grant to Support R&D

A new research grant will see the purchase of food processing equipment, funded by NSERC's Applied Research Tools and Instruments Grant, including general equipment (for washing, cutting, and drying), specialized equipment, such as mill grinder, commercial pasta mixer/maker as well as packaging equipment.

"There is a demonstrated regional need and support for building local food R&D capacity on northern Vancouver Island," says CARTI manager Naomi Tabata.

The \$144,500 project will support local food innovation and will immediately increase NIC's capacity to conduct research with SMEs spanning fisheries and aquaculture, non-timber forest products, and small-scale agriculture.

The first project will investigate optimal processing techniques for seaweed products.

### UPCOMING FUNDING DEADLINES

Please contact CARTI to discuss your ideas for research submissions in advance of the funder deadline or regarding any projects that may involve NIC. There may be additional funding programs that will suit your initiative. CARTI can search our database for funding that may align with your project idea. Additional information is available on the NIC CARTI portal site. You can contact CARTI at 250-923-9771 or [carti@nic.bc.ca](mailto:carti@nic.bc.ca).

FUNDING PROGRAM	DEADLINE
NSERC - Engage and Applied Research Development Grant	Ongoing
INNOVATE BC - ISI Program: Hire A Student	Ongoing
Telus - Community Action Grants	Ongoing
LifeLabs - Community Investment Program	Ongoing
NSERC - Promoscience	Sept. 15, 2020
SSHRC - Insight Grant	Oct. 1, 2020

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