



First Nations Health Authority  
Health through wellness

# **SUMMARY OF THE FIRST ANNUAL 'WE ALL TAKE CARE OF THE HARVEST' (WATCH) GATHERING**

*Seafood Safety, Security and Sovereignty in a Changing Climate*

June 9, 2021  
Online (Zoom)



## Table of Contents

Overview	3
Objectives	3
Invitation	4
215 Children	5
Elders	6
Facilitators	6
Presenters	6
Attendees	7
Acknowledgments to Nations and Territories	9
Presentations	12
Closing	39
Favourite Foods	41
Initiatives that Inspire Hope	42
Questions	44
Requests	44
Concerns	44
Vision	45
Links	47
Gratitude	48
Pilot Community Logo Contest	53



## Overview

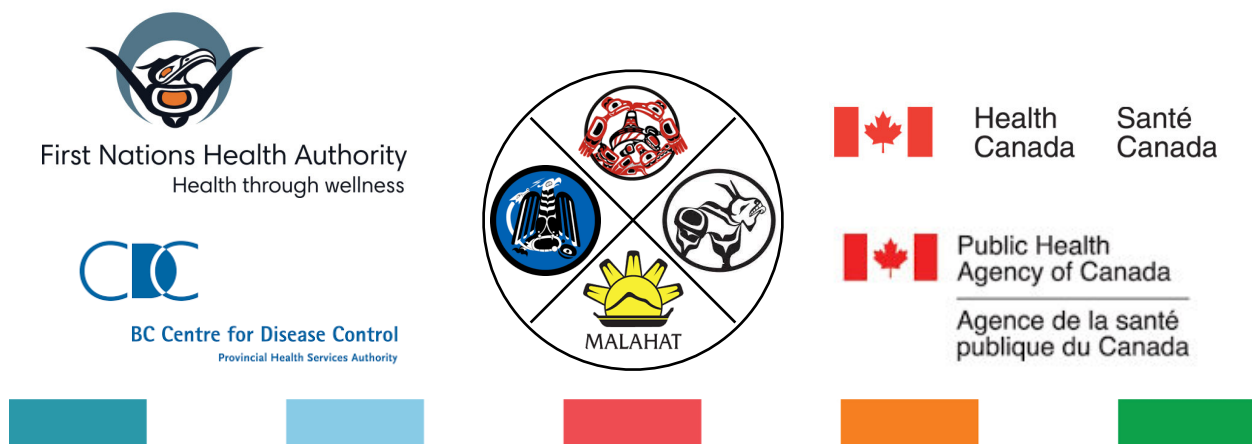
On June 9, 2021, more than 83 people came together in a virtual setting to learn about the WATCH Project and related programs and projects already underway in the territories of our pilot communities - Klahoose, Malahat, Metlakatla and Tseshaht First Nations. Twenty-two presenters including two extraordinary elders shared important stories and information, and more than 42 people joined a visioning session to imagine what the next phases of the Project could be. This detailed summary is a memento for the day and accompanies a wonderful gift for all participants from Hilistis Pauline Waterfall and the Heiltsuk College, *The Traditional Heiltsuk Food Book*. We look forward to seeing you next year for the second Annual WATCH Gathering.

## Objectives

1. Share what we have learned with the WATCH Project so far,
2. Learn about other projects and programs to see a bigger picture of seafood and climate change efforts, and
3. Learn from participants, including ideas for moving from a pilot project into a larger program

### Recommended Citation:

First Nations Health Authority. (2021, June 9). Summary of the First Annual “We All Take Care of the Harvest (WATCH)” Gathering: Seafood Safety, Security and Sovereignty in a Changing Climate. Annual WATCH Gathering 2021, Online (Zoom).



# Invitation



First Nations Health Authority  
Health through wellness

## We All Take Care of the Harvest (WATCH) 2021 Annual Gathering

Everyone welcome! | June 9, 2021 | 10-11:30 a.m. and 1-3 p.m. | Zoom Room

*We All Take Care of the Harvest* (WATCH) is a FNHA seafood and climate change pilot project to support seafood safety, security and sovereignty.

### Agenda

#### **Session 1 10-11:30 a.m.**

Welcome – Peter Mazey *Environmental Health Manager, FNHA*

Opening & Presentation – Elder Hilistis Pauline Waterfall *Heiltsuk First Nation*

WATCH Project Spring 2021 Update! – Holly Clermont *WATCH Project Lead, FNHA*

Seafood Safety Learnings: Past, Present and Future – Lorraine McIntyre *BC Center for Disease Control*

Showcasing WATCH *Metlakatla First Nation*

#### **Session 2 1-2:30 p.m.**

Showcasing WATCH, Continued *Metlakatla First Nation, Klahoose First Nation, Malahat First Nation, Tseshaht First Nation*

Taking Care of the Harvest *Short presentations from other seafood and climate change programs and projects*

Reflections – Elder Syexwaliya (Ann Whonnock) *Squamish First Nation*

#### **Session 2 Continued 2:30-3 p.m.**

Big Pictures *An interactive visioning session!*

Stay tuned for giveaways throughout the event!

To join the WATCH Gathering 2021, please contact [watch-project@fnha.ca](mailto:watch-project@fnha.ca)



Learn more about WATCH <https://www.fnha.ca/watchproject>



## 215 Children

We began the day with a moment of silence to attend to heavy hearts and to honour the children who were recently found in Tk'emlúps te Secwépemc First Nation territory. Ground-penetrating radar had revealed two hundred and fifteen children were buried at a former residential institution in Kamloops. Survivors tell us we can expect more such sites will be discovered.

### **During the presentations:**

"I'm grateful that we had a moment of silence to remember them. I am a survivor of the residential institute system. I refuse to call it a school anymore because a school is the last thing it was. In context with that, it is fitting for me to be able to share with you some of the knowledge that we have around our history...around food sovereignty and nutrition." ... Hilistis Pauline Waterfall

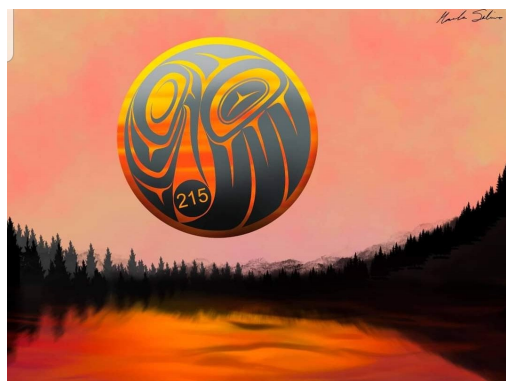
"It's been hard for a lot of our communities, a lot of our elders here. I'm grateful for our elders to taking their time to be here today and sharing their knowledge and wisdom, and I pray for the communities right now, and hope things are going okay" ... Braden Etzerza

### **In the chat:**

"My deep condolences to everyone who has and continues to be impacted by the system of Indian Residential Institutions."

### **In our prayers:**

"Asking you Creator to hear our prayers for Indian residential school survivors, for the intergenerational impact to Indian residential school survivor families who are breaking the cycle, for the 215 children found to go home safely to Creator and ancestors and rest in peace with the ceremonies being done for them, and prayers sent for lighting their way, and for all of us to be healed in the days ahead, especially as they find more sites, that we will heal enough to handle it in a good way when more sites are found and help each other."...Syexwaliya Ann Whonnock



## Elders

Hilistis Pauline Waterfall, Heiltsuk Nation  
Syexwaliya Ann Whonnock, Squamish Nation

## Facilitators

Holly Clermont, FNHA WATCH Project Lead  
Peter Mazey, FNHA Environmental Public Health Services (EPHS) Manager  
Emma Scott, FNHA EPHS Program Officer  
Andrew Sheriff, Malahat Nation Fisheries Coordinator and WATCH Community Lead  
Braden Etzerza, Metlakatla First Nation Food Security Manager and WATCH Community Lead  
Dave Rolston, Tseshaht First Nation Fishery Manager and WATCH Community Lead  
Tina Wesley, Klahoose First Nation Fisheries & Conservation Officer/Manager and WATCH Community Lead  
Dionne Sanderson, FNHA Environmental Contaminants Program Coordinator  
Katie Bauder, FNHA Knowledge Exchange Coordinator

## Presenters

Hilistis Pauline Waterfall & Hbuxvstiasu Kylie Gladstone, Heiltsuk Nation  
Holly Clermont, FNHA  
Lorraine McIntyre, BC Centre for Disease Control Food Safety Specialist  
Debby Peng, FNHA Environmental Health Officer  
Peter Mazey, FNHA  
Braden Etzerza, Metlakatla First Nation  
Jessica Hawryshyn, Metlakatla First Nation Baseline Project Manager  
Katerina Kwon, Metlakatla Cumulative Effects Management Program  
Mary Williams, Metlakatla Restorative Oceans Farming Project  
Tina Wesley, Klahoose First Nation  
Jay Pudota, Samudra Environmental Consulting  
Ian Giesbrecht, Alex Hare, & Isabelle Desmarais, Hakai Institute  
Michelle Robinson, Klahoose First Nation Councillor  
Dave Rolston, Tseshaht First Nation  
Andrew Sheriff, Malahat Nation  
Stefania Gorgopa, Malahat Nation Salish Sea Initiative Coordinator  
Desiree Bulger & William Hall, Enhanced Marine Situational Awareness Initiative  
Syexwaliya Ann Whonnock



# Attendees

Although we did not register people for the WATCH Gathering and therefore have an incomplete picture of attendance, more than 115 people expressed interested in attending, requesting the Zoom link for themselves or others. At least 83 attendees were present for the morning session, and at least 78 were present for the afternoon session. Although the afternoon session extended well beyond the anticipated closing (nearly an hour and a half over the scheduled time), at least 42 attendees stayed for the entire visioning session and closing prayer.

Recognizing that attendees may be members of more than one community, or wear multiple 'hats', below is a list of First Nations and organizations that we understand to have been represented at the Gathering.

## Nations Represented

- Cowichan Tribes
- Gitga'at Nation
- Gwa'sala-Nakwaxda'xw Nations
- Hagwilget First Nation
- Haida Nation
- Heltsuik First Nation
- Kanaka Bar Indian Band
- Klahoose First Nation
- Malahat Nation
- Metlakatla First Nation
- Nuxalk Nation
- Okanagan Indian Band
- Pauquachin First Nation
- Quatsino First Nation
- Stz'uminus First Nation
- Squamish Nation
- Tla'amin Nation
- Tsay Key Dene Nation
- Tseshat First Nation
- Tsleil-Waututh Nation
- W̱SÁNEĆ Leadership Council Society (Tsartlip, Tseycum, Tsawout)



## **Organizations Represented**

BC Centre for Disease Control  
Canadian Food Inspection Agency  
Enhanced Marine Situational Awareness Initiative (Government of Canada, TMX accommodation)  
Fisheries and Oceans Canada (DFO)  
Environment, Community and Health Observatory (ECHO) Network  
Hakai Institute  
Health Canada  
Indigenous Services Canada  
Island Marine Aquatic Working Group  
Ocean and Earth Environmental Services  
Ocean Watch  
Pacific Salmon Foundation  
Parks Canada  
Samudra Environmental Consulting  
Simon Fraser University, Coastal Marine Ecology and Conservation Lab  
Simon Fraser University, Faculty of Health Sciences  
Tsow-Tun Le Lum Society  
UBC, Department of Earth, Ocean and Atmospheric Sciences  
UBC, Institute for Resources, Environment and Sustainability  
University of Ottawa, Toxicology and Environmental Health  
University of Victoria, Centre for Global Studies  
Vancouver Island University, Shellfish Health and Genomics



# Acknowledgments to Nations and Territories

Fifty-one attendees expressed their acknowledgements to First Nations' territories on a Padlet map (Figure 1), with some adding photos and reflections. Another 17 did so in the Zoom Chat (with some overlaps).

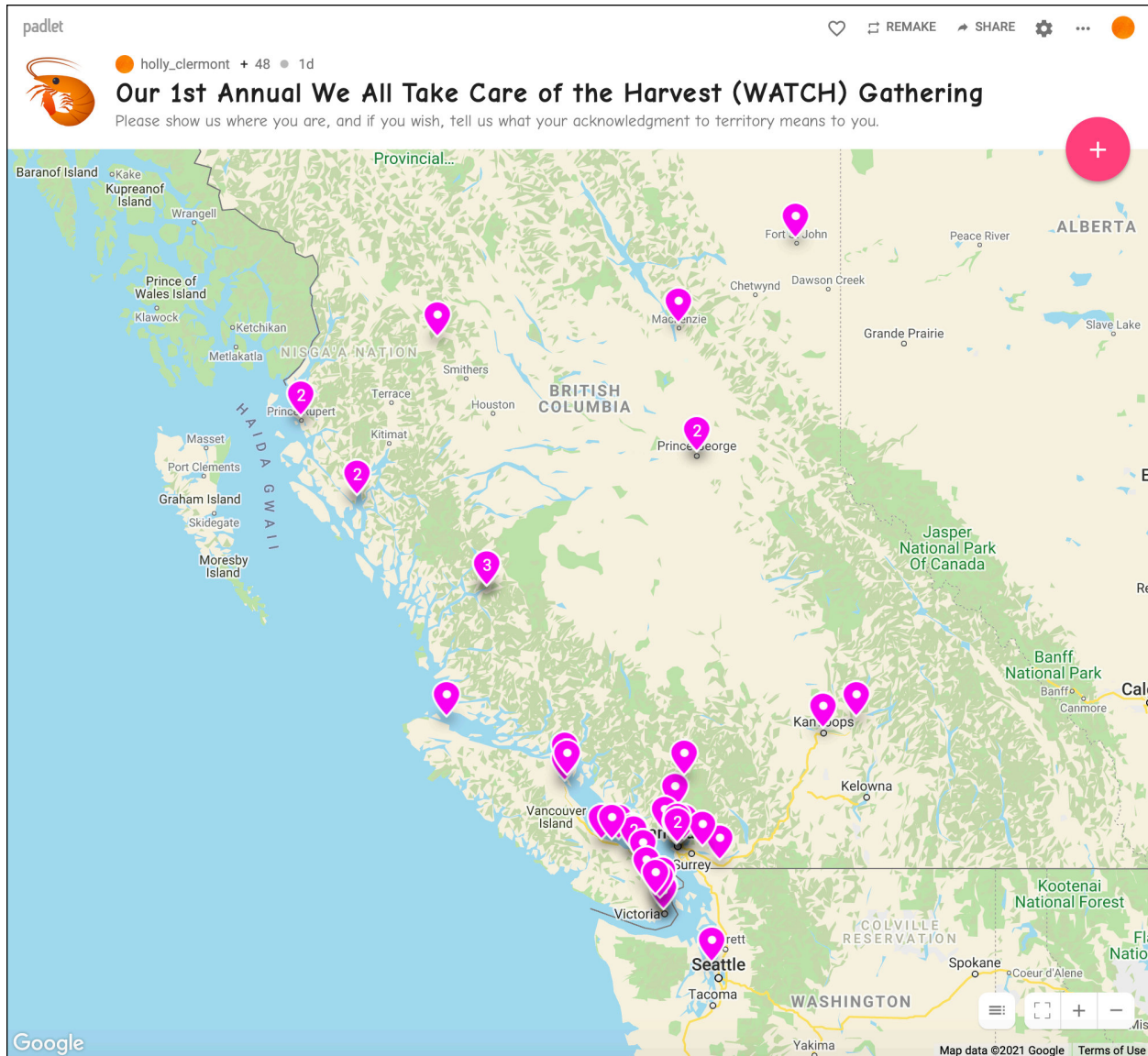


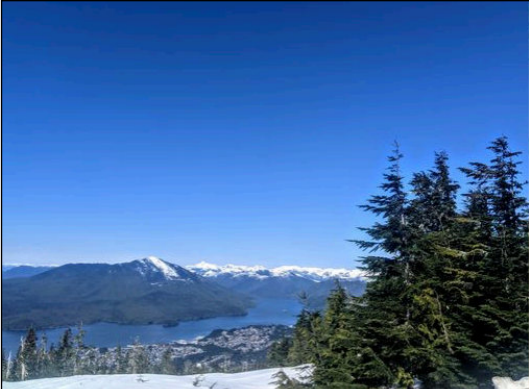
Figure 1. Territory acknowledgments (Padlet)





**Quadra Island, British Columbia**

Alex Hare - I live and work in the territories of the Klahoose, Wei Wai Kai, Wei Wai Kum, Komoks, and Homalco First Nations. Acknowledging territory to me means respecting the connections and values of others to the land and waters that we live on. Also being aware that just because we may not see people on the land, or see development, doesn't mean that it's empty, unused, or uncared for by other people.



**Coast Ts'msyen (Metlakatla and Laxkw'alaams) Territory**

Mary Williams, working with Metlakatla Stewardship Society. As a researcher, student, human, and settler, I continue to benefit from my place on unceded Metlakatla and Laxkw'alaams Territory, and the care Coast Ts'msyen peoples have and continue to give to the land and more than human species that live here.

Examples of territory acknowledgments in the Padlet

---

The WATCH Project encourages reflective, meaningful territory acknowledgements. "Scripted statements recited over and over again risk being empty and performative gestures, relegated to a checkmark, rather than a foundational moment that grounds and shapes the conversation. In order to be meaningful, it must include reflection and intention. Beyond acknowledging the land... disclose what the acknowledgment means to you. Address how [you intend to use this moment] to better serve Indigenous people and the land acknowledged" (from [thevarsity.ca](http://thevarsity.ca)).

---





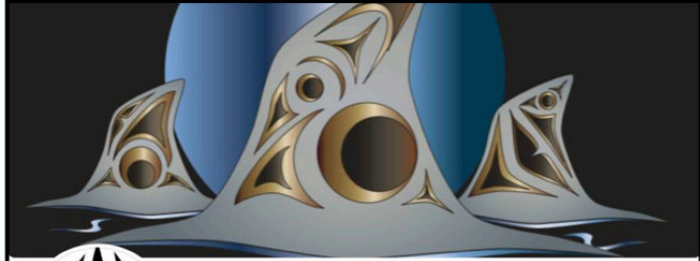


There were three prizes won during the Gathering. Participants who shared territory acknowledgments in the Padlet or Chat had an opportunity to win *Round Dance of the Waters*, a print by Coast Salish artist Darrell Thorne.

## Padlet or Chat Box - Draw 1

*Name, Acknowledgment, Meaning, Photo*

**Round Dance of the Waters**



**DARrell Thorne In Your Side Art**  
@ThornelYS - Artist



## Presentations

### Hilistis Pauline Waterfall & Kylie Gladstone

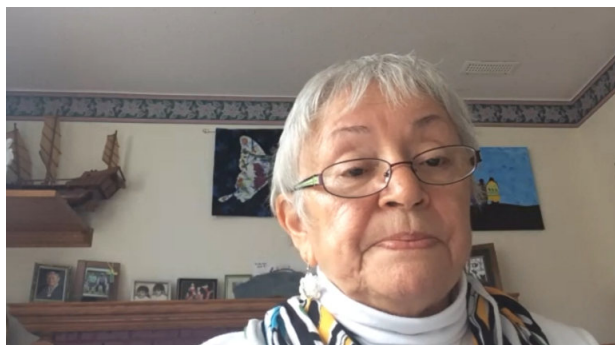
#### ***Hailhzaqv (Heiltsuk) Nutrition: Pathway to Understanding, Reclaiming and Renewing Food Sovereignty***

*(Hail-za-kx - to do and say things in the right way)*

---

#### Presenter Bios

---



Hilistis (Hee-lees-tees) Pauline Waterfall is a Hailhzaqv (Heiltsuk) knowledge keeper who was born in Bella Bella. She and her husband John are proud parents of three adult children, six grandchildren and one great grandchild. She is an educator who founded Heiltsuk College and has been an advisor and adjunct professor for Vancouver Island University's Indigenous Stewardship training program. She is an Order of British Columbia

recipient and former elected Heiltsuk Tribal Councillor. She gives First Nations Culture & History orientation workshops locally and provincially including the Northern Gateway Enbridge hearings. She was the Co-Chairperson of the Daduqwala (Da-do-kwa-la = to look) Adjudication Committee to determine if Heiltsuk Gvi'l'as (laws) were breached with an American corporation's tugboat Nathen E Stewart's catastrophic fuel spill in Heiltsuk home waters. She is working to finalize the Hailhzaqv Constitution on behalf of her Nation. She serves on the Heiltsuk Health Centre Board of Directors with a key focus to promote holistic wellness with her community and people. She supports and helps traditional and elected leaders in matters related to the sustainable use and management of resources within her homelands. The preservation and revitalization of her Hailhzaqv language has been paramount given its near extinction and she supports all efforts to revitalize her Hailhzaqv language. She serves on a variety of boards and committees and continues to devote her time and energy in promotion of highest good and equity. It was our great honour to have her open our Gathering and present to us on this day.

---

Hbuxvstiasu (A-booxs-tee-asu) Kylie Gladstone was born in Nanaimo to Monika Waterfall and her late father Donald Gladstone. She completed high school in Bella Bella and is currently enrolled in





the NITEP (UBC Indigenous Teacher Education Program). She and her partner Dylan Popek live in Bella Coola and are expecting their first child in early September (Congratulations Kylie and Dylan! 🧡). Kylie is undergoing mentorship with her grandmother Pauline for the transmission of Heiltsuk knowledge. She has been involved with her Heiltsuk culture for most of her life and looks forward to being a new mother, completing her studies, and gaining Heiltsuk traditional knowledge from her grandmother. Grandmother Hilistis Pauline noted that Kylie's late father Don and his brother Williams Gladstone won a landmark Supreme Court of Canada case, reasserting the right to trade seafood on a commercial basis.

---

**Enclosed with this summary is *The Traditional Heiltsuk Food Book*.** This special gift came to us from Hilistis Pauline Waterfall. Permission to copy and distribute to event participants was received from Hereditary Chief and Heiltsuk College Director Joann Green. This generosity is beyond anything we ever imagined. Walas Gayasixa, thank you Hilistis Pauline and Joann!

---

Hilistis Pauline shared a historical perspective, barriers to accessing food, and the implications of these. Kylie shared special photos and knowledge of seasonal harvests. Their rich presentation is not easily summarized. What follows is a snapshot of what we learned.

- Hail-za-kx, which means to do or say things in the right way, is a basic value that applies to interactions with other humans and also with our natural world and the life that is there.
- Attunement to the spirit that encompasses all of us is a pathway to understanding, reclaiming and renewing food sovereignty. Those who are attuned to spirit understand that trees, crabs and spiders all have feelings.
- An archaeological dig at an ancient Hailhzaqv village confirms occupancy for at least 14,000 years.
- Our oral history relates that we were placed here by our Creator.
- Our survival and health are intricately linked to the ocean.
- Missionaries played a big role in impacting our access to foods. Dr. R.W. Large came to Bella Bella as a medical missionary in 1898, Dr. G.E. Darby 1914-1959. Their whole purpose was to assimilate us and take us away from our traditional lifestyle. Missionaries informed the *Indian Act*, including an iteration where Indigenous people were not allowed to have food gardens. Yet our land could be used by other people for commercial agriculture without compensation. At some point, food fishing was banned, and traditional fishing gear like rock fish traps were banned and dismantled. A 66 year potlatch ban impacted food ceremonial practices. Our people weren't allowed to have commercial fishing licenses. There were many factors that began to erode our natural connection to our world.
- Dr. Darby advised my mother in 1944 to stop breastfeeding because it was 'unhygienic'. There is a high incidence of lactose intolerance among our people.

- Dr. Darby also advised my parents that marine seafoods weren't an adequate source of protein. And we couldn't have access to our natural animal food protein, so bologna and wieners became a mainstay. These become learned behaviours, continued mainstays in our diets. Western foods became adopted within Indigenous cultures intergenerationally.
- (In the residential 'schools'), we were always hungry. We never had any seafoods. Mostly macaroni, peanut butter, cornmeal or porridge - one of my duties was to remove maggots before the porridge was cooked in the morning. Water soups - mostly onion, celery, carrots - no protein, if there was, was from what the staff ate the day before. Jam sandwiches. TRC revealed that survivors averaged 1,000-1,450 kcal daily (v 1,400-3,200 for an active child). Punishments included no meals.
- There were nutritional experiments performed on Indigenous children in 6 schools from 1942-52 (e.g., Vitamin C supplements for malnourished children (Nova Scotia), inadequate and adequate milk consumption among children with clinical signs of riboflavin deficiency (BC, Alberni), etc.).
- Canadian Food Historian Ian Mosby found that residential school children developed physiologies that prioritized fat deposition over lean muscle and greater insulin sensitivity - increasing tendencies toward obesity and diabetes. Prolonged undernutrition altered thyroid function, lowering basal metabolic rate. There were reproductive effects, including greater risks of stillbirths, preterm births and neonatal deaths, complications with labour, and decreased birth weights (Mosby et al., 2017). Mosby also found that the negative impacts of childhood undernutrition carried on to the grandchildren of residential school children.
- We were hungry, so it impacted our mental well-being, and we lost our identity. TCRN staff (2020) reported that a lack of nutrients like folic acid, vitamin B6 and choline - all required to regulate mood and memory - can lead to overbearing sadness, depression, and negative sense of identity.
- Recall Dr. Darby saying marine seafoods were not wholesome enough?  
Sample content of minerals, vitamins, etc. in traditional Heiltsuk foods:  
 Seaweed: calcium 37%, iron 192%, thiamine 138%, riboflavin 177%, niacin 94%, Vitamin C 17%.  
 Salmon eggs: protein 33%, Vitamin A 116%, Vitamin C 130%, iron 14%.  
 Oolichan grease: fat 15%, Vitamin A 33%.  
 Fish head soup: protein 52%, iron 5%, Vitamin A 7%, niacin 42%.  
 Crab: protein 41%, iron 5%, niacin 33%, Vitamin C 23%.  
 Clams: protein 27%, iron 97%, niacin 24%, Vitamin C 38%.  
 Seal meat: protein 54%, fat 2%, iron 139%, niacin 55%.  
 If we ate these traditional nutrient-rich foods for at least 700 generations, what are the implications if we switch in one generation to high carb, low protein, nutrient-poor foods? This is something we really need to pay attention to.

### Winter seasonal foods and gathering cycles

- Red cod, yellow eye rockfish were gathered using a boat and longline fishing gear. Halibut were also gathered during the winter.

### Spring seasonal foods and gathering cycles

- Herring roe were gathered on the branches of a submerged hemlock tree, or on stringy or flat kelp tied to a fishing line strung for one side of the beach to the other.
- Later in the spring, young laver seaweed was picked by hand off the rocks - an often dangerous undertaking that involved timing the swells to jump off a boat onto the rocks. The seaweed was dried in the sun and either crunched for finer bits or preserved in a bentwood box. Clam juice and cedar bows layered in the box provided extra flavour and nutrients.

### Summer seasonal foods and gathering cycles

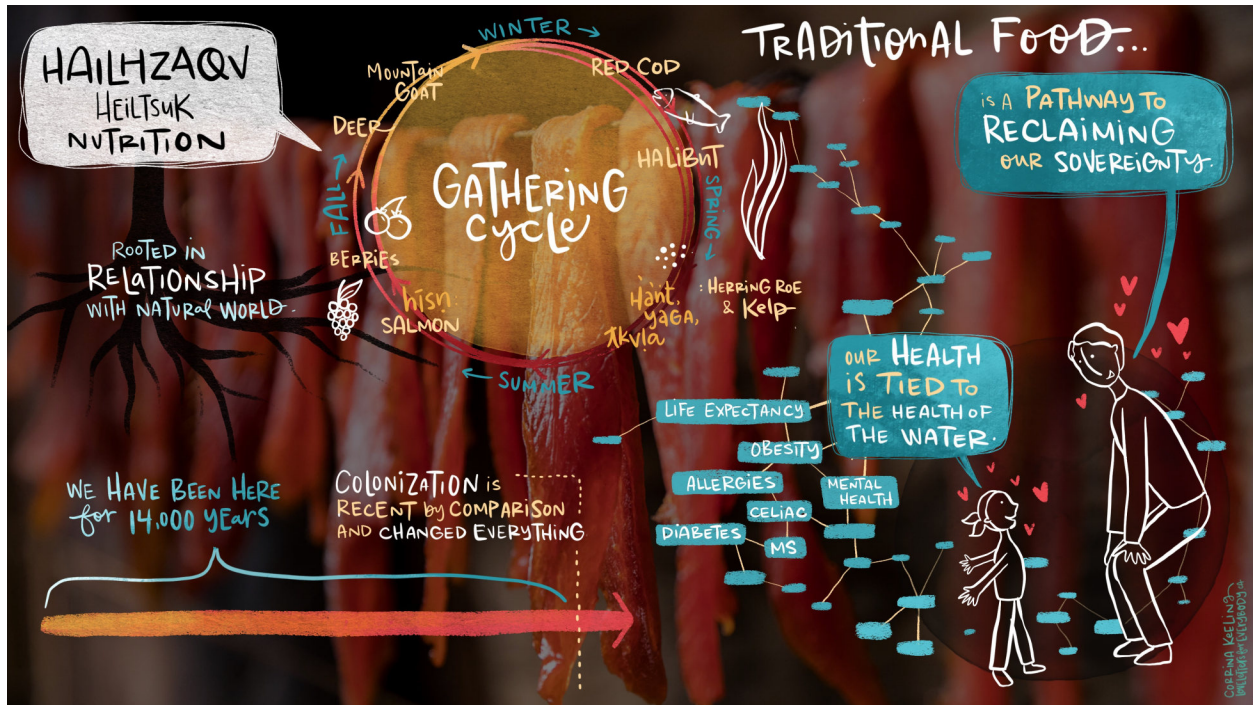
- A nutrient-rich primary food source, sockeye salmon was gathered with rock fish traps that kept the fish alive to swim out of the trap when the tide came back in. At the time, there was an abundance of fish and Heiltsuk law was to take as much as needed and nothing more. Now gill nets are used. Fish were preserved by canning/jarring and smoking with dry alder in a home-built smokehouse.
- Summer foods also included salmon berries, blue berries, and huckleberries. These were the only foods that gave a sense of sweetness. They were eaten fresh, in jams, as berry cakes, and as syrup added to water for juice and in foods for flavour and nutrition.

### Fall seasonal foods and gathering cycles

- Mountain goats and deer were hunted and preserved by jarring and drying.
- Climate change is already impacting natural food cycles. For example, sockeye salmon and other fisheries have collapsed, and berries have been impacted by extreme, unpredictable weather.
- Heiltsuk College, which owns the copyright for *The Traditional Heiltsuk Food Book*, studied the weekly consumption of traditional foods by 60 students. Traditional foods made up less than 10% of their diets. Some of the reasons given included no access to or knowledge of harvest sties, no equipment, no experience, easier access to shopping at a local store, time constraints, and no knowledge of traditional foods that were not eaten regularly (e.g., seal meat). Those who had returned from residential schools, or those whose parents and grandparents had returned from residential schools did not regularly eat traditional foods.
- Over a period of time, traditional foods were gathered, preserved and prepared with the help of knowledgeable elders. The students planned and prepared a culminating feast and gave the preserved foods to the elders who had supported them. *The Heiltsuk Traditional Food Book* was written as a supplemental graded English assignment. Participants were more confident and knowledgeable about traditional foods, and their identity and pride were reinforced. All began to include traditional foods in their regular diets.

- Granny's Kitchen Heiltsuk Food Security Initiative is a food bank with 120 recipients. The Tribal Council made bulk seafood items available for distribution. Local fishers were hired to harvest crabs, prawns and salmon for community distribution. Herring eggs were traded for Haida halibut. Four community gardens were established, with free seeds and gardening lessons and mentorship. Granny's Kitchen emphasized the traditional practice of catching and giving away.
- Qqs (Eyes) Projects Society's Executive Director (and niece of Pauline Waterfall) Jess Housty led a study to assess gaps in Heiltsuk food security and enable the Heiltsuk Interagency Committee to address these gaps. The project was called KÚSĀNTS PÍPUWÍS (We will not be hungry). It surveyed 90 participants, representing 284 community members. There were 22 recommendations, including recommendations to pilot Granny's food bank, develop traditional foods nutritional guide and cookbook, develop policies for food fish distribution, and consider a micro-grant program to assist harvesters to need to travel by water. See Qqs at <https://www.qqsprojects.org>
- Supporting Emerging Aboriginal Stewards (SEAS) (<http://www.emergingstewards.org>) is a youth program initiated by First Nation communities and Nature United. In Bella Bella, it includes nature walks, field trips, and camping trips to explore the territory; seasonal harvesting and preserving; sharing harvested foods and medicines with elders and at the Children's Cultural Celebration; hands-on activities and skill-building, connecting classroom curriculum to local people, places and issues; community events such as Salmon Fest and Oceans Day; collaborating with Bella Bella Community School Heiltsuk Language and Culture Department and the high school outdoors club; mentorship and job-shadowing for high school students; exchange trips with other schools; and summer internships for high school and post-secondary students through Qqs Society.
- Acwsalcsta School and Nuxalk Stewardship office have partnered with Nature United to develop year-round school and summer internship programs. SEAS works closely with the Guardian Watchmen program, families, community members and the school's cultural and language program to support classroom and field-based programs.
- The Kitasoo Community School and the Kitasoo/Xai-Xais Resource Stewardship Office partner with Nature United to deliver year-round school and summer internship programming. The Spirit Bear Lodge works closely with the Stewardship Office to design internship and work experiences and with the school to support student field programs.

"We need to support each other and reconnect us to our natural way of being including our food sovereignty".... Hilistis Pauline Waterfall



*This is the first of five images produced with and for us by Corrina Keeling, a Visual Practitioner & Multidisciplinary Artist. Corrina was delighted to be able to use their creative practice to help bring deeper clarity to the complex and important conversations of the day. Their images are meant to capture the heart of the conversations, and belong collectively to all of us who were participating.*

*Corrina: We started with a really tender and beautiful conversation talking about the gathering cycle of traditional foods in winter, spring, summer and fall. The nutrition is rooted in the relationship with the natural world. The timeline - the Heiltsuk have been here since at least 14,000 and colonization is recent by comparison and has changed everything. It was a really beautiful conversation between grandmother and granddaughter, around attunements to the nature world and that traditional food is a pathway to reclaiming sovereignty. And health is tied to the health of the water, every ailment and situation.*

## Holly Clermont

### WATCH Project Spring 2021 Update

Presenter Bio

It is my honour to be called the WATCH Project Lead... The best part of this project is that it brings people together from sectors that rarely speak to one another and embraces interconnections



and complexity without trying to silo and break things down into little pieces.... [Referencing photo collage] - I grew up in the boreal forest, but when I came to the coast I felt like I had come home.... When I have to go to the mainland and the sea is in my rear-view mirror, I feel unsettled and that feeling doesn't go away until I lay my eyes on the water again. I started my career as a fish and wildlife tech and did a lot of cool things, maybe not as impressive as what your Guardians and Beachkeepers do, but I did get a chance to saddle an elk with a weather station in the 80s. Looking at climate way back then. Those were the days when we used to study species because we wanted to know more about them, not because they're in crisis. Later I would be a biologist and then social scientist, which is super interesting but it's still great to get out into the field once in awhile.

WATCH Project Spring 2021 Update presentation available online at <https://www.youtube.com/watch?v=vCYPMNrUwws>



Illustration by Corrina Keeling. Corrina: We had an overview of the WATCH Project, including some of the strengths...that it embraces complexity and brings people together that don't usually work together. The project is informed by the 7 Directives from the FNHA - that's really important. The four pilot communities, the two pathways - monitoring and planning and the idea that eventually it will move from pilot to program and to Beaufort to Baha. And the reason why we're here - the fact that with the heat wave, algae bloom, neurotoxins in the food web and all of the interconnected impacts with health - ecosystems, culture, and sovereignty. This

*beautiful statement - we used to study species because we were curious, and now we do it because they're in crisis, and so are the communities that are in a relationship with them.*

## Lorraine McIntyre

### ***Seafood Safety Learnings: Past, Present and Future***

---

#### Presenter Bio

---

Lorraine is a food safety specialist who has been working at the BC Centre for Disease Control for over 25 years and has been involved in investigating and researching many seafood-related illnesses and issues. She helped to host the marine biotoxin workshop in 2016 ([HTTP://WWW.BCCDC.CA/HEALTH-PROFESSIONALS/EDUCATION-DEVELOPMENT/MARINE-BIOTOXIN-WORKSHOP](http://www.bccdc.ca/health-professionals/education-development/marine-biotoxin-workshop)), helped secure the funding for WATCH, and has been an enormous help to the WATCH Project in countless ways.

---

- In a review of the history of Paralytic Shellfish Poisonings (PSPs) over the last 80 years (1940-2020), over 50% of illnesses were due to self-harvesting activities, and maybe a third were people who ate in a restaurant or purchased shellfish from a store.
- The biggest community, the biggest peoples that are affected by PSP are First Nation Peoples. In the 80 year history, PSPs have occurred all over BC, including areas where each of the four pilot communities are. One of the earliest accounts was in Tseshaht territory in the 1940s, where there were some deaths from eating mussels with huge amounts of toxins. Fast forward to 1960s and Klahoose territory, there was a family who became ill from eating cockles. Twenty years later, in Metlakatla territory, there was illness in families eating butter clams. Even more recently, in Malahat territory, there was illness in a family eating mussels. The takeaway from this is that PSPs continue to occur in First Nations families, and we want to find ways to stop this.
- At BCCDC, we're involved in the investigation of illnesses. Most reports came from our poison control centre. There is an automated alert message that comes to the email of several people in BCCDC whenever there is a suspect case of PSP. This is called 'near-real-time surveillance' of illnesses. If you ever eat shellfish and you're worried that you might have some kind of biotoxin-related illness, call poison control.
- **Poison control is there for you 24/7 @ 1-800-5678911**
- PSP, Amnesic Shellfish Poisoning (ASP), and Diarrhetic Shellfish Poisoning (DSP) occur in bivalves, but in fact crabs and prawns can also become contaminated with different kinds of marine biotoxins. When you cook crab, it's best if you don't cook it whole. If you can get rid of the hepatopancreas, the guts of the crab, you will reduce your exposure to toxins. This year we had our first case from a lady who ate some spot prawns.

- Washington State had a recall for crabs with domoic acid (ASP toxin) this year and associated with the blob in 2015. In the U.S., they do have criteria for assessing saxitoxins (PSP toxins) and domoic acid in crabs, but we don't have that here in Canada. The Quinault Tribe in Washington State recalled their Dungeness crabs because of PSP. These biotoxin events don't respect our borders so it's important that we develop in the WATCH Project communication networks and assess all of the seafoods that are eaten.
- We have had norovirus illnesses and outbreaks related to spot prawns. Colleagues at DFO tell us that most of the fisheries for spot prawns are in the Howe Sound area. Unlike bivalves there is no restriction for where spot prawns are harvested with respect to biotoxins. There is for sanitary closures, and when the BCCDC shellfish status map is updated, you will be able to see where the outfalls are located in relation to your harvesting areas. (See current map at <http://www.bccdc.ca/health-professionals/professional-resources/shellfish-harvesting-sites-status-map>.)
- There are more and more PSP investigations coincident with rising sea surface temperatures. We will likely see more issues unless we can educate and protect ourselves from potential threats.

## Debby Peng

### ***From the EHO's Desk***

---

#### Presenter Bio

---

Debby is an Environmental Health Officer (EHO) with FNHA. She spent close to 10 years between the two Princes - the beautiful coastal town of Prince Rupert and where she currently resides in Prince George. Her introduction to Coastal First Nations traditional foods occurred during the annual All Natives Basketball Tournaments where she immediately learned to gorge on smoked ooligans, roe on kelp, fritters and seaweed. Her nemesis however, is still the "Indian ice cream" soapberries. Her presentation focuses on a cluster of PSP cases that occurred in 2019, set within the broader picture of traditional food access and food sovereignty, which have significant implications on the holistic nature of Indigenous health and well-being.

---

- In March 2019, 3 clients presented with neurological symptoms at the Prince Rupert ER. They had difficulty walking - stumbling a little bit and tingling of the mouth and tongue, typical symptoms of PSP. In other cases, tingling can extend down to the neck and extremities. In severe cases, it can lead to muscle paralysis, respiratory failure and death within 12 hours. Vomiting and nausea are common, but GI (gastrointestinal) symptoms such as diarrhea, and abdominal cramps are more rare.



- Right away Northern Health and FNHA (Debby) started to connect with community contacts and create a food history. It was a cluster of related individuals - mom, her partner and son all partook in a dinner of clam chowder and clam fritters made from self-harvested butter clams at Dundas Island. We were not told exactly where they were harvested and there were many harvesting spots in that area. They were harvested in the previous November and stored frozen.
- This is a group of knowledgeable individuals so as soon as the mom felt the tingling she connected the dots and induced vomiting and emptied her stomach. She showed the least of the symptoms because there were less of the clams in her.
- We were initially puzzled by the onset timing because it seemed that the group had eaten fritters the night prior and yet it wasn't until they ate the soup that they showed symptoms. However, the progression and intensity of the symptoms did correlate with the dose.
- The investigation includes asking parents and kids to look at a diagram of a butter clam and identify the parts. It's important to know how clams are being processed.
- The traditional teaching is to discard the black tips. When we arrived at the patient's home, they showed us the bags of clams they stored in the freezer. The entire siphon was cut off and stored separately from the clam 'guts' or 'meat'. We sent the bags to a lab and found that both bags (with siphons and without) exceeded Canada's regulatory limit. The limit for saxitoxins was 80 micrograms (ug) per 100 grams of the sample (80 ug STX eq/100 g). The siphons were 1,300 and the viscera was 180. It fits perfectly with an older paper which found that the siphon was the most toxic (Quayle, 1967). How it was explained to me was two ways - the siphon is where the clam takes in the algae and where it retains most of the toxin. But also it is part of the clam's defence mechanism. It's the part that extends beyond the hard shell of the clam. If there is a predator, the toxin will take them out.
- Tying this back to our case, it makes sense because the family used different parts of the clam in making the food. They used the viscera in making the fritters, and they saved the meaty part of the siphon for the soup. The study from 1967 also found that preparation can affect toxicity. In the heating process, the toxin is transformed or unlocked. Being water soluble, a lot of the toxin is retained in the soup or juice.
- FNHA and Northern Health created some joint messaging. It said, "Do not consume butter clams harvested from areas that have not been tested for biotoxins, and/or are not open for harvest under the Canadian Shellfish Sanitation Program, including Dundas Island." We updated the message to say to discard the clams when we found out they exceeded the limit. But there's a problem! - because we know that the entire area hasn't been open for butter clam harvest, ever, due to a variety of reasons. And so this message is diluted because of that.

- There are other challenges with self-harvested clams. It is such a valuable resource. They are often shucked and then frozen. They are then shared within the community, across the Nation. There are a limited number of harvesters with access to resources like boats and with experience. And it's often a labour-intensive operation. And these harvests are not usually organized by Nations, they are usually ad hoc. The fishery manager shared with me that monitoring the catch is quite difficult because people don't always share where they harvest, and that makes sense, perhaps because it's a good spot, perhaps it's a spot that's within the family clan and so on.
- In archaeological studies along the North Coast, there are shell middens as high as 6 m - imagine the amount of clams the people have to consume to build that. Studies with isotopes show multi-season collection in the Dundas Islands, not just during the winter months where there is snow on the tip of the mountains, as opposed to residential sites in Prince Rupert Harbour where harvest is seasonal and there are other abundant resources like salmon. A recent study done by Ben Letham on lake cores from near Prince Rupert showed that the area was much lower 13,000 years ago than it is now. Kim-Ly Thompson and her team at the Gitga'at Nation are using a similar method/ technology to study sediments, to investigate toxin levels. What we see now was not the case many, many years ago, which fits within climate change and adaptation.
- Beach sampling  
There are approximately 450 freshwater, estuarine and marine recreational water sites in BC and the responsibility of water quality sampling has been delegated to the health authorities, including FNHA. We follow the Canadian Recreational Water Quality Guidelines. Sampling is seasonal and takes a risk-based approach. We use an *E. coli* indicator for freshwater and *Enterococci* for the marine environment. DFO takes the lead for sanitary closures of shellfish harvesting sites and marine waters. We have in the past issued an advisory, for example, when there was a sewage spill in Saanich Inlet over Labour Day weekend in 2017, Paper Mill Dam Beach in Port Alberni in 2019, and so on.



## Peter Mazey

### ***Environmental Public Health Services***

---

A/Manager, Environmental Public Health Services

---

We have representatives from the various EPHS Programs on the call today.

- FNHA's Food Security and Healthy Eating program is headed by Kathleen Yung. It looks at traditional foods and food security of those traditional foods.
- The Climate Change and Health Adaptation Program (ICHAP) looks at climate change impacts on traditional foods. We were excited to fund 30 communities this year, totalling over \$3 million for climate change projects within BC. Maery Kaplan-Hallam is the lead for that program. See <https://www.fnha.ca/what-we-do/environmental-health/climate-health-action-program>
- Cody Thomas leads the Local Environmental Observer (LEO) Network.
- Dionne Sanderson leads the Environmental Contaminants Program (ECP), which looks at environmental contaminants on traditional foods and impacts within First Nations. See <https://www.fnha.ca/what-we-do/environmental-health/environmental-contaminants-program>.
- See <https://www.fnha.ca/what-we-do/environmental-health> to access FNHA EPHS programs, projects, and other information.

## Braden Etzerza

### ***Metlakatla First Nation Showcase***

---

Presenter Bio

---

I am from the Metlakatla First Nation, Tahlton, Gitksan, and Métis. I was the Climate Action Coordinator up until a couple of days ago. I'll be transitioning into more housing and food security work. I'm grateful and excited to be a part of the WATCH Project (Braden is Metlakatla's WATCH Community Lead.)

---

- [Referencing photo below], this is our territory. This is our fridge, our freezer, this is where all our food comes from. As coastal people we still eat large amounts of seafood. Programs like WATCH, with climate change and industry, it's critical as First Nations people we continue harvesting and continue monitoring. I am introducing three colleagues and programs that we are working on in Metlakatla that relate to environmental monitoring, food security, food sovereignty and restoration.





## Jessica Hawryshyn

### ***Metlakatla Stewardship Society - Baseline Monitoring & Food Safety***

Biologist, Metlakatla Stewardship Society.

- The baseline study is in the final year of a 4 year agreement, funded by DFO's Coastal Environmental Baseline Program. Metlakatla wanted to access this funding since Prince Rupert is one of two Pacific areas where there is increased shipping and port development activity.
- There are 3 areas of interest:
  - 1) Clams, and butter clams in particular as an important food species for Metlakatla and other coastal First Nations. We wanted to monitor clam populations throughout the Metlakatla territory and understand better what population sizes are like on different beaches and get a sense of the biomass and intertidal habitat.
  - 2) Marine pollution, as another big area of focus. For the last 4 years we have been monitoring marine contaminants in the Metlakatla territory and its food resources, looking at various sites to understand how contaminant levels may vary by species and area.
  - 3) The last area of focus has been around data analysis, to take the data that Metlakatla Stewardship Society is collecting and do some synthesis and visualization of the data to make it more accessible to resource managers and decision makers.
- Even though we are in the final year, we plan to access funding to continue with the project and to expand with new activities.
- In our marine pollution monitoring, we have been partnering with Pollution Tracker (see <https://pollutiontracker.org>), a program affiliated with Ocean Wise, their research organization (see <https://ocean.org>).

- We have been looking at samples of sediments, clams, crabs and mussels. We either look at the whole suite (the Tier 3 contaminants) or in some cases we have looked at Tier 1 and Tier 2. It's a fairly comprehensive list of contaminants: metals, PCBs, PAHs, micro plastics, legacy and current pesticides, dioxins and furans, and pharmaceutical products.
- As we've been receiving some of the results back on some of our samples, they have been opening up more questions for us. We're detecting these contaminants in our seafoods in the territory and in foods people are consuming. In some cases we have environmental thresholds or human health thresholds for certain contaminants, but in other cases we don't. So this raises questions and concerns. What does it mean that we're seeing these contaminants in food that is important to the Nation? So the work that Braden is doing on food security and the work that I'm doing in the baseline project is dovetailed, to look at how can we be accountable for these results that we are receiving and how can we plan additional research to understand how these contaminants might be affecting food security, food safety, human health and community wellness. We are still very much in the planning phase for future work. For immediate next steps, we want to look at additional food species for contaminant testing and to better understand contaminant sources. And also potentially look at doing some risk assessment work around some of these contaminants.

**Linking Contaminant Monitoring to Food Security**  
Recent results raised concerns for food safety and human health

## Mary Williams

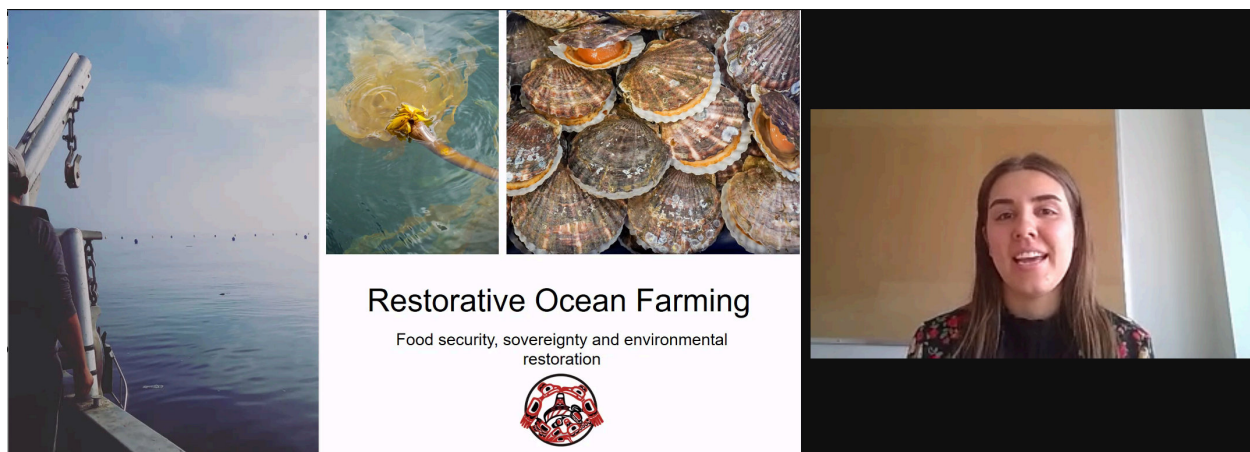
### ***Restorative Ocean Farming: Food Security, Sovereignty and Environmental Restoration***

---

Masters student, York University, with Metlakatla Stewardship Society and Ecotrust Canada

---

- We are scoping out how Restorative Ocean Farming (ROF) can advance Metlakatla's vision for food security, and doing to some work to get a farm into the water.
- ROF is a form of multi-species farming rooted in reciprocity with the ocean, focused on growing species that can help enhance ocean health while also existing in harmony with one another, and ideally create a mini-ecosystem. Metlakatla already has scallops and oyster hatchery farming and processing infrastructure and expertise through an existing aquaculture company which we've been building on to understand how more regenerative species can be grown to benefit community and the environment. In this project, we are looking at growing scallops and oysters and a few species of kelp initially, with the potential to look at more species based on community outreach and market scoping.
- [Referencing a diagram], this is what a farm could look like using longlines, lantern nets, droppers and cages to make use of the entire water column, from the ocean surface to floor to produce an abundance of food while requiring minimal space. At the size of 2 longlines, we could foreseeably grow 8,000 to 12,000 pounds of kelp and 70,000 shellfish, each year.
- The driver behind the ROF concept came from Metlakatla's commitment to protect ocean resources while advancing food security and sovereignty. A lot more research is needed to understand the impacts and benefits of ROF, the carbon and phosphorus and nitrogen capture and subsequent release of kelp. Growing kelp alongside other species may protect shellfish and shell growth as we continue to experience an acidifying ocean.
- Through adopting a polyculture model, there is a potential to include other species to help ensure there are multiple food sources, so hopefully one bad event wouldn't ruin an entire year's harvest. It also provides a more flexible farming model for communities to increase access to other shellfish and seafoods that may otherwise be difficult to access. Farms like these may also support community food programs by selling portions of the harvest each year commercially.



- Right now we're planning and developing processes, and finding funding and partnerships, while enhancing hatchery and processes for co-production.
- In addition to advancing food security, farms like these provide opportunities for monitoring and data collection, along with opportunities to work together. Projects like this require a lot of capacity.

## Katerina Kwon

### *Metlakatla Cumulative Effects Management*

PhD student, School of Resource and Environmental Management, SFU

- I have been working with Metlakatla since 2014 on developing the Cumulative Effects Management Program. We have been developing a management strategy or approach to improve the conditions for clams in Metlakatla's territory. We are now in the stage of exploring management actions for butter clams. We had a Master's student, Emily Spiler, work on this project over the last 2 years, and just submitted our final report to Metlakatla.
- One of the things we have been looking at with management actions is clam gardens, and the potential for clam garden restoration. We have had meetings with members and staff with the idea of using traditional clam garden practices as a way to restore clam beaches and clam populations.



- The 3 main objectives of the project are to:
  - 1) Talk to Metlakatla clam harvesters about the condition of butter clams. This information complements the work that Jessica is doing through the baseline project, so as we're collecting clam condition data, we couple that with more traditional knowledge to get a picture of how clams have changed over time.



- 2) Ask Metlakatla members how they view clam garden restoration. Have they heard of it? Does anyone have knowledge of clam garden restoration?
- 3) Take all of those perspectives and the goals that were outlined by the community and put them together in a clam garden restoration guide. This is to inform and support Metlakatla's decision on whether to go forward with a clam garden restoration project.
- We presented 3 options to Chief and Council and staff at Metlakatla Stewardship Society - to restore one of the existing clam gardens, to build a new clam garden, or to continue the stewardship practices that Metlakatla is already undertaking to maintain and improve the conditions for clams over time.
  - Video resource: Restoring Clam Gardens in Metlakatla Territory <https://www.youtube.com/watch?v=YEQjFoYv12g>

## Tina Wesley

### ***Klahoose First Nation Showcase***

---

#### Presenter Bio

---

I am a fisheries officer and manager for my Nation, also a first responder for my community and a firefighter for Cortes Island. [Tina is Klahoose First Nation's WATCH Community Lead.]

---

- WATCH is about opportunities for collaboration in our environmental monitoring efforts and having sustainable food networks - information sharing is crucial. Here in our Nation, we have our community garden and we raise pigs and chickens here, important during covid when we don't let anyone come in or go out of the reserve. It was an opportunity to further grow our food sources and providing for our Nation. We have oyster farms and clam harvesting. We have our seaweed farm and our geoduck farm. We own our geoduck license and our farm.
- It's been an honour to be part of this pilot project, putting my university education hands-on into a lab. Klahoose territory includes Desolation Sound and goes up all the way into Toba Inlet headwaters. I have a very large territory to cover, so being able to adapt and collaborate as part of the WATCH Project - I'm working with great people who are walking us in baby steps to put together the planning and the monitoring and engulf it into everything that we already have going. It's been carrying us through for creating history and data collection. It's really important for many things that are coming up in the future.
- *Life in a Drop of Water* video by Tina and Phytoplankton Specialist for the WATCH Project Jay Pudota <https://www.youtube.com/watch?v=8dbMXclFmTA>

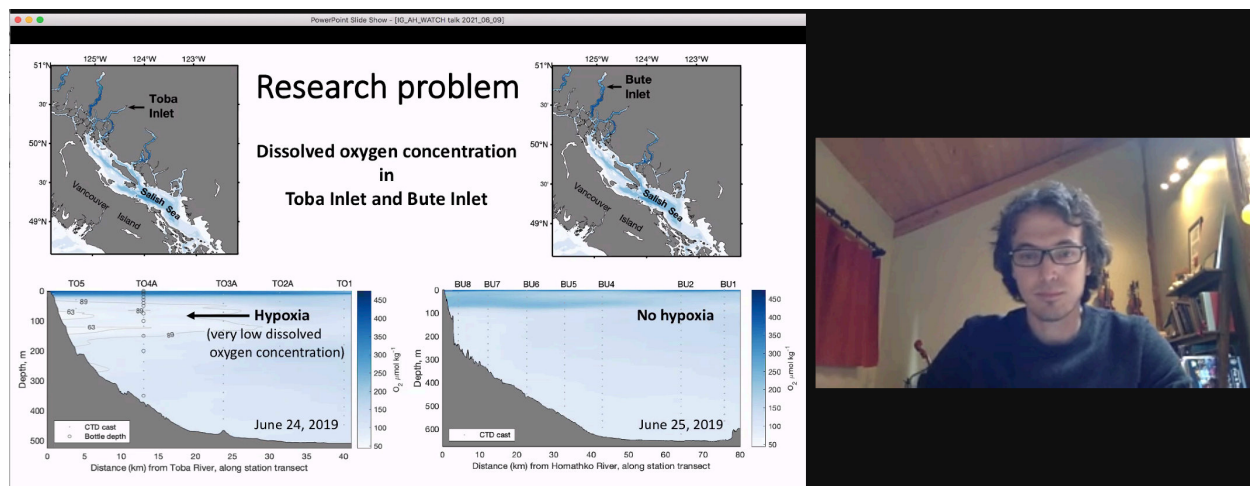
## Ian Giesbrecht, Alex Hare and Isabelle Desmarais

### *Hakai Institute & Klahoose First Nation - Toba Inlet Oxygen Study*

#### Presenter Bios

Ian Giesbrecht is a Watershed Scientist with the Hakai Institute (Ian.Giesbrecht@hakai.org). Alex Hare is an Oceanographer with the Hakai Institute (Alex.Hare@hakai.org). Isabelle Desmarais has been going into the field with Tina to collect data in the river/headwaters of Toba Inlet. The Hakai Institute does coastal margin science from ice fields to oceans in BC. It is rooted in two field stations - one on Calvert Island and one on Quadra Island.

- Ian: We reached out to Klahoose First Nation leadership late last year to describe the problem of low oxygen concentrations in Toba Inlet waters and the science we proposed to do around that. We co-developed a plan for working together this year to get that done. From that point, Tina has become instrumental to the success of the study both in terms of implementing it and in terms of sharing with us a great deal of knowledge given that we are relative newcomers to the territory.
- Alex: Our project focuses on some of the basic water properties that contribute to setting the habitat quality for many of the species that live within the study area. It's a small part of a larger initiative to better understand the linkages between the land and the ocean, and to understand fjord processes in particular. Our interest in Toba Inlet stemmed from a study we did on several fjords in 2019; we looked at Knight Inlet, Bute Inlet and Toba Inlet. We found the most interesting chemistry in Toba Inlet - a large layer of hypoxic seawater coming about halfway down from the head to the mouth, sort of centred in the middle of the water column [referencing the bottom-left plot, below]. The way to interpret this plot is the colours, the shading of blue - the darker blue at the surface shows more oxygen, and the lighter blue shows less oxygen. The left side of the



panel is at the fjord head where the river comes off the land. And the right side is at the mouth of the inlet next to the Discovery Islands. The region of very light blue represents this very low oxygen layer. It's quite large, about 20-25 km long and over a hundred metres thick.

- When we went into Bute Inlet the next day, we didn't see any similar feature in Bute Inlet. So the processes in the inlets were behaving quite differently. This intrigued us.
- While it was oxygen that caught our attention initially, associated with the low oxygen we typically find higher seawater acidity and lower seawater saturation state for calcium carbonate. So wherever you see low oxygen, you can also understand that there is higher acidity and poorer conditions to form shells for marine organisms.
- In 2021 we came back with a plan to study this inlet a lot closer. We wanted to try to understand why the oxygen concentration was so low. We also saw the low oxygen layer in March 2020 and in January of this year, so it seems to be quite persistently low. And we wanted to take the opportunity to understand how the river water and the materials it carries to the ocean contribute to the seawater conditions that we observed. We believe that studying these connections gives us insight into how sensitive our local waters are to processes that affect oxygen and seawater acidity and other properties like the saturation state that I mentioned which create the conditions for shell-forming. This kind of study can also tell us how our local waters are changing, and this is important because sometimes the local waters don't change the same as you would expect from global processes. This is highlighted by another Hakai study that shows that BC waters are warming at about twice the rate as average global seawater at equivalent depths.
- One of the most important parts of our mission is to share the knowledge that we produce with communities and local leaders and others who are interested.
- Every month we have two boats that go into Toba Inlet. One goes up to the head and we sample the river. The purpose of that is to get a handle on what the river is delivering to the coastal environment, what's in the river water, how much of it is there - organic matter, nutrients, sediment load, isotopic tracers that can tell us how much carbon is coming from the land and how much is produced within the marine water itself. A second boat stays in the inlet and lowers a CTD down through the water column. It's a bank of sensors that measures temperature, salinity, oxygen all the way through the water column. At one location in the fjord, we also lower special bottles that remain open until we trigger them so we can collect water at specific depths. We can collect things like inorganic carbon parameters, to give us information about that saturation state that I mentioned. We also collect samples for phytoplankton, microbial samples - what kind of bacteria are present in the water column.
- [Referencing a series of panels of oxygen results collected this year from January to May], the low oxygen zone in January extends almost all the way through the fjord.

Throughout the spring, that oxygen layer has shrunken, diminished in extent and intensity. Last month it looked like we had some higher oxygen water moving into the fjord.

## Michelle Robinson

### *A Leadership Perspective*

---

#### Presenter Bio

---

---

Michelle Robinson is a Councilor in Klahoose First Nation. She is finishing up her second term, four years in. Part of her portfolio is fisheries and conservation, and part is health. She is also involved in the corporation, the business arm. Her regular job is social development for the Nation, with a focus on health and cultural enrichment. She is also cultural leader in her community. And also a daughter, niece, granddaughter, mother and grandmother. She was a commercial fisherwoman for many, many years. Her husband and family still commercial fish to this day.

---

- It took a bit of time to warm up to this project, just because I'm really busy - I just didn't have enough information. Tina was really gracious in letting us know what was going on. A few months go by - it's Friday and I'm going into the office and there's Tina and Jay coming in. They're offering me to go look at the water sample. And I'm thinking, what am I going to look at? ... I don't know too much because I'm not a scientific person but I'm interested. Jay pops up these pictures on Tina's computer and there is so much life. And then he started explaining to me what some of these creatures were.... like a nerdy little tourist I was taking pictures. Jay was gracious enough to share the importance to the food chain and the importance to salmon. Salmon are really dependent on [the plankton]. I went to share this with the Band Manager and the other Councillors. I would love to have Tina and Jay present this to the kids in our community. He was saying that might freak them out because they would see all these things swimming around, but I think they would love it.
- Why do we need this? Am I justified in supporting this at a leadership or corporate level? What are the benefits for the band and our people? So I have to be able to justify as a leader how important it is for Klahoose First Nation to continue in the water monitoring and the relation to us as a community. So I thought about it, and as a corporate venture what of it is water based - we have our Klahoose resort, we have our Grizzly Bear tours, and of course our bears eat the salmon, and the small fish eat the plankton. We have water bottling company that comes off the glacier. We have seaweed, geoducks, oysters, clams and now a commercial fishing arm for our community. For traditional use, for

consumption, we have shellfish, salmon, we eat the bottom fish, the herring eggs, prawns, crabs, urchins, ducks, bears - keep in mind they're using the food chain, the deer going to the water for the salt.

- There was a lot of people trying to push money at us - oh, we'll do this salmon enhancement... I said we really need to get to the bottom of what's going on. It's so heartwarming to see what Hakai is doing. Our Nations are tired of bandaids. Our eulachon run, we used to have a grease trail. We can't have that anymore, we don't have them. So the water sampling and trying to keep on top of what's going on is important to us.
- Our family were hunters, trappers and they had so many stories of how abundant our salmon were.... What is the difference since contact? We can turn this around and say yes, DFO has mismanaged it, massive overfishing.... We have to start looking at other things, and not pointing fingers at anybody. Tina and I were lucky, we lived in Toba Inlet in the 70s, we were the last ones to move out, we've seen the change... We need to look at and monitor other things, such as mining, logging, fish farms. We talked about climate change. We have to deal with waste and sewage. There's boats, cruise ships, fuel spills, all of that we have to look at. How is it impacting our waters? We need to keep an eye on these things. We are stewards of the land and we have to up our game and protect and conserve the species of the ocean. We need to be in control of the monitoring of our waters, because we're here living it, on the water and near the water.
- The lands and the ocean, the foods and the feasts, the ceremonies - they restore, they bring health and they strengthen not just our bodies but they also bring healing to our spirits, our minds, our children, our families, our communities. Most importantly, it creates and sustains our identity as Aboriginal First Nation people and especially as us being Klahoose People.
- This program I'm seeing is vital to the whole ideal. I encourage all of you - the four nations, the FNHA, everybody to continue doing this work. It's so valuable. To me, the monitoring - all the history that you're collecting to the daily data of the future - you have this background to say, well this where our numbers were before, this is where they are now. Now we have a mining group in there, we have a logging company over here now. You'll have the scientific proof to say that's what's causing this, we need to make changes. It's not to say get the hell out, maybe that's what we'll have to do, but maybe there's a way to work around it to make the environment we live in better. I think it's really important to the historical work of collecting the data, and always comparing what comes in the future. So I want to commend you for what you're doing. I see it is as important work for the Klahoose People. It is all about our health. It is all about taking care of each other, being good stewards of the land.

**Dave Rolston**

## ***Tseshaht First Nation Showcase***

---

Tseshaht First Nation Fisheries Manager and WATCH Community Lead

---

- Dave provided highlights from the Tseshaht First Nation WATCH Program video <https://www.youtube.com/watch?v=1625EDo3fM8>
- See also Tseshaht First Nation Beachkeeper Program video <https://www.youtube.com/watch?v=mzdupHQFU0U>

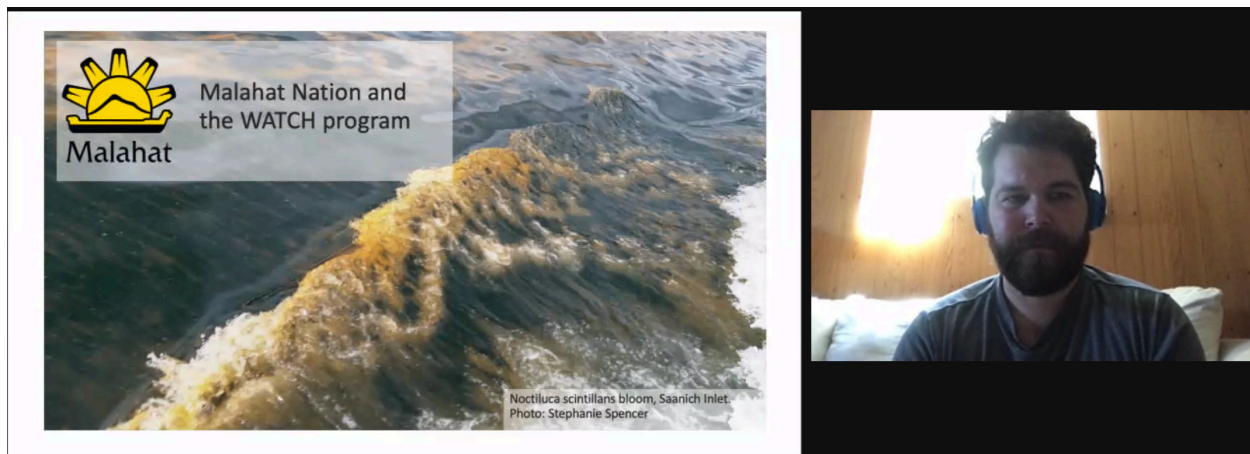
## **Andrew Sheriff**

### ***Malahat Nation Showcase***

---

Malahat Nation Fisheries Coordinator and WATCH Community Lead

---



- Healthy, safe and accessible seafood is one of the primary concerns for Malahat Nation. The BCCDC Shellfish Harvesting Status map (<http://www.bccdc.ca/health-professionals/professional-resources/shellfish-harvesting-sites-status-map>) shows a lot of complex closures covering pretty much the entire shoreline surrounding Saanich Inlet and Malahat's traditional waters. These are barriers to enabling members to harvest shellfish in particular but as we heard before might cause problems with harvesting crabs and other traditional foods. Malahat has previously collected information about these barriers through surveys for seafood use, documented cases of shellfish poisoning, and just talking with people in the community first-hand and oral accounts.
- The WATCH Program is helping to support Malahat's drive to return to healthy and abundant seafood harvesting. [Skipped video of sampling] We are currently developing a monitoring program for 6 different sites. We have been going out pretty regularly

since April. We are going from just looking at plankton to using our YSI meters to look at physical parameters of the water and do nutrient analysis as well.

- Some results that we have seen very generally - there are pretty big differences between our sites, and at each site over time. We have everything from diverse assemblages of plankton with multiple harmful species that we have seen - big Pseudo-nitzschia blooms that are pretty dense, to almost nothing in the water. So it's been interesting to see that happening already as we are monitoring.
- What we are hoping to do at Malahat is to start linking plankton data and biotoxin testing in shellfish so we can get a better understanding of how plankton are affecting shellfish, whether they are producing a lot of toxins, and which species might be contaminated.
- We are also beginning some work with other Nations, DFO, CFIA, and BCCDC to identify and address beach closures, everything from biotoxins to chemical closures and prohibitions. That is very in the developmental stages with emails and talking but it seems like there is a lot of interest and WATCH has really given us the capacity to start this work and to keep going.
- Our overall goals are to remove the barriers to access and create a healthy and abundant harvest. We have also been talking about how to develop what we are calling an integrated regional hub for monitoring and awareness of shellfish contamination. Again, very much in the brainstorming stages [and we invite other communities to reach out]. [Referencing photos of a cooking shellfish on the beach]... these clams were purchased to sharing the traditional baking method because this beach is closed.

## William Hall and Desiree Bulger

### ***Malahat Nation Enhanced Maritime Situational Awareness (EMSA) Program***

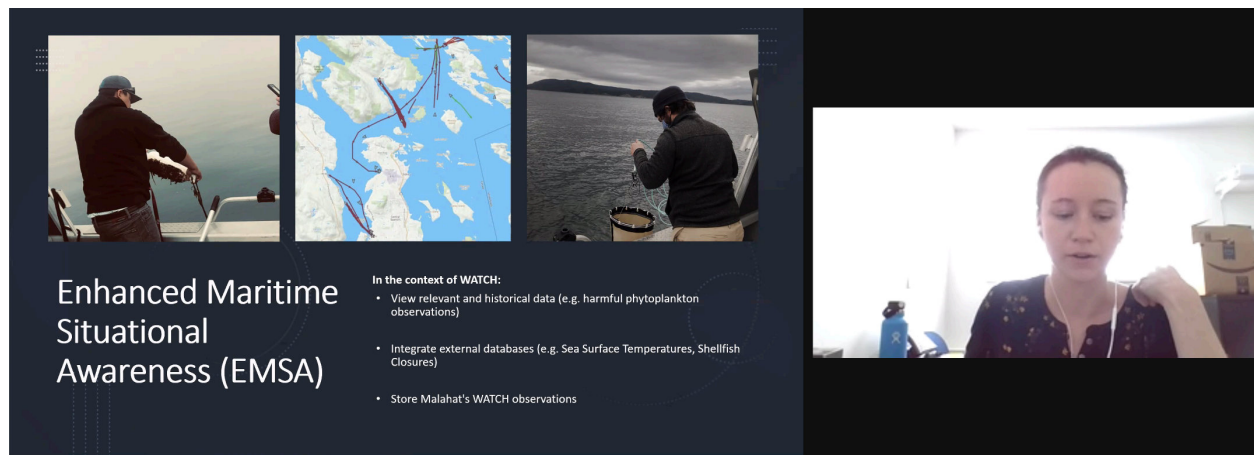
---

Malahat Nation Web Mapping Coordinators

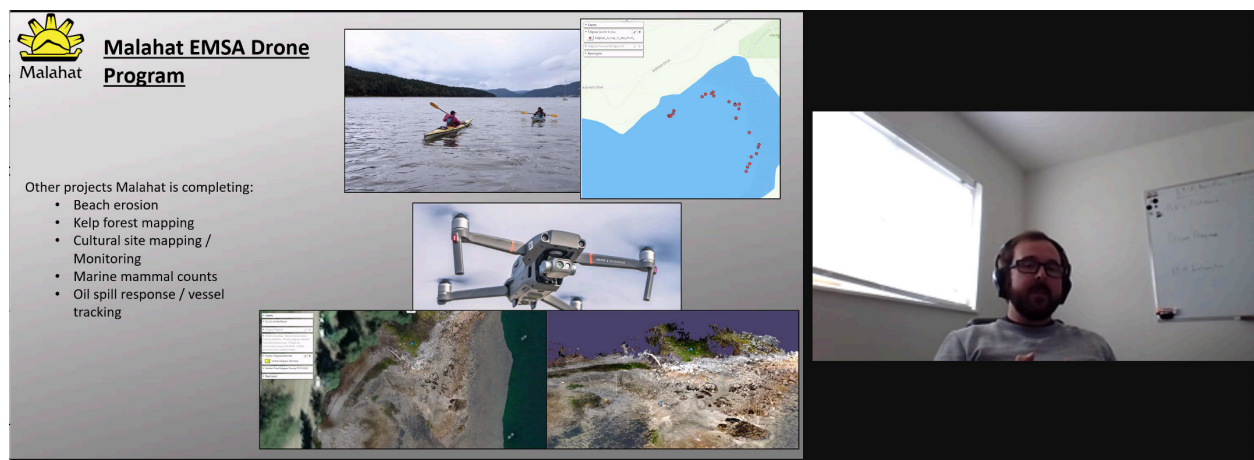
---

- Desiree: EMSA is an online mapping and spatial data program being used at Malahat. It was developed by 13 Indigenous pilot communities and Transport Canada. Accounts are free to any coastal First Nation community.
- EMSA provides a platform to store and view and monitor data, and allows us to track changes in Malahat's traditional marine territory. This allows leadership to make informed marine resource and safety decisions.
- In the context of WATCH, we can view relevant and historical data like phytoplankton observations or external databases such as sea surface temperature and shellfish closures. We also have the ability to store Malahat's WATCH observations.





- William: Malahat is developing an EMSA drone program. We're looking at kelp forest mapping, eelgrass mapping, beach erosion, oil spill response and vessel tracking. We are building 2D and 3D models to understand the distribution of eelgrass, kelp forests and in situ observations with the EMSA app. We are mapping the Malahat coastline to understand the dynamics that are changing in the area. Using the drone gives Malahat a lot of freedom in creating drone products that we can use in-house. So far we've mapped 5 beaches in Malahat territory, ranging about 1 square km. We can look at BC Shore Zone (see [https://sogdatacentre.ca/interactive-map/shorezone\\_map/shorezone\\_map.html](https://sogdatacentre.ca/interactive-map/shorezone_map/shorezone_map.html)), Mayne Island Conservancy datasets (e.g., eelgrass and kelp bed monitoring), and data that Malahat previously collected on the traditional territory.



## Stefania Gogopa

### *Malahat Nation Salish Sea Initiative*

Malahat Nation Salish Sea Initiative Coordinator



- [Referencing slide], you can see some Malahat members harvesting urchins. A big goal for Malahat of the Salish Sea Initiative is to remove barriers to access, so giving members opportunities to share knowledge, learn about science, connect with the marine environment are all part of the Salish Sea Initiative. We are building connections between members and the marine environment to help build long-term capacity for observing and monitoring and taking care of the marine territory. That of course includes food sources and their ecosystems and more.



- The Salish Sea Initiative program is quite broad, but it's basically about building capacity for monitoring. It's a DFO-funded program. It's a Trans Mountain accommodation measure, so 33 Nations are eligible. It's a 5 year program and we're currently in year 3. The benefit of that is that it provides some stable multi-year funding. When we talk about capacity building, it's focused on baseline data collection, tracking environmental impacts and changes, as well as assessing cumulative effects, and finally knowledge acquisition, integration and sharing - sharing across community members, and between generations as well as sharing between western science and Indigenous knowledge. It's a broadly defined program - it's really only limited to marine environments; anything marine focused is eligible under this program.
- At Malahat, we are building capacity by getting our members on the water, like this urchin harvesting. We are hiring and training staff. We have several monitoring programs established; we have started monitoring birds, eelgrass like you saw with the drone program, as well as crab. We have been going out harvesting crab, taking measurements and keeping some of that crab for members. Getting to know the ecosystem better as well as supporting community. And we are also able to build infrastructure with the Salish Sea Initiative program, so we're creating office space, we're acquiring a new boat, we're building a boat launch which is going to be really important for giving members that proper access to the environment, as well as acquiring equipment for the monitoring program.

- With Salish Sea Initiative we can really choose what marine life we want to monitor; monitoring food species and ecosystems and habitats makes a lot of sense, both for connecting Malahat members as well as monitoring for the Malahat community. It's a really great opportunity for organizing complimentary activities - supporting what WATCH is working on, supporting what EMSA is working on, and really having a holistic view in our stewardship program.

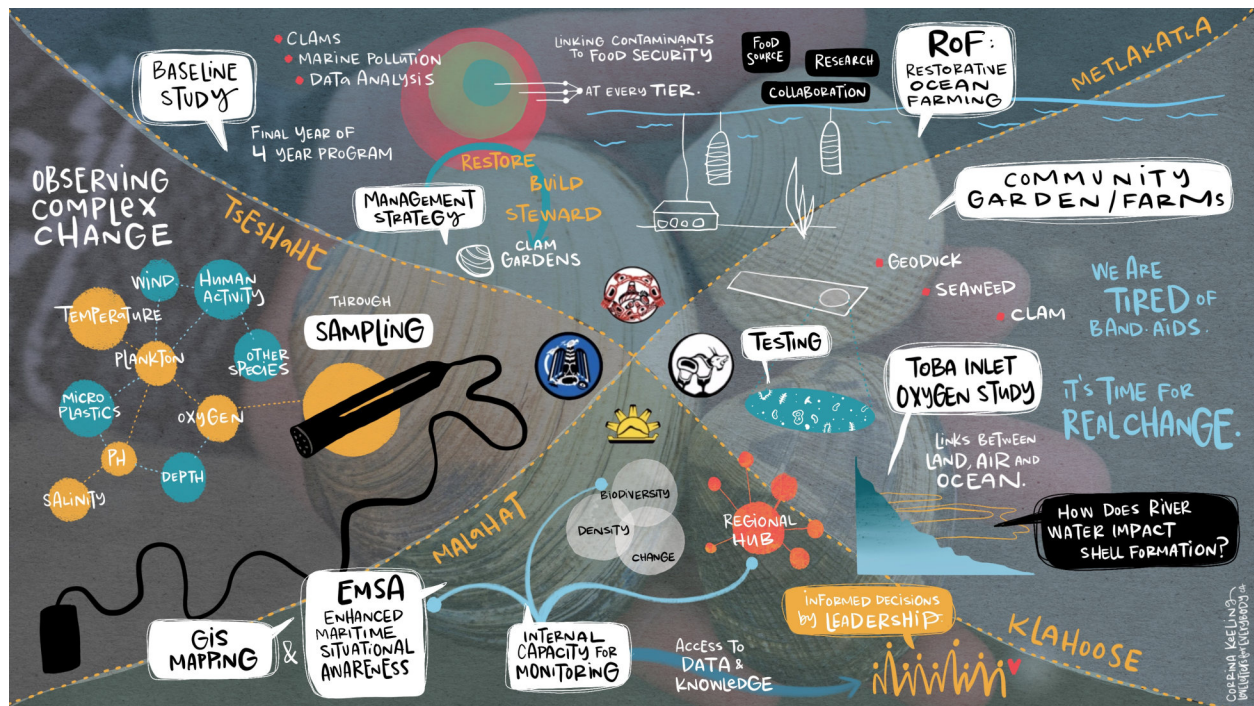


Illustration by Corrina Keeling. Corrina: Listening to the highlights from all of the four presentations from the communities, [here are] some of the names of the projects that are happening and how they are all interconnected.

## Closing

### Syexwaliya Ann Whonnock

I have a passion for all the work that you do, and I say that because I was on Council for Squamish Nation from 1989 to 2005, 16 years. And I was the Co-Chair of the Fisheries Committee, Co-Chair of the Environmental Committee, Co-Chair of Forestry, Co-Chair of Economic Development, you name it I was Co-Chair. And did workshops - road deactivation and stream enhancement and a lot of things during those early years when I was younger and could get out there... So my hands are up to each and every one of you for the good work that you're doing. And I was really interested in hearing about the projects.

I also went to Capilano University and did my Bachelor of Business Admin when I didn't get reelected and then got elected in 2009 for another 8 years. And in 2017 when I didn't get reelected, I decided to take SFU Beatty School of Business 2-year cohort Master of Business Administration, Indigenous Business and Leadership, and I just graduated February 2nd. So convocation is on June 25th [Congratulations Syexwaliya!!] I hear all you young people and I'm also Elder in Residence for Squamish Nation. Education asked me to be the Elder in Residence at SFU Burnaby Campus for the Indigenous Student Centre. So I get to talk to a lot of students and I know that some of them are working in sciences and want to become environmentalists. Doctors, nurses and a few biologists. And I always encourage them because the one thing I always said when I was first on Council and dealing with DFO and government was, "We need defensible data." We need defensible data to be able to support initiatives moving forward... and to get funding for these projects. While you were talking about the testing that you did, it made me think of a paper I did on plastic in the Pacific vortex. I read a lot of scientific papers for that presentation and paper. I thought about how the plastic photodegrades, and keeps photodegrading so that it appears like it's plankton. And that's what fish eat sometimes, thinking it's their food. I don't know if anyone has checked into that aspect of it, and I just throw that out there. And then when we were doing the LNG project and talking about the phytoplankton and all of the things that are really needed in getting to development of a plan, a water plan that helps guide making decisions of developers in your area that impact the waterways and the foods.

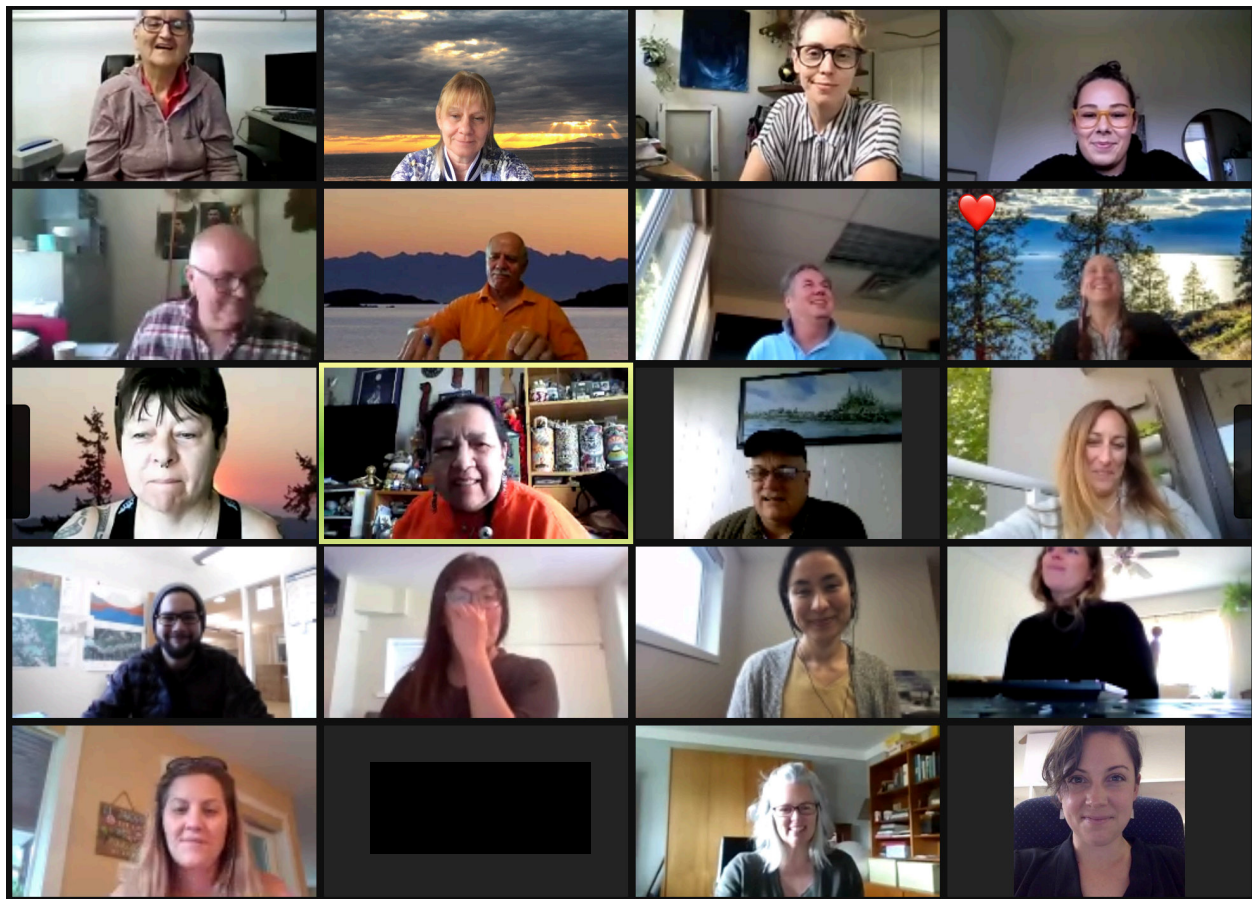
I put my hands up to you because you're walking in the legacy of your ancestors, and bringing back the food. My late cousin Chief Joe Mattias said, "When the tide goes out our table is set." So I found the clam farm and different things really interesting. Excellent work, keep up that good work. Integrate into the work your language and cultural ceremonies. When you're doing your stuff, talk to elders. I had gone on a field trip with some of my elders in the Squamish valley, looking at the creeks and systems for fish. A week later I went to Parksville for a workshop on road deactivation and a biologist did a presentation



and he was saying in scientific words exactly what I heard the week before from my elders. They're like natural biologists without a degree. It was exactly all the same as what he was saying. That shows the importance of getting a video of elders who share what's good in the land and waters. You all have me excited - this is one of my passions, my hands are up to you.

I watched a video on the break, around Campbell River 7 generations did a ceremony on the spit, and a bunch of them were there including a couple of hereditary chiefs. They were singing a song for the 215 children from Kamloops Indian Residential School, and a pod of killer whales came swimming in, and came close to the shore and then swam away as they were singing. That was such awesome good medicine. Now those children have been found, and they can rest in peace and have the ceremonies to journey to Creator and ancestors.

*Song and prayer*



## Favourite Foods

To win a *Salmon in the Wild* towel, oven mitt and potholder set designed by Coast Salish artist Simone Diamond, participants were asked to **'name at least one of [their] favourite seafoods'**. A word cloud was created with the responses (Figure 2).



*I love hadanii! (Black cod in smalgax)*

*K'aww (herring eggs on kelp)*

*Liquid Gold - Ooligan Grease*

*Mussels for me - they make great appetizers coming with their own serving dish*

*Ohh my heaven all this talk about sea food is making me hungry lol*

*Open fire cooked spring salmon (no seasoning)*

*S-axwa' & st'ula'um in Hul'q'umi'num'*

*Sockeye :) mmmm*

*Steelhead Trout*

*Tuqw'tuqw' red snapper in Hul'q'umi'num'*

Figure 2. Favourite foods word cloud, created by Dionne Sanderson and Gathering participants



## Initiatives that Inspire Hope

Participants were asked, 'What seafood and climate change initiative is underway in your community or elsewhere that gives you hope for the future?' These are their responses.

- ★ WATCH 😊
- ★ FNHA Indigenous Health Action Program (ICHAP)
- ★ FNHA Environmental Contaminants Program (ECP)
- ★ Local Environmental Observer (LEO) Network
- ★ Other FNHA EPHS Programs and Projects <https://www.fnha.ca/what-we-do/environmental-health>
- ★ Gitga'at Guardian food harvesting initiative
- ★ Klahoose community garden, and raise chickens and pigs
- ★ Klahoose aquaculture and restoration projects, geoduck farm, oyster, clam and seaweed farm
- ★ Okanagan Indian Band community garden and goal of growing year round and food preservation here
- ★ Stzuminus Health Centre medicine gardens, growing food and traditional medicine
- ★ Stzuminus First Nation beach park with clams and oysters, steam pits, and re-seeding
- ★ Ocean monitoring and cumulative impact studies
- ★ Learning about sea garden restoration work in Heiltsuk land
- ★ SNIDŪEŁ restoration project
- ★ Kelp aquaculture and restoration project
- ★ Climate and Agriculture Initiative BC
- ★ Collaborative fish stock monitoring with goal of co-managing seafood harvest (DFO)
- ★ DFO Institute of Ocean Sciences - monitors the IOS wharf in Saanich Inlet for HABs with weekly taxonomic and biotoxin samples (Melissa Hennekes)
- ★ Genome BC, UBC and others - genomic sequencing of wild steelhead to identify genes that might be more resilient to climate change

- ★ Island Climate Action Network
- ★ Pacific Salmon Foundation Citizen Science Oceanographic Program
- ★ Parks Canada Sea Garden Project
- ★ SEATOR lab in Alaska
- ★ UBC Department of Earth, Ocean and Atmospheric Sciences - measuring metals and PBDE in the SoG/Salish Sea food web (Professor Maria (Maite) Maldonado)
- ★ United Nations Decade for Ocean Science and Sustainable Development (UNDOS)

Those who contributed responses to the question were entered into a draw for a two-night stay at Tin Wis Resort in Tofino!

## Questions

Q: "I understand that the monitoring program has been focusing on shellfish contamination. ***Has any monitoring been done on contaminants entering the ocean from large spills such as radioactive wastes from Fukushima nuclear disaster and petroleum spills from ships and offshore oil drilling accidents?*** The entire Pacific Ocean is connected, that's why Japan's earthquake debris has been found on the shoreline of West Coast Canada..."

A:

Q: "I am curious about the potential for increasing lab capacity for testing biotoxins in shellfish tissue. Will SEATOR be handling all WATCH samples, and are there opportunities to increase capacity for tissue testing in other communities along the coast?"

A: In the coming months, the WATCH Project will be exploring how lab capacity may be increased, not just for the pilot communities but for all coastal communities.

## Requests

Several participants were interested in learning more about a new nano LC-MS method to test PSP developed by Laurie Chan's team, and to having a broader WATCH session on analytical methods and monitoring support needs. **Please indicate your interest in joining the first Monitoring Community of Practice meeting at [watch-project@fnha.ca](mailto:watch-project@fnha.ca).**

## Concerns

"We live at Burrard Inlet, and our waters are polluted. We aren't able to eat the fish and shellfish."

# Vision

The day ended with a visioning session. Participants were asked, “Picture WATCH in 5 years as a fully-fledged planning and monitoring program. What does it look like? What features does it have?”

Responses are organized by Impact Streams in our theory of change (Figure 3).

- Communication and knowledge-sharing between participants using common formats for data and other information
- Communication and collaboration between members and non-members of WATCH [Note everyone can be a member of the WATCH Community of Practice]
- Data in open access international repositories such as Ocean Biodiversity Information System (OBIS) [subject to data-sharing agreements]
- All levels of government and big corporations provide support for regulatory change to improve safe harvesting and to fund ongoing monitoring, cleaning up lands and waters and to educate to provide awareness

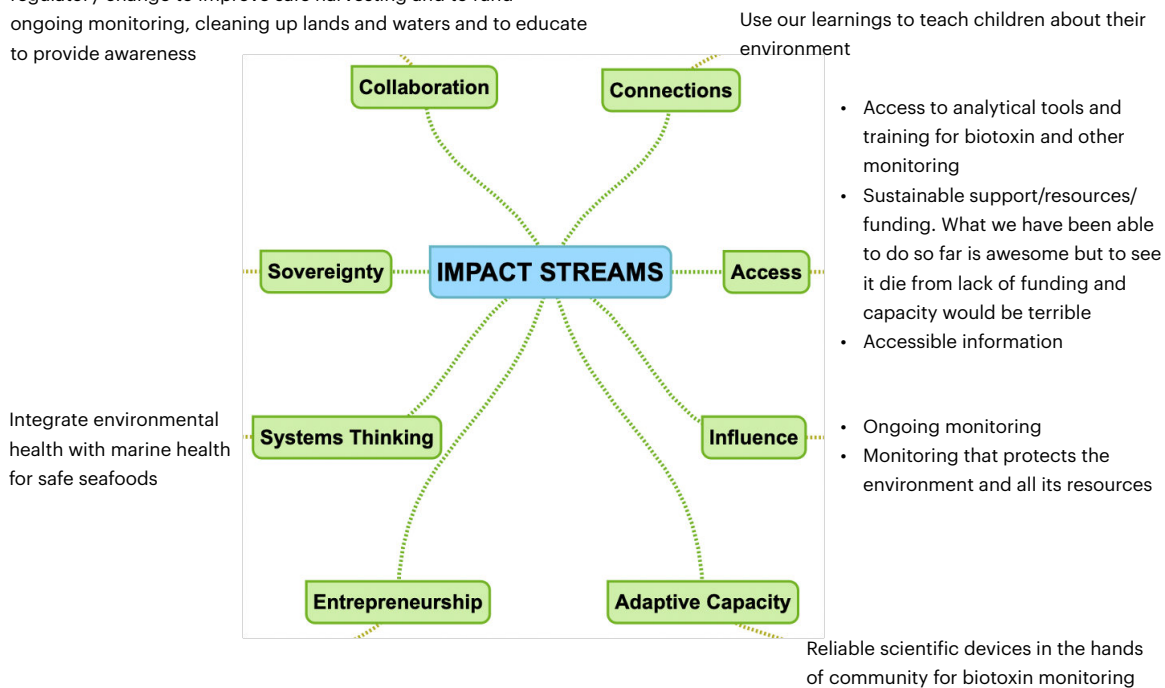


Figure 3. Visioning comments organized by Theory of Change impact streams



Our Vision, by Corrina Keeling



## Links

- [WATCH Project Update, Spring 2021](https://www.fnha.ca/what-we-do/environmental-health/watch-project) (Holly's presentation). You can also access this 10 minute video from the WATCH website <https://www.fnha.ca/what-we-do/environmental-health/watch-project>
- [BCCDC Shellfish Harvesting Status map](#)
- [BCCDC Sea Surface Temperatures map](#)
- FNHA [Indigenous Climate Health Action Program](#) (ICHAP)
- [Local Environmental Observer \(LEO\) Network](#)
- FNHA [Environmental Contaminants Program](#) (ECP)
- [FNHA Environmental Health Services](#)
- [Restoring Clam Gardens in Metlakatla Territory](#) - 11 minute video
- [Life in a Drop of Water](#) by Tina Wesley and Jay Pudota - 3 minute video
- [Tseshaht First Nation WATCH Program](#) (Dave's presentation) - 26 minute video
- [Tseshaht First Nation Beachkeeper Program](#) - 14 minute video
- New evidence for chronic low level exposure to domoic acid causing memory loss: Grattan, L.M., Kaddis, L., Tracey, J.K., & Morris, J.G. (2021). Long Term Memory Outcome of Repetitive, Low-Level Dietary Exposure to Domoic Acid in Native Americans. *Int J Environ Res Public Health*, 18 (8): 3955. doi: 10.3390/ijerph18083955, <https://pubmed.ncbi.nlm.nih.gov/33918677/>
- [Enhanced Maritime Situational Awareness Initiative](#)
- [Ocean Biodiversity Information System](#) (OBIS)

## Gratitude

### Morning session

The day really engaged my emotions - a mix of sadness at what [was] lost through colonization...

"Thank you so much to all the presenters for sharing your wealth of knowledge and experiences with us. I have learned so much, and looking forward to learning more from everyone!"

"Thanks for the great presentations so far." "Excellent presentations everyone." "Thank you - that was excellent." "Excellent presentations." "Thank you." "Thank you everyone!" "Thanks everyone." "Thank you everyone for sharing." "Thank you so much everyone! This has been so useful and informative." "Thank you everyone for sharing."

(See also: Personalized, below.)

### Afternoon session

"This is a near and dear important part of Indigenous life for me. I have really enjoyed these presentations!"

"Thank you to everyone. This has been very informative and I am excited to see the WATCH program grow, as well as all of the other Projects Nations are undertaking!"

"Thank you, everyone! Specially the presenters and organizers! I learnt a lot and look forward to further discussions. Thanks again."

"This is truly amazing. I am so proud of the communities and the FNHA team. Refreshing and inspiring."

"Excited to be a part of this! Great initiative. Thanks to the all the contributors."

"I have immensely enjoyed coming to see this project come to fruition and breathing life to such an important issue. Best to all of the pilot communities and the WATCH project as a whole. I raise my hands to all of you."

"Thank you to all our presenters and speakers! I learned so much today and am inspired by our shared vision. Such important work!"

"Thank-you very much for the invitation to participate in today's Gathering. Hugely impressed with the work that is already being done, especially by the youth! Look forward to following up on ways we might be able to contribute to biotoxin monitoring. Thanks again."

"Thank you!" "Thank you everyone!" "Thanks all!" "Thanks everyone!" "Thanks and well done, everyone." "Thank you all!" "Thanks everyone." "Thanks Everyone. Take care." "Thank you." "Thanks all!" "Thanks so much everyone!" "Thanks everyone, this was great!" "Thank you so much everyone."

"Thank you everyone. This was a wonderful meeting and I am very grateful and thankful for the opportunity to join."

"Thanks everyone. Excellent session. It was amazing!"

"Thank you so much Everyone. Wonderful program and sharing. Looking forward to the next discussion."

"Thank you to everyone today for sharing and inviting me to the first WATCH Annual Gathering. Huy Ch q'a"

"Excited to be a part of this! Great initiative. Thanks to all the contributors."

"This flew by! Thank you for all the beautiful insights everyone has shared, it has sparked a lot of passion within myself."

"I took soo much from this and am interested in seeing what we can do for our Nation as well. Thank you for sharing."

### **Personalized**

"Thank you so much for your presentation, Pauline and Kylie!" "Thank you Kylie and Pauline." "Thank you, Pauline and Kylie for sharing with us!" "Thank-you Kylie and Pauline."

"Toyaxsutnuun Kylie and Pauline ❤️ You both are amazing." "Thank you for that amazing presentation." "Wonderful presentation, thank you both." "Thank you, for sharing your information. From where I'm from we raise our hands up, in thank you." "Thank you Pauline and Kylie... [for the] beautiful and very informative presentation...." "Thank you for sharing Pauline and Kylie." "Thank you Pauline and Kylie, so wonderful to learn how you harvest traditional foods and their importance." "Very grateful for the presentation, Pauline and Kylie." "Huy ch q'u Pauline & Kylie for that wonderful presentation." "Huy Ch Qa Siem. Wonderful teachings and some great memories of the central coast. I remember digging a pail of clams in Paul anchorage near Ivory Island. I love this important work! And the reframe for the "school to institution! Beautiful..."

"Thanks so much for the presentation, Holly!" "Thank you Holly! That was a great presentation, thank you for sharing." "Holly, what a fabulous video. As a plankton biologist, Pseudo-nitzschia, Alexandrium and Dinophysis will forevermore be known as evil kayaks, evil hamburgers and evil koolaid men." [Kudos to Sitka Tribe of Alaska presenters for these easy-to-remember images/monikers] "Same here... never heard those names before."

"Thank you Holly and Lorraine for the great presentations."

"Thank you so much Lorraine. That was very informative. My partner and I have had many "discussions" about removing the hepatopancreas prior to cooking crabs :)"

"Well done Debby." "Thanks Debby!"

"Thank you so much to Pauline, Kylie, Holly, Lorraine and Debby! Incredibly informative presentations! SO thankful to be here :)"

"Thank you Holly and Lorraine for your informative presentations."

"To Tina, Dave, Andrew and Braden: so fantastic to see all the videos and photos of sampling and work done in your communities - thank you so much for sharing this knowledge." "Thanks Dave!"

"Michelle, thank you so much for the very kind words for Hakai! We will be sure to share this with our leadership. Thank you so much for welcoming and encouraging the work."

"My hands lifted to you Holly, Emma, Peter and Jay for all your efforts, time, and energy towards this project, thank you for your leadership and support. Thank you for today, Emote"

"Peter and Holly, raising hands to you both for all the work you have done steering this project!!"

"Great job Corrina ❤️ very beautiful." "What a wonderful way to represent all that information. Well done Corrina!" "Yes, well done! Stunning image with powerful messages and learnings captured. Thank you!" "👉" " Great job Corrina ❤️ very beautiful."

"Thank you Syexwaliya!" "So fun!!! Thank you." "This song reminds me of my childhood."

"Thank you!!!!" "Thank you!" "Thank you!" "Thank you so much Syexwaliya for that closing!!"

"Awesome!!" "Thank you Syexwaliya." "Syexwaliya thank you Huy Ch q'a you are amazing!!!!"

"Thank you!! Feeling lighter now!" "Thank you very much Syexwaliya. You made my day. And thank you all the presenters, the FNHA and attendees for this amazing informative and learning session." "Always better from hearing you speak Syexwaliya." "Thank you Syexwaliya!" "Thank you Syexwaliya, and everyone else here today." "Emote'Emote" "Tapadh Leibh, Syexwaliya." "Thank you so much Syexwaliya... " "SYEXWALIYA ❤️ my hands are raised to you, thank you so much for your wise words, your passion and love for our resources, you've been awesome medicine to my heart, Beautiful Healing son, Emote' hugs, can't wait to meet you in person in a huge feast of our traditional foods." "Thank you!" "So much fun :)" "Thank you Syexwaliya. I miss you."

## After the Gathering

"I found the gathering interesting and touching. It was a different kind of meeting for me and I certainly see the need and value. Thank you..."

"I very much enjoyed attending the Gathering. Some excellent talks that, for me, put the importance of the work into context (I spend a lot of time buried in data and analysis and seeing the bigger perspective is good). There really seemed to be strong motivation and a broad range of expertise, so it will be exciting to see the work progress."

"It was great to see all the work being done in BC with your program."

"It was a pleasure being part of the WATCH meeting. I found it very informative and interesting to take part in listening to the presenters."

"It was a really good day... I really enjoyed learning more about the country foods and the seasonal cycle, and was very impressed by what the various teams were achieving already. The day really engaged my emotions - a mix of sadness at what they had lost through colonization and uplifting to see what they're doing for the future. There was a real spirit of generosity and hope. The graphic artist was fabulous. And the closing of the day with the song about eagle/wolf/whale/salmon was perfect. I felt lighter than air after that and I think I wasn't the only one. Looking forward to ongoing engagement!"

"Thank you so much for the invitation to join the gathering! We really enjoyed learning about all of the ongoing work and the leaps and bounds that your project has taken since it started. We were in awe of all the amazing things happening on the coast and motivated by the alignment of goals across these initiatives. It really feels like there is a LOT of positive momentum here and we appreciate all of the hard work that you, your team and program partners have contributed towards supporting Indigenous food sovereignty and security."

"Thank you so much for the invite to the WATCH presentation today as it was very informative and very helpful for future work."

"Thanks for hosting such an informative event, it was great to be a part of it and I hope I can help in the future."

"Thank you again for inviting me to participate in the annual WATCH gathering. I learned a lot and feel privileged to be able to help with the project from the BCCDC."

"Thank you so much for the ... amazing webinar."

"It was an honour to attend, witness, and learn so much!"

"Thanks so much! We enjoyed the gathering."



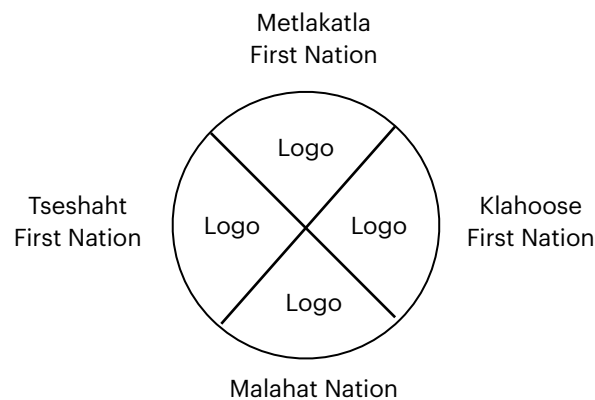
"Thanks so much for organizing the WATCH Annual Gathering. I learnt a lot from everyone and it was a real treat to attend."

"Thanks again for hosting such a great event."

## Pilot Community Logo Contest

The four pilot communities are co-hosting a contest to design a WATCH logo! The new WATCH logo will use one original artwork from each community reflecting one or both themes of the WATCH Project. These themes are: “We All Take Care of the Harvest” and “seafood and climate change”.

There will be ocean and seafood-themed prizes for winners from three age categories (adults, youth (12-20 years) and children (under 12 years)). **The top prize is a half-day boating adventure with your community's WATCH monitoring crew.**



### Guidelines

- Incorporate a WATCH theme: ‘We All Take Care of the Harvest’ and/or ‘seafood and climate change’
- Include original artwork only - it must be your own work
- Include your name and age
- Send your entries on or before October 1, 2021 to [watch-project@fnha.ca](mailto:watch-project@fnha.ca)

### How winning logos will be selected

- Winning entries for each age category will be chosen by a committee of elders, preferably from the pilot communities. (If you are an elder and want to be on the selection committee, please contact your WATCH Community Lead.)
- Selections will be made by October 31, 2021.
- Only one logo from each community will be used for the main WATCH logo.
- WATCH Community Leads will be responsible for prizes for winning entries in their communities.

### How your logo will be used

- The WATCH logo will be used for WATCH communication materials and giveaways until the next logo is designed. (A 2022 logo contest may be announced for ‘trainee WATCH communities’ at our second Annual Gathering in June 2022.)
- Artwork that is not included in the final logo may be used in other products, such as community invitations or adaptation plans.