Collaborative Science 8:20 min

PERCY STARR Hereditary Chief, Kitasoo/Xais'Xais Nation
We struggle now with aquatic resources, we really struggle….

ART STERRITT *Executive Director, Coastal First Nations*
30 years ago we had about 100% employment – very wealthy people - had all of the food they needed, all of the economy they needed, all of the jobs they needed. They had lots of boats. They fished all species. But over a period of about 30 years that all started to get mismanaged by government to the point where the salmon industry is down, the different cod fisheries are down. First Nations through legislation began to get marginalized and pushed out of different fisheries so that right now in our communities we'd be hard-pressed to have even one community that had less than 80 or 85% unemployment.

CHARLIE MASON *Hereditary Chief, Kitasoo/Xais'Xais Nation*
Sort of goes back to the things that we now stand up to fight for. Say like sea cucumber that was the last one, last year. And this year it's herring. These are resources. These are our resources. These are very important to us. They're very important to us," I said, "because once they clean it out there'll be nothing left for us." They're basically just taking your food away, with a care in the world. They say oh yeah it will come back and it does come back but it is 10,15 years before it comes to a level it becomes satisfactory for us to even harvest it.
We've been hurt a lot by the decisions of the government.

DOUGLAS NEASLOSS Kitasoo Band Council & Kitasoo/Xai'Xais Integrated Resource Authority Stewardship Director
By developing these marine spatial zones, like we have on the land side that will help us protect multiple species and make sure that those species continue to be there, and not just for First Nations, but for everyone.

We wanted to make sure that there was a place for commercial fishermen, recreational fishermen, for food fishermen.

All of us have stewardship responsibilities. It doesn't matter whether you're First nations or non-First nation. So it's really important that we set a good balance.

Narrator
The marine plans initiate that balance by protecting marine ecosystems and supporting economic opportunities that can restore nature and communities. They are a starting point for a different kind of economic prosperity, one that can endure generation after generation.

DOUGLAS NEASLOSS Kitasoo Band Council & Kitasoo/Xai'Xais Integrated Resource Authority Stewardship Director
So it was important that we start doing our own science, and we start partnering up, whether that's with the province, whether that's with the different academic institutions to start gathering the proper data so we can make proper decisions.

Just this year alone we're doing salmon work, we're doing rockfish, we're doing Dungeness crab, we're doing bears, we're doing birds. And we're investing hundreds of thousands of dollars in some of this work, and its not cheap but it's gonna help us make sustainable decisions, and I think that's really what's important to the community.

Narrator
With the understanding that we depend on a healthy ocean to sustain us now and into the future, the Heiltsuk Nation is working with researchers from Simon Fraser University to determine if a commercial harvest of kelp can be done sustainably.

KIRA KRUMHANSL Postdoctoral Researcher & Hakai Scholar, Simon Fraser University
So the kelps are an important form of structure in the ocean, so they provide habitat for a lot of different species, like commercially important fish species, other invertebrates, like sea urchins, abalone, cucumbers, those kinds of things. And so essentially if you remove that habitat structure of the kelp, there's concern that there's impact on these other species that inhabit the kelp, and feed on the kelp.

So we're looking to determine how much can be, of the kelp, can be taken from these ecosystems without impacting negatively the other fishery species in the ecosystem and also the carbon storage and flux value of these ecosystems.

Dr. ANNE SALOMON Marine Ecologist, Simon Fraser University
MaPP Marine Advisory Committee
First Nations had been investing a lot of time, intellectual capacity, knowledge, both traditional knowledge and scientific data, to make marine use plans that the communities were comfortable with and were really community driven.

There was a collection of scientific data that included bathymetry data, current data and also biological data like the occurrence or presence of sea ducks, herring, kelp forest, all kind of mapped spatially – and that was made available to anyone who wanted it to identify areas that were ecologically important, important to commercial fisheries, important to the tourism and recreation sector, and areas that were culturally important.

DOUGLAS NEASLOSS Kitasoo Band Council & Kitasoo/Xai'Xais Integrated Resource Authority Stewardship Director
We're looking at science in a new way. We were able to take traditional ecological knowledge and local knowledge and merge that with the best available western science and I think as stewards I think we have to look at the best way of gathering all information before decisions are made so.

CHRISTINA SERVICE ***PhD Student, University of Victoria & Spirit Bear Research Foundation***
We're working on a bear monitoring project in the Kitasoo First nation territory, in partnership with Raincoast Conservation and Spirit Bear Research Foundation. We're basically looking to monitor these animals non-invasively, so we use non-invasive methods, such as barbed-wire, hair corrals and remote cameras to get hair samples from these individuals and be able to see which unique bears are around, how they're moving across the territory and also how much salmon these bears have been eating this past year.

ROSIE CHILD Field Technician, University of Victoria & Spirit Bear Research Foundation

So to find out how much salmon they're eating, we grab their hair from these barbed-wire corrals. And they're especially valuable in the spring because they've just woken up and they're shedding their hair from the previous fall, where they eat a lot of salmon. And then we use something called stable isotope analysis, which enables us to see what proportion of their diet is salmon or marine mammals or plant-based.

CHRISTINA SERVICE ***PhD Student, University of Victoria & Spirit Bear Research Foundation***
So in Kitasoo territory we've been monitoring bears this way since 2012, but this project's a piece of a larger monitoring project at the landscape scale, which includes partners from Bella Bella, the Heiltsuk Nation, the Nuxalk Nation out of Bella Coola, and also the Wuikinuxv Nation out of Rivers Inlet.

Narrator
This collaborative science paired with traditional and local knowledge is central to the marine plans and will inform decisions on sustainable economic development and stewardship of British Columbia's coastal marine environment.

Traditional Knowledge (Haida Gwaii) 7:45 min

Trevor Russ, Vice President, Council of the Haida Nation
This is the area where the first harvest happens for some of the people at home.
So, we got a couple hours before low water so the area here should dry off a little bit more and we'll be able to get down inside the tideline to look for some seafood there.
Might get lucky.

All of the kids that grew up in the coastal communities hear from their parents and grandparents, that is "when the tide is out, the table is set," meaning that once the tide recedes and the shoreline is exposed there's opportunity to get out and harvest clams, chitons, mussels, our seaweeds, abalone, if you're lucky enough, sea scallops. There's so many different little creatures out there that you can harvest and have good meal from.

My oldest great uncle he owned a little mosquito vessel, so as young as I can remember to be old enough to hold a knife, so whenever he went out anywhere, he took me along with him and showed me the areas, and where I needed to go to harvest, and what times. And that's where it started.

Some chitons, in Haida language we call it T'aa You use the juices to season your seaweed and as well what I like to do with them is, I clean them when I get home and then I'll pickle them and we eat them as a snack. Some people use them in different dishes as well.

The harvesting is what I base my timing around a lot of the year. A lot of it works around the seasons of the year. The moon. The different moons. The different tides. That all effects on what we're harvesting, and the time of year we're harvesting it.
The newer moons, and the full moons are the bigger tides. So those are the times to get out onto the beaches and try to harvest what you can.

I just found this purple urchin in this tide pool here. I caught him eating the same thing I've just been harvesting this morning, some chitons.

Based on the upbringing that we all have, that everything is interconnected to each other, and we have to understand the balance. We all learn that growing up. If you happen to go to an area, and you see it's been harvested quite frequently, try to move to a different area. Or otherwise, you know, we're gonna deplete the stock that's in the area. Then it all depends on what you're harvesting, right. For me it makes a lot easier to get a little further away from town. The stuff's that closer to town, is more accessible, so a lot more people get out to harvest that stuff.

Traditional knowledge is knowledge that's been passed on through the generations, so from our ancestors on down to our grandparents, to our own parents, our aunts and uncles, and now, my generation, we're passing on to our children, and on to our nieces and nephews. That's what I consider to be our traditional knowledge.

I truly take pride in is preserving our foods, and sharing it with my friends, and neighbors, and other family members, and I try to pass it on to my kids to let them know as young people that's kind of the role is to get out and to harvest, and share it with the Elders. And make sure that people in your family have an opportunity to have a taste of what we have around us.

Typically in the prime harvest time you get nice long strands of it. Here you see some of it is quite long actually but it's just starting so. This stuff is the first batch of the season, and it's the closest to town so the majority of the members of the community won't venture very far , most guys are just running little skiffs. This is the area they come harvesting in the next couple of weeks.

The marine plans have identified specific areas that are of frequent harvesting areas for ourselves that are set aside with certain protections that only allow uses for Haidas to get in there and harvest specific species. So that's gonna be key for our future generations to have the opportunity to get out and harvest what's there, set aside for us.

Right in behind the village there is where the kids are going tomorrow to harvest.

„Where did you guys go with the boat yesterday?"
„We went just over to just past Yan, to the point just before the sandy beach there. We just went to grab some mussels and chitons and check on the seaweed."
„How is the seaweed?"
„Most is about that long. I managed to get a bundle that big of some nice long stuff. Probably next weekend it should be ready over there."

Traditional knowledge was a huge component to the Haida Gwaii marine plan process. When we first engaged in back in the mid-2000s, community consultation happened through door-to-door visits, individuals were identified that were frequent harvesters of all species, and we did a lot of one-on-one interviews with a lot of the older Haidas, middle-aged Haidas, and young Haidas that were experienced in harvesting. That identified the key areas for ourselves to set aside for our own uses. So that played a big role, and then once the community consultation process ended, we developed a work group that provided input into the technical planning piece to help us develop a solid plan.

Intertidal Walk 9:20min

Ali Pearson, Interpretation Officer, Gwaii Haanas National Park Preserve, National Marine Conservation Area Reserve, Haida Heritage Site
Today it will be a lot of fun because we take the kids out to take a peak at the intertidal area. That boundary between the land and sea is always moving around and the intertidal area is where thiat happens and today we take the kids out and see what we can see and let them find some interesting things on the beach.

Jody Bissett, Interpretation Coordinator, Gwaii Haanas National Park Preserve, National Marine Conservation Area Reserve, Haida Heritage Site
Can everybody look out at the ocean. Can everyone see the ocean way down there. So right now is what we call low tide. So the ocean is way out there. What happens, does anyone know what happens when there is high tide? So maybe everybody can stand up and sort of put on your detective glasses and can you guys see or guess where the tide, the ocean will come up to at high tide? Can you use your detective glasses to see if you see any clue along the beach that might tell us how high the water comes at high tide?

When we're on the beach and can sort of can see this line of seaweed and sticks and debris, this is a good clue of how high the tide comes at high tide.

So we have this amazing space between high tide and low tide. So this area between high and low tide is called the intertidal zone. And the intertidal zone is this amazing area we can explore, we can harvest food from, we can get a glimpse, a peak into the ocean world and we can and we actually can walk through it. But the intertidal zone is also an area people can harm when we're not careful.

This is a great beach to explore and see a lot of different habitats, a lot of different creatures in a small area. So when you look out you see the green, that's eelgrass. So it's not seaweed, it's a true plant and eelgrass is an incredible important habitat for a lot of different marine creatures.

Often people call eelgrass meadows the nurseries of the ocean. So this is a very important habitat. It's also a habitat that's very easy for people to disturb. So you can imagine pulling boats up or anchoring boats or building docks, the eelgrass because it's a true plant, it has a root system, once that's disturbed it's not necessary gonna grow back. And because it's sort of the nursery of the oceans you can imagine the repercussions of harming those nurseries, you'll have less babies, less successful reproduction, less creatures in the ocean. So a really, really rich area.

Are you guys ready to do some exploring? We've done a lot of talking. We need to be respectful, we need to be responsible and we need to be ready to learn. So let's see what we can find.

A crab! But now watch this! It is empty, there is no crab in the shell! So where do you think the crab went? It grew itself a new bigger shell and because the shell can't grow the crab actually backs itself out of the old too small shell and it grows a much bigger one.
So what I'm going to look for is a moon snail. Oh you found a moon snail?!
What do you think this is?

Kelp!
It kind of looks like kelp. Other guesses?
That is a moon snail casing. The moon snails lay their eggs inside theses casings.
Oh the moon snail casing. I'll try to find a real moon snail necause there were a bunch here yesterday. Can you see this poking out of the sand? You know what that is? Be gentle! This is a giant clam called a gooey duck. Oh, here is another one. We need to walk softly and do you see this? They can camouflage very well. That means they can hide within their environment. So those are clams that are under the sand. So as we're walking along there are actually hundreds and hundreds of animals under the sand, under our feet.

Jody Bissett, Interpretation Coordinator, Gwaii Haanas National Park Preserve, National Marine Conservation Area Reserve, Haida Heritage Site
We all are stewards of the earth and it can be a big job of thinking of being a steward of the entire earth, so how I like to think of it is that I like to pick a special place I'd like to be steward of. And maybe that's your backyard, you can keep it clean, you can look after it. May that is a special section of beach, you can go to and check on the plants and animals.

What kind of animal is this?
This animal is called a Moon snail. You can see its big snail shell. If you like you can touch the skin of the moon snail.And tell me what it feels like.
Slimy! Slimy!
It likes to cruise around with this fleshy, gooey, slimy foot. And it actually goes under the sand and it hunts for clams. So this animal likes to eat clams. And have you guys ever seen a clam shell that has a hole in it like that?
So how do you think the moon snail makes that perfect circle in the shell to eat the clam?
Digging?
You think it digs in?
Drills!
It drill, its a great word, It drills.
Moon snail have this special appendage called a radula. It's really really rough like a drill and they actually will drill that hole into the clam shell and then they will drink the clam out of the shell. So when you find shells like this with a hole in it you know it's been eaten by a moon snail.

Jody Bissett, Interpretation Coordinator, Gwaii Haanas National Park Preserve, National Marine Conservation Area Reserve, Haida Heritage Site
Because its totally overwhelming to think about the entire planet we might pick little areas, there might be a small section of forest that is very special to you and you can be the steward of that spot. You can go and check on the plants and animals. You can walk carefully and observe what's living there and growing there. You can pick up garbage you can see. You can tell other people how they can be stewards in their own special place. And if everybody picks a section of beach or a little bit of forest and looks after it, all of sudden we have this a are taking care of and are stewards for. The plants and animals can live and thrive. And in little ways we can make sure we're protecting the entire planet because if everybody in the world picked a special space or place to be the steward of then we would be looking after the entire world.

Chiefs Robe 2:00 min

Weaving Chief's Robe

Evelyn Vanderhoop – Master Weaver, Haida Nation

I am weaving a chief's robe that we call the Naaxiin. The pattern that I'm weaving and creating with this particular robe is Qinga. He controls the ocean and he's leader and ruler of many sea creatures, and he also controls the weather. Our ancestors really depended on his benevolence.

In the past they were made out of mountain goat wool. And the Haidas, we don't have mountain goat on our islands, so we would travel by the canoes to trade the mountain goat wool. And it was the people inland, near the mountain ranges that would climb those mountains in the spring when the goats were losing their warm undercoat.

We have, as Haida people, as indigenous people, been really concerned about our environment and our ability to provide for our great-grandchildren and our grandchildren and the future generations. We look back at our stories that our ancestors told of the power of the ocean, and the reverence, and how to be respectful. These stories aren't ancient tales that don't connect to our world now. They really remind us that in order for our abundance, we thank our ancestors, and our grandchildren are going to thank us, hopefully, for our caring for our environment. So I think it's very important to continue our traditions in so many ways and so many respects.