



CCIRA



The Common Voice

CCIRA Newsletter
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Central Coast Indigenous Resource Alliance





Crab pilot project a positive step towards collaborative fisheries management

In the 1990's people from our Nations could go crab fishing on the Central Coast and with just four traps catch 30-40 Dungeness crab in a day. But with the increase in commercial and recreational fishing in our territories, that kind of catch is now rare, and it is difficult for our Nations to meet our crab needs.

To address these concerns, DFO and the Central Coast Nations engaged in a pilot project in 2017 to create a collaborative decision-making structure (or government-to-government protocol) for managing Dungeness crab in our territories. We reported on this in our April 2017 newsletter, and now, two years into the pilot, we are achieving meaningful progress.

Pilot project accomplishments

It is no secret that our Nations and DFO have not always seen eye to eye on fisheries management issues. "When we first started this project, it felt like an 'us and them' approach by DFO," says Mike Reid, Heiltsuk's Aquatics Manager.

"But things are definitely better now," he explains, noting that DFO's regional staff and the Central Coast Nations are working really well together. "DFO is showing a willingness to leave their comfort zone to make this collaboration work," says Mike. This, in itself, is a major accomplishment and our Nations commend DFO for the efforts they are making.

Other notable accomplishments thus far include four new commercial crab fishing closures within our territories, and an agreement on how science conducted by DFO and our Nations will be integrated together to improve sustainability and increase our access to crab for FSC purposes.

Importantly a co-led process for engaging commercial and recreational crab fishermen has also been developed and we are working with DFO to engage with these sectors. "Nobody wants to see the crab stocks depleted," says Mike. "For the commercial fishermen, their livelihood depends on it," adding that recreational fishers have also been supportive of measures to make the fishery more sustainable.



Keith Windsor conducting crab research in Nuxalk Territory.

DFO and our Nations sometimes have different ideas about what makes a fishery sustainable. For example, DFO science may suggest a particular population is stable and not declining. But to our Nations this may not mean it is healthy in relation to our historical knowledge of that population and its ability to support the ecosystem and our FSC needs. Taking this more holistic view has helped form management goals that reflect sustainable crab populations on the Central Coast.

Consensus is the key

From the project’s inception, a collaborative approach between our Nations and DFO has been the foundation of the work, extending from how science is done and how it informs management, to influencing the recommendations made to leadership that will inform their decisions.

Here is how it works:

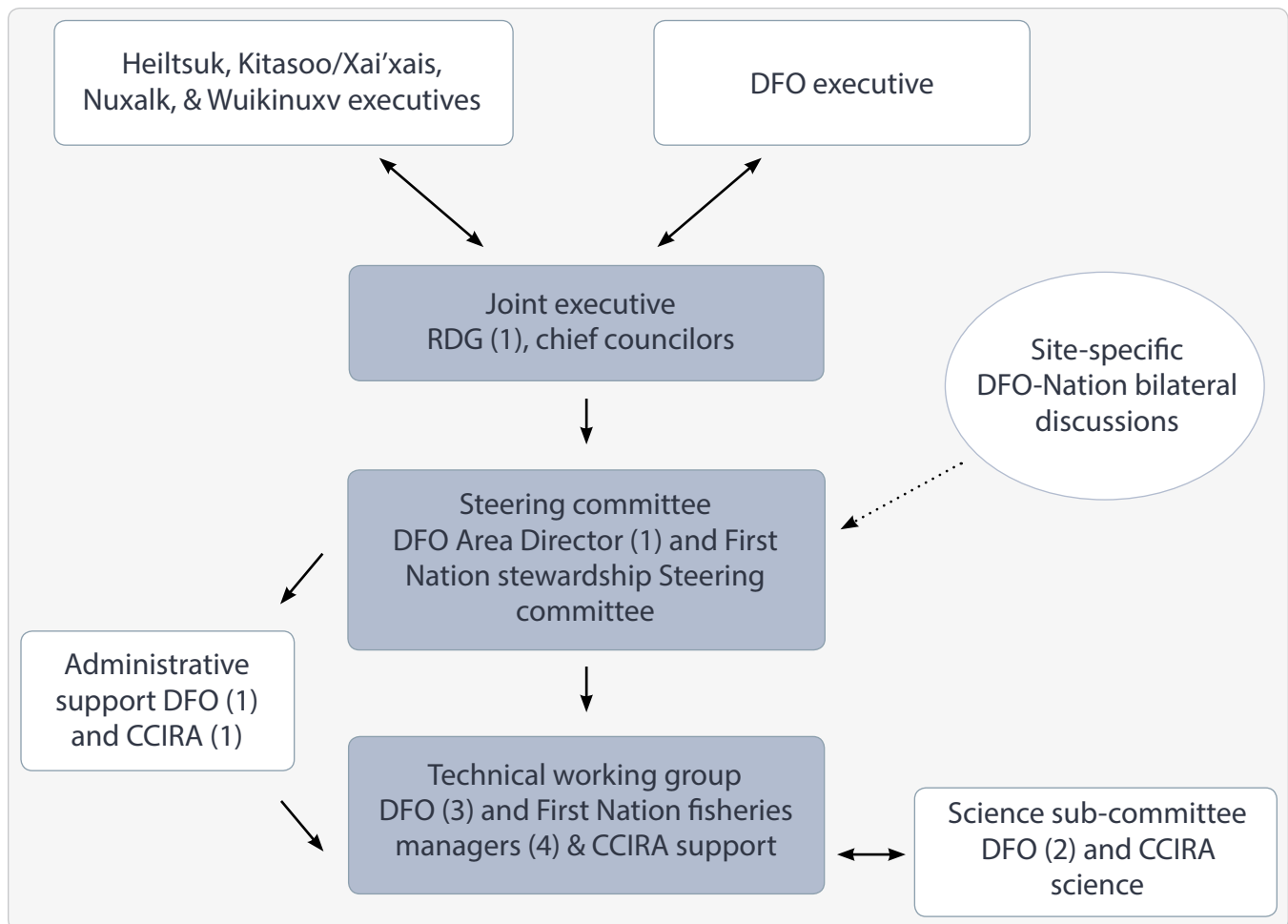
Think of the decision-making process of this pilot project as a ladder. The bottom rung is a technical working group made up of fisheries managers from DFO and our Nations. On the second rung is a steering committee composed of

DFO and First Nations senior management. On the third rung is a joint executive. What makes this ladder unique is that recommendations cannot be passed up to the next rung until there is consensus between our Nations and DFO.

Ultimately, recommendations are given to the DFO Minister and our Nations’ leadership independently and those leaders make the final decisions. If there is disagreement on the outcome, then there is a process for leadership to work towards resolving disagreements (Figure 1).

Continued on page 4.

Figure 1. Governance schematic for collaborative crab management on the Central Coast.





Continued from page 3.

Reaching consensus at each stage—or rung—has not been easy; it has forced everybody to think about problems in new ways. This makes people uncomfortable, but also leads to new ways of knowing, stretching people to think of new solutions that all parties are comfortable with—something that often seemed impossible to achieve in the past.

Over the last two years the following themes have emerged that serve as examples for how the work is progressing as a whole.

Collaboration increases comfort

Our Nations have not always been comfortable sharing our knowledge with DFO because they were not sure how that information was going to be used. However, because fisheries managers from our Nations and DFO are working together to make management recommendations, our people are more confident sharing important knowledge because they retain control over how it is being used.

Reaching consensus has not been easy; it has forced everybody to think about problems in new ways. This makes people uncomfortable, but also leads to new ways of knowing, stretching people to think of new solutions that all parties are comfortable with—something that often seemed impossible to achieve in the past.



Ernie Mason and Sandie Hankewich measuring Dungeness crab in Kitsoo/Xai'xais territory.

Assessing sustainability together

DFO and our Nations sometimes have different ideas about what makes a fishery sustainable. For example, DFO science may suggest a particular population is stable and not declining. But to our Nations this may not mean it is healthy in relation to our historical knowledge of that population and its ability to support the ecosystem and our FSC needs. Taking this more holistic view has helped form management goals that reflect sustainable crab populations on the Central Coast.

Shared Science is good science

Together, the project partners conducted an extensive assessment of current crab science. This included the science our Nations have conducted within our territories that incorporates our Indigenous and local knowledge. This illustrates DFO's willingness to accept Indigenous knowledge

and Western science as complementary ways of knowing, while generating a collaborative understanding of the crab fishery that is enriched by that collective knowledge.

What's next?

As a pilot project for fisheries reconciliation and collaborative governance, lessons from this work will be adapted to other fisheries. In fact, they have already been used to review effectiveness of rockfish conservation areas, and in the Heiltsuk Nation's negotiations with DFO on herring management.

In the meantime, there is a lot left to do. We are talking about creating a new paradigm, reimagining the future of fisheries management in a way that gives our Nations a meaningful role in decisions that affect us. It is not going to happen overnight. And yet, here we are, inching closer towards that goal.



Gord Moody, Josh Vickers, and Patrick Johnson conducting crab surveys in Wuikinuxv territory.



CCIRA study identifies key habitats for rockfish conservation

What's at stake when it comes to conservation of fish populations on the Central Coast? Frank Johnson of the Wuikinuxv Nation puts it this way: "We stand to lose a lot. If we lose all the fish, there will be no Wuikinuxv." In other words, as seafaring and fishing people, the culture, livelihood and physical sustenance of Central Coast Nations are tied directly to fish populations and the health of marine ecosystems. Rockfish are an important part of this equation.

Over his 40 years fishing Central Coast waters, Frank has witnessed profound changes in the size and abundance of rockfish. In the past, he says, the average yelloweye rockfish (or red snapper) was 15 to 20 pounds. "Now it is really seldom that you catch one that big," he explains. "My guess is that there's been about an 80% decline in catch of all bottom fish. I've seen the decline right from the start."

In response to these kinds of concerns from local fishers, CCIRA launched a rockfish research project in 2013. Along with our collaborators, CCIRA has used traditional knowledge and science to publish four research papers and a comic strip that collectively tell a story about rockfish on the Central Coast.

The most recent paper was published in *Conservation Letters* in collaboration with scientists from Fisheries and Oceans Canada's Institute of Ocean Sciences and the Hakai Institute. Led by CCIRA's science coordinator, Alejandro Frid, the study sheds new light on how the design of marine protected areas (MPAs), can be optimized to help support the long-term recovery of at least 22 species of rockfish that live in nearshore waters of the Central Coast.

The study was conducted over hundreds of square kilometers and encompassed the territories of all of our Nations. Data from 254 sites was collected using SCUBA surveys



Conducting dive surveys for rockfish on the Central Coast.

and an underwater camera towed by a boat and lowered to depths of up to 200 metres (110 fathoms). In the following question and answer section, Alejandro tells us more about the study and the significance of the results.

Q & A with CCIRA Science Coordinator, Alejandro Frid

What is the best way to help depleted rockfish populations recover?

"We have to simultaneously shelter them from overfishing while also protecting high-quality habitats that sustain the greatest diversity of rockfish species. In a practical sense, that requires us to identify what those habitats are and where they are located. After that, we can prioritize those areas for protection by the network of Marine Protected Areas currently being planned for the Northern Shelf Bioregion, which includes the Central Coast. Outside of protected areas we need to manage commercial and recreational fisheries more conservatively so that the largest and oldest rockfishes—which produce the most young—are not depleted."

"We stand to lose a lot. If we lose all the fish, there will be no Wuikinuxv."

Frank Johnson, Wuikinuxv Nation

What were the original objectives of your study?

“Previous research by CCIRA and others has already shown that marine protected areas are an effective way to protect rockfish populations from over-exploitation. In this study, we set out to answer the question of what specific habitat types sustain the greatest number of rockfish species.”

What did you discover?

“We found that the most structurally complex rocky reefs—those containing more crevices in bedrock and large boulders mixed with smaller rock particles—supported the most rockfish species. We also discovered specific areas that sustain a particularly high diversity of rockfish. Lastly, at some sites we encountered substantial concentrations of deep water corals and glass sponges, which have inherent biological value in marine ecosystems, and also provide habitat for rockfish and other marine life.”

Why is this study and its results significant?

“All four Central Coast First Nations have co-led and conducted this research. They are also governance partners in the Canada-British Columbia Marine Protected Areas Network Strategy process, which aims to create a network of MPA’s in British

Columbia by 2020. That means that First Nations are not only leading essential technical work, but—after being left out of resource management decisions since colonization—they are starting to regain control over the long-term management of marine resources in their territories.

The information about habitat from our study comes at a time when it can specifically help strengthen the design of the MPA network with respect to rockfish. This is important because rockfishes are a diverse group of species that play important ecological roles in the marine environment and are also culturally and economically important to First Nations.”

Where is this work heading in the future?

“For us, the long-term recovery of rockfish populations on the Central Coast is intertwined with the rights and cultures of local First Nations. We’d like to see the Nations continue to assert their position as the stewards of this coast, using science and traditional knowledge to guide their management decisions. Ultimately, we’d like to see the Nations and the marine environment thriving here; we’d like to do our best to ensure that future generations will be able to catch a lot of big healthy rockfish, like the ones in Frank’s stories.”



A researcher using SCUBA gear swims through a large school of subadult widow rockfish on the Central Coast of British Columbia. Photo by Alejandro Frid.



New scientific publications

Under the direction of our Science Coordinator, Alejandro Frid, CCIRA has established a record of publishing in top scientific journals. This growing body of work illustrates CCIRA's commitment to doing rigorous research on marine resources that matter to our Nations, while also illustrating how Indigenous knowledge and Western science can complement one another.

Here we provide a summary of our latest two scientific publications.

Incorporating Indigenous perspectives in research

In collaboration with Natalie Ban of the University of Victoria, this paper was published in the prestigious journal *Nature Ecology and Evolution* by Alejandro and co-authors Mike Reid (Heiltsuk), Barry Edgar (Kitasoo/Xai'xais), Danielle Shaw (Wuikinuxv), and Peter Siwallace (Nuxalk).

This paper highlights the individual strengths of Indigenous knowledge and Western science, illustrating how these complementary world views can be used in combination to enhance research. When it comes to resource management this is critical. The authors point out that when Indigenous perspectives are not considered in research, policymakers may lack the information needed to make socially just and ecologically sound decisions.

Our Nations have seen this time and time again with resources like herring, crab, salmon, eulachon and more when Federal and Provincial governments make decisions that do not incorporate our values and our intimate knowledge of Central Coast ecosystems.

“Importantly, Indigenous knowledge and ecological science recognize the interconnection of all living and physical entities,” write the authors. “Our view is that Indigenous peoples and scientists can...fruitfully combine their different ways



A quillback rockfish, a plumose anemone and an orange coral (*Paragorgia pacifica*) captured by towed video camera. Green parallel lasers 10 cm apart are used to estimate the size of fish and habitat features such as boulders, but may also “lure” fish towards the camera.

of understanding the past and predicting the future, thereby improving conservation and resource management policies.”

The authors also provide specific recommendations and best practices for other ecologists wishing to foster collaborative relationships with Indigenous peoples. These include developing research protocol agreements with local people, among other suggestions. Together, this work makes a strong

“Our view is that Indigenous peoples and scientists can...fruitfully combine their different ways of understanding the past and predicting the future, thereby improving conservation and resource management policies.”

Natalie Ban and Alejandro Frid.

case for the inclusion of Indigenous knowledge in scientific research while creating a path for other scientists to follow.

Groundfish chasing the light

Counting fish isn't easy – especially when counting live fish that are swimming around in the depths of the ocean. But since 2015, CCIRA has been doing just that by towing a video camera equipped with lasers behind a boat. Using this technique CCIRA scientists are learning how fisheries and environmental change impacts groundfish stocks over time. But there is a hitch.

The laser beams project as dots on the seafloor or on fish. The known distance between the dots helps observers estimate the size of the fish and habitat features like boulders and corals. But, like a fishing lure, some fish species may confuse the laser dots for food and actively chase them which could bias the counts towards those species.

To overcome this potential source of error, Alejandro, CCIRA's Fisheries Coordinator, Madeleine McGreer, and co-author Twyla Frid analyzed the video footage from those surveys. They determined that fish with relatively short lifespans—such as lingcod and kelp greenling, which are risk-takers that prioritize finding food and reproducing in the short-term—were most likely to follow the laser dots. Longer lived species like yelloweye, which can live a century or more, take less risks for a short-term meal and were less likely to follow the dots. Instead, these fish prioritize staying alive to reproduce every year of their long lives.

Armed with this new knowledge, Alejandro and Madeleine developed a method to correct for this bias in fish counts. The results were published in the international science journal *Biological Conservation*. Applying this correction factor will strengthen future research efforts and lead to better conservation outcomes.



Heiltsuk Guardian Watchmen, Jordan Wilson (right), and CCIRA's Marine Implementation Coordinator, Anna Gerrard, conducting field research.





Oceans RFA formalizes collaborative marine management process

In June 2018, on National Indigenous People's Day, representatives from 14 First Nations gathered near Prince Rupert, along with officials from Canada's Federal Government, to announce a landmark agreement for working together to protect and manage the North Pacific Coast.

The Reconciliation Framework Agreement for Bioregional Oceans Management and Protection, often referred to simply as the Oceans RFA, charts a way forward in collaborative marine management. The planning region covers a vast coastal area, extending from roughly Campbell River to the Alaska border, which is split into four sub-regions for effective planning – Northern Vancouver Island, Central Coast, North Coast and Haida Gwaii.

Based on a nation-to-nation governance structure, the framework is designed to enhance two critical aspects of marine planning in the region. First, it provides a model for collaborative stewardship of marine ecosystems, aiming to preserve important natural and cultural resources through the creation of marine protected areas. It also strives to ensure safety in all coastal communities by enhancing emergency response capabilities and improving local and regional management of shipping traffic.

The framework formalizes a more rigorous and collaborative process for federal officials to work with coastal Nations, ensuring their interests will be considered in management decisions. In other words, it reduces the number of unilateral decisions from external agencies affecting the long-term future of coastal communities.



Herring spawn in Kitasoo/Xai'xais territory.

“It is clear that to be successful, oceans management and protection must be Indigenous-led and must support coastal First Nations’ vision for a marine safety regime that will ensure the protection of our coastal communities, economies and ecosystems.” Heiltsuk Chief Councillor Marilyn Slett



“This agreement is an encouraging and positive step forward in our journey toward nation-to-nation collaboration and reconciliation,” said Heiltsuk Chief Councillor Marilyn Slett, who spoke to assembled representatives during the Oceans RFA announcement. “It is clear that to be successful, oceans management and protection must be Indigenous-led and must support coastal First Nations’ vision for a marine safety regime that will ensure the protection of our coastal communities, economies and ecosystems.”

On paper, such frameworks may seem somewhat pie-in-the-sky. But since the historic collaborative agreement was announced, several tangible projects are already underway that could have positive impact on coastal lands and waters, specifically along the Central Coast. These include two pilot projects seeking to establish effective coastal management at a regional scale – one project focused on emergency response planning and the other on proactive vessel management to ensure safe shipping through coastal territories.

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“The goal of the Regional Response Planning initiative is for all four sub-regions to work together to develop integrated plans for the entire region,” says Diana Chan, who represents the Heiltsuk Nation on the Central Coast sub-regional technical working group and on the overarching regional technical working group. She says each pilot project follows the governance structure set out by the Oceans RFA, and both involve several levels of planning – from a high-level executive committee to technical working groups for conducting on-the-ground work.

The regional response plan will clarify roles and responsibilities for agencies that need to respond in a coordinated way to inevitable marine spills and accidents, including the kind of equipment and resources marine managers would need and where they will be stationed. Chan says project participants hope to finalize their integrated plan by the end of 2019.

Central Coast Nations are also engaged in another pilot program focused on proactive vessel management, which will offer recommendations on how to better manage shipping traffic in coastal waters. The project will involve information sharing and discussion with other federal and

provincial agencies, non-signatory First Nations, the shipping industry and other marine stakeholders in achieving solutions to marine vessel traffic issues.

As with regional response efforts, the vessel management plan will occur within the governance framework established by the Oceans RFA, including high-level coordination of sub-regional steering committees and technical working groups. “Those working groups have already been established, and the sub-regional pilot projects are being carried out,” says Chan. “Now, it’s a matter of collective discussions, stakeholder engagement, and evaluations that will ultimately lead to final recommendations.” Planners hope to present their findings, including lessons learned, best practices and recommendations for the national framework, to all interested parties by late 2019.

Although much of this planning is happening behind the scenes and at a high level, it will have an impact on everything from making articulated barge traffic safer on the Central Coast to making our Nations more prepared to respond to marine emergencies and spills. And the Oceans RFA recognizes that First Nations will continue to play a lead role.



MPA network update

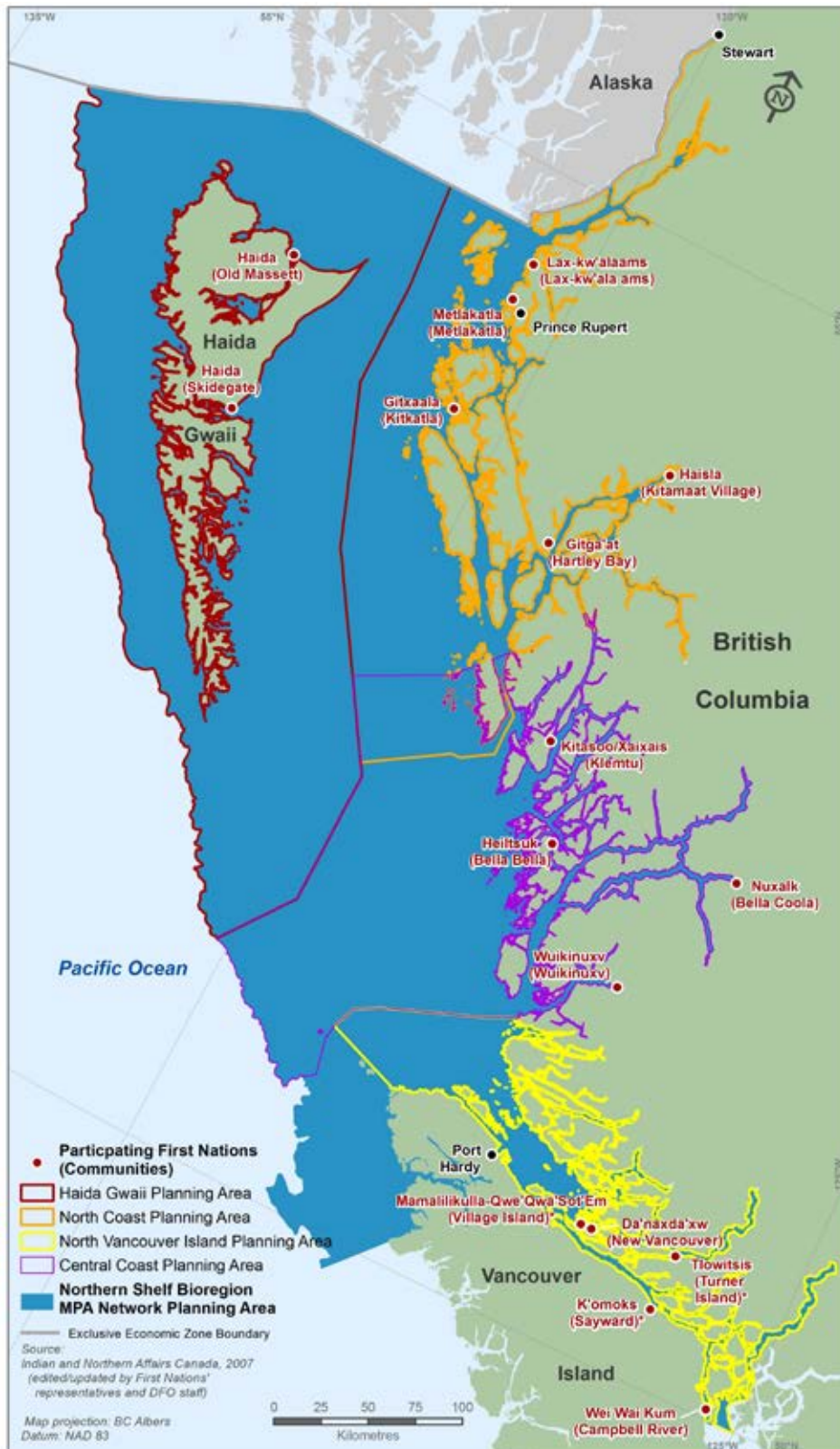
Work continues on the Canada-British Columbia Marine Protected Area Network Strategy—a government-to-government effort to create a marine protected area network within 13 bioregions in Canada, including the Central Coast of BC.

This work—co-led by provincial and federal agencies along with 17 First Nations (including Central Coast Nations)—is critical to protect marine resources that are in decline after

decades of industrial fishing pressure. These are the very resources that we rely on for our sustenance and cultural and economic wellbeing.

The intention of the partners is to have plans for the proposed MPA network completed for approval by March 2020. In the meantime, our Nations will continue working to ensure that the MPA network respects our Indigenous laws and values while helping create a healthy future for the coast that benefits all stakeholders.





The Oceans RFA will have an impact on everything from making articulated barge traffic safer on the Central Coast to making our Nations more prepared to respond to marine emergencies and spills. First Nations will continue to play a lead role in this process.

Planning under the Oceans RFA encompasses the entire Northern Shelf Bioregion including the Central Coast.



CCIRA hires new staff

Jean-Phillip Sargeant, *Marine Response Coordinator*

“Jean has a passion for resource management and the marine environment. After graduating from the University of Victoria with a degree in geography he spent time abroad to acquire a graduate degree in coastal and marine resource management. Jean has had the opportunity to work on the development of marine protected areas, cumulative effects and marine spatial planning over the past 5 years. Most recently Jean spent time as a Marine Planner for the North Coast-Skeena First Nations Stewardship Society. Jean is really excited to continue working on marine management as the interim Marine Response Coordinator for CCIRA.”

Michael Vegh, *Mapp Technical Support & Indigenous Laws Coordinator*

Michael Vegh is from the Heiltsuk First Nation. After completing his Bachelor of Environment degree in 2018, he joined CCIRA to further his passion for Indigenous stewardship. Throughout his young professional career, Michael has held executive roles within numerous Indigenous organizations, completed multiple field biologist positions within his traditional territory, and has developed policy at both the National and regional scale to advance Indigenous-led resource management.



Jean-Phillip Sargeant, Interim Marine Response Coordinator.



Michael Vegh, Mapp Technical Support.

Great Bear Rainforest IMAX features our Nations

In February of this year a really big film hit theatres around the world. Three years in the making, the Great Bear Rainforest IMAX showcases the wild beauty and rich wildlife of the coast. Importantly, it also features Central Coast First Nations people and our strong ties to this place as its original stewards.

The film highlights the Heiltsuk's traditional herring harvest, cutting-edge bear research by the Kitasoo/Xai'xais, and the next generation of youth who are being taught to apply traditional knowledge and science as caretakers of their traditional territories.

"I've worked with a lot of film crews and journalists," says Kitasoo/Xai'xais SEAS Coordinator, Vernon Brown. "But one of the really exciting parts about this project was taking

some of our students along, like Mercedes Robinson-Neasloss who appears in the film."

"The other exciting thing," says Vern, "is the message about our Nations' work — whether it's research, salmon conservation, ending the grizzly bear hunt, or other efforts to protect this coast. The film highlights the First Nations of this region, showing we have lived here forever, and we are doing a lot of good work as stewards of this place. I think it is important to share that positive message with people around the world."



IMAX Director, Ian McAllister interviewing Mercedes Robinson-Neasloss for the film. Photo by MacGillivray Freeman.

CCIRA



About This Newsletter

Our Nations created CCIRA to build upon our success in working together to develop and implement our Nation-level marine use plans. Today, CCIRA is involved in a wide array of projects and initiatives across the central coast. The Common Voice is one source of information about CCIRA's activities in our communities. Each issue will highlight specific projects that are underway in our communities with updates on projects and policies that CCIRA is working on. The Common Voice is distributed to all central coast First Nations and is one way we are working to ensure that our communities stay connected with each other. For more information about CCIRA and what we do, please visit our website www.ccira.ca or contact us at info@ccira.ca

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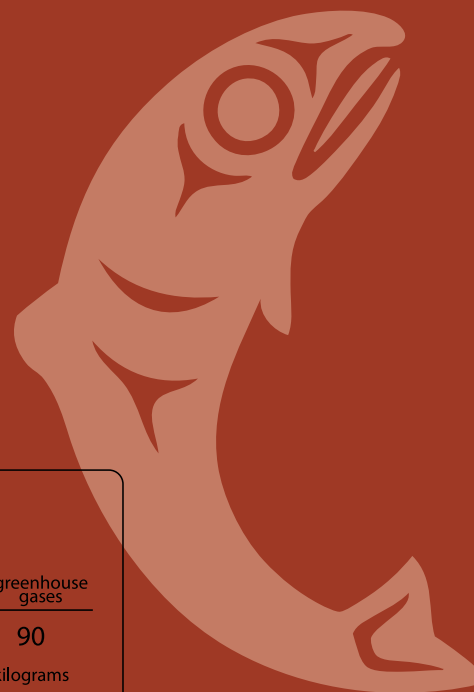
Rick Shaw, Wuikinuxv Nation

Hey! Did you know CCIRA is online

All of our newsletters and articles are on our website at this address: www.ccira.ca

How to Get Involved

- » Visit your Community Coordinator or Resource Stewardship Office and ask about your Nation's marine use plan.
- » Attend local marine use planning open houses and community meetings.
- » Take advantage of training and employment opportunities.



Environmental Benefits Statement

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