The Common Voice

CCIRA Newsletter
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CCIRA

Central Coast Indigenous Resource Alliance

Inside this issue

Guardians engage in oil spill response work

On September 17, 2019, the Kitasoo/Xai'xais Guardian Watchmen were on the water conducting oil-spill response fieldwork, when they heard a call for help over the VHF. A pleasure boat had run-aground. As the closest vessel to the site, they sped through the fjords, arriving at the scene to find a wooden boat taking on water and listing at 45 degrees. The skipper and his dog were floating in a skiff nearby.

The tide was rising, threatening to completely submerge the boat. "The Guardians sprang to action," says Laurel Sleigh, the Marine Use Coordinator for the Kitasoo/Xai'xais who was with the Guardians that day. "They got the man and dog into the safety of the Guardian boat, lashed the sinking boat to shore, retrieved a jerry can of gas from the sinking boat and started making radio calls for backup and to locate a pump." Then they took off for Klemtu so the man and his dog could be warmed up. Before long, the Guardians had returned to the site, pumped out the boat and towed it back to town safely. The boat and its passengers were saved, and no fuel or oil was spilled into the ocean.

"This is why the Guardians are the best people to conduct spill response preperatory work," says Laurel, "because they are often first on the scene in events like this."

Guardians create Geographic Response Strategies for marine accidents

Unbelievably, all this happened while the Guardians were doing oil spill mitigation and response work. In fact, all Central Coast Nations are engaging in similar work in their territories, creating site-specific Geographic Response Strategies (GRS) to protect particular natural and cultural resources from any future marine accidents.

A GRS is a document that outlines the initial response for site specific spills in order to best contain oil and keep pollutants out of sensitive areas. "Each GRS for a specific site includes one to two pages of details on the resources at risk and critical information on everything from water depth and booming configurations for different scenarios based on the wind, sea-state and tides," explains Laurel. "All this means that before a response team hits the water, they will already have a general sense of how much anchor chain, boom and other equipment they might need at the spill site, and what resources they will aim to protect during the initial hours after an incident." When a distress call comes in, the Guardians and other responders can review a GRS, grab all the specific gear needed for that site and head out well prepared to prevent disaster.

Kitasoo/Xai'xais identify 100 sites at risk from marine accidents

During two Areas of Concern workshops, the Kitasoo/Xai'xais identified over 100 sites in their territory where cultural or natural resources were at risk from marine accidents. With the help of spill response expert, Elise DeCola of Nuka Research, the Kitasoo/Xai'xais the Guardians were able to assess almost 30 of the Areas of Concern within a weeklong field season in 2019. Before hitting the water, Elise ran them through a day of training in town before accompanying them for three days of GRS assessments in the field.

"On the water Elise would help us consider different boom angles and arrangements at each site," says Laurel. "It was a great capacity building exercise. By mid-week, the Guard-

The Guardians are the best people to conduct spill response preperatory work, because they are often first on the scene in events like this."

— Laurel Sleigh, the Marine Use Coordinator for the Kitasoo/Xai'xais

ians were considering all booming tactics and capturing the relevant field information necessary to create the GRS plans without support. The hope is that this process can eventually be entirely Nation driven."

Guardians' local knowledge is critical

Given the extraordinary knowledge the Guardians have of their own territory, it is not surprising how quickly they took to this work, says Laurel. "Their local knowledge was critical. They already knew the type and volume of local boat traffic and the impact of the wind, tides and seasonality in particular areas. They were able to quickly piece together how all these factors would affect a spill response."

The Kitasoo/Xai'xais will continue this field work next season for the remaining Areas of Concern in their territory. Likewise, the Heiltsuk conducted GRS fieldwork in 2019 and are scheduled to continue in 2020, while the Nuxalk and Wuikinuxv Nations will begin in 2020.

(From left to right) Keith Neasloss, Elwin Muldoe Jr., Victor Reece, Laurel Sleigh on the water doing oil spill response fieldwork in Kitasoo/Xai'xais territory.

Nuxalk Atnarko sockeye study an example of collaborative research done right

Throughout the 1970's and 80's, 30,000 sockeye bound to spawn in the Atnarko river in Nuxalk territory were caught each year by Indigenous, recreational and commercial fishermen. 30,000 more made it past the fishermen to spawn. All these fish helped to sustain Nuxalk culture, local economies, and ecosystems alike. Then in the 1990's Atnarko sockeye collapsed and have not recovered.

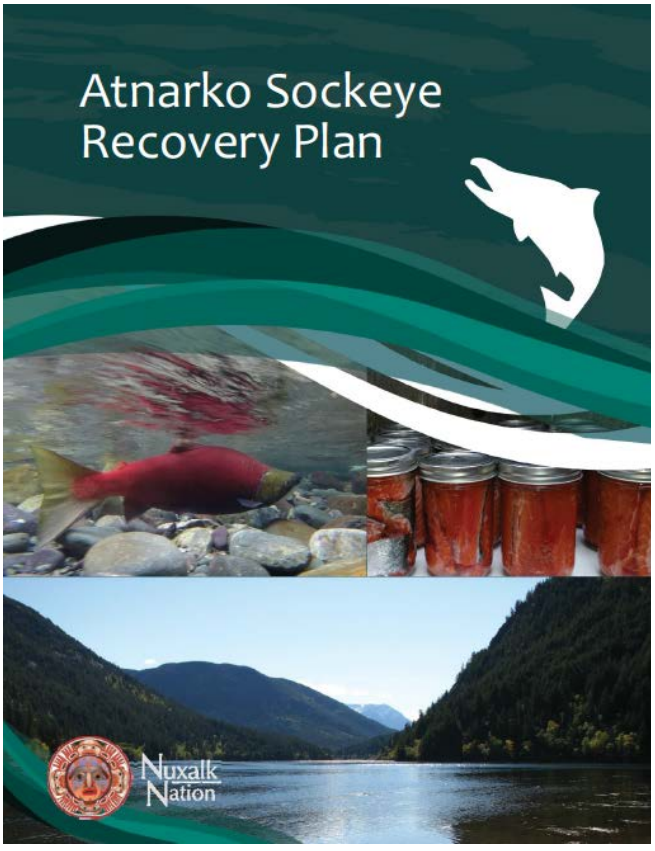
In response to the impacts on local people and ecosystems, a recovery plan was written in 2016 by the Nuxalk Nation in collaboration with Fisheries and Oceans Canada (DFO). The recovery plan compiled all the available information on Atnarko sockeye, the potential factors limiting recovery and identified actions to revitalize the population. Incidental catches of Atnarko sockeye (fish caught during mixed-stock fisheries that contain fish from numerous populations), were identified as one factor that warranted further investigation. In response, the Nuxalk Nation initiated a study to address the impact of incidental catches and, in the fall of 2019, a new collaborative research paper was published in Marine and Coastal Fisheries.

Among other findings, the authors found the population has potential to recover if a sufficient number of fish make it to the spawning grounds. For example, no Atnarko sockeye were harvested, there would be about a 69% chance of reaching the recovery goal of 15,000 spawners in the Atnarko river within four generations. However, at current rates of harvest there is only a 50-60% chance of meeting the recovery goal, with chances of success dwindling below 50% if harvests rates increase. While there are many other factors contributing to the recovery potential of Atnarko sockeye, these results indicate the importance of mitigating incidental harvest rates effectively.

"Our study [of Atnarko sockeye] highlights collaborative research initiated and directed by the Nuxalk Nation to promote the recovery of a depressed stock that is inherent to traditional foods, thereby contributing to a global effort to integrate Indigenous cultural values with biological conservation."

The authors of the paper include Brendan Connors from DFO, William Atlas from Simon Fraser University, Megan and Jason Moody from the Nuxalk Nation and CCIRA's Science Coordinator Alejandro Frid.

The paper is noteworthy for the for its scientific contributions on the impact of incidental catches on recovery of a depleted salmon populations. But as, as the authors write, it also stands as an example of collaborative scientific research instigated and directed by a First Nation to help recovery a depleted salmon population that is an important to local Indigenous culture. The paper, they write, is "contributing to a global effort to integrate Indigenous cultural values with biological conservation."



Living ancestors' dreams in Bella Bella with new Big House

In October of 2019 the Heiltsuk Nation officially opened the first new Big House in their territory in 120 years. As we move into the next decade, CCIRA is excited for the new beginnings the Big House signifies.

Speaking to reporters at the time of the opening, Heiltsuk's William Housty said, "there's a sense of pride knowing the dreams of so many ancestors are now being lived by our generation, people like my late grandfather who always talked about the Big House and how important it was aren't here anymore. Now we're living their dreams."

New fishing closures proposed for crab

Over the past five years, CCIRA has completed the most extensive Dungeness crab studies ever conducted on the Central Coast. Using a combination of science and indigenous knowledge, this research was spurred on by declines in our FSC catches over the past 20 years. The overarching goal has been to gather information to improve management and restore crab populations and FSC harvests. Now, with the research findings in hand and a productive working partnership with Fisheries and Oceans Canada (DFO), we are poised to see new management actions for Central Coast crab adopted by DFO this winter.

The two key findings from our published research papers are: (1) our catches have declined such that we cannot meet our FSC needs, and (2) fishing closures can help crab populations recover. With these results in mind—and with the aim of restoring FSC catches—we have identified numerous locations in our territories where crab fishing closures could be implemented.

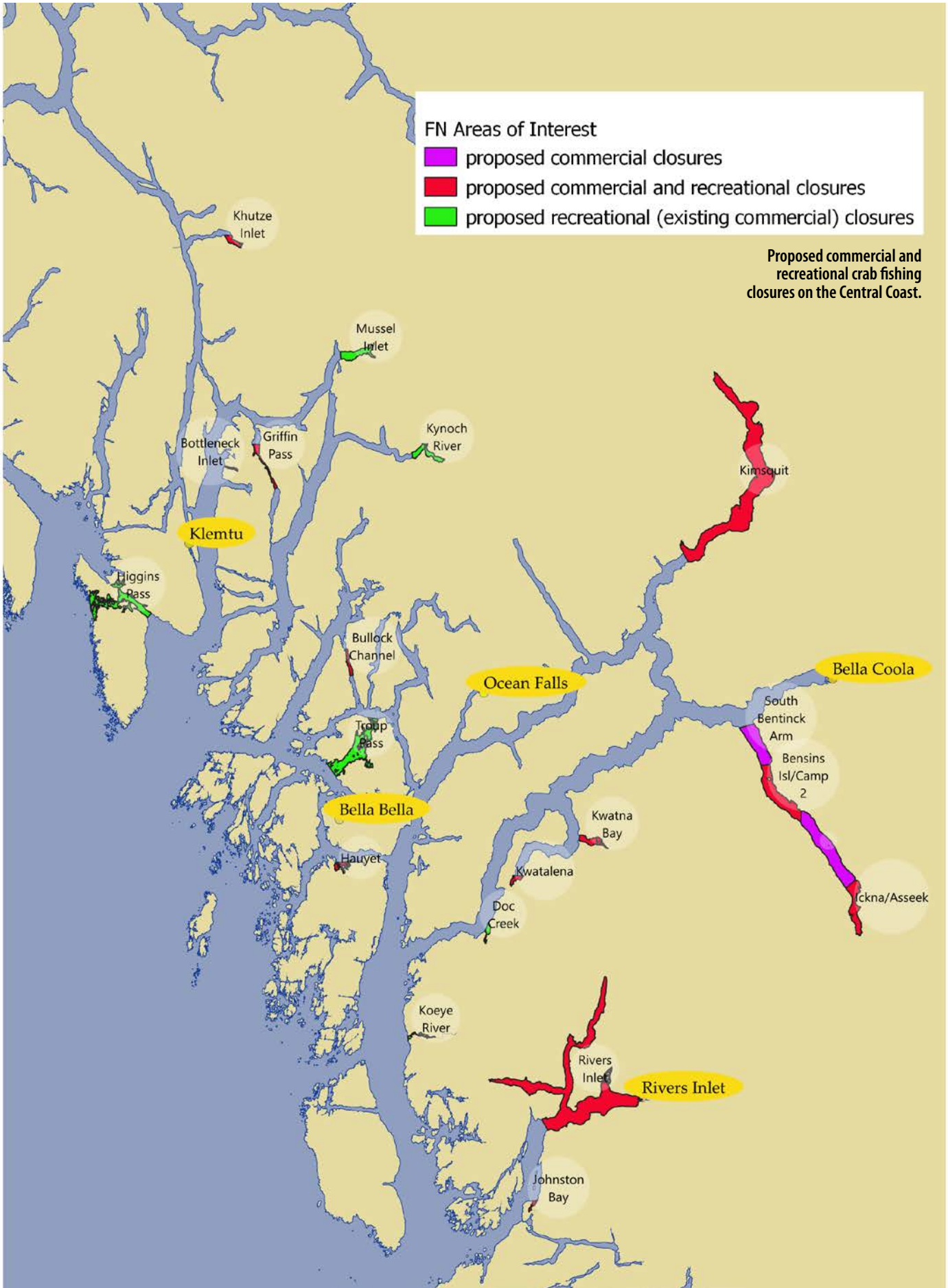
"Our research is consistent with other studies showing that marine sanctuaries free from fishing can help populations recover."

Notably, our research results are consistent with a large body of research showing that marine sanctuaries free from fishing can help depleted populations recover. Through a consensus-driven collaboration with DFO over the past two years, 17 different locations have been identified as potential recreational and/or commercial fishing closures on the Central Coast.

However, before any new fishing closures can be adopted, a comprehensive stakeholder engagement process has been undertaken over the last six months and is almost complete. Through webinars and a workshop, our Nations and DFO will work with recreational and commercial fishers to review the proposed closures and finalize or revise recommendations for these areas. The hope is that new closures will become part of the Integrated Fisheries Management plan for summer 2020.

"…the science and our fishers' are telling the same story: recreational and commercial fishing pressures are reducing the size and abundance of crab to the point that our Nations cannot meet our FSC needs."

Kitasoo/Xai'xais' Guardian Watchmen, Ernie Mason, labeling crab traps in his territory.



Proposed commercial and recreational crab fishing closures on the Central Coast.

MPA Network and Fisheries Reconciliation Agreement create hope for new opportunities

25 years from now things could look very different on the Central Coast. Ocean ecosystems could be healthier and fish populations more robust with a thriving food fishery for local people. These outcomes are some of the possible benefits from the implementation of the Government-to-Government-Government Northern Shelf Bioregion Marine Protected Area (MPA) Network process – a monumental piece of marine conservation planning that is getting closer to completion. Meanwhile with the signing of the Fisheries Resources Reconciliation Agreement (FRRA) in July of this year, our Nations can also expect to be a bigger part of local commercial fisheries in the future that are managed collaboratively by DFO and our Nations.

With the decline in FSC harvests across numerous species over their lifetimes, our elder fishers have witnessed a major loss in our Nations' cultural sustenance. This loss is indicative of ocean ecosystems suffering from the combined impacts of industrial fishing pressure and a changing climate, among many other factors. Engaging in the MPA process is a big part of our Nations' approach to revitalizing the marine ecosystems we rely on and making them more resilient.

After 7 years of work, the first draft of the proposed MPA network for the northern shelf bioregion has been released to stakeholders for review. Between now and 2021 when implementation of the MPA network will begin, there is still a lot to do. As this planning process continues to roll out, our Nations will be simultaneously contemplating the implications of the FRRA, which Coastal First Nations signed along with DFO and the Department of Crown-Indigenous Relations and Northern Affairs.

Working towards collaborative fisheries management with DFO

In a news release after the signing the FRRA, the DFO website stated: "this agreement will facilitate an enhanced role in collaborative governance, and in fisheries management and decision-making processes for the Coastal First Nations." In other words—after being left out of fisheries management decisions in our territories for decades—the government of Canada has committed to working towards more collaborative management of fisheries with our Coastal Nations. A current living example of this is the collaborative crab management pilot project between our Nations and DFO that is already underway. This project is paving a path for other collaborative fisheries management projects to follow.

While ocean health has declined in our territories over time, our communities' access to local commercial fisheries—and the economic benefits they provide—has also deteriorated. As part of the FRRA, Coastal First Nations have negotiated to acquire greater economic access to commercial fisheries over the next 20 years. This means, two decades from now, Coastal First Nations will own approximately 30% of commercial fishing licences in our territories. Our Nations will be working to build our capacity to work those licenses ourselves, providing local employment for our people within small-scale community-based fisheries built around sustainable harvests within a conservation-focused management system.

A healthy ocean means healthy local fishing economy

In the same news release Chief Marilyn Slett, President of the Coastal First Nations, said "This [FRRA] agreement will get families and fishers back on the water and re-establish a small boat fleet in our communities. By working together—on a nation-to-nation basis—we will provide opportunities for our communities to fully participate in the fishing economy; create new jobs and investments; and increase economic opportunities and build capacity."

Implementation of a world class Marine Protected Areas network in our territories, combined with the FRRA is a one-two punch for our Nations: by revitalizing marine ecosystems, the MPA network has the potential to restore the productivity and resiliency of ocean ecosystems, supporting bountiful FSC harvests, and sustainable local commercial fisheries managed collaboratively through a ground-breaking reconciliation agreement.

Timeline to implementation

March - May

Review of stakeholder feedback and conduct Partner workshops to develop second draft of network.

June -July

Refine network scenario based on workshops and analysis.

August - October

Internal technical review and refined network scenario and network action plan.

November - December

Executive review of network scenario and draft network action plan.

January - April 2021

Stakeholder and public engagement on final scenario.

May 2021

Refine final network scenario and recommend to leadership for approval.

June 2021

Leadership review and approval of final network scenario and network action plan

The Northern Shelf Bioregion Marine Protected Area (MPA) Network process is a government-to-government-to-government effort to create a marine protected area network within 13 bioregions in Canada, including the Central Coast of BC

Five things you should know about rockfish and marine protection

Since 2013, CCIRA has been using science and traditional knowledge to build the most extensive database for rockfish ever compiled for the Central Coast. This growing body of work is providing insights that can help improve the design of the Marine Protected Areas network in our territories and beyond.

1. Bigger is better

Big old rockfish are reproductive powerhouses, birthing more larvae (live young) than younger, smaller females. The difference can be dramatic, ranging in some species from a mere 100 thousand young when mothers first become reproductive to upwards of two-and-half million young when mothers become older and reach larger sizes. In other words, big old fish play outsized roles for maintaining sustainable rockfish fisheries.

Unfortunately, these same fish are targeted by fishers. When populations are overfished, they lose their big old fish, threatening the sustainability of local fisheries and the ability of a population to recover from over-exploitation.

2. Central Coast Rockfish are struggling

Rockfishes in British Columbia were severely depleted from the late 1970s to the late 1990s as commercial and recreational fisheries expanded. As an example, CCIRA research shows that the average size of yelloweye rockfish caught by Indigenous fishers on the Central Coast has declined by 45% since the 1980s. And, despite more conservative fishery management since the 2000's, the average body sizes of yelloweye and quillback rockfish have continued to decline rapidly in the Central Coast. On average, yelloweye rockfish also have become younger every year, as the older fish become scarcer in the population.

3. Rockfish Conservation Areas can help recovery

There are 36 species of rockfish in BC waters with myriad differences between them. For example, our research shows

that some species prefer deep water with big rocky structure, while others prefer more moderate depths with less rocky structure. Some rockfish species also grow more quickly than others. Yet, despite these differences between species, recent dive surveys by CCIRA found that a wide range of rockfish species had larger body sizes inside two Rockfish

Diver Derek VanMaanen conducting a fish transect during a rockfish dive survey.

Conservation Areas (RCAs)—places where most commercial and recreational fisheries are prohibited—than in adjacent unprotected areas. These results are encouraging. They are also consistent with research in California where there is ample evidence that protected areas have helped the recovery of many rockfish species.

"Recent dive surveys by CCIRA found that a wide range of rockfish species had larger body sizes inside two Rockfish Conservation Areas than in adjacent unprotected areas."

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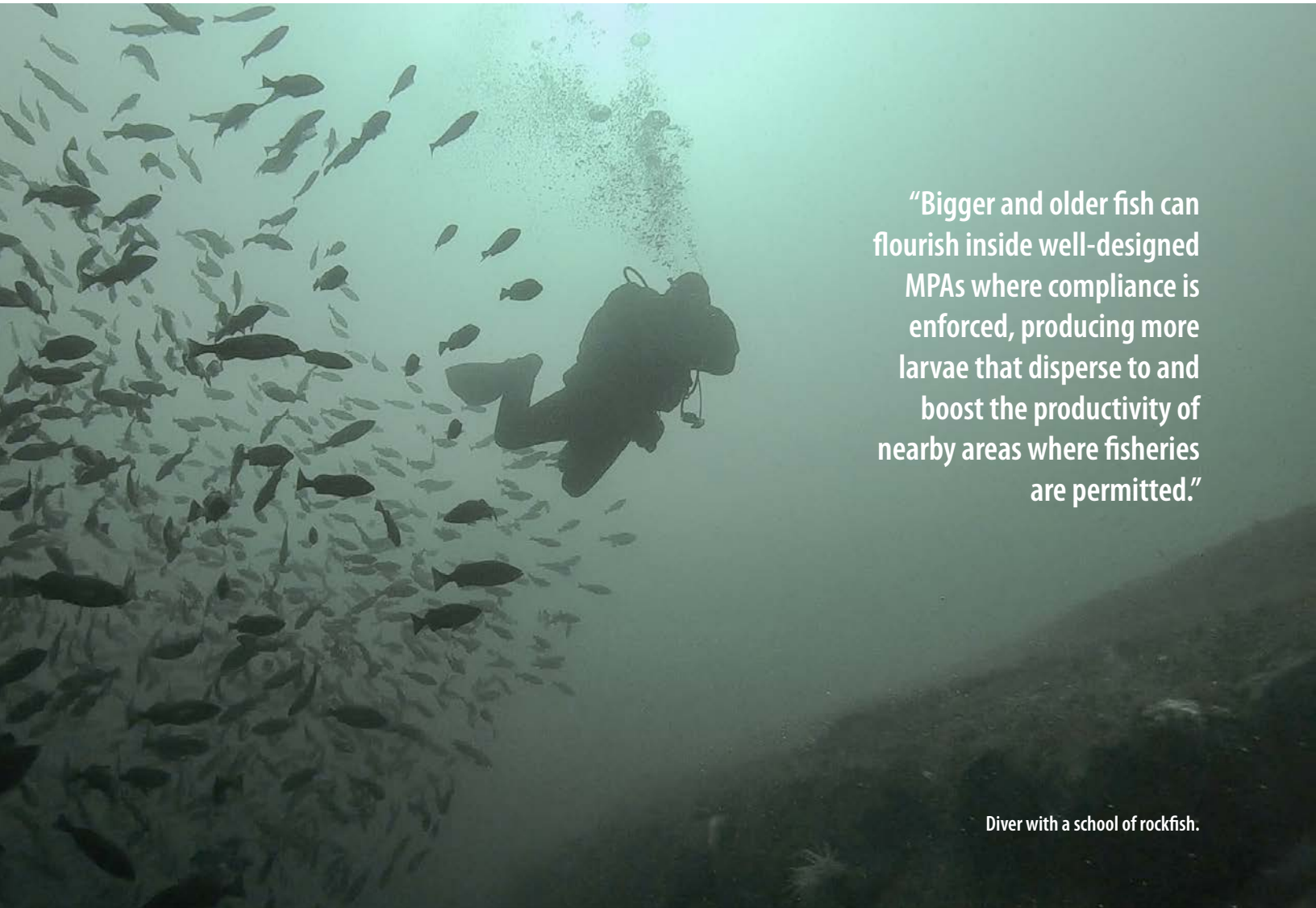
Yet the same CCIRA research also found that at four other RCAs rockfish body sizes did not differ between protected and fished areas. In other words, 4 of 6 RCAs examined appeared to not be meeting their conservation objectives, and it is important to examine why. "We need to investigate whether the lack of increase in body sizes at 4 RCAs reflects non-compliance by recreational fishers, poorer habitat, too small a size of the protected area, impacts of commercial fisheries permitted in RCAs (such as mid-water trawls), or a combination of these factors," says CCIRA Science Coordinator Alejandro Frid. "DFO has invested almost no resources in compliance monitoring and enforcement for RCAs; it is a priority to mitigate that problem so that we can begin to understand why some RCAs are performing better than others."

CCIRA's dive survey data were collected when RCAs where just 8-to-15-years-old. Research in California has shown that rockfish recovery was more likely to be detected after 20 years of spatial protection, suggesting that RCAs benefits are likely to keep increasing over time.

4. Marine Protected Areas known to enhance fisheries

Parallel with our work in progress on RCAs, there is growing evidence from other studies conducted all over the world



"Bigger and older fish can flourish inside well-designed MPAs where compliance is enforced, producing more larvae that disperse to and boost the productivity of nearby areas where fisheries are permitted."

Diver with a school of rockfish.

that fish and invertebrates inside Marine Protected Areas (MPAs) can be more abundant and grow to greater size and age than in fished areas. Bigger and older fish can flourish inside well-designed MPAs where compliance is enforced, producing more larvae that disperse to and boost the productivity of nearby areas where fisheries are permitted.

5.What you measure matters

Given what we know about rockfish reproduction, Alejandro is urging Fisheries and Oceans Canada to update their management approach for yelloweye rockfish and other groundfish. DFO's models focus on overall biomass—the total weight of fish in a population—to estimate the sustainability of fisheries. These models assume that the reproductive capacity of younger, smaller females is the same as that of older, larger females.

This, says Alejandro, is biologically unrealistic given what we know about rockfish reproduction. He suggests DFO should modify their approach to include the restoration of large size and old age classes in yelloweye rockfish populations as explicit management objectives. This is critical as some research suggests that fishery models that focus solely on biomass can underestimate the extent to which stocks have been overfished and promote unsustainable fishing practices.

A copper rockfish.

CCIRA hires new staff

Desiree Lawson, *MaPP implementation coordinator*

Desiree is Haíłzaqv and lives in her home territory in Bella Bella. She is passionate about supporting the Nations as they assert their inherent title and rights by practicing their ancestral laws. She understands the importance of indigenous stewardship; the need to respect all living beings and their right to live is a top priority for Desiree. In 2017 she graduated with a degree in Natural Resource Protection from VIU. Prior to that she also received a diploma in Resource Management Officer Technology. The experience Desiree received from the Haíłzaqv Integrated Resource Management Department (HIRMD) in numerous planning roles, as well as a Guardian Watchman has provided great knowledge of indigenous governance, laws and stewardship.

Desiree with a sand dollar on a beach.

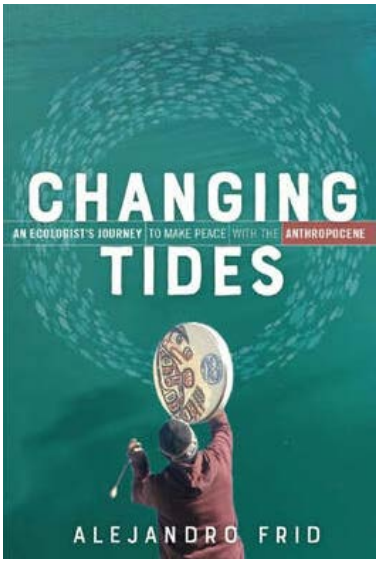
Alejandro Frid publishes new book

As CCIRA's Science Coordinator, Alejandro Frid has established an impressive record of publishing research papers in esteemed journals. Much of this research is aimed at enhancing marine conservation by integrating science with Indigenous knowledge. But on his own time, he has also published two books! His most recent book came out this fall. Changing Tides: An Ecologist's Journey to Make Peace with the Anthropocene, is strongly influenced by his work with the Central Coast Nations.

As described on the website of New Society Publishers:

"In this book, Alejandro draws from a deep well of personal experience and that of Indigenous colleagues, finding a glimmer of hope in Indigenous cultures that, despite the ravishes of colonialism, have for thousands of years developed intentional and socially complex practices for resource management that epitomize sustainability. Ultimately, Alejandro argues, merging scientific perspectives with Indigenous knowledge might just help us change the story we tell ourselves about who we are and where we could go to help steer ourselves towards a more benign Anthropocene."

Congratulations Alejandro!

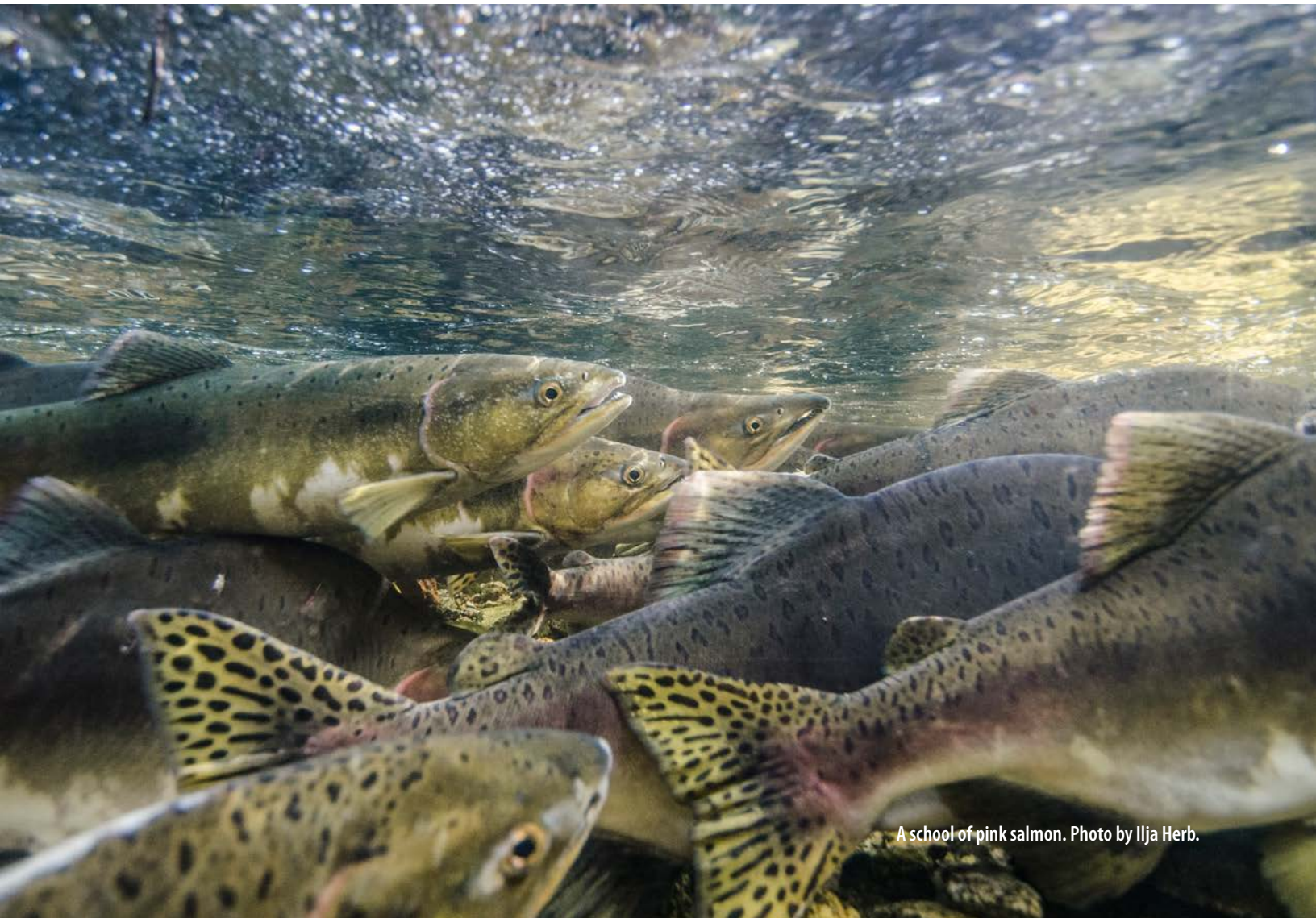


CCIRA joins international salmon research expedition

2019 was a bad year for salmon returns coast-wide in British Columbia, and an international team of scientists has been trying to figure out why. This March, the research team will head back to the open Pacific for a second expedition to study the ocean survival of salmon. And, this time CCIRA's Field Technician, Tristan Blaine, is scheduled to join them.

The research team is composed of leading salmon researchers from Canada, USA, Russia, Japan and Korea who will conduct research in a 697,500 km2 study area in the Pacific Ocean. One major objective of the research is to identify the mechanisms that control salmon survival in the open ocean. One working hypothesis is that total adult salmon abundance is influenced by the number of salmon that survive to the end of their first year in the sea. The researchers suspect this is strongly tied to the production and timing of the things that salmon eat. But, as our climate changes, scientists have a lot to learn about the implications of the corresponding changes in ocean conditions and how they affect things like salmon and their food. This expedition will help fill in some of those knowledge gaps.

CCIRA is proud that Tristan will be representing the Central Coast Nations on this research project. Stay tuned for updates from Tristan on the expedition.



A school of pink salmon. Photo by Ilja Herb.

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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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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