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Saltwater News

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Haida Gwaii's Newest MOST WANTED Aquatic Invasive Species

Diving down into Haida Gwaii's kelp forests, one can admire fish swimming through the long fronds. **Yaanaanaa** • **G̲iinuu** *sea cucumber* in shades of red and orange, blue **G̲aal** • **taax̲aw** *mussels*, and purple **gudaangee** • **guuding.ngaay** *sea urchins* plaster the rocky ocean floor. The beauty and diversity of Haida Gwaii's marine ecosystem, with its numerous unique species, are sensitive to disturbance. The loss of a key species, such as star fish, or the introduction of a new species, can disturb the balance in these ecosystems. Historically the archipelago was relatively isolated with only Haida canoes making the journey to and from the mainland. However, with the increasing movement of people, plants, and animals between Haida Gwaii and the mainland, these unique and fragile ecosystems are under threat from new arrivals.

What are aquatic invasive species?

Although every introduced species is a potential invader, to be considered invasive a species must have a negative affect on the environment, human economy, or human health. These effects generally occur if there is no or limited predation. A lack of competition in a species' new environment can also contribute. Sometimes the absences of predation and competition combine, leading invasive populations to explode. Most introduced species in Haida Gwaii's aquatic ecosystems are not considered invasive.

Why should we be concerned about them?

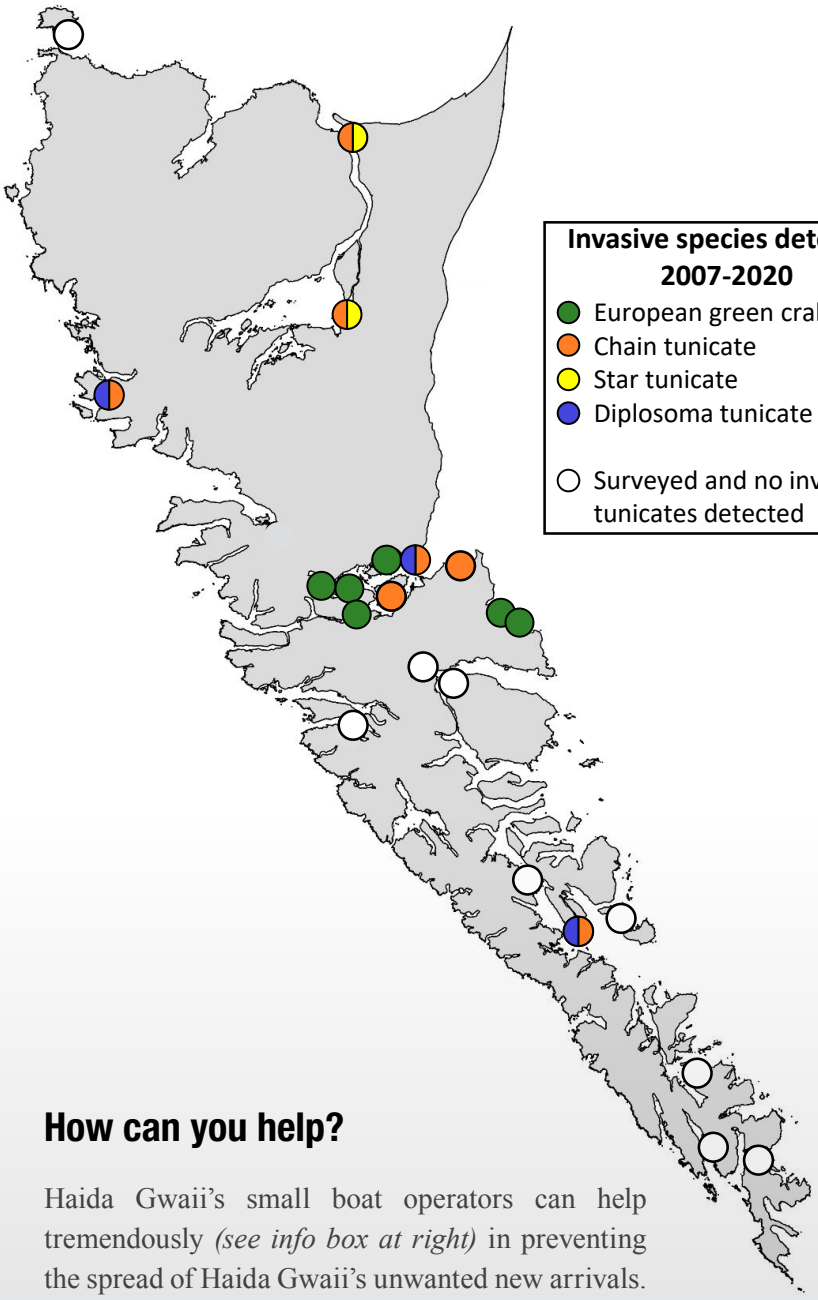
Predicting which introduced species will become invasive in a new ecosystem is nearly impossible, even if the species is well studied. That's why introduced species are always considered to pose a threat to Haida Gwaii's aquatic ecosystems. To address this threat, the Council of the Haida Nation is working to prevent the introduction of these potential aquatic invaders.

How do they get here?

Historically, species have been introduced for commercial purposes and through trade, such as Pacific oysters in the 1990s. Attempts to introduce Manila clams in 1962 failed. On Haida Gwaii invasive species spread primarily through marine vessel traffic and aquaculture. Many marine species travel as "blind passengers" on gear and equipment, on the hulls of boats, and in ballast water.

What are we doing about them?

Through the Haida Gwaii Marine Plan, CHN is collaborating with the provincial and federal governments on a number of projects to prevent the introduction of aquatic invasive species and minimize their impacts. This work includes: 1) monitoring existing invasive species and trying to reduce their spread; 2) monitoring for new invasive species and trying to prevent their arrival; and 3) developing a management plan and biosecurity protocol on how to deal with marine invasive species to limit their spread, for Haida Gwaii.



Through the Marine Plan Partnership (MaPP), CHN and BC are monitoring seven sites for invasive fouling organisms and Parks Canada is monitoring five sites in Gwaii Haanas. Invasive tunicates were first detected in **Xaana Kaahlii GawGaay** *Skidegate Inlet* and **Dal Kaahlii** *Delkatla Inlet* (Masset Harbour) in 2007. Monitoring has been conducted since 2014, and in that time the invasive tunicates have spread to **Gamadiis** *Port Clements*, **Kingts'ii Gwaay.yaay** *Bischoff Islands*, and **Naasduu Gwaay.yaay** *Hippa Island*. CHN/MaPP/GH have been monitoring for European green crab since 2017, and unfortunately they were detected in Xaana Kaahlii Gawgaay in 2020.

How can you help?

Haida Gwaii's small boat operators can help tremendously *(see info box at right)* in preventing the spread of Haida Gwaii's unwanted new arrivals.

You can learn more about Haida Gwaii's most wanted invasive species *(above)*, what you can do when you find them, and how to prevent them from spreading to uninvaded ecosystems on Haida Gwaii (info box). You can find descriptions of several invasive species in this publication. Also keep your eyes open for a soon to come brochure and an identification guide for aquatic invasive species on Haida Gwaii.

SEE SOMETHING? SAY SOMETHING!

1. Take clear photos of the suspect
2. Record date and location with GPS if possible
3. If it's on your boat, report where it has been recently
4. Report this information to:

invasives@haidanation.com

Your information will help all management partners track and reduce the spread of these invaders!

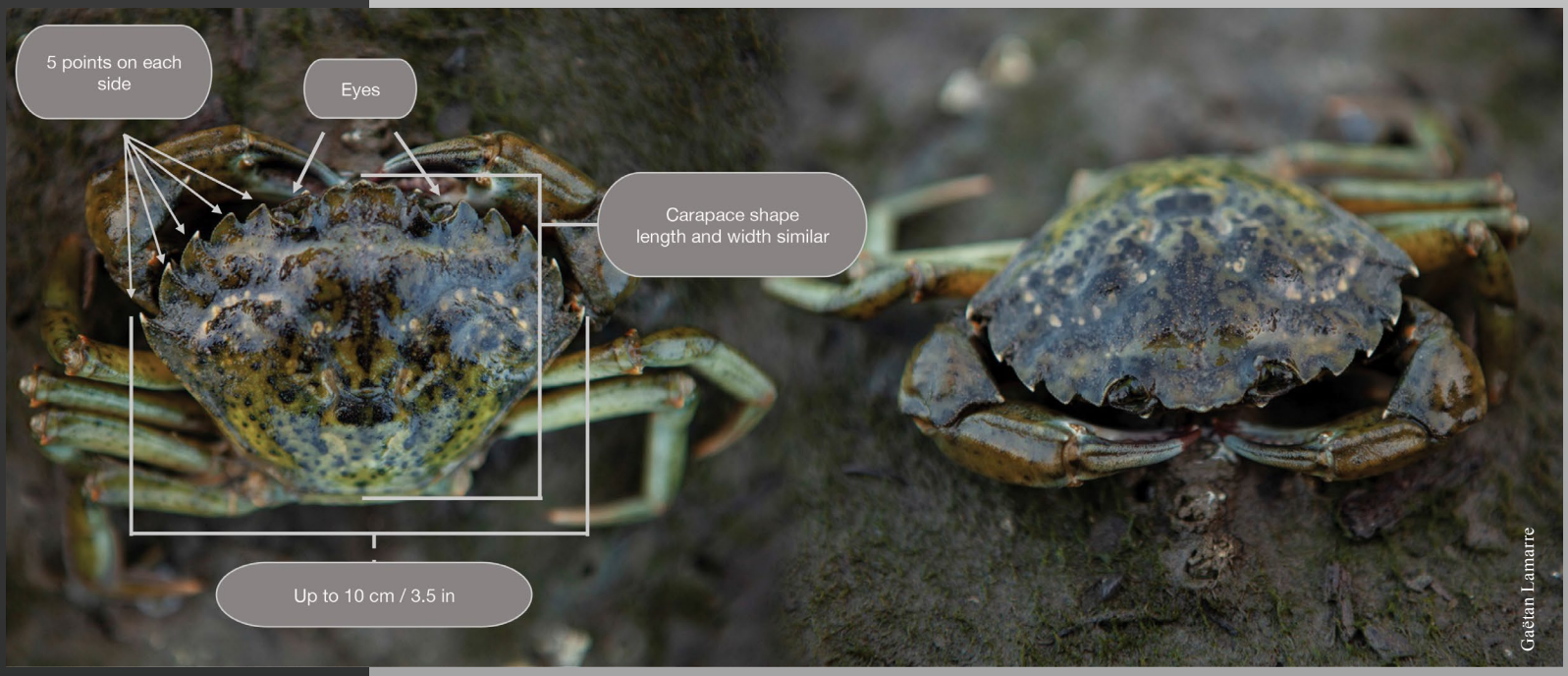
***The articles include selected words in Xaad kil • Xaayda kil, northern place names are in Xaad kil, southern in Xaayda kil ***

EUROPEAN GREEN CRAB

Carcinus maenas.

In July 2020, a small number of male and female adult crabs were found in **Xaana Kaahlii Gawgaay** *Skidegate Inlet*. For more info, check out the Haida Laas article: **http://www.haidanation.ca/?p=11791**

The **European green crab** is often green in colour, but it can also be yellow, orange, or mottled. The best way to identify a European green crab is that they have **five very obvious spines** on the side of each eye. The shape of their carapace is also distinctive and it is as long as it is wide. They can get up to 10 centimetres across their carapace, but this early in the invasion most of the adults will likely be smaller. Be sure it is a European Green Crab before killing any crab and dispose of them on land, away from the beach. If you are unsure whether or not you have a European green crab, gather it in a container to keep it alive and send us a photo.



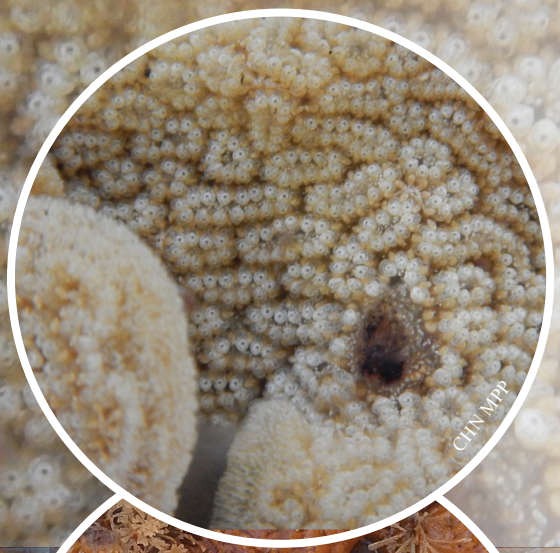
Please report your find to invasives@haidanation.com if you come across any of these listed invaders in a new area of Haida Gwaii.

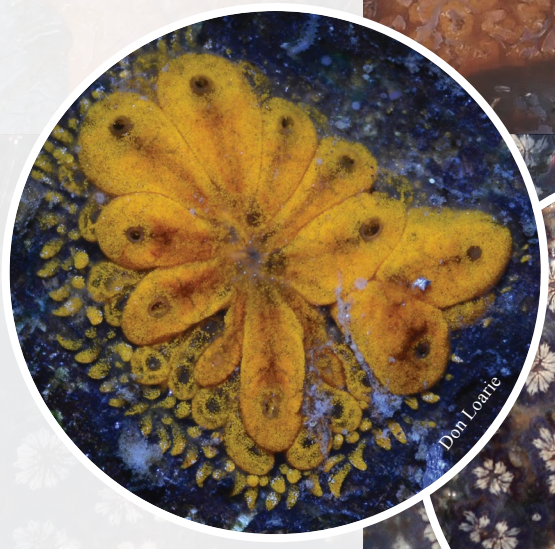
CHAIN TUNICATE & STAR TUNICATE

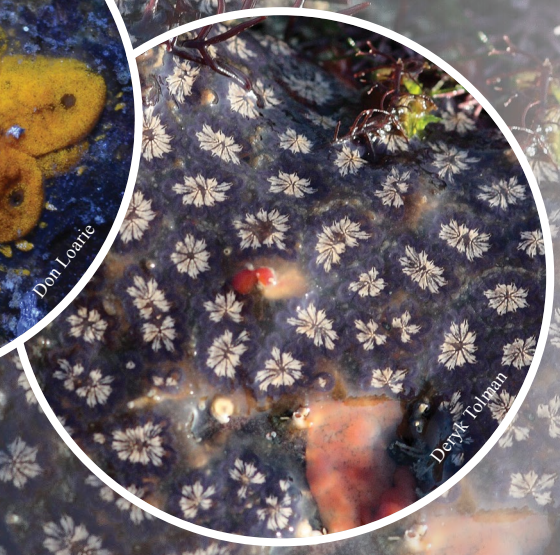
Chain tunicate *Botrylloides violaceus* (top left circle photos)

and **Golden star tunicate** *Botryllus schlosseri* (bottom left circle photos).

Both invasive tunicate species can be found on hulls of boats and other marine equipment. The most effective way to kill them is to let them dry out.







DIPLOSOMA TUNICATE

Diplosoma listerianum.

This tunicate has been detected in 2014 on Haida Gwaii and since been found in X̲aana K̲aahlii G̲awG̲aay, at Naasduu Gwaay.yaay and in Gwaii Haanas.

SEA VOMIT

Didemnum vexillum.

Sea Vomit has not yet been detected on Haida Gwaii. However, if you have detected it, we want to know because we might be able to eradicate it before it becomes established. Early detection is key, so keep your eyes open for this invasive species.

Chaawsalii damaan tl'a kingga • Chiixwaay Kaydts'id ***Beach Watch***

Trial Voluntary Protection Zone for Shipping on Haida Gwaii

Early in the morning on October 17, 2014, the Russian cargo vessel, *Simushir*, lost power about 20.5 nautical miles (nm) off the **duu guusd • daawuuxusda** *west coast* of Haida Gwaii while a major storm was progressing. The vessel was carrying mining supplies and had 472 tonnes of bunker fuel and 59 tonnes of diesel aboard. At its closest point, the *Simushir* came 5.6 nm (10.4 km) from shore, and preparations began for a potential oil spill. The Canadian Coast Guard vessel *Gordon Reid* attempted to tow the vessel, breaking three tow lines. Fortunately, the weather subsided to avoid disaster. The rescue tug *Barbara Foss* arrived at the scene more than 24 hours later and the *Simushir* was towed to **Kxeen** *Prince Rupert*. Then President of the Council of the Haida Nation, **kil tlaats 'gaa** *Peter Lantin*, described the event as "a brutal eye-opening experience" for the Haida Nation.

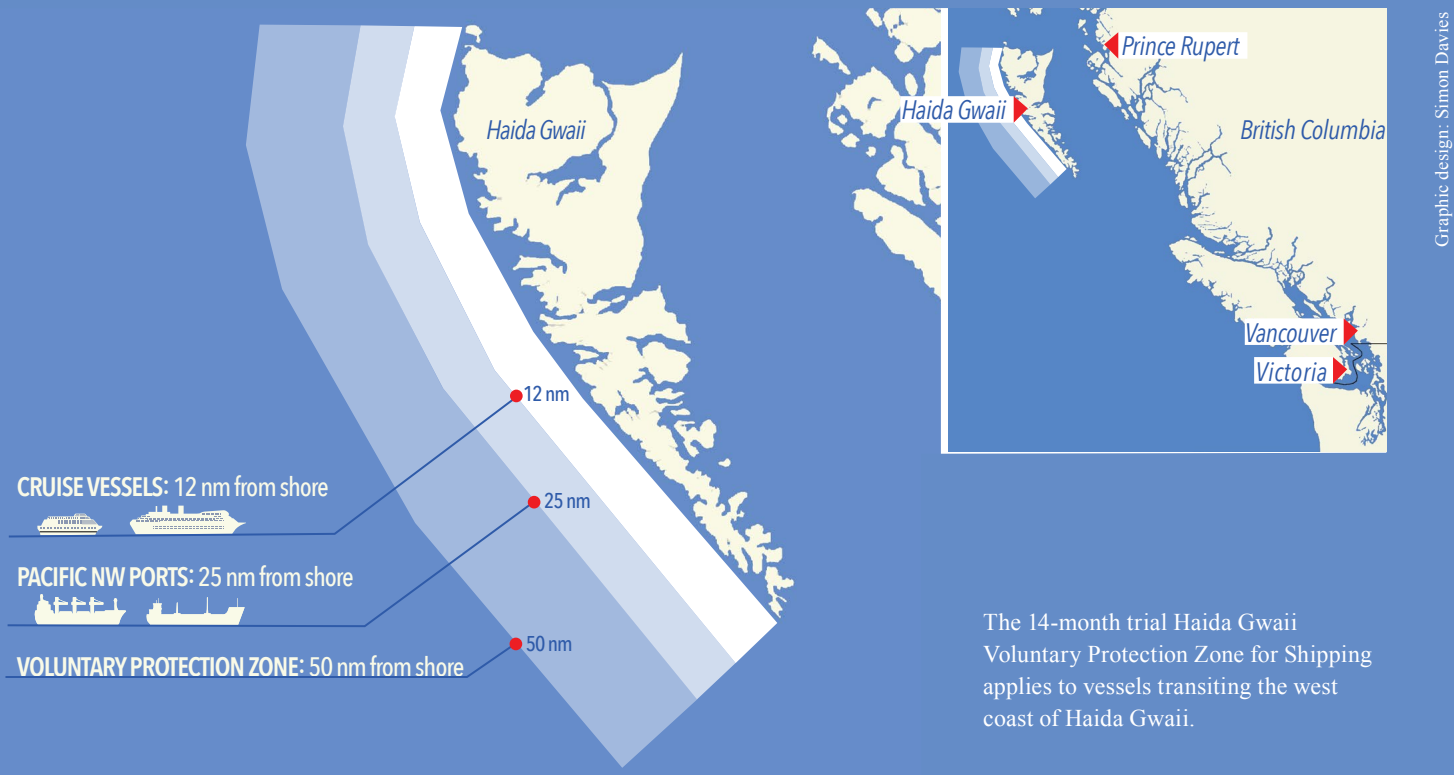
On September 4, 2020, CHN and Canada jointly announced a 14-month trial Voluntary Protection Zone for Shipping off daawuuxusda of Haida Gwaii, which began on September 1 (**https://tinyurl.com/y9gd9wer**). In June 2018, the CHN and the Government of Canada committed to work together on the issue of vessel drift on the west coast of Haida Gwaii through the Reconciliation Framework Agreement for Bioregional Oceans Management and Protection (**https://pm.gc.ca/en/news/backgrounders/2018/06/21/reconciliation-framework-agreement-bioregional-oceans-management-and**).

In the 2018 *Vessel Drift and Response Analysis* conducted by Nuka Research for Clear Seas Centre for Responsible Shipping, a drift model was used to estimate the time required for an Emergency Towing Vessel (ETV) to effectively respond to a drifting vessel. The model estimated a 99% likelihood of an effective response for a scenario with two ETVs for a ship transiting at least 43 nm offshore. This reflects the number of ETVs currently patrolling the Pacific Region.

Since February 2019, the CHN's Marine Planning Program, Transport Canada, and the maritime shipping industry have worked together to analyze shipping traffic patterns in Haida territorial waters and explore preventative measures. This includes encouraging vessels to transit a sufficient distance offshore to ensure an adequate response time by emergency towing and prevent groundings. The analysis was led by Nuka Research in partnership with Clear Seas Centre for Responsible Shipping. The technical report is available here: **http://haidagwaii-vpz.ca/reports/**

CHN now has extensive information on shipping traffic along the duu guusd • daawuuxusda, **Siigee • Siigey** *Dixon Entrance*, and **Siigee • Siigey** *Hecate Strait*, including the trade routes used, ship types and companies involved, among other information.

During the 14-month trial, vessels 500 gross tonnes or more are asked to stay a minimum of 50 nm off the west coast of Haida Gwaii. Exceptions to this rule apply to cruise ships, which are asked to stay a minimum of 12 nm from shore and vessels transiting between Pacific Northwest ports (Washington, BC and Alaska), which are asked to observe a minimum distance of 25 nm from shore. Tugs and barges, as well as all fishing vessels are exempt from the trial.



The 14-month trial Haida Gwaii Voluntary Protection Zone for Shipping applies to vessels transiting the west coast of Haida Gwaii.

Laden oil tankers already adhere to the Voluntary Tanker Exclusion Zone, established in 1985, which asks them to travel at least 73 nautical miles offshore of Haida Gwaii.

Since the *Simushir* near-miss event six years ago, CHN's priority has been to prevent marine incidents. This trial is an improvement to the status quo and supports the commitment made by CHN and Canada in the Gwaii Haanas Gina 'Waadluxan KilGuhlGa Land-Sea-People Plan "to encourage large vessels to transit sufficiently far offshore to ensure adequate response time and prevent accidents". For CHN, the trial does not meet the 50 nm distance needed to ensure a high likelihood of effective response. The vessel drift model shows that for vessels transiting more than 12 nm offshore, there is only a 90% likelihood of effective response - a 1 in 10 chance of an *in*effective response. "The voluntary measures are a step in the right direction, yet we have much work to do together to protect the coastlines of Haida Gwaii to the highest standards" reminds **Gaagwiis** *Jason Alsop*, President of the Haida Nation.

Technical staff continue to monitor shipping traffic and analyze adherence to the Voluntary Protection Zone using the Enhanced Maritime Situational Awareness (EMSA) system (see article on Monitoring, page 9). The trial will be evaluated using monitoring information to inform next steps. For more information on the trial, including progress reports, go to **http://haidagwaii-vpz.ca/**

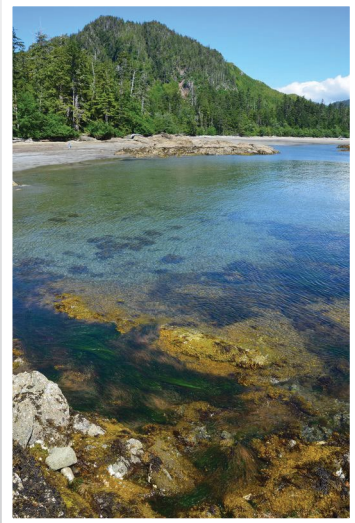
Deirdre Leowinata, Pacific Wild

Biodiversity in the Marine Protected Area around **SG̲aan K̲inghlas** *Bowie Seamount.*

Siigee Tla Kagandangs • Tang.G̲wan Siigaay K̲uuyada Dii

Protecting the Ocean

The Council of the Haida Nation is collaborating with the federal and provincial governments to protect and manage the ocean in Haida territorial waters. One of these initiatives plans for a Marine Protected Area (MPA) network in the Northern Shelf Bioregion, an area that runs from northern Vancouver Island, through the central and north coast, and here to Haida Gwaii. The planning process includes government-to-government engagement between federal and provincial bodies and Indigenous Nations, and consultation and information exchanges with marine users and coastal communities.



Miles Green

Near **Chaahluu K̲aahlii** *Renell Sound* on the **duu guusd** • **daawuuxusda** *west coast* of Haida Gwaii.

The Haida Gwaii portion of the current draft MPA network is built on Haida marine plans and marine protected areas, including Gwaii Haanas and the foreshore components of the 11 Haida Heritage Sites that the Province of BC recognizes as Conservancies; five Haida Heritage Sites that the Province of BC recognizes as Ecological Reserves; two Haida Heritage Sites that the Province of BC recognizes as Provincial Parks; and Protection Management Zones identified in the Haida Gwaii Marine Plan.

CHN's Marine Planning team is currently talking with members of the Haida Marine Work Group, the Haida Oceans Leadership Committee, and Haida fishermen about the draft MPA Network Scenario, in addition to continuing to engage with the Haida Gwaii Integrated Advisory Committee. This will ensure Haida citizens can contribute to and shape the MPA Network design. The CHN is aiming to engage more with Haida citizens about the draft MPA Network Scenario at a virtual open house. Stay tuned for more opportunities to get involved.

LOOKING AT THE NUMBERS: OCEAN PROTECTION AT NATIONAL AND INTERNATIONAL SCALES

As of August 1, 2019, more than 10% of coastal and marine areas within Canadian jurisdiction are now protected within marine protected areas (MPAs) and other effective area-based conservation measures. This means the Canadian government has now met its international marine conservation target, which it committed to in 2010 at the Convention of Biological Diversity in Aichi, Japan. The MPA Network planning process is not expected to contribute to Canada's marine conservation target.

Internationally the "Aichi Target 11" to protect 10% of the ocean by 2020 has led to a significant increase in protected marine areas throughout the world – from about 0.1% protection for most of the past century to estimates ranging from 4.8% (Atlas of Marine Protection) to 7.68% (IUCN) official protection.

However, these percentages don't tell the whole story. Large-scale extractive activities, including commercial fishing, mining, and oil and gas drilling, are still permitted in some MPAs both nationally and internationally.[1] One estimate from a 2018 study by Sala et. al claims that only 2% of oceans are fully or strongly protected. "Fully" means all extractive or destructive activities are prohibited. "Strongly" means only minimal fishing occurs.

But even if the Aichi Target 11 *was* achieved at the national and international scales, there are emerging opinions that the 10% target is not enough to address the oceans' widespread biodiversity crisis. In other words, we need to protect more – a lot more – to safeguard oceans for present and future generations. While scientists are of varying opinions, many agree we must protect *at least* 30% of each habitat in a network of highly protected marine areas. Some conservation organizations are even promoting a goal of 50% through the Nature Needs Half movement.

[1] In April 2019, the Government of Canada adopted new protection standards for federal MPAs, based on the recommendations from the independent National Advisory Panel on MPA standards. These new protection standards include prohibitions on oil and gas activities; mining; dumping; and bottom trawling for commercial and recreational purposes, and will apply to all new federal MPAs.

Chaawsalii damaan tl'a kingga • Chiixwaay Kaydts'id *Beach Watch*

Monitoring Marine Shipping in Haida Territory

Today, over 52% of the land area and 87% of the shoreline on Haida Gwaii are protected through various marine plans and processes. However, vessel traffic in Haida territory is expected to grow based on global shipping trends and trade forecasts, and the Port of Prince Rupert's plans for terminal expansion to increase its container-handling capacity. Haida Gwaii's remote location, variable sea and weather conditions, and rich ecological and cultural heritage make it vulnerable to pollution from ship breakdowns and accidents. The near-miss incident involving the *Simushir* cargo vessel in October 2014 highlighted the need for improved monitoring and communication to not only enable a timely and effective response in the event of a marine incident, but more importantly preventative measures to ensure safe shipping, including vessel monitoring.

Through the Haida Gwaii Marine Awareness Project, analysts in Council of the Haida Nation's Marine Planning Program are using the Enhanced Maritime Situational Awareness (EMSA) system, a web-based tool to monitor marine shipping traffic in Haida Gwaii waters in near-real time (see info box). The system also provides access to other situational awareness information such as weather and sea state conditions, including historical and forecast data. The EMSA system is being developed by Transport Canada (TC) in collaboration with 13 Indigenous partners across Canada, including the CHN. The tools and applications of the EMSA system are tailored to the diverse needs for maritime monitoring on Canada's coasts and CHN is ensuring the tool will be useful for continued use across Haida Gwaii and the Northern Shelf Bioregion (NSB).

The Haida Gwaii shipping monitoring plan sets out goals for vessel traffic monitoring to support the implementation of shipping and marine safety strategies and objectives in different collaborative Haida Gwaii marine plans (see back cover), developed by the CHN, BC and Canada, and other shipping priorities identified by the Haida Nation. A key monitoring activity is in support of the trial Haida Gwaii Voluntary Protection Zone (VPZ) for Shipping on the west coast of Haida Gwaii (see article on the VPZ on page 5). The key monitoring objectives throughout the 14-month trial include:

- Identifying vessels transiting inside the VPZ
- Updating vessel traffic analysis findings from the technical report developed for the trial, and
- Identifying potential unintended consequences, such as re-routing traffic through Hecate Strait to avoid the VPZ.

As part of monitoring, virtual perimeters with predefined conditions called "geofences" were set up on the EMSA system (see Figure 1). When a vessel enters the geofence corresponding to the VPZ, the vessel information, trip details, meteorological and oceanographic information are recorded in a downloadable report. These reports are used to compile monthly progress reports, which are reviewed by the project partners to assess the effectiveness of the trial and to identify adaptive management measures. To view these reports, go to **haidagwaii-vpz.ca**

The Haida Gwaii Marine Awareness Project brings together partner organizations, including the CHN, TC, the Canadian Coast Guard (CCG), Parks Canada Agency, the Province of BC, and Fisheries and Oceans Canada (DFO) to support implementation of the Haida Gwaii marine plans. For example, the SGaan Kinghlas - Bowie Seamount Gin Siigee Tl'a Damaan Kinggangs Gin K'aalaagangs Marine Protected Area Management Plan (2019) encourages large vessels to transit a minimum of 50 nautical miles from the pinnacle,

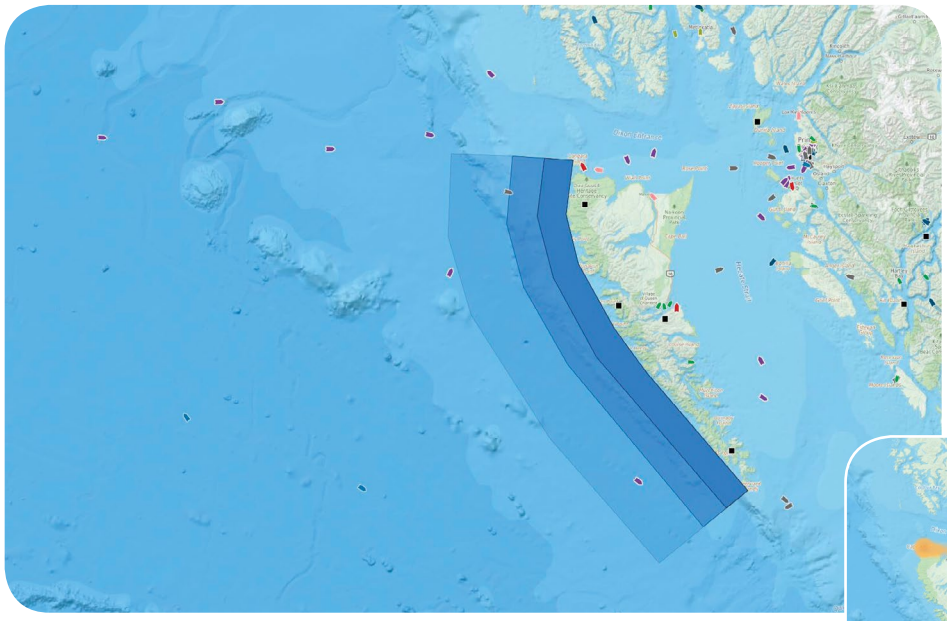
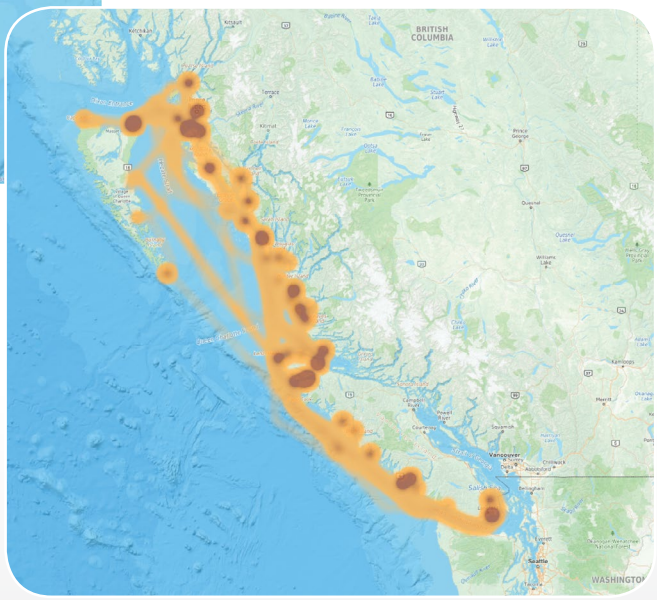


Figure 1 (left)
The Enhanced Maritime Situational Awareness (EMSA) system displaying near-real time vessel traffic and the geofences associated with the VPZ.

Figure 2 (below)
Heat map showing presence of the two emergency towing vessels (ETVs) patrolling the Pacific region, the *Atlantic Eagle and Atlantic Raven*, during the month of September. The lighter shade represents less time spent, while the darker shade represents more time spent.



How does the EMSA system work?

The EMSA system is a web-based Geographic Information System (GIS) application that displays near real-time vessel locations and other marine use information in the waters around Haida Gwaii and beyond. In the EMSA system, as in other GIS, data related to a specific coordinate position on the earth can be gathered, displayed and analyzed in an interactive map. Layers of data include weather, currents, tides, protected areas, and other marine and coastal information. Other uses of the system may include collecting and storing information about resources on-island, such as equipment, facilities and personnel that can be mobilized during a marine environmental emergency response. In this way, the system is intended to support the overarching goals of the project by increasing access to information to enable marine planning, management, and response.

so geofences have been set up to identify traffic in the area. The Haida Gwaii Marine Plan (2015) also sets out a strategy to work collaboratively to increase measures to prevent marine accidents and spills, so the CHN is monitoring key issues such as vessels loitering or anchoring in **Gadsguusd** *McIntyre Bay* and vessels transiting in close proximity to **K'iis Gwaay** *Langara Island*. The CHN also communicates with TC and the CCG's Marine Communications and Traffic Services (MCTS) when there is irregular vessel behavior and issues of concern to the Haida Nation.

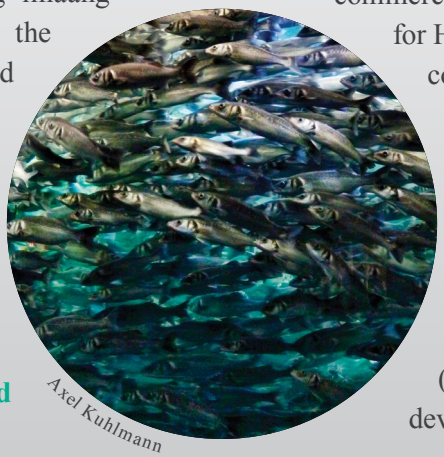
The Haida Gwaii Marine Awareness Project supports ongoing discussions on how monitoring, notifications and communication of marine shipping information can be improved to prevent accidents. The overarching goal is for the Haida Nation to steward the lands and waters of Haida Gwaii to the highest standards.

Gwaii Haanas

K'aaw • **K'aaw** *herring roe on kelp*, a delicious and staple Haida food

Rebuilding Haida Gwaii Herring

A plan is underway to rebuild **'iinaang** • **iinang** *Pacific herring* in Haida Gwaii! This small fish is integral to Haida culture and economy. For many harvesting 'iinaang and **k'aaw** *herring roe on kelp* marks the beginning of a new year of harvesting and trading with our neighbors. Haida oral narratives and archeological records both demonstrate that 'iinaang have been sustainably harvested for millennia in Haida Gwaii. Besides humans, 'iinaang is also important to other species in the ecosystem, including predators such as seabirds, **kaay** • **kay** *sea lions*, **xuud** • **xuud** ***seals*** and **sgaan** • **sgaana** *orcas*.



Axel Kuhlmann

Large scale commercial 'iinaang reduction fisheries began in British Columbia in the 1930s, removing thousands of tonnes of 'iinaang from the marine ecosystem for meal and oil. Overfishing eventually led to the collapse of 'iinaang fisheries coastwide in the late 1960s. Stocks recovered with new, more conservatively managed, commercial roe and k'aaw fisheries beginning in the early 1970s. However, Haida Gwaii stocks began to decline in the late 1990s leading to commercial roe and k'aaw fishery closures.

'Iinaang have yet to recover, with stocks remaining depressed for more than fifteen years affecting both food and commercial spawn-on-kelp fishing opportunities for Haida citizens. But there is hope that a new collaboration, based on both Haida marine traditional knowledge and western science, will support the rebuilding of 'iinaang throughout Haida Gwaii.

In 2018, the Council of the Haida Nation, together with the Department of Fisheries and Oceans Canada (DFO) and Parks Canada committed to developing and implementing a rebuilding

Sgaguud • **SGap** *Humpback whale* Corporal (BCX1238) lunge-feeding on juvenile Pacific herring.

plan for Haida Gwaii ‘iinaang by December 2020 and to close the commercial roe fishery until April 2021. To meet this commitment, a working group has been formed to collaborate together on this project, that includes **Nang Jingwas** *Russ Jones*.

“When DFO planned to reopen the ‘iinaang fishery in Gwaii Haanas in 2015, the Haida Nation went to court to obtain an injunction. At that time, the Council of the Haida Nation identified a rebuilding plan as one of the essential measures that needed to be in place before reopening the commercial fishery could be considered,” notes Nang Jingwas.

An important part of the plan is identifying objectives and targets for rebuilding Haida Gwaii ‘iinaang and sustaining Haida traditional harvests. How many ‘iinaang are required in a sustainable marine ecosystem? Which cultural and social practices need to be thriving before commercial fisheries can be considered again? Will there be economic benefits to citizens of the Haida Nation and Haida Gwaii?

“For Haida fishermen, commercial k’aaw fisheries in Gwaii Haanas have been closed since 2004 and a rebuilt stock would mean opportunities for Haida fishermen to participate again in commercial fisheries,” Nang Jingwas points out.

What are the signs that tell ‘iinaang have recovered? The herring rebuilding plan will include actions to support the implementation of these objectives and targets by local agencies, including data collection and monitoring.

Nang Jingwas explains, “Herring models are being developed to examine effects of fishing on ‘stocklets’ that are small herring populations such as in Selwyn Inlet within a larger management area, and commercial k’aaw fisheries. K’aaw fisheries have less impact because only the eggs are harvested and most ‘iinaang return to spawn in future years. Past models have focused on sac roe fisheries that remove both fish and roe.”

What does a rebuilt ‘iinaang population mean to you? Maybe it is travelling with your family to Gwaii Haanas to harvest k’aaw. Maybe it is sitting down to a feast of fresh k’aaw cooked in butter or dipped in soy sauce, or a different family recipe. Maybe it is a rack of k’aaw drying in the sun before being traded for mainland delicacies, or a family business running a commercial k’aaw operation in Xaana Kaahlii GawGaay. While it is too soon to tell how long rebuilding healthy Haida Gwaii ‘iinaang populations may take or what form this may take, this collaboration gives us a path to move forward together.

Chaawsalii damaan tl'a kingga • Chiixwaay Kaydts'id *Beach Watch*

Site Specific Response Plans Speed Up Response Endeavors in Marine Shipping Incidents

Marine shipping around Haida Gwaii has been increasing over the last several years. For the Council of the Haida Nation, prevention of marine shipping incidents is priority but preparing for a possible marine emergency remains important. As a result, the CHN and other coastal nations have been working together since 2018 to develop marine environmental emergency response plans for the Northern Shelf Bioregion that involve the Province of BC, Gwaii Haanas, Canadian Coast Guard and other federal agencies.

Detailed Geographic Response Plans provide tactical information to guide an environmental response in specific Areas of Concern (AOC) around Haida Gwaii. An AOC is a discrete coastal area such as a cove, bay, marina, or estuary that has been determined by the community to be *sensitive* and *vulnerable* to marine pollution impacts.

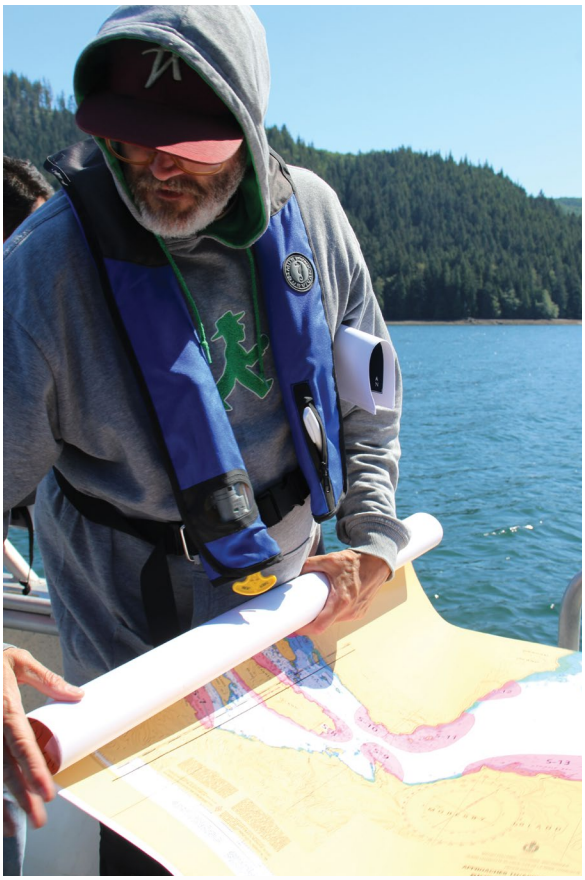
Hannah Bregulla

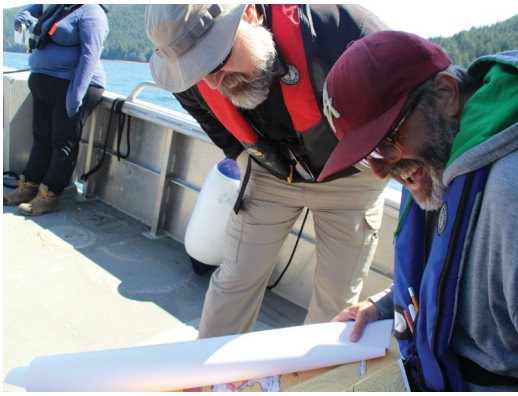
These AOCs were identified in two separate multi-day workshops with Haida traditional knowledge holders, fishermen, biologists, CHN and Parks Canada staff. This work is an important part of implementing the *Haida Gwaii Marine Plan* and the *Gwaii Haanas Gina 'waadluxan kilGuhlGa Land-Sea-People Plan.*

Workshop participants mapped 130 AOCs. A highly *sensitive area* is an area of cultural and/or ecological importance with valuable resources to protect that may be disproportionally negatively impacted by marine pollution. A *vulnerable area* has a higher risk of being exposed to pollutants due to its proximity to risk factors, such as a fuel dock or frequent marine traffic. AOCs were also chosen based on the *feasibility of mounting a shoreline protection response*. In other words, sites were chosen based on prevalent tide and wind conditions, shoreline access and size of the area allow for an effective response with the available resources (personnel, vessels, booms, etc.). For example, surrounding all of Maude Island with boom to protect its various valuable habitats might not be feasible, but using a limited amount of boom to prevent oil from interacting with a sensitive area, such as a critical salmon rearing stream, would be possible. To develop Geographic Response Plans, CHN has started to survey each AOC.

Equipped with nautical charts, a range finder, camera and clipboards, a group of CHN staff from Marine Planning Program, Protected Areas Program, and Haida Fisheries Program spent several days on the Haida Fisheries landing craft *Duu Guusd,* surveying shorelines within AOCs in Skidegate and Masset Inlets in August 2019 and March

CHN Marine Planning Program and Haida Fisheries Program staff are being trained in the development of Geographic response strategies in **Xaana Kaahlii GawGaay** *Skidegate Inlet*.





Hannah Bregulla

2020. While in the field, CHN staff record prevailing currents, take pictures of shoreline approaches, confirm depths, and find the best locations to deploy shoreline protection tactics such as absorbent and deflection booms.

All of this information will be digitized and used to develop area-specific Geographic Response Strategies for each location. GRSs are short tactical plans that first responders will take into the field and use in the event an oil spill or other marine pollution incident response. The goal is to have one Geographic Response Strategy for each of the 130 Areas of Concern. By planning for marine environmental emergency response in advance, the CHN ensures that sites with extremely high cultural, social and environmental value will be included in the response tactics, without delay.

While preventing marine incidents from occurring in the first place is a priority, preparing first responders such as Haida citizens and island citizens for a response is a critical part of taking care of Haida Gwaii.

3 QUESTIONS TO ASK, WHEN PRIORITIZING AREAS OF CONCERN

Is the area SENSITIVE?

Is it a site of archeological, cultural, spiritual or ecological value? Are there important resources (e.g. seabirds, herring spawning, marine plants, marine mammals) to protect?

Is the area VULNERABLE?

Is it located in a place, where potentially dangerous activities take place, such as near fuel dock or on course of a major shipping route or where fuel barges land? Is there a history of past incidents or close calls?

Is it FEASIBLE to mount a response?

In case of an oil spill, is it possible, with the limited resources available to mount an effective response at the site? Will size of the area, coastline, prevalent wind and currents allow for an effective response? A response should not have a more negative impact on the site than no response!

ABOUT THE CHN MARINE PLANNING PROGRAM

The CHN Marine Planning Program consists of a group of marine planning professionals who provide expertise and technical support for the CHN's marine planning and plan implementation initiatives, including:

- Haida Gwaii Marine Plan
- Gwaii Haanas GINA 'WAADLUXAN KILGUHLGA Land-Sea-People Plan
- SGaan Kinghlas-Bowie Seamount GIN SIIGEE TL'A DAMAAN KINGGANGS GIN K'AALAAGANGS Plan
- Pacific North Coast Integrated Management Area Plan
- Tri-partite shipping discussions
- Marine Protected Area network planning

In addition, the Marine Planning Program provides support for other marine-related initiatives, including: reconciliation, cooperative and coordinated management with BC and Canada, and communications and outreach.

CHN MARINE PLANNING STAFF

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Haawa • Haw'aa to **Khataya** *Lindsay Galbraith* and Carolyn Gibson for their much appreciated contributions to various projects.

Stef Olcen

ABOUT Kii.ngaay Taang.aay

The CHN Marine Planning Program developed this newsletter to provide Haida citizens, Island residents, and the broader public with information about the Haida Nation's marine planning initiatives. Each issue of **Kii.ngaay Tang.aay** features stories about specific marine-related projects that are underway in Haida Gwaii as well as updates on relevant laws, policies and reports that relate to the Haida Nation's marine planning and implementation activities.

Kii.ngaay Tang.aay is distributed to all of the communities of Haida Gwaii and is also available online on the Haida Nation's website at **www.haidanation.ca**

Like the Council of the Haida Nation's Facebook page to get updates on the Nation's latest news, issues and events.

For more information about the CHN Marine Planning Program, including current issues and initiatives that the program is currently working on, go to www.haidamarineplanning.com