
GREAT BEAR SEA
CPAWS
CANADIAN PARKS AND WILDERNESS SOCIETY
BRITISH COLUMBIA CHAPTER
WEST COAST
Environmental Law
PACIFICWILD
DAVID SUZUKI
FOUNDATION
One nature.

The Great Bear Sea is Home

BC needs a network of Marine Protected Areas. Indigenous nations have made their home along the coast and stewarded it for millennia. Let's work together to establish a network of protected areas across the Great Bear Sea where marine life and communities can thrive. Let's protect the Great Bear Sea. It's home.

GREAT BEAR SEA

About

This resource is adopted from the previous greatbearsea.org website, a collaborative effort between Canadian Parks and Wilderness Society - British Columbia Chapter, West Coast Environmental Law, Pacific Wild, and David Suzuki Foundation.

If you have any questions about this resource please contact:
oceans@cpawsbc.org

Visit **ourgreatbearsea.org** to learn more about the Great Bear Sea!

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THE REGION

Great Bear Sea
THE REGION

The Great Bear Sea, off the coast of British Columbia (BC), is one of our planet's most productive cold water marine environments and has tremendous cultural significance to the people who live here. The people along this coast rely on these waters for their food, livelihoods, recreation and wellbeing.

Many First Nations, the Government of Canada, and the Province of BC are working together to develop a network of marine protected areas (MPA) in this region. These partners are now seeking public input on a draft plan for the MPA network. Creating this MPA network will ensure that future generations can benefit from the beauty and productivity of the Great Bear Sea.

Click here for more information about the MPA network planning process and to add your voice.

Why the Great Bear Sea?

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Credit: West Coast Environmental Law

https://www.youtube.com/watch?v=gV2Fly-kY4I&feature=youtu.be

The Region and **SUBREGIONS**

The Great Bear Sea is one of several place names used to describe the marine waters spanning from Campbell River on Vancouver Island to the Alaskan border. This region covers two-thirds of the BC coast and the traditional territories of 32 First Nations. It aligns with the geographic area of the Northern Shelf Bioregion, one of 13 ecological bioregions identified for protection across Canada.

The Great Bear Sea region consists of four subregions: Central Coast, North Coast, North Vancouver Island, and Haida Gwaii.

The four subregions of the Great Bear Sea

HAIDA GWAII

Haida Gwaii is renowned for rich wildlife, old-growth forests and deeply rooted culture. The translation X̲aaydag̲a Gwaay.yaay (People of the Land or Haida's land) hints at the Haida people's deep connection with the land and sea. The Haida Gwaii archipelago comprises approximately 150 islands that extend about 250 kilometres north to south.

Photo Credit: Rogier Gruys / ©Parks Canada / Gwaii Haanas

Photo Credit: Jayne (Flickr CC)

NORTH COAST

The region's North Coast reaches from the Alaskan border south to Laredo Sound and west to the centre of the Hecate Strait. Thousands of islands dot a system of long, deep fjords

CENTRAL COAST

The Central Coast centres around Queen Charlotte Sound. The region contains hundreds of islands, rocky headlands that jut into the ocean, and a complex system of steep fjords.

Photo Credit: Markus Thompson

Photo Credit: Ruth Hartnup (Flickr CC)

NORTH VANCOUVER ISLAND

The North Vancouver Island region lies between northern Vancouver Island and the BC mainland, as well as the waters just north of Vancouver Island. It is a rugged area of many islands, inlets and fjords that are home to thriving communities and steep windswept cliffs that see few visitors.

Local **TREASURES**

These waters are one of Canada's unique natural treasures and one of the most biologically diverse cold water seas on earth. The region is also rich in culture, with diverse marine life and areas holding great significance to the people that live here.

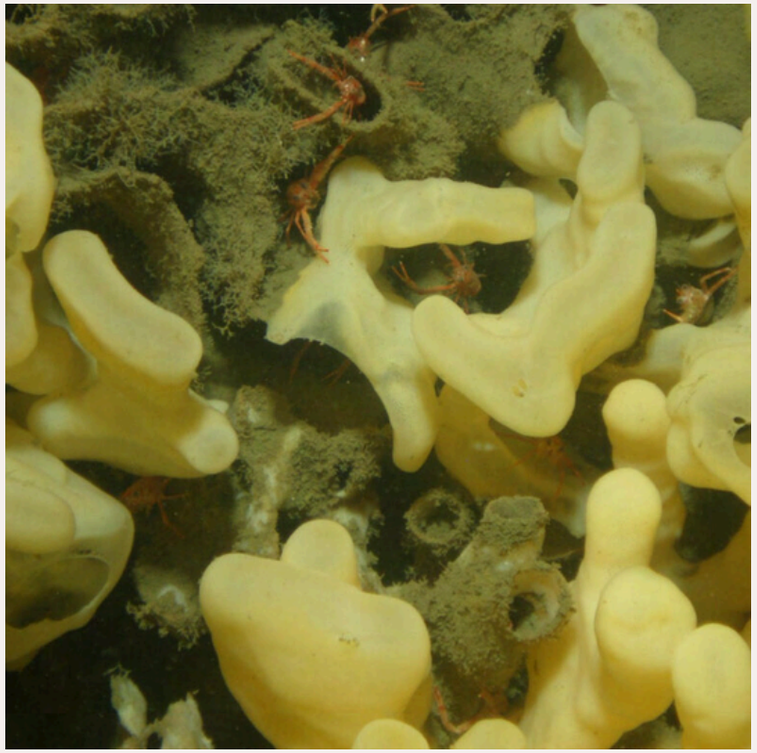


Photo Credit: Kim Conway

Living Glass Sponge

The Central Coast of BC is home to some of the world's last remaining glass sponge reefs, previously thought to be globally extinct.

Critical Seabird Habitat

These waters contain many areas that are critical to the survival of birds, especially migratory seabirds. Triangle Island supports British Columbia's largest seabird colony, hosting species like auklets, puffins, guillemots, gulls, cormorants and murres. The Scott Islands Marine National Wildlife Area protects the valuable feeding grounds for these birds.

Local **TREASURES**

UNESCO World Heritage Site

The village of SG̱ang Gwaay Llnagaay in Gwaii Haanas, on the archipelago of Haida Gwaii, is a **UNESCO World Heritage Site** owing to its globally significant cultural heritage. Here the remains of cedar longhouses and carved poles illustrate the art and way of life of the Haida, showcasing their living culture and deep relationship with the land and sea.

Great Bear Rainforest

A global ecological treasure that covers 6.4 million hectares on the north and central coast of BC – about the size of Ireland. Representing one quarter of the world's remaining coastal temperate rainforests, it is a rare ecosystem found in only 11 regions of the world.
Led by First Nations with government, environmental and industry sectors, 85% of the rainforest has been formally protected since 2016 through the **Great Bear Rainforest Agreement.**

Watch: **Great Bear Rainforest – Protecting Our Land and Sea.**

Photo Credit: Scott Munn / ©Parks Canada / Gwaii Haanas

Local **TREASURES**

Clam Gardens

Clam gardens, such as those on Quadra Island, are ancient intertidal features created and maintained by coastal First Nations to enhance shellfish productivity. These features are made by constructing rock walls at the low tide line along the edges of bays and inlets, transforming naturally sloping beaches or rocky shorelines into productive, level beach terraces for clams to grow. Clam gardening is still practiced today and supports thriving aquaculture on the coast.

Watch: Hakai Institutes Clam Gardens: Filling in the Gaps

Recovering Populations of Whales

This area of the ocean contains critically important whale habitat, from Telegraph Cove on Vancouver Island to Kitimat fjord in the North Coast. These areas and many more in the region support whale populations still recovering from the effects of whaling.

Watch: Orca Whale Sounds.

Photo Credit: Debbie Gardiner / ©Parks Canada / Gwaii Haanas

Local TREASURES

Photo Credit: yohancha (Flickr CC BY-ND 2.0)

A Rich Archaeological Record

Archaeological sites across the region have uncovered cultural footprints of First Nations. These include shell middens, clam gardens, fish traps, fire cracked rocks, and culturally modified trees, among others. These sites date from recent times to 14,000+ years ago, and studies are ongoing to uncover new information.

Watch: Hakai – The Archaeology Story.

An Abrupt Drop

The seafloor on the west coast of Haida Gwaii drops abruptly to abyssal depths more than 2 km deep. A process called “upwelling” causes nutrient-rich waters from the depths to rise to the surface, nourishing plankton, the basis of the marine food web. The enriched nearshore waters attract many species that are normally found offshore in open waters. Examples include seabirds like puffins and albatrosses, fishes like ocean sunfish and salmon shark, and even the occasional Basking Shark— the second largest fish on the planet.

The Importance of **A HEALTHY OCEAN**

www.youtube.com/watch?v=TzzzFdr_JJQ&feature=youtu.be

We rely on a healthy ocean to bolster healthy communities. With a strong and thriving ocean, we can enjoy activities like fishing, boating, kayaking, and whale watching.

Watch the video to learn more about why it's important to have a healthy ocean.

Photo Credit: Markus Thompson

Marine **VEGETATION**

These waters are among the most productive coldwater marine environments on the planet. An incredible diversity of animal, plant and seaweed species support a complex food web, ranging from tiny algae to gigantic whales. This abundance offers many benefits to communities along the BC coast, providing sustenance, livelihoods, recreation and more.

Photo Credit: Colby Stopa (CC BY 2.0)

BLUE CARBON HABITATS

These waters are home to kelp forests, eelgrass meadows, and salt marshes. These marine ecosystems, known as **blue carbon** habitats, absorb and store high amounts of carbon that would otherwise be released into the atmosphere. Acting as carbon sinks, BC's kelp forests can absorb two to four times more carbon than land based forests. Investing in their protection and restoration is key to fighting climate change.

Eelgrass HABITAT

Eelgrass is one of the most prominent seagrasses in BC, growing along 25-35% of the BC coast. In the Skeena River estuary, eelgrass meadows serve as nurseries for baby shellfish and fish, including young salmon. These habitats also capture excess nutrients to prevent harmful algae blooms, and their root systems stabilize shorelines from erosion and extreme weather.

Despite their many benefits, eelgrass meadows are one of the most threatened habitats in the world. Marine protected areas can protect eelgrass habitats from disturbances by anchors, dredging, and industrial development.

Photo Credit: Markus Thompson

Kelp FORESTS

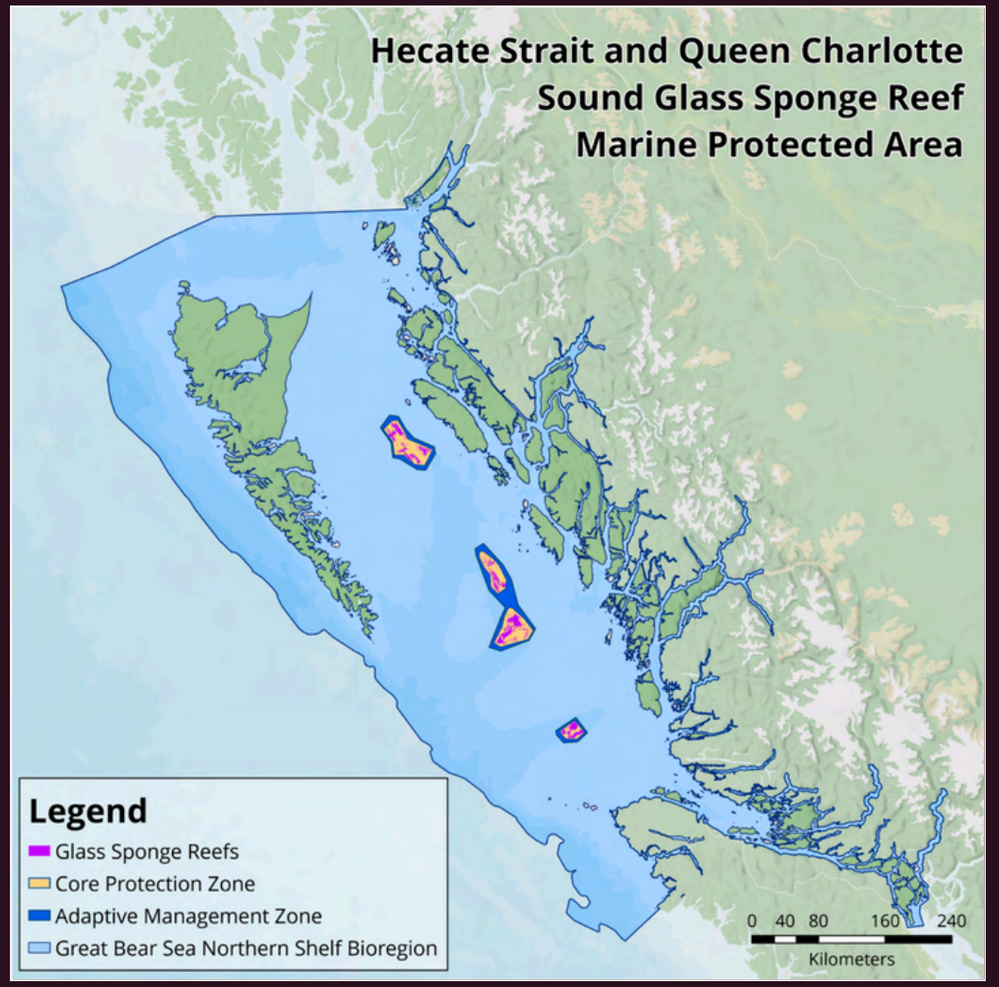
Dense underwater **kelp forests** provide cover from predators, and a habitat for animals like sea otters to hunt. These habitats are important for commercially harvested species such as juvenile cod, crab, and rockfish.

CORAL AND SPONGE REEFS

BC is home to cold water corals and sponges, including unique **glass sponge reefs** that were once thought to be globally extinct. Coral and sponge reefs create complex structures that provide habitat for many species, much like seagrasses do. They act as nurseries, refuge, and feeding grounds for other marine wildlife, and enhance local biological diversity and abundance.

Sponge Reefs in Hecate Strait and QUEEN CHARLOTTE SOUND

In the depths of Hecate Strait and Queen Charlotte Sound, sponge reefs cover over 700 square kilometres (equivalent to Vancouver Island's Greater Victoria region) of the seafloor and rise up to the height of a six-storey building. The intricate shapes of reefs make perfect nooks for young rockfish and other socially and economically important marine animals. In 2017, the Hecate Strait/Queen Charlotte Sound Glass Sponge Reefs Marine Protected Areawas designated to safeguard the reefs and the marine life they harbour.



Hecate Strait & Queen Charlotte Sound Glass Sponge Reef MPA

Cold Water Corals AND SPONGES

Saving the Sea of Glass

Glass sponge reefs are an integral part of a healthy marine habitat. These rare and unique marine animals provide shelter for marine life, including rockfish and shrimp, store carbon on the ocean floor, filter bacteria out of the water, and fertilize the ocean. The sea of glass supports thriving culture and livelihoods for coastal communities.

Watch: Saving The Sea of Glass in The Salish Sea **here.**

Photo Credit: Kim Conway

Fragile Reefs

Corals and sponges are very vulnerable to physical damage from bottom-contact fisheries. For instance, bottom trawling nets and prawn traps easily shatter the fragile skeleton of glass sponge reefs. **The Pacific Groundfish Trawl Habitat Agreement between industry**, NGOs and the federal government has dramatically curtailed trawling impacts on sensitive coral and sponge reefs. However, some reefs could benefit from proposed marine protected areas that would exclude bottom-contact fisheries. Additionally, these protections could increase reef resilience to climate change. The glass sponge reef near Dundas Island is the largest known reef still unprotected in BC.

Whales, Dolphins & **PORPOISES**

Whales, dolphins, and porpoises – collectively known as cetaceans – live in or migrate through these waters. By feeding on krill, herring, marine mammals and other animals, whales help bring balance to ocean ecosystems. Their feeding also helps fight **climate change,** with large amounts of carbon stored in their bodies. Cetaceans also help **transfer nutrients** between the deep ocean and surface waters.

The Deep Fjords of Douglas Channel

The **deep fjords of Douglas Channel** provide the perfect habitat for some whale species. These nutrient-rich waters are home to Canada's highest concentration of humpback and fin whales, two distinct populations of orcas, as well as other marine mammals. The threat of **ship strikes** and **noise disturbance** from increased tanker traffic in this area threatens species already at risk.

Listen to the recording of orca sounds drowned out by the propeller noise from a boat **here.**

Photo Credit: Charlie Stinchcomb (CC BY 2.0)

Whales, Dolphins & **PORPOISES**

Orca Rubbing Beaches

Johnstone Strait/Blackfish Sound is critical habitat for northern resident **orcas** – protection of the area is essential to the survival or recovery of these iconic species North of Vancouver Island. It's a popular destination for whale watching and other recreational activities like kayaking. Visitors can witness a rare behaviour where orcas rub themselves on shallow barnacle-encrusted rocks, pebbles and gravel seafloor.

Watch underwater footage of the **Rubbing Beach.**

Indicators of Ocean Health

Healthy whale populations indicate a healthy ocean and some whales like humpbacks have made a remarkable comeback in the region over the last decade. However, other whales show signs of trouble.

The **Pacific grey whale** population has declined by almost a quarter since 2016. Although the cause of this unusual mortality event is still unknown, scientists suspect one or a combination of climate change impacts on the whales' food supply, harmful algal blooms, disease, natural predation and human interactions as reasons for such decline.

Photo Credit: Ryan Miller www.millermarine.ca

Whales, Dolphins & **PORPOISES**

Humpback Whales

Every year, humpback whales migrate with their young from Hawaii and Mexico to feed in these thriving waters. They are well known for "bubble-net feeding" in which teams of whales work together blowing a net of bubbles and vocalizing to corral fish. A newly observed feeding method called "**trap feeding"** has also been recorded off northern Vancouver Island. After having their populations devastated by whaling, humpback numbers are increasing along the BC coast.

Watch: **MERS Trap-Feeding Video.**

Other Marine **MAMMALS**

These waters host a rich abundance and diversity of marine fishes, including many species that are important to First Nations, commercial, and recreational fisheries. Unfortunately, many fisheries have seen dramatic decreases over the years. **Marine protected areas** can help restore these populations.

Seals, Sea Lions and Otters

These waters are home to many marine mammals, including three species of seal, two species of sea lion, and the northern sea otter. **Seals and sea lions**, also known as pinnipeds, have specialized flippers and insulating blubber to swim and forage at sea. In contrast, **otters** are a type of weasel and have webbed feet and the thickest fur of any animal.

Stellar Sea Lions - Haul Outs and Rookeries

Haida Gwaii is home to the biggest colony of Steller sea lions in BC. The southern tip of the archipelago contains multiple haul out sites used for resting, along with rookeries for birthing and nursing pups.

Photo Credit: Markus Thompson

Other Marine **MAMMALS**

Sea Otters - Extirpation and Reintroduction

During the commercial fur trade of the 1600 to 1800s, sea otters were completely killed off in Canada. They were later reintroduced in Checleset Bay and have since repopulated parts of the Central Coast and North Vancouver Island where they feed on urchins and other invertebrates. Otter sightings have also been reported in Haida Gwaii, where they were once abundant. Sea otters play a key role in maintaining healthy kelp forests. Without them, urchin populations can explode and overfeed on kelp, decimating kelp forests and the animals that rely on them.

Bears - Connecting Land and Sea

While not a marine mammal, bears provide important connections between the land and sea. They transfer marine nutrients to the land by carrying salmon carcasses into the forest during spawning seasons, fueling the growth of forest ecosystems.

Photo Credit: Markus Thompson

Photo Credit: Markus Thompson

Marine **BIRDS**

The Pacific Flyway

The Great Bear Sea region is part of the **Pacific Flyway** – a major route for migratory birds in the Americas. Each fall and spring, hundreds of thousands of birds travel between their breeding grounds in the Arctic and their wintering grounds in Mexico and South America. These migrants rely on the nutrient-rich estuaries and mudflats where freshwater meets the Pacific Ocean to refuel and replenish body fat along their long journey.

Seabirds in Haida Gwaii

Around 1.5 million seabirds from 12 species nest on Haida Gwaii, including half of the world's population of Ancient Murrelets. Once an important food source for Haida First Nation, SGin Xaana (night-bird) or Ancient Murrelets, are now a species-at-risk in Canada due to predation and habitat destruction by introduced species.

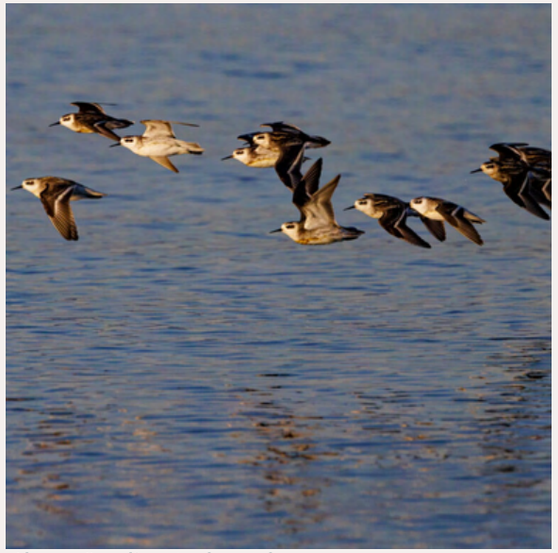


Photo Credit: Markus Thompson

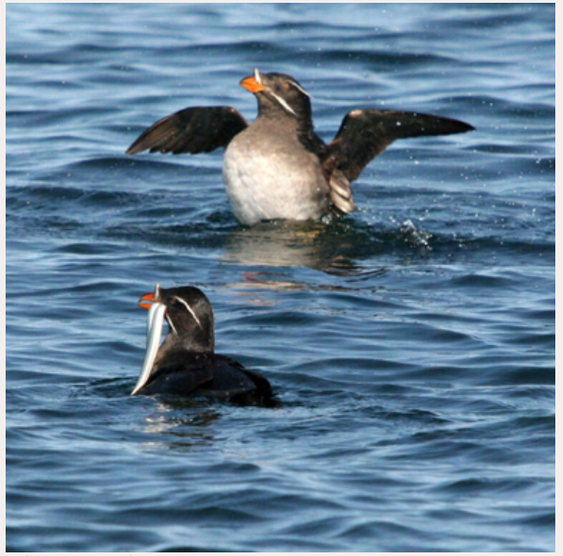


Photo Credit: Duane Fuerter

Marine **BIRDS**

Photo Credit: Markus Thompson

Photo Credit: Sabine Jensen

Important Bird Areas

These waters contain a network of internationally recognized **Important Bird Areas (IBAs).** A whopping 32 of the 84 designated IBAs in BC are in the region.

Largest Seabird Breeding Colonies

With roughly 1.4 million seabirds, the **Scott Islands marine National Wildlife Area** supports the largest seabird breeding colonies in BC. These birds include 50% of the global population of Cassin's auklets, 90% of Canada's tufted puffins, 95% of Pacific Canada's common murres, and significant numbers of rhinoceros auklets. These dedicated seabird parents brave the rugged waters to forage out at sea and bring back fish for their hungry chicks. Seabirds from as far away as Japan, Australia, and Chile also come here to feed in the prey-rich waters.

FISH

These waters host a rich abundance and diversity of marine fishes, including many species that are important to First Nations, commercial, and recreational fisheries. Unfortunately, many fisheries have seen dramatic decreases over the years. **Marine protected areas** can help restore these populations.

Eulachon

The **eulachon**, a small silvery smelt-like fish, has many names: oolichan, ooligan, hooligan. They are a significant food source for a wide variety of fish, birds and mammals– including humans. **Marine protected areas** that protect spawning areas could help restore eulachon populations.

Watch: **Among the Eulachon**

Photo Credit: Brodie Guy (CC BY-NC-ND 2.0)

Pacific Herring

Pacific herring are small, but might, forage fish that are crucial for many different species— from salmon to whales to seals and birds. Every spring, Pacific herring spawn on the coasts of Salish Sea islands. The milt turns the waters a turquoise blue colour, and the beaches become white-ish with billions of eggs.

Watch: **Beauty and the Feast**

Photo Credit: Province of BC (Flickr CC)

Photo Credit: Ed Bierman (CC BY 2.0)

Salmon

All five species of Pacific Salmon are found in the region: **chinook, coho, pink, sockeye,** and **chum salmon.**

The Skeena River estuary, consisting of immense mudflats and shallow intertidal passages, provides important nursery habitat for juvenile salmon. Each year, hundreds of millions of juvenile salmon journey through the Skeena River estuary on their way out to sea. At the end of their life cycle, they return to the streams, bringing vital ocean nutrients to streams and forests.

Watch: **Salmon Feed Forests**

Rockfish

There are 38 species of **rockfish** along the coast of BC. Rockfish have been fished as a reliable food source for centuries by First Nations and now represent an important fishery for coastal BC.

Some rockfish can live over 100 years, are slow to reproduce, and have incredibly small home ranges (often limited to a few square metres), with divers finding them in the same spot year after year. **Marine protected areas,** even small ones, can help restore populations and allow them to grow larger.

INVERTEBRATES

Invertebrates are animals that lack a backbone. They're the most diverse group of animals in the ocean. Mollusks are a category of invertebrates that include oysters, clams, and octopus. They have a soft body and may have a hard external or internal shell, or lack a shell altogether. Shrimp, lobster and crab belong to a group of invertebrates called crustaceans, which typically possess a body covering or shell. Many species of mollusks and crustaceans are targeted by commercial and recreational fisheries.

Dungeness Crab

Dungeness crab is the largest edible **true crab** on the Pacific coast and a popular seafood delicacy. They can grow as large as 10 inches across their body. Like other crustaceans, they need to shed their hard exoskeleton to grow.

Dungeness crabs reach sexual maturity quickly and have short life spans. This makes them a good alternative when it comes to sustainable seafood, according to **Seafood Watch** and **Ocean Wise**. To ensure the **sustainable fishing** of this crab in BC, only male crabs that have a body that is 6.5 inches can be taken to ensure that females remain to produce offspring and replenish the population.

Photo Credit: CDFW by Christy Juhasz (CC BY 2.0)

Octopus Dens

The **giant Pacific octopus** is the largest octopus in the world, usually weighing around 15 kg with arms that reach over 4 metres in length.

Naw náaGalang, or octopus houses, are circular dome-shaped structures on Haida Gwaii that mimic natural octopus dens occurring under large rocks, and used by First Nations to catch the invertebrates for food from time immemorial.

Photo Credit: Matt Knoth (CC-BY-NC-ND 2.0)

Nudibranchs

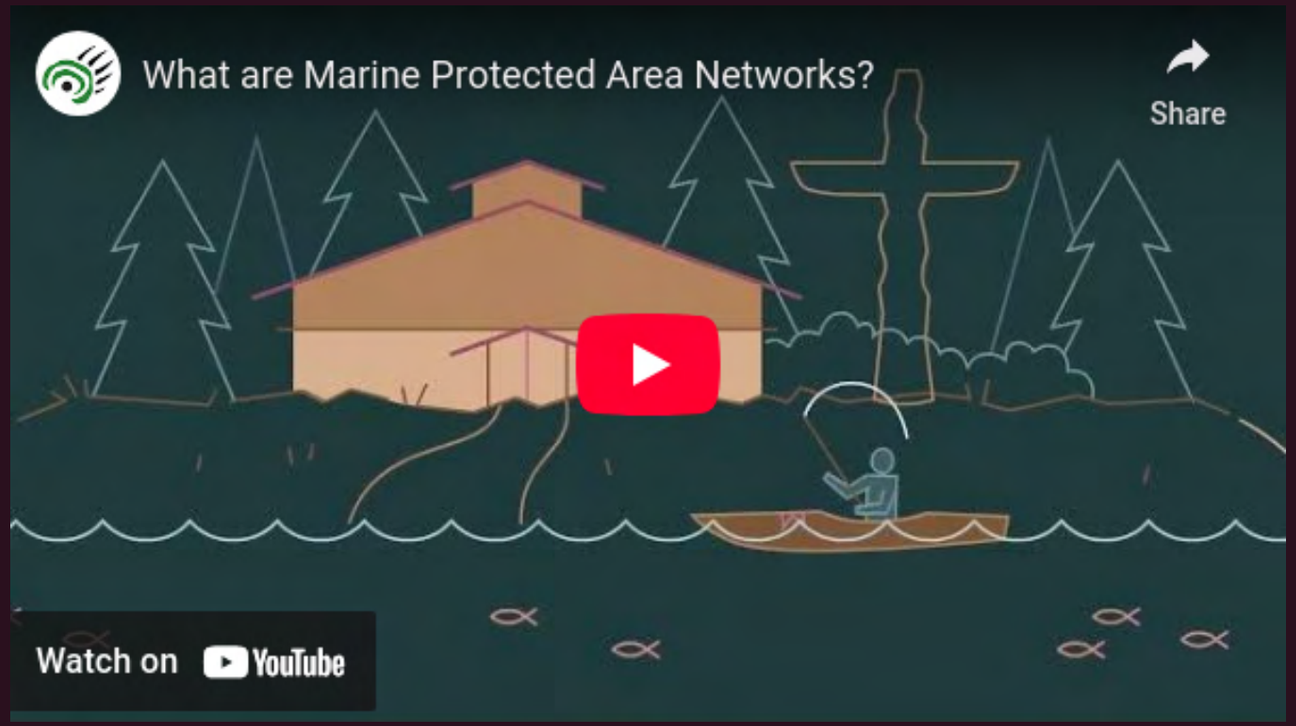
Nudibranchs are sea slugs, famous for the extravagant plume-like extremities on their backs. The bright colors warn predators that they are foul tasting or toxic to eat. Like slugs on land, they use the tentacles on their heads to sense the world around them.

Giant Jellies

The **lion's mane jellyfish**, is the largest jellyfish species on the planet. Its long trailing tentacles can grow longer than a blue whale. Stinging tentacles are used to capture and eat prey like fish, zooplankton, and even other jellyfish.

Photo Credit: Alan Weir (CC BY 2.0)

What are **MARINE PROTECTED AREA NETWORKS?**



www.youtube.com/watch?v=TzzzFdr_JJQ&feature=youtu.be

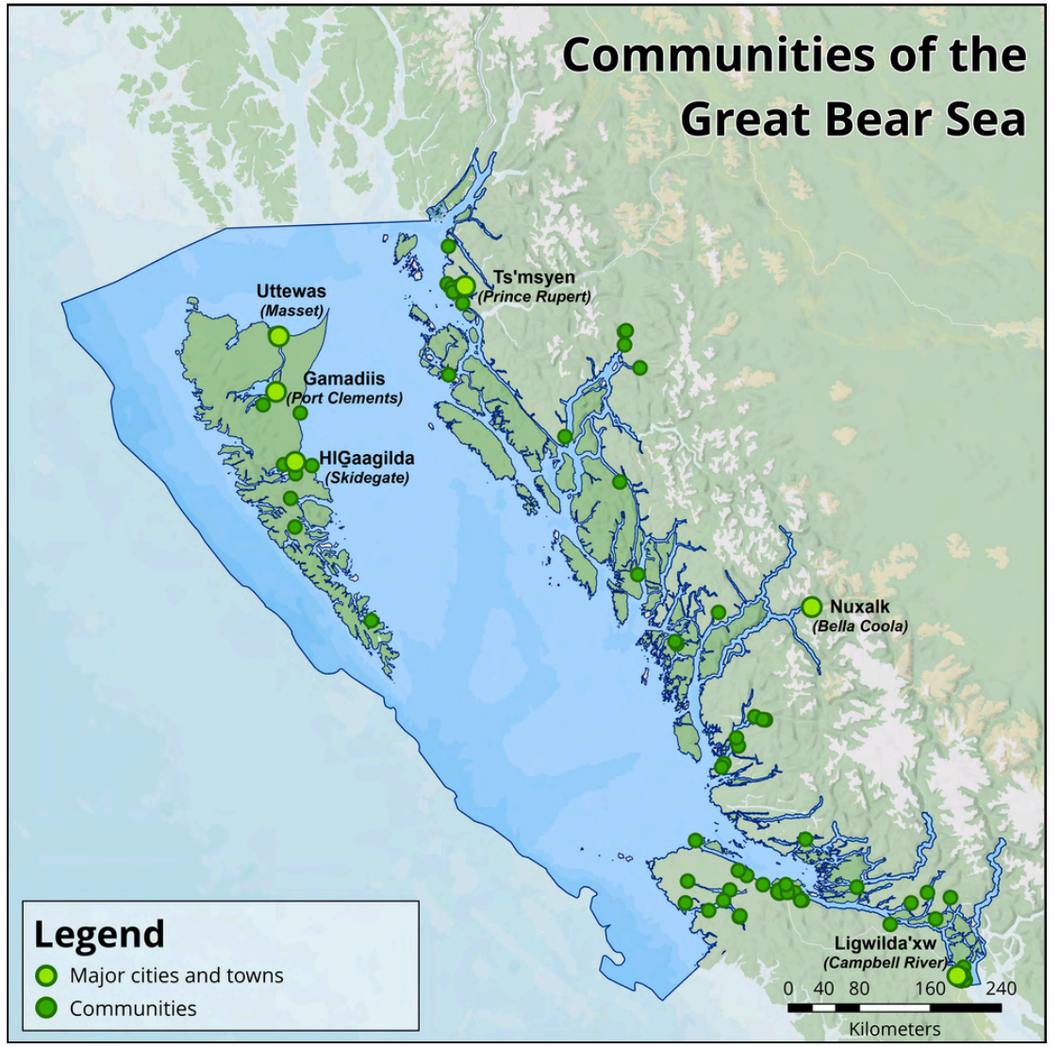
Protecting an area as large as the ocean is a daunting task. That's why we need a network of government and coastal communities working together to raise the level of protection across the ocean collectively.

Watch the video to learn more about Marine Protected Area Networks.

PEOPLE

Great Bear Sea **COMMUNITIES**

Many First Nations settlements along the coastal shores of the Great Bear Sea date back thousands of years. Today, there are 64 communities living next to this sea, half of which are First Nation communities. These waters are central to the cultures and economies of these communities, providing them with food, jobs, recreation, transport corridors, and many more benefits.



Communities in the Great Bear Sea

HAIDA GWAII COMMUNITIES

Haida Gwaii has been home to the Haida people since a time before memory and will continue to be for generations to come. About half of the archipelago's population of 4,400 is of Haida descent. The islands' main communities are Masset, Old Massett, Port Clements, Daajing Giids (Queen Charlotte City), Sandspit, Skidegate, and Tlell.

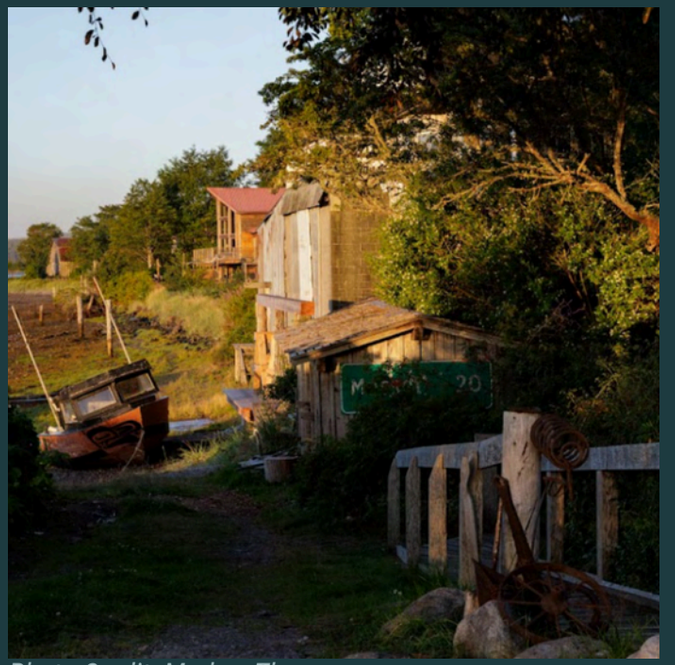


Photo Credit: Markus Thompson

Photo Credit: Markus Thompson

NORTH COAST COMMUNITIES

The North Coast is home to more than 42,000 people, with the majority living in the communities of Kitimat, Prince Rupert, and Terrace. This area includes the marine traditional territories of various First Nations, including member nations of the marine protected area network planning process – Gitga'at, Gitxaała, Haisla, Kitselas, Kitsumkalum, and Metlakatla First Nations. The area also includes lands covered by the Nisga'a Treaty.

CENTRAL COAST COMMUNITIES

About 3,500 people live adjacent to the Central Coast, mainly in the communities of Bella Bella, Bella Coola, Klemtu, Ocean Falls, Shearwater, and Kitit (Rivers Inlet). This area covers the traditional territories of several First Nations that have stewarded the lands and waters for millennia. First Nations involved in the marine protected area network planning process include the Heiltsuk, Kitasoo / Xai'xais, Nuxalk and Wuikinuxv First Nations.

Photo Credit: Sam Beebe (Flickr CC)

Photo Credit: Markus Thompson

NORTH VANCOUVER ISLAND COMMUNITIES

The North Vancouver Island area is home to roughly 40,000 people. Major communities include Port Hardy, Port McNeill, Alert Bay, Sayward and Campbell River. The area covers the traditional territories of the Kwiakah, Mamalilikulla, Tlowitsis, Da'naxda'xw-Awaetlatla, Wei Wai Kum and the K'ómoks First Nations – all partners in the marine protected area network planning process – as well as several neighbouring Nations with strong connections to the sea.

The Blue **ECONOMY**

The **“blue economy”** (economic sectors with links to the ocean and coasts) includes fisheries, tourism, and shipping. To benefit coastal communities, these industries depend on a healthy ocean. Growing the blue economy requires a commitment to ocean protection.

Commercial Fisheries

Commercial fisheries contribute $1.5 billion per year to the BC economy. They require healthy and abundant fish stocks. Over decades of commercial fishing harvesting, fish stocks in BC are at much lower levels of abundance than they were historically. Commercial fisheries can result in overharvesting and destructive practices that deplete stocks, destroy fish habitats, and endanger the longevity of fisheries.

Well managed marine protected areas can quadruple fish populations in only a decade and increase the abundance and body size of commercially-targeted species. With the “spillover effect”, these larger and more numerous fish move from protected areas replenishing neighbouring fishable waters.

Photo Credit: Rowan Trebilco / Green Fire Productions

The Blue ECONOMY

Sport Fisheries

BC has a reputation for being one of the greatest **sport fishing** destinations in the world. About 300,000 license holders participate in tidal recreational fishing on the coast. The most important recreational fishing species are Pacific salmon and bottom fish like halibut. Marine protected areas can help provide healthy and abundant populations of fish for this sector and be a key economic driver.

Watch: **Fishing BC Presents: Exploring Port Hardy on Northern Vancouver Island.**

Tourism

The remote wilderness, unique culture, and spectacular ocean vistas of the Pacific coast attract visitors from around the world. Coastal tourism – including **Indigenous-led tourism** – is one of the fastest growing sectors in the BC economy. The $5.8 billion in annual revenue that nature-based tourism and recreation brings in directly depends on healthy coastal ecosystems.

For example, the Kitasoo Xai'xais Nation-owned and operated **Spirit Bear Lodge** employs nearly 10% of the local Central Coast population, particularly youth.

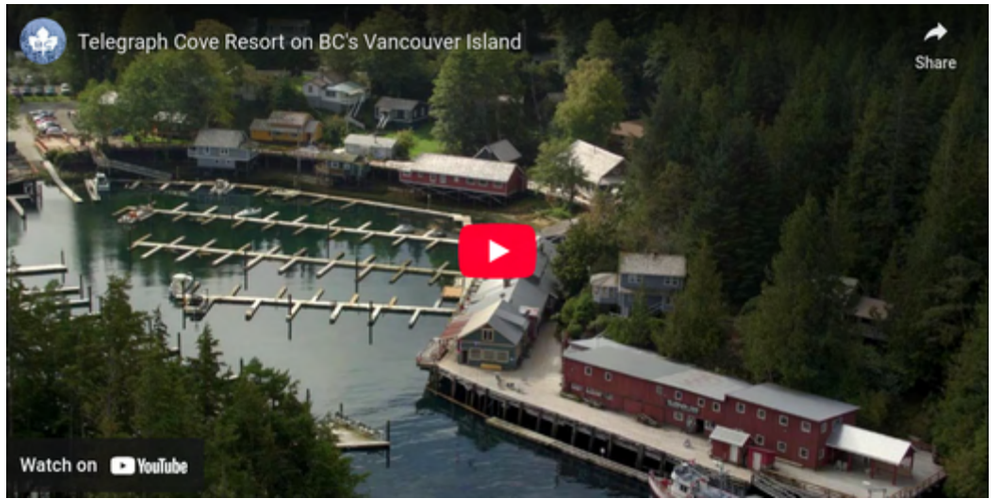
Watch: **Spirit Bear.**

The Blue ECONOMY

Marine Transportation

Transportation is the largest sector of BC's blue economy, bringing in $5.9 billion a year. The remote coastal communities in the Great Bear Sea region rely heavily on marine transportation for travel and access to goods and services. However, marine vessels impact ocean ecosystems with a number of **stressors**, including air and water pollution, marine accidents and spills, underwater noise, whale strikes, and ocean dumping. Well managed marine protected areas can reduce these impacts within their boundaries and help contribute to the use of better shipping practices elsewhere.

Telegraph Cove Resort on BC's Vancouver Island



https://www.youtube.com/watch?v=_Y6RAyJi_1A

Watch: **Telegraph Cove Resort.**

Food from **THE SEA**

The ocean has always been an important and reliable source of food for people living along the Great Bear Sea region. **Food from the sea** is not only delicious; it's also high in protein and packed with micronutrients that are not readily found in land-based foods.

Watch: **Preparing Spring Salmon on BC's Haida Gwaii.**

The Coastal Food Web

Indigenous communities have always sustained themselves on the abundance of these marine waters. Each season brings new fish, shellfish, and seaweed to harvest – renewing a deep connection to the sea and the species that are vital to community health and wellbeing. Protecting marine resources is essential in preserving this **harvesting cycle** that goes back thousands of years.

Watch: **Preserving the Coastal Food Web.**

Photo Credit:A. Davey (CC BY 2.0)

Food from **THE SEA**

Wild Harvest Festival

Food has always been part of the human story and a way to connect with others. Since 2015, the local, grassroots **Sandspit Wild Harvest Festival** in Haida Gwaii has been bringing people together to share and exchange knowledge about the foraging of wild plants, animals and marine life for food, medicine, and other uses.

Photo Credit: Sandspit Wild Harvest Festival

Harvesting Herring Roe

Indigenous Nations have sustainably harvested **herring roe**, tiny fish eggs, for thousands of years. The fish eggs are collected from kelp or hanging tree branches in areas where herring spawn.

Clam Digging

Shellfish have always been a staple food source for coastal First Nations. Razor clams are abundant on the exposed, wavy and sandy beaches on the North Coast of Haida Gwaii, where harvesting them has been an important cultural practice for thousands of years.

Watch: **Kâmahl – Harvesting Razor Clams.**

Photo Credit: Markus Thompson

Food from **THE SEA**

Indigenous Culinary Experiences

Indigenous chef Roberta Olsen from **“Keenawii’s Kitchen”**, named after her Haida name ‘Keenawii’, offers her guests a cultural experience through the sharing of an authentic Haida meal. Each meal features multiple courses and traditional Haida foods cooked with ingredients that have been grown or caught on Haida Gwaii, including seafood like dried seaweed, salmon, and herring eggs on kelp.

Watch: **Keenawii’s Kitchen – Food From The Sea.**

Traditional and Commercial Uses of Kelp

First Nations have harvested kelp in this area from time immemorial. Traditional practices are still used today to collect herring eggs and hunt animals living in kelp forests. Certain types of kelp are also **harvested for commercial uses**. They offer a sustainable alternative ingredient in fertilizers, food additives, and cosmetics.

Photo Credit: Markus Thompson

RECREATION & OUTDOOR ACTIVITIES

Coastal and marine areas in the region provide excellent opportunities for adventure and recreation, including scuba diving, sport fishing, surfing, wildlife watching, sailing and boating. These nature-based activities play an important part in maintaining our physical, mental and emotional health. For many people, these experiences form our strongest connection to nature.

WILDLIFE EXPERIENCES

Wilderness experiences across the region range from wilderness resorts and spas to kayaking and wildlife viewing. The expansive wilderness and presence of iconic BC wildlife are important factors for people choosing the Great Bear Sea as a tourism or adventure destination. In the Central Coast, the chance to see the spirit bear, a rare subspecies of black bear, attracts tourists from around the world.

WHALE WATCHING

Whales have wowed people for millennia and are deeply woven into the histories of coastal First Nations. Today, **Indigenous guides** offer visitors culturally immersive experiences that combine whale watching expeditions with storytelling visits to coastal cultural sites.

Photo Credit: Ryan Miller www.millermarine.ca

RECREATION & OUTDOOR ACTIVITIES

SURFING

Haida Gwaii offers excellent **surfing** experiences for those brave enough to venture into its frigid waters. A crowd favorite is North Beach, which is beloved by locals and visitors for its fun waves, uncrowded beaches, and dramatic scenery. With surfing growing in popularity both nationally and internationally, Haida Gwaii remains one of the best and most remote surf destinations in Canada.

Watch: **Surfing in Haida Gwaii.**

KAYAKING

Kayaking provides the ultimate vantage point to explore these waters and all the wilderness and cultural heritage they have to offer. **BC Marine Trails** offers simple, practical resources to guide paddlers, from novices to experts, in exploring the coastline safely, sustainably, and respectfully.

DIVING

This region has many great options for scuba diving, free diving and snorkeling, especially in North Vancouver Island. Browning Pass near Port Hardy is world-renowned for its coldwater diving, a destination made famous by the late ocean explorer Jacques Cousteau. These waters are enriched with plankton from seasonal upwellings, supporting a great abundance and variety of ocean life. Giant Pacific octopus, schools of rockfish, and vibrant anemones are some of the many species that can be encountered here.

CANADA'S LARGEST GHOST TOWN

The coast provides tourists with many outdoor adventure options. One of the most peculiar and eerie is a tour of **Anyox** – Canada’s largest Ghost Town. On the coast of the Observatory Inlet, Anyox is a quintessential example of a once thriving mining town turned abandoned ghost town, offering visitors a glimpse of the boom-and-bust cycle of BC’s early mining history.

Collaborative **STEWARDSHIP**

First Nations have stewarded the lands and waters of the North Pacific Coast for thousands of years, according to their own laws and knowledge systems. Today, many First Nations work **collaboratively** with federal and provincial governments to advance conservation and sustainable resource management in the region and other parts of Canada. This includes collaborative efforts to develop Canada's first-ever marine protected area network in the Great Bear Sea region.

Email **oceans@cpawsbc.org** to let us know about other marine stewardship initiatives in the Great Bear Sea.

Coastal Guardian Watchmen

The North Pacific Coast is a vast area that faces a number of threats, including illegal forestry, recreation, fishing and hunting. The **Coastal Guardian Watchmen** play a critical role in stewarding these areas under Indigenous law, ensuring resources are sustainably managed, that rules and regulations are followed and that land and marine use agreements are implemented effectively.

Eulachon Restoration

Eulachon plays an important role in the health and cultural well-being of many coastal First Nations. Aside from food, First Nations make **grease** from the oily fish, which is also known as "candlefish" because First Nations used the dried fish as a torch at night. The Nuxalk Sputc (Eulachon) Project aims to restore eulachon to historic populations and revitalize the cultural practices tied to it.

Photo Credit: Georgia Lloyd-smith

Collaborative **STEWARDSHIP**

BC Clean Coasts

Funded by the Province of BC in partnership with coastal communities and Indigenous Peoples, the Clean Coast, Clean Waters initiative aims to reduce plastic pollution, support healthy marine environments and create new jobs. To date, the initiative has already removed more than 1,000 tonnes of debris, including more than 250 tonnes of derelict vessels (86 vessels). The initiative has also recycled or upcycled 65% of material recovered from shoreline projects and cleaned nearly 4,000km of shoreline.

The Gwaii Haanas Agreement

The Haida Nation was first to designate the Gwaii Haanas Haida Heritage Site in Haida Gwaii, including the marine area of what is now designated Gwaii Haanas National Marine Conservation Area Reserve (NMCAR) under Canadian legislation. Through the **Gwaii Haanas Marine Agreement (2010)**, the Haida Nation partnered with the Government of Canada in the establishment of Gwaii Haanas NMCAR. The agreement expresses respect for Canadian and Haida interests and designations, and includes a mutual commitment to protect Gwaii Haanas. The 42-foot **Gwaii Haanas Legacy Pole** on Lyell Island honors this ground-breaking achievement of cooperative management.

Photo Credit: Holly Richards / USFWS

Collaborative **STEWARDSHIP**

Blue Carbon: A Climate Change Solution

First Nations and other coastal communities are investing in the protection and restoration of salt marshes, eelgrass meadows, and kelp forests. These are known as “blue carbon habitats” because they store vast amounts of carbon that would otherwise be released into the atmosphere.

Salmon Creekwalkers

Salmon are integral to the well-being of coastal ecosystems and communities, from feeding bears to nurturing forests and sustaining livelihoods, cultures and traditions. Coastal Guardian Creekwalkers aim to learn more about salmon populations (and recent declines), by visiting streams multiple times during spawning to count fish and provide detailed assessments of salmon returns.

Dungeness crab Recovery

In a precedent-setting example of collaborative governance in action, First Nations on the Central Coast engaged with federal officials to close key fishing locations to enable Dungeness crab populations to recover. The species is culturally significant for the Nations.

Photo Credit: Stephanie Funa/ @Parks Canada/ Gwaii Haanas

Photo Credit: Kevin Cole (Wikimedia)

COLLABORATIVE RESEARCH

Drawing upon multiple types of knowledge strengthens environmental research and management. Collaborative science – integrating Indigenous knowledge, local knowledge and science-based knowledge – is taking place across these waters to support conservation and management actions.

HUMPBACK RESURGANCE

Humpback whales are making a comeback along the North Coast. The **Gitga'at First Nation and whale researchers** are working together to learn how to keep those surging populations healthy.

CORAL REEF DISCOVERY

In May 2021, a long-term **research partnership** between Central Coast First Nations and Fisheries and Oceans Canada discovered a coral reef in Finlayson Channel – the first coldwater coral reef to be identified along the North Pacific Coast. Previously thought to be extinct in this region, it's the first intact Lophelia pertusa reef found in Canada's Pacific.

Photo Credit: Ryan Miller www.millermarine.ca

Photo Credit: NOAA

COLLABORATIVE RESEARCH

ROCKFISH RESEARCH

Rockfish have been fished as a reliable food source for centuries by First Nations. It's now an important fishery for coastal BC. **Collaborative research** between Central Coast First Nations and others has led to increased knowledge and better management practices of this culturally important species

Photo Credit: Ed Bierman (CC BY 2.0)

KELP MONITORING

Kelp species are sentinels of the health of marine environments. Monitoring kelp is critical to informing decision-making in marine conservation and management. The **Regional Kelp Monitoring Project** brings together experts from various collaborating initiatives to monitor the extent and condition of kelp forests across these waters.

Photo Credit: Lichen, Troy Moth I Gitxsan Territory

The Benefits of a Marine **PROTECTED AREA NETWORK**

www.youtube.com/watch?v=TzzzFdr_JJQ&feature=youtu.be

Creating marine protected areas, and networks of MPAs that are strong, permanent and well-regulated is an essential step toward a healthy ocean. Let's take a closer look at how marine protected areas and their networks can benefit both the ocean life within it and the communities that border them.

Watch the video to learn more about the benefits of Marine Protected Area network.

Creating a MARINE PROTECTED AREA NETWORK

Credit: West Coast Environmental Law

https://www.youtube.com/watch?v=gV2FIy-kY4I

For over a decade, 17 First Nations and the governments of Canada and BC have been working together to develop the Northern Shelf Bioregion Marine Protected Area (MPA) Network spanning from North Vancouver Island, along the Central and North Coasts, and Haida Gwaii. These partners are now seeking public input on a draft plan for the MPA network.

Developing a well managed MPA network, the first one in Canada, will help to ensure that future generations can benefit from the beauty and bounty of the Great Bear Sea.

Ocean
UNDER THREAT

A healthy ocean has sustained communities and cultures in the region for thousands of years. But the ocean's ability to provide for people is under threat more than ever before. These threats include overharvesting, destructive fishing, and pollution, all of which are amplified by climate change.

Marine protected areas can help reduce these threats by managing human activities. **These areas** act as a refuge where nature has the space it needs to recover, adapt, and thrive.

Photo Credit: Markus Thompson

Ocean UNDER THREAT

Depleted Fish Stocks

Multiple fisheries in BC are struggling due to overharvesting, habitat destruction, climate change and poor management. **Declines in species** include salmon, herring, rockfish, Dungeness crab, eulachon, kelp and other seaweeds, and northern abalone.

Establishing marine protected areas can provide long-term benefits for fisheries, by helping to rebuild and sustain abundant fish stocks.

Destructive Fishing

Fishing is an integral part of our local and global food systems. Indigenous Peoples have sustainably fished in this region from time immemorial. But some commercial fishing practices can have destructive impacts on marine ecosystems through over-harvesting, by-catch and habitat destruction if not managed properly.

A fishing method of concern is bottom trawling which involves dragging a net across the seafloor to scoop up fish. It has the potential to damage sensitive seabed habitats such as coral and sponge reefs or sea pens. Through a **unique agreement** between the commercial fishing sector, conservation groups and the federal government, bottom trawl impacts on these sensitive habitats have been reduced in the Great Bear Sea.

Establishing marine protected areas that prohibit bottom-trawling can add an additional layer of protection to ensure important habitats stay intact and productive.

Ocean
UNDER THREAT

Ocean Dumping

Ocean dumping contaminates the marine environment and can be harmful to humans as well.

- Sewage, both treated and untreated, can cause fecal contamination in the shellfish we eat.
- Greywater, from sinks, showers and washing machines aboard ships – notably **cruise ships** – promotes algal blooms, creates ocean dead zones, and contains microplastics.

Establishing marine protected areas that **prohibit dumping** is important for ocean health.

Watch: **Help ensure #NoDumping in MPAs means NO to ALL dumping of harmful ship waste.**

Climate Change

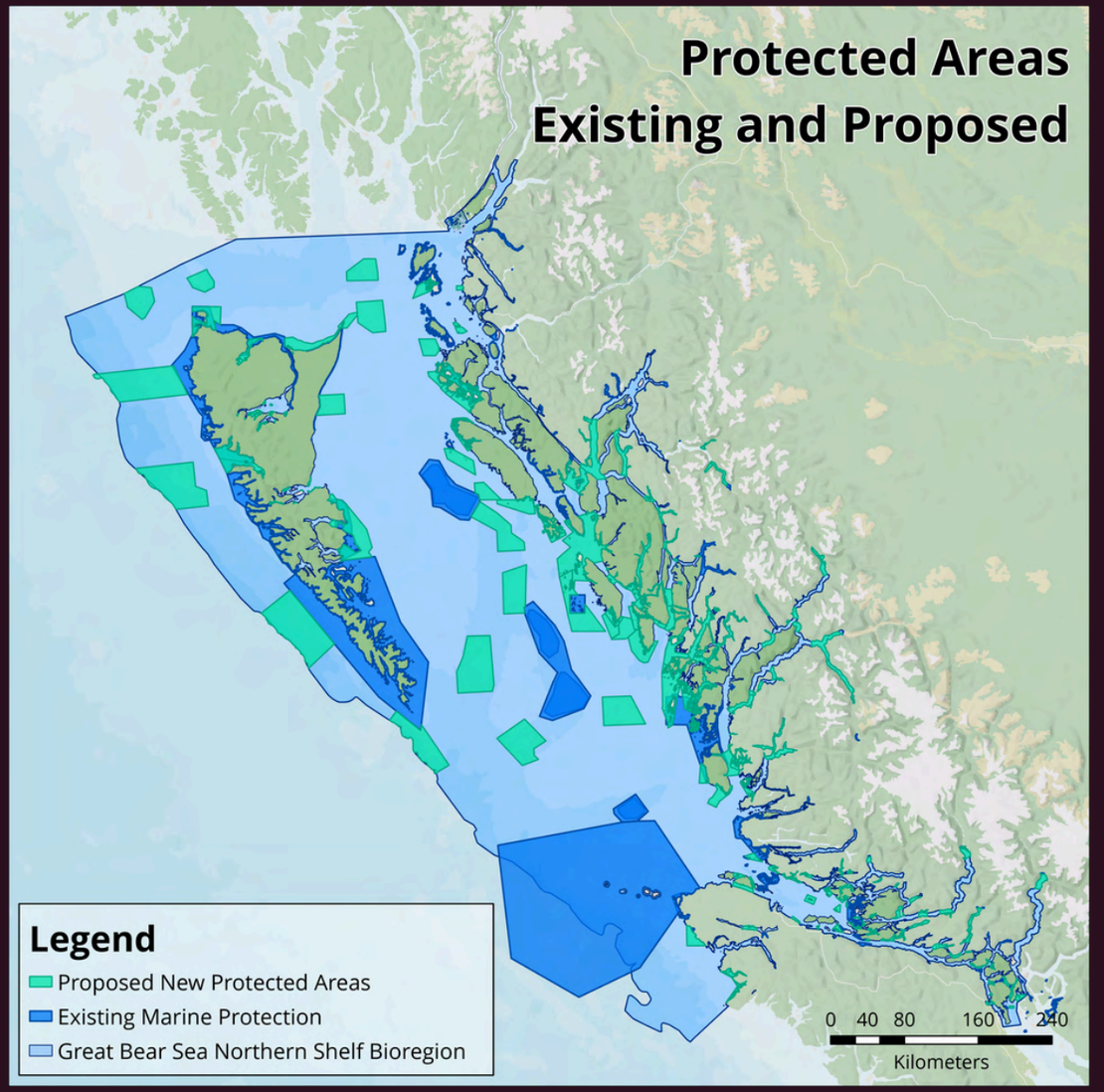
Climate change is causing the ocean to warm, become more acidic, and low in oxygen. Sea levels are rising across the BC coast, putting communities and marine environments at risk.

Establishing marine protected areas helps to maintain ecosystem functioning, biodiversity and productivity, which enhances the ability of habitats and species to withstand stressors and recover quickly. This makes them more resilient to climate change impacts. Marine protected areas can also help mitigate climate change by protecting habitats, like salt marshes and seagrass beds, that **remove and store carbon** from the atmosphere.

Existing Marine **PROTECTED AREAS**

A marine protected area is a defined area of the ocean that conserves nature by preserving sensitive habitats and reducing threats to marine life. There is no one-size-fits-all when it comes to marine protected areas. Existing protected areas vary in size, the types of human activities permitted, and how they are managed.

This region has a number of existing marine protected areas that provide key protection. A network will connect these sites and amplify the benefits of protection to support ocean health across the region.



Existing and Proposed marine protection in the Great Bear Sea

Existing Marine **PROTECTED AREAS**

Gitdisdzu Lugyeks (Kitasu Bay) Marine Protected Area

In June, 2022, the Kitasoo Xai'xais Nation declared the **Gitdisdzu Lugyeks (Kitasu Bay) marine protected area**. The declaration is in accordance with Kitasoo Xai'xais laws, customs, principles, and values. Near Klemtu on the Central Coast, it will protect tidal lagoons, estuaries, and kelp forests. Seabirds, whales, salmon, herring, and shellfish depend on the area for food and shelter. The management plan weaves together traditional Kitasoo Xai'xais knowledge and management practices with the latest science-based marine research. The waters will continue to be monitored and cared for by the Kitasoo Xai'xais Watchmen, which carry on the work of their ancestors in protecting and managing coastal territories.

Gwaii Haanas Marine Conservation Area Reserve & Haida Heritage Site

Haida Gwaii's **Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve (NMCAR), and Haida Heritage Site** protects natural and cultural treasures from mountain top to sea floor. The Gina 'Waadluxan KilGuhlGa Land-Sea-People Management Plan, which means "talking about everything", manages Gwaii Haanas as a single, interconnected ecosystem. Managed cooperatively by the Council of the Haida Nation and the Government of Canada, this NMCAR is made up of different management zones, which work together to protect ecological and cultural features, while maintaining viable commercial and recreational activities. Traditional access is maintained throughout Gwaii Haanas.

Photo Credit: Rogier Gruys / Parks Canada / Gwaii Haanas

Existing Marine **PROTECTED AREAS**

Photo Credit: Markus Thompson

Hecate Strait/Queen Charlotte Sound Glass Sponge Reef Marine Protected Area

In 2017, the **Hecate Strait/Queen Charlotte Sound Glass Sponge Reefs Marine Protected Area** was established to protect thousands of square kilometers of ancient glass sponge reefs, which are only found off the coast of the Pacific Northwest. This marine protected area restricts activities that may damage the health or functioning of reefs, such as bottom trawling – thus providing a safe refuge for sponges and the species who depend on them. By protecting glass sponge reefs that sequester carbon, the marine protected area also contributes to mitigating climate change.

Gwaxdlala/Nalaxdlala (Lull Bay/Hoeya Sound) IPCA

In November, 2021, the Mamalilikulla First Nation declared the **Gwaxdlala/Nalaxdlala1 (Lull Bay/Hoeya Sound) Indigenous Protected and Conserved Area (IPCA)** in Knight Inlet on the Central Coast. The 10,416 hectare IPCA contains a unique underwater sponge and coral reef, as well as historical Mamalilikulla settlements and cultural and archaeological sites. The Mamalilikulla First Nation plans to restore its traditional governance approach and take a primary role in the planning, use, management, and restoration of its traditional lands and waters.

Existing Marine **PROTECTED AREAS**

Scott Islands Marine National Wildlife Area

In 2018, the **Scott Islands marine National Wildlife Area** was established to protect the highest concentration of breeding seabirds on the Pacific Coast of Canada. This marine protected area is collaboratively managed between Canada, BC, Tlatlasikwala First Nation and Quatsino First Nation.

Rockfish Conservation Areas

Another conservation tool used in the region are **Rockfish Conservation Areas**, which prohibit all fishing activities that impact rockfish species. There are 71 sites across these marine waters that give different species of rockfish a safe space to grow old and large enough to reproduce and replenish their populations.

Hakai Lúxvbálís Conservancy

In addition to marine protected areas, there are other types of effective conservation measures such as provincial marine parks. The largest marine park, encompassing more than 120,000 hectares of land and sea, is the **Hakai Lúxvbálís Conservancy**. It is managed under a cooperative agreement between the Haíłzaqv (Heiltsuk Nation) and the Province of British Columbia.

Photo Credit: Nicole Beaulac (Flickr CC)

Photo Credit: Ed Bierman

Benefits of MARINE PROTECTED AREAS

Marine protected areas provide **refuge for ocean life** to thrive and also benefit people by supporting sustainable industries, local economies, and coastal communities.
Networks of marine protected areas amplify the benefits of single sites by protecting wildlife movement and a wider array of biodiversity.

Benefits to Nature Conservation

Marine protected areas are recognized worldwide as an effective tool to protect, maintain and restore ocean health. By limiting harmful human activities, **marine protected areas** can:

- Provide safe refuges for ocean wildlife, especially endangered species.
- Protect important habitats and ecosystems used by species throughout their life cycle, including breeding grounds, nursery areas, and migratory rest stops.
- Restore damaged habitats and depleted populations.
- Act as an “insurance policy” for marine conservation against unpredictable environmental changes or management failures.

Photo Credit: Markus Thompson

Photo Credit: Lichen, Troy Moth | Gitxsan Territory

Photo Credit: Markus Thompson

Benefits of MARINE PROTECTED AREAS

Benefits to Fisheries

Marine protected areas support abundant fish stocks by offering a refuge where fish can grow larger, live longer and produce more offspring. As numbers of fish in MPAs multiply, some fish and their babies can **spill over** into neighboring waters where fisheries can reap the rewards. This, in turn, can help in the recovery of depleted fish stocks, supporting local food security and sustainable fisheries in the long-term.

Economic Opportunities

In addition to fisheries, marine protected areas can greatly **benefit tourism and related endeavours** like recreational activities. That's because marine protected areas help to preserve or enhance the natural beauty and the abundance of wildlife that attract recreational users and tourists from near and far. Marine protected areas can also create new jobs in marine protected area planning, management, monitoring, research and education.

Benefits of
MARINE PROTECTED AREAS

Benefits to Climate Change Adaptation and Mitigation

As the world grows warmer, marine protected areas can help both **nature and people** by protecting habitats such as salt marshes, seagrass meadows, and kelp forests that both capture carbon (climate change mitigation) and buffer coasts against rising tides and storm surges (climate change adaptation).

Benefits to First Nation Communities

Marine protected areas can play a central role in **reconciliation and upholding Indigenous rights and laws**. To honour, learn and weave knowledge of marine protection through co-governance sets the course for a healthy ocean that supports us all. Ocean resources are the lifeline for coastal First Nations people. Protection and sustainable economic development are the foundation of their marine plans for their territorial waters.

Photo Credit: Lichen, Troy Moth | Gitxsan Territory

Strong **PROTECTION**

Marine protected areas only produce ecological, economic, and social benefits under appropriate design and management conditions. In order for marine protected areas to be an effective conservation tool, emphasis must be placed on proper management and **strong protection**.

In 2019, Canada committed to implementing "**minimum standards**" for all new federal marine protected areas. These standards would prohibit dumping, bottom trawling, mining and oil and gas activities. Canada also committed to review existing marine protected areas against these standards. An interdepartmental task force was convened in 2020 to define and operationalize the minimum protection standards to support implementation.

Download a helpful infographic that talks about what stronger marine protection looks like.

Click to download

Why We Need to Strengthen **MARINE PROTECTED AREAS**

https://www.youtube.com/watch?v=rhbm9ydWaFQ&ab_channel=CPAWS-BC

Establishing a minimum standard of protection is only one step in an effort toward building stronger protection for our ocean.

Watch the video to learn more about why we need to strengthen Marine Protected Areas.