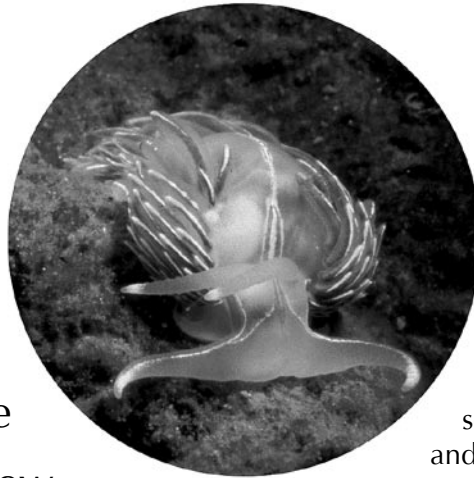


STOCK

The context of these reflections lay in dialogue that Islanders have been engaged in over the past few years – informal conversations, interviews and workshops. In this document, I have tried to accurately reflect the thoughts, concerns and needs that I have heard Islanders express. It is my hope that these reflections will begin to lay foundations for an Islands' grown Haida Gwaii Marine Strategy whose first consideration is Haida Gwaii and the people who live with it. ~ Lynn Lee

TAKING

reflecting on
the sea around us



Salmon, halibut, lingcod, rockfish, clam, abalone, urchin, prawn, crab, shrimp, scallop, octopus, mussel, barnacle and seaweed. These are some of the fish, shellfish and marine plants that have sustained the Haida people over thousands of years and today they still feed the Haida and other Islanders.

But, things are different now. Haida people lived with the land and sea, using ocean resources for food, ceremony, tools and trade – clan rights and customs ensured the perpetuity of what they used. Now, like no other time in history, plants and animals are being exploited and sold on world markets at rates that guarantee the extinction of some species. The scale of the commercial salmon fishery, canneries, trawlers and underwater fishing technology, are all taking its toll.

Complex ecological puzzles emerge from this situation. What was the ocean like when sea cows still existed or when sea otters thrived and fur seals were plentiful? What was it like before large-scale industrial fishing began? How do marine resources contribute to the Islands today and most importantly, what can it to look like in future?

FISHING

The history of fisheries here began with the Haida fishing for food and trade in a system that evolved over several thousand years. In the last two centuries, European trade has led to large-scale industrial fishing for sea otter, fur seal, whales, salmon, groundfish and shellfish. As these fisheries grew, fishers became removed from the marine ecosystems that supported them. Where the majority of salmon fishers used to live in the north, most now live in southern BC. No Islanders and few on the North Coast hold geoduck licenses even though half the catch comes from the North Coast, and of that, a third from Haida Gwaii. Except for the razor clam and Dungeness crab fisheries, people who do not live near their fishing areas hold the majority of licenses and benefit most from the resources. Some fish is processed on-Island, but most is taken away.

Islanders realize that action is needed now before more salmon stocks disappear, before rockfish and lingcod are hard to find, before another sad story happens like that of abalone. Islanders recognize strength in diversification, the value of small-scale operations, and the need to build a vibrant future.

LOCAL CONTROL

There is a common understanding of the need to bring marine resource management closer to home. For Islanders, discussions invariably lead to talk about local control, local access, local benefits, local training and local involvement in research and monitoring. Changes in governance are necessary to reconcile First Nations constitutional rights.

The challenge for Islanders is to work with each other. Fishers, industry and governments need to redefine relationships to begin addressing the long-term ecological health of Haida Gwaii in context with Haida rights and title, local needs and world demand.

The following snapshots of marine issues identified by Islanders are presented in no order of value or importance. Islanders recognize the need for a holistic approach to the land and sea around Haida Gwaii, yet separation of complex issues is sometimes helpful to understand the whole – hence

ISLANDERS recognize the need for a holistic approach to the LAND & SEA around Haida Gwaii



Kids with prawns.

photo: Lynn Lee

separation of the topics below. Since all things in nature are connected, the issues are intertwined and so too are the solutions. This is by no means a complete list.

GEODUCK

Three decades ago the geoduck – largest burrowing clam in the world – was hardly noticed, hunkered down under up to a meter of sand and gravel with their necks (siphons) poking out from the sea floor to sift microscopic plankton for food. Some Haida gather intertidal geoducks by cutting off their protruding necks — this technique does not kill the clam. Halibut do the same, they take the tops of the geoduck neck.

The geoduck commercial fishery is now the highest-value shellfish fishery in BC supplying culinary markets throughout Asia. Commercial fishers forged cooperative ties with management agencies to invest in scientific research, monitoring and management. On Haida Gwaii, they work with the Haida Fisheries Program and Department of Fisheries and Oceans (DFO) to conduct geoduck population surveys. Although these are good and necessary relationships, Islanders want more say.

Islanders are mostly removed from the management and benefits of the fishery. There are no Islands-based license holders or fishers. There is concern about the fishery itself. Is it wasteful – do fishers discard low quality ‘ugly’ geoducks, leaving the clams to scavengers? Is there a tie between geoduck fishers and abalone poaching? How effective is monitoring on this remote coastline? Much of the geoduck life history and their connections in the marine ecosystem are a mystery – what are the ecological implications?



Geoducks: on the deck being examined and above a siphon peaks through the sea bed.

photos: Lynn Lee

RED SEA URCHIN

Spiny kelp eaters inhabiting exposed rocky shores, red sea urchins are common in shallow subtidal waters. Sea urchin roe – egg and sperm sacs – is a traditional food of the Haida people and is also prized in Japan. In the century long absence of sea otters the urchin multiplied. In huge numbers, red urchins grazed creating a phenomenon dubbed ‘urchin barrens’ — places where urchins sit spine to spine with little kelp between. At Cape Knox, urchin barrens extend for hundreds of metres from shore. Off Limestone Island, kelp thrives on underwater pinnacles above the extent of red urchins where currents and wave action are too strong.

Islanders' thoughts about red sea urchins are divided. On one hand, some think their abundance has led to an alarming decline in kelp and suggest the commercial fishery be used as a means of urchin control. On the other hand, there is concern about local depletion by commercial urchin fishing. The Haida, for example, have requested areas closed to commercial fishing to ensure community needs are met.

Cooperative research and management relationships are a hallmark of the red urchin commercial fishery, similar to the geoduck fishery. The Haida Fisheries Program, commercial fishers and DFO have worked together on red urchin inventories, habitat surveys, and experimental research sites for over a decade.

As with the geoduck fishery, however, Islanders are removed from the management and benefits associated with the fishery. There is one Islands-based commercial fishing license held by the Council of the Haida Nation. There is no local processing of red urchins and local benefits are limited to the time and money spent by fishers on groceries and other services.

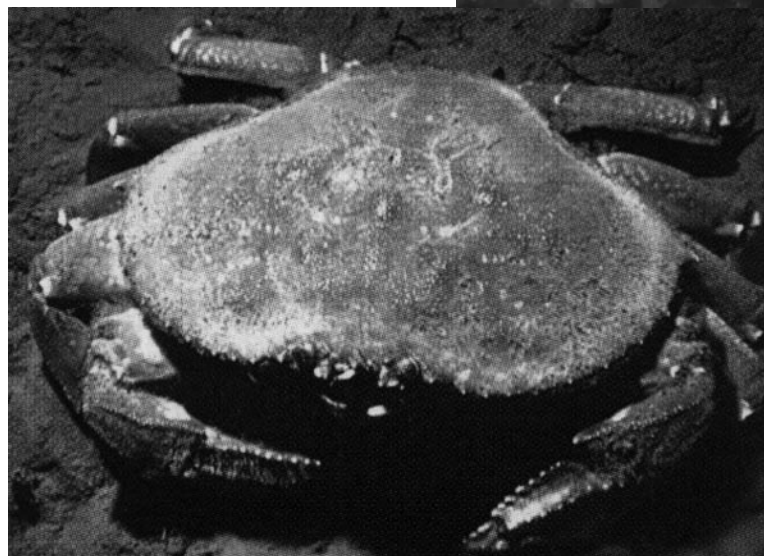
SEA OTTER

Lying on their backs munching on crab, urchin or abalone, sea otters are the centre of great debate. Historically common around Haida Gwaii, sea otters were hunted to local extirpation for the fur trade and have not returned in any numbers – occasional sightings of individuals are reported. What if sea otters do re-establish a population here? Some Islanders are vehemently opposed to their return, with predictions of doom for shellfish resources. Others support their return, with predictions of increasing kelp beds and coastal productivity including fish and life dependent on lush kelp forests.

DUNGENESS CRAB

As far as we know, Dungeness crab have always come close to shore on North Beach to mate in summer. Dip-netting to catch a few crabs for dinner was known only to Islanders – but the secret is out. Recreational dip-net crabbing on North Beach has become a 'must-do' for Island visitors such that over 100 recreational crabbers might be out on a single low tide.

The sea around Haida Gwaii is a major contributor to the BC commercial crab catch. In past years, Island residents held many more crab licenses and Masset was home to a major crab canning industry employing many from Old Massett and Masset. Today, a handful of license-holders live here, some Islanders work aboard commercial vessels and



above: Red Sea Urchins in the shallows at Murchison Island
left: Dungeness crab

photos: Lynn Lee

some of the commercial catch is processed in Masset.

Islanders want to know about the impacts of recreational and commercial fishing on the crab population. Through their beach monitoring activities, the Haida Fisheries Program provides information about the recreational fishery. Mandatory video surveillance equipment and additional field research on-board commercial vessels could address some impacts of the commercial fishery, including suspected illegal fishing of undersized, female and soft-shelled crabs.

Lying on their backs
munching crab, urchin
or abalone
sea otters
are at the centre of **great**
debate

ROCKFISH

The oldest recorded rockfish was caught off the Bowie Seamount and aged at 208 years! More than 60 different rockfish species inhabit Northeast Pacific waters – all with characters and quirks different from one another. In general, rockfish are long lived and slow to mature with slow rates of replenishment in a population.

What are the effects of increased fishing on rockfish populations? In southern BC, particularly the Strait of Georgia, the long rockfish fishing history provides some insight. Decades ago, rockfish was considered ‘garbage’ fish not worthy of eating. Considered to have no food value, rockfish were thrown back in the water, dead or dying. When salmon fisheries declined and Asian markets developed, the value of rockfish increased. A commercial rockfish fishery began and rockfish in the Strait of Georgia became harder to find. It is to the point where some now consider those populations ‘commercially extinct’. Recently, efforts have been made to curtail increasing recreational catches and DFO Rockfish Conservation Areas are being implemented to attempt restoration of depleted rockfish populations and protection of robust ones.

Although rockfish in the north are thought to be in better shape than those down south, Islanders are still concerned about local depletion of rockfish particularly in places that are heavily fished, like around Skidegate Point and Langara Island. There are questions about the impacts of commercial ‘bycatch’ often unaccounted for in fisheries landings and Islanders are aware of the distressing lack of knowledge about rockfish species life histories, local population status, and ecological connections.

LINGCOD

Lingcod are an important food source and depletion by commercial and recreational fishing is a concern. On the North Coast, the general consensus is that lingcod populations are not as depressed as those down south. But what state are they really in? No one has the answer. There are impacts on lingcod from various sources – commercial bottom trawl, hook and line, and troll fisheries, recreational fisheries and First Nations food fisheries – but the extent of impacts remains unstudied.

KRILL

The immense food energy packed in this tiny shrimp-like zooplankton

and their sheer abundance feed immense creatures including blue whales and basking sharks. At the base of marine food web, krill and other zooplankton are critical to the survival of just about every marine – from juvenile fish to herring to adult sockeye salmon to humpback whales they all eat krill at some stage in their life. The BC krill fishery is fairly new and is currently limited to south coast inlets. The Islands' consensus is that the ecological risks of such a fishery are so great that no commercial krill fishery should occur in Haida Gwaii waters.

ABALONE

There are now only a few abalone left. In 1990, the abalone fishery became the first on the Pacific coast to be closed to all fishing due to low population. This affected First Nations cultures, recreational fishing and commercial economies and was a wake-up call to fisheries managers.

Over a 20-year span of commercial fishing, abalone virtually disappeared from the Islands. Locals say almost a million pounds were taken from Cumshewa Inlet alone and the former commercial fishery and ongoing illegal fishery are blamed for the current 'threatened' status of abalone.

Although a terrible ecological story, abalone is a success story about communities and agencies working together. The Haida Gwaii Abalone Stewards are composed of representatives of Haida governments, federal government agencies, and Islands-based marine conservation groups that work to build awareness of abalone issues and encourage community stewardship of ocean resources. Local research may provide insight into measures for rebuilding abalone to levels that can support a 'sustainable food fishery'.



Abalone
photo: Bart deFreitas

OFFSHORE OIL and GAS

The risks to Haida Gwaii's rich environment are too great to support offshore oil and gas exploration and development. That sums up the view of an overwhelming majority of Islanders. The reasons are many. Suffice it to say that there are too many unknowns and the risks too high to food fisheries, other fisheries and tourism.

Instead of arguing over the pros and cons of offshore oil and gas, Islanders want to move the conversation towards alternative energy sources that will be more sustainable over the long term. Wind and tide feature prominently among future sources of energy.

HALIBUT

About a century ago, halibut was commercially fished in a way that fishers began to fear for the fish's survival. This concern fueled creation of the International Pacific Halibut Commission, an organization responsible for research and management of Pacific halibut in Canadian and US waters. By some accounts, they seem to be doing a decent job, although Islanders still have questions. What are the impacts of fisheries on halibut populations around the Islands? How far do halibut migrate? Are there places where they consistently go to spawn, places where the juveniles tend to hang out?

In addition to the hook and line fleet that target halibut a significant amount is caught by bottom trawlers. Radical changes in trawl fleet management in 1996 have reduced discarded halibut 'bycatch', but the trawl fleet still has impact.

Unaccounted halibut 'bycatch' also occurs in hook and line fisheries targeting other species such as dogfish.

Fishers living on Haida Gwaii and in other coastal communities have a long history of fishing halibut, though their numbers have dwindled with time. Presently, a handful of halibut fishers live on the Islands, including those who fish a license held by the Council of the Haida Nation. Islanders are concerned about the trend in declining benefits for First Nations and other coastal communities, concurrent with factors that limit access into the fishery.

HERRING

Each spring shores teem with life as masses of herring return to spawn. Sea lions, eagles, grey whales, Pacific white-sided dolphins, Chinook salmon, gulls, ducks, seabirds, sculpins, bat stars and more, feast on returning herring and their eggs. Haida elders remember when there was so much herring spawn, it stretched throughout Skidegate Inlet and also right around Burnaby Island. They also remember the bright lights of floating factories that rendered over 77,000 tonnes of herring in a single year. The highest estimated mass of herring around Haida Gwaii totalled 100,000 tonnes – now there is a fishery when only over 10,000 tonnes return. Is 10% really enough to ensure healthy herring populations?

The lack of herring has been notable in the past decade and a half and this concern fueled a Haida protest in the late 1990s. Most years, less than 10,000 tonnes returned. Intensive roe herring fisheries since the early 1970s took much of the commercial herring quota. A smaller portion has gone to k'aaw – herring roe-on-kelp – fishers, and an even smaller proportion to Haida food fishers.

Over and over, Islanders voice concerns about sustainability of the herring roe fishery. Herring mature around 3 years old and, given the chance, return to spawn again and again over a lifespan up to 10 years. Herring have become fewer and smaller as the roe herring fishery took

THE RISKS

to [the] rich environment

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the larger fish that produced more eggs. In contrast, most of the herring penned for the k'aaw fishery live and return to spawn again.

BOTTOM TRAWLERS or DRAGGERS

Bottom trawling, otherwise known as dragging, is pretty tough on the sea floor. Corals, brittle stars, sponges, fishes and invertebrates that happen to be in or swimming over the ocean floor in the path of a trawl net are swallowed by the gaping maw and finished.

Some Islanders think there is room for bottom trawling within Haida Gwaii waters, while others feel trawlers should be banned. Fearing impacts on food fisheries, the Haida banned dragging in Skidegate Inlet many years ago.

Bottom trawling damages sea floor habitat and animals. There is equal concern over the large volume and scope of the catch, much of which can be 'bycatch', discarded often-dead fish unaccounted in fishery records. Reforms instituted in 1996 addressed some of these concerns with mandatory fishery observers on-board and improved catch reporting. However, Islanders still want to better understand the impacts of trawl activities – if and how trawling fits in with ecosystem-based management for Haida Gwaii waters.

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should be banned.

RAZOR CLAM

Vital as food, razor clams are also economically important to Old Massett where the majority of diggers live. Fish plants in Massett process all razor clams, providing employment and supplying both food and bait markets. The fishery is co-managed by the Council of the Haida Nation and DFO.

Islanders' concerns stem around impacts of the recreational and commercial fisheries, razor clam abundance and population health, vehicle traffic on the beach and the use of clams for bait. Many of these issues continue to be addressed through the Haida Fisheries Program stock assessment and monitoring programs. Others could be managed with general codes of conduct for beach traffic.

WILD SALMON

Salmon is an icon of the BC coast, vital to the culture of First Nations peoples. Salmon is a keystone species marking coastal rainforests with an abundance of marine nutrients. Spawning salmon swim up their natal streams providing food for bears, eagles, people, gulls, river otters, martens. Their carcasses grow monumental cedar and spruce trees. Salmon eggs feed fish, birds and bears.

Pacific salmon populations are in trouble. The current condition of Haida Gwaii's Pacific salmon species can be said to be average to low when compared to records dating back to 1950. Some populations

continue to provide food, recreation and limited commercial fishing. Others like those in southeast Moresby Island have still not recovered from past human activities. What are the consequences of depressed salmon populations on everything that relies on salmon?

Countless salmon canneries sprung up throughout the early half of the 20th century, including short-lived pink canneries in Massett Inlet. A troll, seine and gillnet fleet fished for salmon migrating to Haida Gwaii streams and those further south. Old Masset and Skidegate were sites of a boat building industry that produced high quality seine boats. Many Haida owned and captained salmon fishing vessels of all sizes, from small open 'mosquito' day-fishing skiffs to large seiners.

Many salmon fishers lived on Haida Gwaii and in coastal communities, close to the areas they fished. Only a decade or two ago, a local salmon fleet ranging from day fishers to ice and freezer troll boats and seiners was a vibrant part of the Islands' life and economy. Today, there are no day fishers, and a handful of troll and seine license-holders still live on the Islands. A new debate about turning salmon into a quota fishery is raging. Prospects do not inspire young people to make a living fishing salmon.

Islanders want to re-build a vibrant economy around wild salmon. Concerns about declining salmon abundance and uncertain effects of changing ocean conditions means that wild salmon fisheries should not catch as many fish as before. The future is about catching fewer salmon of high quality with local value-added processing. Revival of the Haida 'mosquito' fishing fleet may be part of the answer, allowing more Haida people to make a living from wild salmon. Other discussions include the idea of new commercial licenses that would enable small-scale fishers to supply many different fish specifically to local markets.

Islanders want more say and accountability in salmon fisheries management. How can resource allocation and management decision-making be made more transparent and fair? Local fishers see themselves as part of the solution, addressing issues with practical knowledge and assisting with research.

SALMON FARMING

No salmon farming in Haida Gwaii waters – that is the clear message in discussions about salmon farming. Like offshore oil and gas, most Islanders feel that the many risks associated with salmon farming – disease from overcrowding, sea lice, impacts of wastes, use of antibiotics, impacts of bright lights and scaring devices, escaped and surviving Atlantic salmon, uncertain impacts on wild salmon – are too great to allow open net cage salmon farming.



Chum salmon at Lagoon Inlet.

photo: Lynn Lee

The Council of the Haida Nation has kept salmon farms out of these waters to date and Islanders want to keep it that way. Islanders want to focus on wild salmon and ensure that wild salmon populations and fisheries co-exist in perpetuity.

SHELLFISH FARMING and other AQUACULTURE

Shellfish farming has made its mark on Haida Gwaii with pilot sites established by the Council of the Haida Nation and other Islanders over recent years. The greatest advantage of bivalve farming is that food does not have to be added – bivalves filter feed plankton from the water. The greatest disadvantage is that the farmed species are not native to Haida Gwaii waters. The soother is that oysters are not supposed to spawn in cool Island waters, and weathervane scallops seem to be localized to specific habitats so there is little danger they will take over. Overall, the risks seem relatively small compared to other industrial activities.

The scale of operation is the major caveat in developing a ‘sustainable’ shellfish farming industry. How large are the operations going to be, how many and where? If shellfish farming can be developed responsibly so that impacts on local areas can be monitored and detected, there is a chance of long-term success. Fundamental issues revolve around privatization of a ‘public’ resource, local access to a new industry, competition leading to large corporate control, and accountability of management agencies.

SPORTSFISHERY

In the early 1990s, the burgeoning sportsfishing lodge industry sparked the Haida people to protest at Langara Island to halt lodge operations. Before 1985 there were no sportsfishing lodges. By 1990 there were 8 exclusive lodges catering to people and politicians wanting to ‘catch the big one’. Now there are over 20 floating and land-based lodges. Islanders take issue with this industry.

Over a short 20 years, sportsfishing lodges encroached on traditional Haida fishing and former commercial fishing areas, sending out fleets of small open skiffs, often piloted by clients inexperienced at navigating the ocean. The Haida protest secured a moratorium on further foreshore tenures for these lodges in 1993. However, floating lodges continued to creep in – often with no permits and little to no regulation — dumping sewage, cleaners and bilge into remote bays.

The issue has come to a head in recent years. A land-based lodge was built in Port Louis against zoning regulations and the Samson floating lodge in Naden Harbour sank. A floating lodge anchors in Nesto Inlet each year and disturbs ancient murrelets during their sensitive nesting and fledging season.

The path to a more satisfactory relationship between Islanders and sportsfishing lodges could **begin** by developing a code of conduct for lodge **operations**

As with many other industries, there is the question of local benefits. Aside from a few service jobs, many argue that there are no local benefits. Some lodge owners say they do contribute to the Islands' economy and that they should not all be tarred with the same brush. Islanders want to see accountability of lodge conduct and accurate catch reporting. Although the Haida Fisheries Program has operated a creel survey program for over a decade, not all the lodges cooperate.

The path to a more satisfactory relationship between Islanders and sportsfishing lodges could begin by developing a code of conduct for lodge



operations. Specific concerns such as salmon mortality caused by fishing methods, accountability of catch, allocation, management and impacts to salmon stocks could be addressed.

Sportsfishing boats ready for a tow to a west coast fishing lodge.

photo: SRs InHouse

MARINE PROTECTED AREAS

Touted as an effective tool for fisheries management by some and as a idea with unproven benefits by others, marine protected areas are a focus of debate. A large part of this debate stems from confusion about what they are – for many, it means no fishing within *any* Marine Protected Area but this is not true. Marine Protected Areas are just a name for areas of ocean that are managed differently than their surrounding waters with a goal of ensuring that human activities are in keeping with the ecological health of the ocean.

Like many other issues the cornerstone is local control. Islanders want more say in planning and resource management, as well as fair, well-defined relationships between First Nations, local, provincial and federal governments. Successful implementation of Marine Protected Areas will only happen if there is local buy-in. For that, there must be effective local planning and decision-making to define what Marine Protected Areas mean for the Islands. Then, these areas may benefit Haida Gwaii ecosystems and communities.

