

Marine Plan for the Harvest of *k^wumt*

(Bull Kelp, Nereocystis Leutkeana)

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Vision Statement

The K'omoks people have occupied their traditional territory, "the land of the plenty," for millennia (K'omoks First Nation, 2012, p. 9). The K'omoks Nation holds "Aboriginal rights and title to the lands, waters, air and resources within [their] traditional territory" (K'omoks First Nation, 2012, p. 5), and is currently negotiating treaty agreements to have their rights and title recognized (K'omoks First Nation, n.d.). Through the treaty, the K'omoks are striving to achieve self-governance, ownership, and control of their lands and resources (K'omoks First Nation, n.d.). Self-governance would allow the K'omoks people to regain control over their lives, which are inextricably linked to the land and water, by being able to make decisions directly concerning the use of their lands and water in a way that uplifts their cultural values, beliefs, and traditions.

Connecting with traditional values and teachings will allow for the younger generation to learn and practice the fundamental teachings, and understand what it means to be a member of the K'omoks Nation (K'omoks First Nation, 2012, p. 9). Although indigenous cultural practices and beliefs have often been rejected due to the colonial perspectives, the value of their culture should not be discounted for the health of the people and the environment. This plan will highlight the need for local indigenous perspectives in the management of the environment and the harvesting of k^wumt , otherwise known as bull kelp.

In order to protect the environment and its resources for the next generation, there is a need for traditional ecological knowledge (TEK) to be incorporated into the management of marine resources. The people of K'omoks have managed the resources for millennia . Their teachings tell us the importance of the natural balance, which leads to "the healthy functioning of the natural cycles, seasonal changes and the natural flow of life" (K'omoks First Nation, 2012, p. 11). This has been

disrupted by the overexploitation of some species and the overprotection of others (K'omoks First Nation, 2012, p. 20).

TEK provides tools and insight into environmental management, and including scientific research allows for a broader perspective. Furthermore, TEK highlights the importance of ecosystem-based management, rather than focusing on specific species, when each lives in coexistence with one another.

Area Description

The K'omoks First Nation Territory (KFN) stretches from H'ksum, a small township on the northeastern coast of Vancouver Island down into the Georgia Strait and along the upper limits of the Puntledge River watershed, see Figure 1. It includes Denman and Hornby Island along with all the rivers flowing to the ocean within central Vancouver Island. In total, the K'omoks traditional territory covers 1,071,578 hectares; 257,973 hectares are classified as marine zones, while the remaining 813,605 hectares are the traditional terrestrial territory (page 7 - KFNMP). The K'omoks Nation settlement is currently located in the heart of their traditional territory, just outside the town of Comox.

This territory is bordered on the north by the Southern Kwakiutl and on the south by the Coast Salish, two linguistically differentiated coastal First Nations. The territory of the K'omoks Nation is referred to as "the land of plenty" by many of the Salish and Kwakw'ala speaking First Nations. The K'omoks take only what can be sustainably harvested, including: berries, shellfish, salmon, small game, and a multitude of other marine and terrestrial creatures to satisfy the needs of multiple generations (citation).



Figure 1. A map of the K'omoks traditional territory (KFN Marine Plan, 2020).

There exist current maps that provide boundaries to the territory of the K'omoks people however, history suggests that there was often overlap in territories between Nations; two governing bodies presiding over the same region. Therefore it is important to consider that the boundaries established on the map indicate regions within which the law requires consultation with the K'omoks Nations regarding the harvest of natural resources but, they do not establish supreme jurisdiction. While the K'omoks Nation claims these regions to be their traditional territory, we acknowledge that the space is shared with our neighbouring Nations and the need for their consultation when considering activities is essential within these shared borders.

The KFN marine plan for the harvest of k^wumt is defined and applied within the boundaries of the K'omoks' traditional territory. It pertains to any harvest of this species for any use. While we

acknowledge that there may be small-scale harvest for personal use, we strongly suggest that this marine plan be reviewed prior to harvest in order to understand and implement the accepted and sustainable harvesting methods put forward by the KFN.

History of *K^wumt* in Northwest Coast Nations

Marine algae and seagrasses have been integral resources for the First Peoples of the Northwest Coast since time immemorial. These organisms have provided nourishment, materials and medicines, and have featured in the narratives and traditions of people along the West Coast. Among these marine



entities, Nancy Turner describes that an organism commonly referred to today as "bull kelp" was "the most valued marine plant material in traditional Northwest Coast technology," and has been a key component in the construction of a "coastal habitat that is productive for all life" (Turner, 2001). Bull kelp anchors itself to rocks on the ocean floor by way of a holdfast composed of many fingerlike projections, or haptera (Bull Kelp). The flexible stipe extends 10 - 20 meters until enlarging to form a

round float known as a pneumatocyst, out of which 30 - 60 narrow blade-shaped fronds grow to form a golden brown canopy on the ocean surface (Bull Kelp).

Bull kelp is regarded as a keystone species due to its dominance in the coastal environment and immense influence on the biodiversity, structure, and function of kelp forest ecosystems along the coastline (Turner, 2001). Bull kelp break and calm turbulent waters, support a wide variety of marine (including many of high economic importance in British Columbia), and terrestrial species that feed on kelps washed onto the shore (Turner, 2015).

Some of the most prolific uses of bull kelp were as anchors, fishing lines, ropes, and fishing nets (Turner, 2001). The kelp was cut by specially trained divers at locations known to produce long and strong stipes; the stipes were then cured by soaking in alternating baths of fresh and saltwater, dried, and rubbed with dogfish oil until saturated (Turner, 2001). The curing process could take up to a year, though when dried and stored properly, stipes could be utilized for several years. Hollow bulbs and adjoining stalks were also utilized in the process of steaming and bending of wood (Turner, 2001).

There are no records of any Indigenous group on the West Coast extensively harvesting bull kelp for consumption, though it is briefly mentioned by Turner (2001) that fresh bull kelp blades were cooked in stews and soups by some people. The plant was instead used in the preparation and storage of many foods. Squamish fishermen utilized kelp blades to keep fish fresh in their canoes; bulbs and stipes were cured and used to store eulachon grease, seal oil, and molasses; Nuu-chah-nulth groups used bulbs as moulds for deer suet. The melted fat would be poured into the hollow stem and allowed to harden after which the kelp could be broken away to leave a bulb of suet that was easily stored. The Comox would line steam pits with blades to generate steam and flavour foods (Turner, 2001; Turner, 2019).

Bull kelp is significant in the medicines of Coastal people, with blades being commonly used in steam bathing and a salve of cottonwood buds boiled in deer fat, which created a fragrant ointment for protection against sun and windburn, and the treatment of burns; again this was stored in the bulbs of the kelp (Turner, 2001; 2019).

As such a prominent cultural fixture of coastal life, bull kelp is well represented in the oral histories of the First People along the coast including those of the K'òmoks, the Haida, the Ts'msyen, the Nahwitti, and the Kwakwaka'wakw.

Although technologies and food customs have been altered over the short period of time since colonization, marine plants remain an integral component of the healthy and environmentally harmonious lifestyle of coastal First Peoples. Many of the uses and cultural associations with marine plants, including bull kelp, continue today, and Turner (2001) communicates:

it is a vision of First People up and down the coast that the traditional knowledge and practices will become even stronger in the future, that their children and grandchildren will be trained in traditional ways as well as modem technology, and, therefore, that marine plants will be even more important, culturally and environmentally, in the future than they are at present.

The First Peoples that communicated this vision were also knowledgeable of the effects of environmental deterioration and its impacts on marine entities including bull kelp. Bull kelp is not only a keystone species by the purely ecological definition, it is also a key part of the lives of the First People along the coast. Though more adventurous eaters will pickle the stipes of bull kelp in vinegar and spices or buy such pickles at specialty food stores and farmers markets, bull kelp is not widely consumed by non-Indigenous groups - at least, not knowingly (Turner, 2001). Bull kelp provides algin, an emulsifying and bonding agent extracted from the seaweed, for a wide variety of products including: toothpastes, shampoos, salad dressings, puddings, ice creams and other dairy products, and even pharmaceuticals (Bull Kelp; NOAA, 2009). The vast majority of people that consume kelp in these forms are not aware of how much they rely on this organism; in modern Western society, people are especially separated from the organisms that are integral to their every day. Bull kelp tissue has also been harvested for use as feed in abalone mariculture and in the production of liquid fertilizer (Springer et al., 2017), though it has not been widely harvested in B.C. waters. A manufacturer of algae-based agricultural products called Sidney Seaweed Products (1965-1974) has been the only company to experience economic success in the harvest of bull kelp, and harvesting has been limited to small-scale operations collecting less than 100 tonnes per year combined (Springer et al., 2017).

Guidelines and Restrictions

There are existing precedents which should be followed for establishing guidelines and restrictions with respect to resource extraction on KFN. These precedents include the *Delganuukw v*. *British Columbia 1997* Supreme Court decision, the adoption of UNDRIP (United Nations Declaration on the Rights of Indigenous Peoples) by British Columbia, and the ongoing treaty process between the KFN and the province of BC. Incidentally, the KFN Marine Plan of 2012 discusses in great detail the current and proposed uses for marine resources within KFN. With respect to bull kelp harvesting, the establishment of a licensing program which follows traditional Kwakiutl practices and adheres to the forthcoming K'omoks Constitution needs to be implemented and observed if this resource is to be successfully and sustainably harvested. What follows will highlight who has the power to give out

licenses, the harvest zoning, and the differences between Indigenous vs. Department of Fisheries and Oceans Canada (DFO) Marine Use Plans (MUP).

Who has the authority to give out licenses?

The Canadian Supreme Court decision *Delgamuukw v. British Columbia 1997* established that First Nations who have not signed a treaty have never surrendered their rights and titles to the resources on their territories, and this remains true for the KFN. While the KFN is now engaged with the Canadian government in a treaty process which will ultimately determine who has authority over marine resources, until the treaty is signed that authority remains in the jurisdiction of the Numaym house structure which makes up Kwakiutl society. To this end, the KFN Marine Use Plan of 2012 requires "meaningful relationships and dialogue with those in authority who are proposing activities within our traditional territories" (KFN Marine Use Plan 2012:22). Applicants for licensing will need to have an understanding of Kwakiutl inheritance and house structures in order to ascertain which Numaym has rights and title over a specific site in order to establish meaningful relationships.

Prior to the enforcement of the Indian Act on Kwakiutl territory, resources were inherited through the Numaym house structure. Numayms are juro-political units which have overlapping rights to specific sites of resource extraction and they consist of many individuals who are related to each other through a bilateral kinship system (Boas 1889, 1920; Codere 1990). The heads of the numayms have the most pressing claims to specific sites (Boas 1920; ibid). These rights to harvesting sites include both land and marine resources, and while there may not be a inheritance system in place for bull kelp specifically, any resources which fall within the territory of the KFN are subject to its laws and governing bodies as outlined by, *Delgamuukw v British Columbia 1997*, UNDRIP articles 26.1 and 26.2, the forthcoming KFN Constitution and the KFN MUP of 2012. It will be the ongoing treaty

process which ultimately determines who has the governing authority over marine resources on KFN territory (KFN website accessed March 2020).

Under the KFN Draft Constitution, the license issuing authority related to resource management is the First Nation Council of the KFN. Any application for a resource extraction license needs to first go through the First Nation Council for their deliberation and subsequent presentation to the annual Peoples' Assembly. The Peoples' Assembly is made up of all members of the KFN and has the final say over any legislative agenda proposed by the First Nation Council. The Peoples' Assembly has the authority to approve or deny any motion or license related to resource extraction on KFN territory and this includes the harvesting of bull kelp. As outlined in the KFN marine use plan, the KFN is obligated to maintain the resources on their territory which have been given to them by the Creator (KFN MUP 2012: 23).

Upon approval of a resource extraction license we propose that an Office of Marine Use be created or folded into the pre-existing KFN Ecosystem Based Management Plan to appropriately monitor the use of approved licenses. This body should be an internal monitoring agency made up of KFN members and expert staff working on behalf of the KFN as outlined in the KFN MUP. The role of this agency will be to review licenses before their submission to the First Nation Council and will provide input in government to government negotiations regarding sustainable harvesting practices and approved harvest zones. As bull kelp provides habitat for species fundamental to the success of Indigenous Nations including the KFN, we propose that the authority to delegate areas available for bull kelp harvest fall to the Office of Marine Use in accordance with the KFN MUP.

Harvest Zoning

The Canadian Supreme Court Decision of 1984 *R v. Sparrow*, established that Indigenous people have the right to harvest resources domestically and to derive profit from those resources. As

the harvesting of bull kelp constitutes a traditional practice, protecting the continuation of that practice is paramount. Therefore, we propose that zones be set up within KFN territory which will allow for the continued practice of the Numaym inheritance structure, while allowing for commercial harvest in zones not delegated for domestic harvest by KFN members. These zones will need to be continually monitored and will be subsequent to change as climate change impacts the viability of commercial



Figure 2 cited in Costa et al. 2019

harvesting. The KFN's right to harvest domestically takes precedence over commercial harvesting, and it will be the Office of Marine Use which protects those inherent rights.

Figure 2 Illustrates a map of historic kelp forests in British Columbia compiled by the Spectral Remote Sensing Laboratory (Costa et al. 2019), including those within KFN territory centered around the north-central part of Vancouver Island and the Johnstone Strait. Mapping, the knowledge of Numaym house leaders, and the Office of Marine Use will prompt ongoing discussion between the KFN and the province regarding which sites will be available for commercial harvesting at which times throughout the year.

Differences between Inidgenous and DFO Marine Use Plans

The goals of the KFN MUP and of the DFO differ in that Kwakiutl culture is intrinsically tied to the land and waters of the territory. In their MUP, the KFN outlines how their values directly relate to the management of the resources on the territory (see KFN MUP 2012: 9-11). As such, the goal for the KFN is not to extract the full economic output capability of the territory, but instead to use the inherited knowledge of their ancestors to reproduce and maintain K'omoks society and culture for further generations. Accordingly, a major critique of the DFO's designation of the Pacific NW Coast as part of the PNCIMA region is that it's intended to generate maximum output of resources for commercial gain, and has no vested interest in maintaining environments which are not directly related to economic initiatives (see Pacific North Coast Integrated Management Area Plan 2017; Butler 2006: 107-126). This is especially the case for bull kelp, because while it is not necessarily as fundamental to K'omoks lifeways as other species such as salmon, many marine ecosystems which harbor those fundamental species rely on bull kelp as readily available habitat. Furthermore, the PNCIMA Initiative groups together huge swathes of territory which don't have that much in common apart from salmon runs (the most commercially viable species). With respect to bull kelp, figure 2 above illustrates the lack of the species along the coast stretching from just north of Vancouver Island to just south of Banks Island and Hartley Bay. In this respect, the KFN MUP allows for localized forms of knowledge to inform the state about how to create marine management plans for the specific areas within the KFN.

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