

Priority 5:

Traditional Indigenous Knowledge for Ecosystem Recovery

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Introduction

The Salish Sea is home to twenty-three federally recognized indigenous tribes, six non-federally recognized tribes, and thirty-two First Nations (Encyclopedia of Puget Sound, 2015). As original stewards of the land for millennia, these tribes and Nations have deep and intrinsic ties to the Salish Sea landscape and depend upon historically utilized natural resources for cultural, spiritual, economical, and sustenance purposes. Regrettably, this relationship is not only often overlooked when considering ecosystem recovery efforts, but commonly misunderstood or exploited.

Historically indigenous peoples have been forced off their lands and forbidden access to resources vital to their wellbeing, contributing to intergenerational trauma, increased dietary-related diseases, and barriers to traditional cultural practices. Multiple efforts are currently underway across multiple scales and levels of governance to reinforce indigenous sovereignty and power across shared ecosystems and borders. As I will discuss, this comes with many challenges, both politically and socially, as it is difficult to meaningfully recognize indigenous autonomy and support decolonization in a colonial framework. The paradox arises in how to simultaneously empower and protect Traditional Knowledge from misuse while effectively and purposefully integrating it into ecosystem recovery efforts.

In this non-exhaustive review, I will review relevant local literature that discusses the historical misrepresentation of Indigenous Knowledge, current collaborative efforts, and suggestions for respectful and meaningful incorporation of Traditional Ecological Knowledge (TEK) for Salish Sea ecosystem recovery. The literature analyzed references the diverse views of different Nations and tribes throughout the Salish Sea region both in Canada and Washington State. As a non-indigenous person, I write this literature review solely based on available peer-reviewed literature, not based on personal knowledge or opinion.

A History of Exploitation

Representing just one of a multitude of social injustices associated with colonization, food insecurity and an increased dependence on processed foods has contributed to increased prevalence of diet-related disease in indigenous communities (Muller, 2018). The harvest and consumption of traditional foods (or First Foods) is vital to cultural preservation, community connections, and food sovereignty; thus, community impacts are far-reaching (Muller, 2018). Furthermore, colonial institutions such as large-scale agricultural outfits and unsustainable resource extraction have further threatened these rights by contributing to environmental degradation and resource declines, creating challenges for traditional land management (Muller, 2018).

As history shows, knowledge in the wrong hands can prove detrimental. Pacific Northwest colonizers used false trust to gain access to indigenous land, knowledge, and resources, leading to overharvesting and exploitation of valued resources such as now-endangered salmon, and seaweed (Muller, 2018). In other cases, historically utilized foods such

as salal berries, now considered “super foods” for their health benefits, continue to be overharvested for commercial gain (Muller, 2018). Many indigenous communities fear, further yet, that disclosure of this knowledge could lead to loss of access to traditional harvest sites or methods through illegalization or land privatization (Muller, 2018).

TEK is vital for indigenous cultural preservation and could prove extremely beneficial to ecosystem recovery efforts. However, one Elder explains that it is hard to trust in these situations as historically indigenous knowledge has been used as form of power and control over resources, versus an attempt to conserve them or help indigenous peoples (Muller, 2018). This fear should not be overlooked, as while Canada utilizes TEK increasingly in environmental policy, there is no federal protection or recognition of indigenous stewardship or governance over these resources and knowledge (Muller, 2018). Additionally, the very act of utilizing TEK within a scientific climate is considered by many as removal of context and thus, loss of sacredness (Muller, 2018). As TEK is principally passed down through generations orally, translating this knowledge into written form (which is likely then to be further condensed for scientific purposes), goes against the very logic of sharing it (Muller, 2018).

Current Collaborations and Governance Structure

Collaboration efforts with local organizations and public health and education sectors can be very beneficial for indigenous communities through the reassertion of TEK and conserving traditional community food sources (Muller, 2018). However, sharing this information is not without risk. Indigenous communities must balance between safeguarding sacred knowledge and contributing to more comprehensive policy and legislation for environmental recovery

(Muller, 2018). Muller (2018) adds that reassertion of this knowledge can strengthen wellbeing and sense of identity; rightfully implement indigenous resource management and development; increase recognition of the risks of environmental harm and climate change for indigenous communities; and guide hunting and land access regulations.

In other cases, partnerships can reinforce treaty rights which are threatened by unlawful proposals such as marine terminals and oil pipelines (Norman, 2019). The Portage Bay Partnership is one such relationship between the Lhaq'temish People of the Lummi Nation in the Salish Sea, and local farmers working towards reconciliation for their part in pollution to local waterways (Norman, 2019). Through financial compensation and adaptations to farming practices, an assembly of farmers are working under an agreement based on indigenous values to restore the health of the Nooksack River Basin, a traditional Lummi Nation shellfish bed (Norman, 2019).

Over a 10-year period (1996-2006), the Lummi Nation lost access to over 700 acres of shellfish beds due to bacterial contamination from agricultural and dairy practices (Norman, 2019). Despite collaborative efforts between the Lummi Nation and the State of Washington which restored the beds by 2006, similar concerns have closed the site twice more between 2014 and 2019 (Norman, 2019). In addition to the over \$8 million USD economic loss, the Nation lost the ability to practice traditional harvesting and ceremonies related to shellfish resources, thus having great implications for community wellbeing (Norman, 2019). These issues were fueled by lack of protection from local, state, and federal authorities who failed to assess water quality and pollution inputs for a span of decades (Norman, 2019).

The Friends of Nemaiah Valley (FONV) is one example of an effective and meaningful collaboration between the Xeni Gwet'in First Nation of British Columbia and an unincorporated non-profit society. The FONV respect the traditional territories of the Xeni Gwet'in and their status as a sovereign Nation, with the Nation acting as lead on decision-making and collaborative efforts (Von der Porten and de Loë, 2013). This success in part results from the acknowledgement and respect of First Nations history and their ability to assert their own governance (Von der Porten and de Loë, 2013). As suggested by Von der Porten and de Loë (2013), future collaborations could learn a lot from the context of this relationship.

As indigenous rights are protected constitutionally in Canada, the Crown (Canadian government) is required to consult with indigenous Nations when there is potential for decisions to affect their interests (Hanson, 2008). However, the process is regulated by Canadian law, ultimately overriding indigenous self-determination and authority in regards to these decisions (Hanson, 2008). Furthermore, while these rights are recognized, they are not defined, therefore the Crown can choose which cases qualify for this designation (Hanson, 2008). The First Nations thus lose the ability to actively govern their lands and are treated as mere stakeholders in the decision-making process (Hanson, 2008).

The Tsleil-Waututh Nation of the greater-Vancouver region receives on average over 400 new requests per year in response to rapidly expanding urbanization, each requiring responses or assessments which can take up to years to complete (Hanson, 2008). The sheer volume of consultation requests received annually limits the Nation's ability to review each case, further undermining their ability to assert sovereignty over their land (Hanson, 2008). These limitations are additionally complicated by short deadlines (typically one week to one month to respond)

and lack of staffing (Hanson, 2008). While the Tsleil-Waututh Nation continues to participate to uphold legal obligations and self-determination, the process ultimately compromises indigenous rights over their own lands.

Singleton (2009) expresses that collaborative efforts are minimized by institutional domination over indigenous Nations ability to meaningfully participate and assert sovereignty, including who ultimately defines problems and what knowledge is utilized as fact. Despite constitutional acknowledgement of self-sovereignty, indigenous Nation's ability to manage historic lands continue to be undermined through colonial systems. True collaboration requires complete acknowledgement of indigenous self-determination and historical occupation, and meaningful efforts to accommodate for these needs and values.

The Coast Salish Aboriginal Council represents an example of contemporary indigenous efforts to reestablish sovereignty and jurisdiction over regional lands and increase authority in transboundary collaborations (Norman, 2012). Established in 2005, the Council consists of over 70 tribes and bands from the Salish Sea region between Washington and Canada who have united over shared environmental goals and cultural identity (Norman, 2012). Through Council meetings and gatherings revolving between these communities the Council aims to fortify indigenous culture, recover endangered salmon stocks, and restore environmental health through both individual and collective effort (Norman, 2012).

By developing an internal consensus among local bands and tribes, the Council effectively increases coordination efforts with outside agencies and governments (Norman, 2012). Among these coordinated efforts are collaborations between the Council and the United States Geological Survey (USGS) for water quality assessments, as well as with Environment

Canada and the US Environmental Protection Agency (EPA) for the development of ecosystem indicators (Norman, 2012). By refusing outside funding and administrative support by way of nonprofit organization registration, the Council maintains fully self-determining, allowing for deliberate and meaningful progress towards a shared goal (Norman, 2012).

Respectful Incorporation of Traditional Ecological Knowledge

Casimirri (2003) argues that there are several problems with current efforts to utilize TEK in Canadian resource management, including the implication that this knowledge is only valuable once western Science has deemed it so. Additionally, problems arise in a lack of understanding and representation of the full breadth of TEK, as only certain components that are found to be relevant are included within collaboration efforts, removing it from context and representing it as a single unit versus part of an interlocking network (Casimirri, 2003). In this way, TEK is treated as data or evidence versus sacred cultural property.

Contributing to these disparities are the ways in which TEK is collected and compared against western science for validity, predominantly by non-indigenous peoples and via western methods of research (Casimirri, 2003). Once this information is recorded from traditional oral methods of transmission into western formats (typically written), these new sources then commonly become the predominant reference, thus removing direct collaboration with the original holders of the knowledge (Casimirri, 2003). This knowledge is then used to attempt to resolve western-identified issues within a western resource management structure despite drastically different, often contrasting, ideologies and viewpoints (Casimirri, 2003).

Above all, challenges in meaningful collaboration arise in the very structure of governance models that were created to oppress indigenous communities, reinforcing the importance of indigenous-guided agreements (Norman, 2019). While western frameworks exist around procured rights and the commodification of natural resources, indigenous frameworks consist of a give-and-take relationship with the natural environment connected with innate responsibility (Norman, 2019). These two markedly different worldviews contradict each other, reinforcing the need for a re-framing of colonial governance structures (Norman, 2019). As in the case of the Portage Bay Partnership, revision begins with accountability for past wrongs and transparency moving forward towards more sustainable land management measures (Norman, 2019).

Indigenous Nations are commonly referred to as “stakeholders,” “interest groups,” or “minorities” by different organizations and partnerships, terms that fail to recognize the sovereignty of indigenous peoples (Von der Porten and de Loë, 2013). These terms suggest they are one of many concerned groups such as recreational boaters and advocacy groups, versus self-determining Nations with their own governing bodies and judicial systems that stewarded the land long before current governance systems existed (Von der Porten and de Loë, 2013). In future collaborative efforts, it is vital to recognize indigenous sovereignty by addressing them as Nations, not stakeholders, and acknowledging their ability to implement their own environmental governance under this authority (Von der Porten and de Loë, 2013). Regional, state, provincial governments, and organizations need to respect this designation when considering authority and recognize indigenous Nations as dual managers over lands and waters with the right to designate management (Von der Porten and de Loë, 2013). Furthermore, recognition of different

capacities and resources is vital for truly collaborative governance on an equal playing field (Von der Porten and de Loë, 2013).

Motivations for collaborative relationships with indigenous Nations vary greatly, ranging from recognized value of TEK and insights to legal mandates requiring consultation (Von der Porten and de Loë, 2013). Despite the reasoning behind collaboration efforts, First Nations' peoples expressed the importance of building a relationship through in-person communication with meaningful intent versus simply meeting stipulations (Von der Porten and de Loë, 2013). Furthermore, involved parties should arrive without predestined goals or end results, choosing instead to involve indigenous Nations throughout the entire process and to arrive at an agreed-upon outcome, including identification of the original issue (Von der Porten and de Loë, 2013).

Appropriate venues and processes are also vital for a meaningful collaboration (Von der Porten and de Loë, 2013). Nations should be given their choice of meeting place, considering that agreements are under their terms, and thus they should not be expected to travel to accommodate outside needs. Each Nation should be acknowledged as distinct with their own sets of values and responsibilities, with consideration for the goals of each Nation and consultation at each step in the process versus seeking approval post-decision (Von der Porten and de Loë, 2013). Recognizing historical Indigenous lands as traditional territory is vital to the collaborative process, respecting not only their jurisdiction over, but deep connection to, the environment which differs greatly from western perspective (Von der Porten and de Loë, 2013).

Protecting Indigenous Knowledge through collaborative processes requires careful consideration with whom the knowledge is shared, how, why, and when (Muller, 2018). While policy often requires specific locations to enforce protection, access rights and harvest

restrictions can complicate the legality of some circumstances, creating hesitancy from indigenous communities to provide details (Muller, 2018). Therefore, it is imperative to consider the significance of potential effects for these communities when sharing Indigenous Knowledge publicly through policy development or collaboration. It is hence crucial to ensure that TEK remains intellectual property of these communities, and that safeguards are in place to prevent removal from context, criminalization, or any other repercussions (Muller, 2018).

Conclusion

Indigenous reaffirmation of internal self-governance is vital for cultural preservation and community wellbeing. Alliances such as the Coast Salish Aboriginal Council support strategic and beneficial collaboration opportunities with outside agencies while simultaneously reasserting independence from colonial systems (Norman, 2012). While colonialism has attempted to remove cultural cornerstones such as traditional ceremonies and native language, modern efforts to revitalize these knowledge bases are reaffirming indigenous sovereignty.

Western governance models could benefit significantly from the inclusion of TEK in ecosystem recovery efforts. While western resource and land management primarily focus on profitability and viability, indigenous management is established from reciprocity and respect. This, however, should not be confused with the fact that TEK has profound value that far predates western science, and thus is not in any way “validated” by this acknowledgement. Incorporating TEK knowledge holders into western ecosystem recovery efforts would promote inclusivity and representation of diverse viewpoints and values, supporting policy that benefits all.

As Norman (2012) illustrates, there is very limited literature available on post-colonial power dynamics. Researching how institutions including governance systems and political borders, which were developed with the intent to hold control over people and resources, effect current collaboration efforts could prove extremely beneficial in moving away from colonialism (Norman, 2012). The establishment of the Coast Salish Aboriginal Council is one example of how indigenous tribes and bands have aligned to reevaluate citizenry in the face of imposed political systems (Norman, 2012).

Acknowledging indigenous self-governance and nationhood that far predates colonial arrival is vital in collaborative governance efforts (Von der Porten and de Loë, 2013). Subsequent research should investigate ways in which this can be reinforced in local collaborations through discussions with Salish Sea Tribal Nations. In several cases of Canadian collaborative water governance, regional, and provincial organization employees were uneducated or unaware of the full history of local First Nations and their position of sovereignty, including the fact that large sections of land never left indigenous control (Von der Porten and de Loë, 2013). Would educational efforts aimed at decision-makers and stakeholders to clarify indigenous history in the Pacific Northwest benefit these efforts?

Incorporation of TEK is vital for comprehensive and effective policy, but as history shows, this information can be exposed to misuse and exploitation. Future research should determine ways in which local legislation can constructively and wholly represent TEK while simultaneously protecting it. The knowledge and resulting methods may vary greatly by location and across subjects, emphasizing the importance of acknowledging the values and needs of

different Nations, including where, when, and in what context TEK should be used. Traditional Knowledge is, and will always remain, the property of indigenous peoples.

As Casimirri (2003) asserts, Indigenous Knowledge cannot simply be merged into a western paradigm without depreciation of Indigenous identity, culture, and knowledge systems. Purposeful and respectful representation of Indigenous Knowledge in western systems requires the involvement of TEK holders, versus solely the inclusion of TEK (Casimirri, 2003). Moving forward requires recognition that the western perspective is just one of many approaches to comprehending the world and that TEK should be incorporated opposed to acculturated into existing systems (Casimirri, 2003).

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