
Foods that Nourish Us: Climate Change Impacts on Indigenous Culture in the Pacific Northwest

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Introduction to Climate Change and Indigenous People

Climate change is a major issue facing indigenous people today partly because of their strong cultural relationship to their homelands.¹ In addition, the place-specific status of treaties means that tribal people cannot simply move when climate change negatively impacts their homes.² Together, these effects lead to disproportionate climate change impacts for indigenous people.³ In the Pacific Northwest, climate change and its effects on indigenous people are raising concerns in native communities. The changing relationship to their traditional foods has emerged as a particularly strong concern for many native people in the Northwest.⁴ An increasingly severe set of impacts associated with climate change such as loss of traditional gathering sites due to sea level rise, changing distributions of first-food species, and the decline in health of riparian species, such as salmon, make up these challenges.⁵ Historically and today, colonization and industrialization negatively impact traditional, first-food use in the Pacific Northwest compounding the effects of climate change.⁶

An emerging body of literature focuses on the effects of climate change on first foods in the Northwest. This research details how the impacts of shifts in climate as well as climate change policy are affecting

native peoples. Much of the existing research acknowledges the cultural and religious importance of these foods and the potential impact that climate change could cause to native cultures. However, the research does not explore the depth of cultural importance that first foods have to indigenous society, and especially to native family and sovereignty. Little of the existing research makes meaningful links between nuanced understandings of the multifaceted cultural importance of first foods with the ongoing and projected effects of climate change on the cultural aspects of traditional food use. Instead, much of the research focuses on quantifying or cataloguing how climate change affects first-foods species and how change affects the ability of indigenous people to continue to use these foods. Existing literature often treats first foods as a resource, as something to be counted and monitored. Scientific studies tend to quantify and track first-foods species and document the nutritional importance of first foods, while social research tends to explore access to first foods as an issue of resource management.⁷ Little has been written, however, on climate change in the Northwest as an issue primarily about culture. Existing research does not lend itself to link the cultural elements of first-food use with the impacts of climate change. Instead, current research tends to focus on how, when, and where first foods are accessed, and how access will be impacted by climate change. Having developed for thousands of years alongside first foods, native cultures are deeply intertwined with those foods and the traditions surrounding their use.⁸ The continued use of these foods, then, is profoundly important as an expression of native culture.⁹ Therefore, understanding how native culture becomes impacted by climate change and first-food loss provides a critical avenue for allowing native people to protect their culture.

Viewing native peoples' relationship to first foods through the lens of resource management and quantification may actually be counter-productive for indigenous efforts to maintain the security of first foods

in the face of climate change. Overlooking the cultural importance of first foods leaves an incomplete understanding of how they are integral to indigenous cultural functioning in the Northwest. Instead, it places first foods within a broader climate change narrative that reduces the environment to natural resources that are becoming increasingly scarce. I suggest that overlooking the cultural importance of first foods construes the devastating cultural impacts of climate change on different peoples as simply quantifiable while ignoring the complex relationship between native people in the Northwest and traditional foods. For example, the loss of foods, such as salmon who have immense religious importance, would rob the ability of many coastal peoples to practice their religions.¹⁰ Additionally, viewing first foods as a resource ignores the historical context of first-food use and colonization in the Pacific Northwest. This historical relationship between first foods and culture that developed among native people offers a more complete understanding of how first foods impact and shape native culture, and how native culture will therefore be affected by climate change with the loss of first foods.

Without exploring what first foods have meant in the past, and how that meaning has translated into today's native communities, it is difficult to assess the cultural importance of these foods. As the destruction of fisheries and the decreased gathering of roots, berries and other foods across the Northwest during the late 19th and early 20th centuries have demonstrated, immense cultural loss accompanies the diminished access of native people to first foods. First-food loss becomes cultural loss, because of the vital role that these foods play to indigenous culture. Drawing from the history of colonization in the Northwest helps to establish the important cultural role that first foods have played and continue to play in native culture. This historical perspective facilitates moving beyond viewing first foods only as a resource and lends credibility to the argument that first foods and climate change are issues of culture. Furthermore,

the efforts of native people to maintain a relationship to first foods in the face of both colonization and climate change paints a vivid picture of the importance that these foods have had for native cultures through time and the impacts that first-food loss can have for native people now and in the future. Finally, discussing climate change alongside colonization provides a more concrete understanding of issues facing native people today. Cultural and natural resources are affected by colonial and climatic issues simultaneously and in interrelated ways.¹¹

My research has two principal goals. First, the research ties together tribal and First Nations accounts and writings about the importance of first foods in their communities in order to draw out the vital roles that these foods play throughout the Pacific Northwest. Second, my research explores how the impacts of climate change may affect the important and unique roles that first foods play in many cultures in the Pacific Northwest. The impacts of climate change, however, should not be viewed in a vacuum. Culture is something that changes and evolves over time, and therefore the past relationship between native people and first foods needs to be considered alongside the current place of first foods in native culture. I compare oppression of first-food use during historical colonization to the potential and ongoing impacts of climate change on first foods today. In doing so, this research ties together native and scholarly voices on the cultural importance of first foods with emerging research on the potential impacts of climate change on these foods, while drawing lessons from the history of threats to first-food use in native North America.

First foods are deeply embedded within many aspects of indigenous cultures in the Pacific Northwest. Family, kinship, and sovereignty are aspects of indigenous cultures in which first foods play integral roles. The gathering of first foods is structured around family relationships, and likewise first foods shape native definitions of family.¹² Historically,

sovereignty was denied to native people in part by denying access to first foods, and the sovereignty of modern native people still depends on the continued ability to access first-food species.¹³ These particularly important aspects of first-food use help to establish a stronger understanding of what is at stake as first foods are threatened by climate change. Breaking first foods into the aspects of family and sovereignty helps to illuminate the complex cultural importance that first foods have in native communities of the Northwest. Yet family and sovereignty are not all encompassing. Some important aspects of first foods may not fit within family or sovereignty. Moreover, there are many cultures and by extension ideas, philosophies, and relationships to first foods in the Pacific Northwest. This research does not claim that these diverse worldviews are somehow identical. Instead, while recognizing that the aspects of family and sovereignty are far from comprehensive, this research seeks to synthesize existing voices concerning the importance of first foods and to provide an understanding of how first foods and climate change are important issues in today's native Northwest. By giving greater voice to indigenous people on issues of climate change, this research helps to explain to the community-at-large the traditional importance of first foods, the struggles native people have faced in the past to continue first-food use, and the impacts that climate change can have on these foods. Climate change, with its impact on first foods, poses a threat to the indigenous family and indigenous sovereignty by denying native people in the Northwest access to those foods. Furthermore, comparing the effects of colonialism and the potential of climate change reveals that colonialism contextualizes the impacts of climate change. Viewing these effects as common and part of a continuum of negative impacts to first-food use gives a more complete understanding of cultural importance of first foods and demonstrates how the health of first foods is central to indigenous wellbeing.

First Foods and their Role in Family and Kinship

First foods have a long and multifaceted role in family life in native communities, a role first challenged by colonization and again by climate change. Since time immemorial, native families have come together spatially and interpersonally by gathering traditional foods. Therefore, gathering first foods provides culturally meaningful places and activities that bind families to ancestral and traditional practices. Moreover, the manner in which families gather food, not simply the accumulation and consumption of those foods, brings them together. The relationship between first foods and native people in the Northwest has shaped how native families function and defines the roles that kinship play and have played in native communities. Traditional foods have provided a space for creating and maintaining family networks and have shaped native conceptions of family. Denying access to first foods was a main colonial tool used to weaken native families; similarly, climate change represents an attack on the ability of indigenous families to maintain themselves.

For the Witsuwit'en and Gitskan people of British Columbia, seasonal gathering binds together families through a system of usufruct and family-dependent gathering. Gathering of fish, plant and game was traditionally carried out across a wide territory according to the seasonal availability of different foods. This method of traveling from area to area in order to gather is called a seasonal round. Richard Daly describes how "the seasonal round [today] still involves a flexible system of seeking and granting use permission from the House group's...chiefs and the reciprocal use of territories by neighbouring chiefs, who often have kinship or marriage links with one another."¹⁴ Usufruct rights to harvest at certain locations are tied to complex family networks. Daly also describes how "due to the flexible system of sharing and reciprocating with seasonal use rights to hunting territories, [community] members...had the option of spending

the bulk of the winter with either a set of in-laws, with their father's kin... or simply with their own chief."¹⁵ These seasonal gathering rights and relationships show how familial ties were established and maintained through mutual access to first foods; family is expressed through peoples' dependence on first foods. The act of gathering first foods binding families together is not unique to British Columbia, as cultural practices of salmon fishing on the Columbia River demonstrate.

Traditionally, salmon were an integral part of determining and maintaining family on the Columbia River, both because of family-owned fishing spots, and because of the unique cultural space provided by those fishing places. Salmon were key to survival for people on the Columbia; having access to productive fishing spots was necessary to maintain one's family. A system of inherited fishing spots ensured that families would have continued security in their access to the precious salmon.¹⁶ At culturally important fishing places, such as Celilo Falls, these inherited fishing spots brought together distant relatives from all along the Columbia. The impact that Celilo and other central fishing spots had on tribal people cannot be overstated. Nez Perce tribal member Leroy Smith states that "We didn't just go to Celilo to catch fish. Celilo was the place to go to be with your relatives, to trade for other goods, to play games, gamble, and it was a good place to find a mate."¹⁷ Celilo Falls was a culturally unique place that facilitated not only traditional fishing, but also brought together native families. As Smith noted, these inherited fishing spots also dictated, in part, marriages along the Columbia.¹⁸ Marriages between families with access to different fishing areas allowed people to extend their family trees, and in doing so guaranteed a larger security blanket for both families. Salmon, in a way, dictated marriages on the Columbia River through inherited fishing access. More broadly, "marriages-for-salmon" maintained strong inter-tribal/inter-community relationships that provided cohesion and strength

along the river. As the fishing spots have historically played a strong role in determining marriages along the Columbia, so they continue to play a role in defining what it means for a person to be someone's relative. In other words, sharing fishing rights is a unique expression of family along the Columbia.

Salmon is so integral to Columbia River people that many identify the fish as their kin.¹⁹ In a video testimony of salmon's importance on the Columbia River, one tribal fisher states that "salmon was presented to me, my family, through our religion as our brother, the same with the deer. And our sisters are the roots and the berries. And you would treat them as such, their life is just as valuable to you as another person would be. And you treat them with that respect for their life and in return they're going treat you the same with their life. That's the way I was told. You know, it's faith. It's a faith that I believe in, it's a faith that I try to instill into my children... that can't go away, there's no way out of it. It's a way of life."²⁰ In many ways, then, first foods are actively shaping indigenous conceptions of family. Including salmon in one's family mandates that the fish be treated with respect and gratitude. On the Columbia, family can also mean all of one's relations, not just those of the same species. Salmon, who are related to native people through legends and by their mutual dependence on the Columbia River, form part of an extended family that exists outside the current Western definition of the word family.²¹ A loss of salmon, therefore, represents a loss of the vehicle by which indigenous Northwest people express their love and relation to other beings, as well as a loss of community. Although this would not necessarily be considered an issue of family in the West, it is an entirely different situation on the native Columbia River.

Viewing both historical and current threats to salmon in light of their status as native family sheds light on what is at stake with climate change

and indigenous people. The struggle of native people to maintain the health and integrity of salmon can be understood as the obligation of one family member to another. When viewed in this light, preservation of salmon and native peoples' relationship to salmon is not merely about access to a quantity of salmon; it is about the quality of access. Having a healthy relationship to a family member depends just as much on having culturally meaningful spaces and activities to bring family together as it does on having an allotted amount of time to spend with one another. Native people depend on the upkeep of traditional fishing spots and practices to maintain a strong relationship to salmon, both for its cultural benefits to native family and because salmon are kin. Colonization, however, has diminished the strong relationship between native people and salmon on the Columbia. The link between colonization and climate change exposes how changes to climate can create new problems for the native family as well as amplify existing problems.

The traditional importance of salmon to family on the Columbia was not something that halted after colonization. However, colonization dealt devastating blows to salmon fishing. For example, construction of the Dalles Dam permanently submerged Celilo Falls, destroying a central fishing place and rallying point for native families.²² The important role of Celilo and the cultural loss resulting from its destruction demonstrate how first foods provide unique cultural spaces that express what native family means. As the cultural devastation caused by the loss of Celilo shows, it is not just access to salmon that determines native family, but also the existence of traditional gathering spaces. These spaces are filled with tradition and history; coming together in these spaces connects native people to their ancestral culture and continues a culturally meaningful activity that shapes family. Despite efforts of colonization to destroy these culturally important fishing places, salmon has continued to play a central

role in both family practices and the concept of kinship on the Columbia River. However, the legacy of this relationship is rife with oppression and struggle.

Columbia River salmon have faced an increasingly degraded home since European colonization. Commercial fishing in the 19th and early 20th centuries decimated once plentiful salmon runs, crippling the runs of salmon up the river.²³ Construction of dams on the Columbia and its tributaries has restricted access of salmon to their spawning grounds, further damaging their ability to thrive. Today there are 219 dams on the Columbia and its tributaries, with over 40 on the Columbia itself.²⁴ These dams have meant a serious reduction of the wild fishery. The pre-contact salmon fishery on the Columbia and its tributaries has been estimated at 15-20 million salmon migrating annually, compared to a low of 500,000 in the late 1970s, and to approximately 1.5 million in 2011.²⁵ Since colonization, wild salmon runs have been crippled and make up only a minuscule fraction of the total runs.²⁶ In addition to a dramatic decline in salmon numbers, native people must now compete with commercial and recreational fishers for access to fish, which further reduces the amount of salmon available when compared to ancestral rates and harvesting practices. A major component in maintaining salmon runs in the face of declining wild salmon populations has been the proliferation of hatcheries, which account for the large majority of salmon spawned on the Columbia and its tributaries. While hatcheries have managed to keep salmon runs at viable levels, they come with their own set of problems, such as lack of genetic diversity in hatchery populations.²⁷ In other words, hatcheries are far from a perfect solution and have been a point of increasing contention in salmon restoration.²⁸ Despite these challenges, native people continue to fish for salmon, although at a highly diminished level.

For native people the systematic denial of access to salmon on

the Columbia remains a major problem for families on the river. The construction of dams, unequal access to fishing during colonization, and the overharvesting of the salmon fishery depleted the number of fish running up the river and reduced native access to salmon.²⁹ Lowering the number of salmon is an obvious blow to indigenous access. In addition, the monopolization of productive fishing spots and the devastating effects of such projects as the Dalles Dam destroyed important traditional gathering spaces. Taken together, colonization and industrialization have simultaneously attacked salmon health, restricted the ability of native people to access what salmon remain, and undermined the continuation of critically important, traditional gathering spaces. However, those negative aspects have been met with continued resistance. Families that had once inherited fishing spots and bonded over salmon fought throughout the 20th century to keep their rights to fish.³⁰ These legal battles eventually led to the enforcement of the legal rights of native fishers on the Columbia, ensuring their continued access to salmon.³¹ Additionally, the proliferation of hatcheries has helped to ensure that salmon fishing will continue for future generations.³² The continuous struggle of native Columbia River people to protect their relationship to salmon demonstrates how integral it is to their way of life and their concept of family. However, declining salmon health and fishing shows that the relationship between native people and sacred salmon is already in danger. The effects of climate change stand to exacerbate this already stressed relationship.

Just as colonization altered river conditions to make rivers less welcoming to salmon, climate change threatens to make the Columbia and other rivers in the Northwest inhospitable for salmon. River temperatures, rising at dangerous rates for salmon, cause a wide variety of challenges for them. As fish migrate up rivers, they rely on temperature signals that are unique to their migratory route to guide them.³³ Changing water

temperatures disrupt temperature signals, making it more difficult for salmon to migrate. Additionally, salmon rely on patches of cool water to rest during their migration.³⁴ Without the cool patches, more salmon perish during migration, as they waste more energy traveling, reducing the health of each run. For Nisqually people, serious concern about declines in salmon runs because of increasing river temperatures has led to massive efforts, such as rechanneling sections of the river system in an effort to provide more low current, cool water eddies and decreasing water temperature in the Nisqually watershed.³⁵ Warmer water causes other problems as diseases become more prevalent with rising water temperatures.³⁶ Even changes in ocean temperature are playing a role. Salmon migrations are affected by ocean temperature increases, which discourage runs from moving up river.³⁷ Furthermore, extreme weather events such as floods and landslides are projected to increase and cause even more stress to freshwater salmon.³⁸ These forces are acting to deplete the salmon fishery, further lowering the numbers of running salmon. These changes create even more concern because hatcheries will be unable to compensate for the loss of salmon. Although hatcheries care for fry salmon and nourish salmon runs, they do not protect salmon from environmental changes. A growing body of scientific evidence is showing that the escalating changes to the hydrological system will spell disaster for salmon and other native fish throughout the Northwest.³⁹ While these changes to climate are new and emerging, they have many similarities to colonization and fishery loss in the past.

The effects of climate change are similar to the past destruction of traditional fishing sites. Colonial depletion of salmon fisheries occurred in two ways: overfishing and the construction of dams. Overfishing has depleted salmon numbers, just as warming waters have lowered the survival rates of young fish. Dams have led to changes in distribution of

sediment along the river beds, altering the physiology of rivers in ways similar to changes brought on by changing precipitation levels and glacial melting. If salmon were to stop running up certain tributaries, for example, once-critical fishing spots would become barren. In many ways, these changes would have the same effects that colonization did; they would deplete salmon runs and destroy culturally meaningful fishing places. Given the unique role that each fishing spot can play for certain families, this would certainly be a disaster for native people. Taken together, these effects would mean a permanent loss of access to salmon for some native peoples and a loss of culturally significant spaces that enable native families to bond. Moreover, many treaties limit fishing rights to “usual and accustomed places.”⁴⁰ This means that in addition to geographical limits to fishing, native people would face policy restrictions in trying to adapt to climate change. More importantly, those restrictions go beyond an issue of simple access to threaten traditional, culturally meaningful access to salmon. Therefore, the threats include the ability to maintain family networks through inherited fishing spots and the ability to come together in places where salmon are supposed to be gathered in accordance with one’s culture.

Many native communities identify the loss of salmon as a major concern. As part of an intertribal salmon restoration project entitled *W̓y-Kan-Ush-Mi-Wa-Kish-Wit* (Spirit of the Salmon), the Umatilla, Warm Springs, Yakama, and Nez Perce nations state that “without salmon returning to our rivers and streams, we would cease to be Indian people.”⁴¹ These words show how salmon is a dear family member, a way for native families to come together in the face of cultural assimilation, and a part of what it means for these tribes to continue their existence. Similar to the historical oppression of Columbia River people, climate change has the potential to impact native communities by denying their

relationship to their salmon kin. In the past, this denial has been used as a tool to degrade indigenous kinship (including kinship between salmon and people). Climate change, although not an intentional effort to colonize or assimilate native people, has the potential to further alienate native kinship networks by pushing salmon outside of their historical ranges and denying native access to this sacred fish. Columbia River native people are unfortunately not alone in this dilemma. Struggles of peoples north of the Columbia further demonstrate how gathering first foods is a powerful tool in bringing family together, as well as the role that colonization and climate change play in disrupting those relationships.

As the Huna Tlingit of Southeast Alaska and Gitga'at of British Columbia struggle to access first foods in the face of unhelpful state policies and climate change, members of these communities articulate how important it is to tribal families to maintain access to these resources. Furthermore, their experience offers an excellent case to view how climate change can immediately impact cultural practices that help to hold indigenous families together. Comparing the legal issues that affect gathering by the Huna Tlingit with the threat that climate change poses for Gitga'at and other British Columbia First Nations further demonstrates how colonial impacts and climate change parallel one another by disrupting traditional families and removing cultural spaces that bring family together.

The Huna Tlingit historically gathered massive amounts of seagull eggs on the coast of southeast Alaska. For these people, gathering eggs has traditionally been a way to bring families together. Eugene Hunn notes that, while seagull eggs were “not notable” in terms of their proportion of traditional diet, or of “outstanding...ritual significance,” they are highly regarded by Huna people because of how they “brought families together.”⁴² The right to gather eggs is limited by one's relation to a Huna

community member. Friends and relatives from other tribal communities may come and harvest, as long as they come with their Huna relations.⁴³ This creates both a literal and cultural space in which only members of an extended kinship network and their friends are spending time together. Gathering eggs traditionally could be a week-long excursion, in which children learned skills and families reconnected as they gathered and prepared food.⁴⁴ Numerous elders recounted to Hunn how gathering eggs was a family event and an opportunity to teach and bond with children. One elder, Lily White, commented that it was “like Easter.”⁴⁵ Therefore, gathering seagull eggs is a way to raise, strengthen, and nurture Tlingit families. As Huna elder Pat Mills noted, “this is the way we came to love our country as our fathers and uncles did. We also felt that we were a part of somebody and somebody special when our families took us on these trips. We were taught this is who we are and this is how it’s going to be.”⁴⁶ This sentiment describes exactly the importance of gathering in lifting up native families. Exercising cultural practices in a family setting is a way for people not only to gather food, but to maintain their identity, culture and self-esteem.

Huna Tlingit egg gathering has dwindled, in part because of the rocky relationship between Huna people and the National Park Service (NPS) that administers Glacier Bay National Park where North and South Marble Islands and other favored egg gathering sites are located.⁴⁷ The NPS enforces restrictions on which first foods within the park may be harvested, and seagull eggs are prohibited from being gathered. While the relationship between the NPS and Huna Tlingit is not overtly colonialist, the fact remains that traditional Huna Tlingit gathering land is now under control of a US federal agency. The ability of the NPS to declare gathering practices illegal and enforce these restrictions has decreased egg gathering considerably in Huna country.⁴⁸ For Huna people, gathering eggs on the

Marble Islands is a unique bonding experience for families. Similar to the traditional fishing spots of people on the Columbia, these islands provided a unique and culturally significant space to bring family together. Therefore, NPS gathering restrictions damage the capacity of Huna people to teach their traditions to their children and maintain their cultural heritage as Huna families. The fact that some Huna people have access to other egg gathering sites is irrelevant because gathering is not a simple matter of access or quantity. Instead, it is about the traditional connection Huna people have to certain gathering places, and the connection these places have to their families. Restrictions to gathering at these places damage the ability of Huna Tlingit people to continue gathering eggs in a way that is culturally meaningful.

For many peoples of British Columbia and Southeast Alaska, including Tsimshian, Tlingit, Gitga'at, and Kwakwaka'wakw, seaweed is an important first food. Nancy Turner notes that in addition to providing valuable nutrition, seaweed harvesting "brings families and communities together" to practice their culture.⁴⁹ Similar to Tlingit egg gathering, seaweed harvests are a time to bond with family. Turner also notes evidence that seaweed brought people together across cultural groups. A linguistic analysis of the diverse peoples who gather seaweed, i.e. across languages, showed that common terms exist for this type of seaweed.⁵⁰ This cross-linguistic commonality is an excellent example of how seaweed not only immediately binds families together but also reaches across language groups and tribes to form links and bonds. Those links create opportunities to strengthen extended family and kinship networks. For these people, summer months have traditionally been dedicated to gathering seaweed. For the Gitga'at, even the name for the month of May translates to "month for getting seaweed."⁵¹ During this time, families gather together and move to seaweed gathering camps to harvest and

process the valuable first food.⁵² Similar to Huna egg gathering, seaweed gathering provides a time for families to bond together while harvesting a food. Traditional Knowledge, a critical aspect of Gitga'at culture, is used to determine how and when seaweed will be harvested. These harvests are vital for this important knowledge to pass from one generation to another through practice. Unfortunately, seaweed provides another example of how gathering, an important aspect of indigenous family life, is affected by climate change.

Warming and unpredictable temperatures have resulted in drastic changes in seaweed availability on the British Columbia coast. Gathering times have become increasingly unpredictable because of previously unheard of changes in weather patterns.⁵³ These changes have made it difficult for elders and experienced gatherers to anticipate when to gather and preserve seaweed. For example, unpredictable rainy seasons make it hard to dry seaweed, a process that demands good weather for many consecutive days. This unpredictability is a significant obstacle to the continued use of seaweed for Gitga'at people. Because gathering is less predictable, it is more difficult to decide correctly when and how to gather. In the past, families could accommodate variations in weather by falling back on other foods.⁵⁴ However, today's changes are much more drastic. Hence, they affect multiple foods at once, making it more difficult for families to rely on a different resource, such as halibut, when the seaweed harvest is bad.⁵⁵ Additionally, given that today the majority of young people depend on wage labor,⁵⁶ unpredictable conditions make gathering even less realistic for these families, who also have obligations of nine-to-five jobs. Climate change, therefore, can be thought of as the last straw in making gathering not feasible. Turner notes a growing concern in British Columbia and Southeast Alaskan communities that climate change may be one change too many, one that will exaggerate the effects of young

peoples' alienation from traditional culture and make the continuation of seaweed gathering an unlikely scenario.⁵⁷

Comparing Huna egg gathering to Gitga'at seaweed use demonstrates how climate-induced changes to first foods and colonial impacts on the indigenous family have similar effects. As with egg gathering, the changing conditions of gathering seaweed make it hard for families to bring in younger generations to continue this culturally important process, and colonization removes spaces that bring families together. For Gitga'at seaweed, both forces make gathering unpredictable and therefore less feasible. For Huna people, colonial bureaucracy has restricted access to important cultural spaces. While NPS restriction of egg gathering is a legal barrier, and climate change damage to seaweed gathering is an environmental barrier, these cases expose a parallel between climate change and colonialism. The processes deny native people access to culturally important places that traditionally bring families together. Taken in concert, these impacts sap strength from the capacity of first foods to maintain native families, as they have done for thousands of years.

First Foods and Their Role in Sovereignty

Since colonization began, first foods have played a central role in wars for the rights of indigenous people. From early conquest and settlement of traditional gathering territories, to industrial monopolization of native land, to modern legal battles for fishing and gathering rights, first foods have been at the center of the contentious battle for native sovereignty in the Northwest.⁵⁸ For the purposes of this paper, sovereignty means 1) having access to resources that enable cultural autonomy, 2) maintaining primary responsibility for the care of these resources, and 3) the ability to continue cultural practices through a continued relationship to these cultural resources. This definition of sovereignty is concerned primarily

with the ability of people to maintain and control their own culture and the factors (e.g., species, land, practices, people, knowledge) that enable their culture to exist in today's world. Comparing the effects of climate change to past struggles against colonization reveals how the relationship between first foods and native people is a central aspect in maintaining indigenous sovereignty. Key issues of access to first foods, ecosystem changes, policy restrictions, and the social stability of native communities factor into both historical struggles for sovereignty and the impacts of climate change on sovereignty. First foods have historically been a cornerstone of indigenous autonomy; climate change represents a challenge to this autonomy because of its varied and negative impacts on native access to first foods. Current changes in climate also represent potential harm to the status of indigenous sovereignty in the Northwest.

To explore how colonialism targeted first foods and in doing so reduced indigenous sovereignty, let us return to salmon along the Columbia. Traditionally, salmon played not only an important role in family life, but also in determining status and wealth on the Columbia River. In pre- and early-contact times, salmon represented the single largest influx of energy available to people along the River.⁵⁹ Logically, salmon became central to native economy and society. Fishing rights were the responsibility of headmen and chiefs, as they both regulated the fishing of others and inherited important and prestigious fishing rights.⁶⁰ European settlers also quickly identified that salmon meant wealth along the Columbia. Colonial commercial fishing diminished indigenous sovereignty on the Columbia in unprecedented ways by displacing native fisherman, removing a centerpiece of native leadership and responsibility, and marginalizing the role of both fishers and leaders along the river. An excellent example of this clash can be found in a dispute brought to court in 1895. The Winans, a white fishing family, pursued a dogged and ruthless policy of

excluding Indians from access to fishing on property they had purchased. They fenced in miles of riverbank that was traditionally fished by native people, and employed thugs to rough up Indians who tried to make it through.⁶¹ Additionally, families such as the Winans ruined native fishing grounds to make way for massive fish wheels that quickly depleted salmon runs.⁶² Fisheries that once granted powerful social capital to the chiefs and headmen who managed them were destroyed by fishing practices ill-suited to the seasonal runs of salmon. The loss of access to salmon was as much a political undermining as it was a cultural loss. Native fishers had some of their most important property—their fishing rights—taken from them without recourse. Native political and social autonomy was crippled as salmon runs declined. Salmon not only fed native people, they also supplied wealth and a means to coordinate and direct political action. Therefore, a loss of salmon was a loss of cultural autonomy. Modern relationships to salmon continue to show how fishing rights are a key component of indigenous sovereignty.

For Nimiipu (Nez Perce) people, salmon have always been a cornerstone of culture. This is reflected in stories, the economic and social importance of salmon in pre-colonial times, as well as the continued dedication of the Nimiipu to maintaining a strong relationship with salmon (in part through involvement with the Columbia River Intertribal Fishing Commission).⁶³ Although salmon runs are a fraction of what they once were, Nimiipu people strive to continue their relationship with the fish. As with much of the Northwest, colonialism has damaged this relationship by reducing the size and health of salmon runs. However, many people work diligently to ensure that Nimiipu culture is still structured around salmon. B.J. Colombi writes that “sovereignty in land and salmon gives Nimiipu a base of power.”⁶⁴ Salmon have done this by providing a cultural base for Nimiipu people that in turn grants Nimiipu people the ability to adapt to changes

and be resilient. Colombi argues that for Nimiipu people, culture, not institutions, is the key to resiliency and, by extension, the ability to retain cultural and political sovereignty.⁶⁵ Salmon give themselves to Nimiipu, and in doing so provide the people with means to adapt and maintain their culture in the face of changes. At the same time, the relationship to salmon gives Nimiipu people cultural, economic and political strength.⁶⁶ In short, salmon maintain the sovereignty of Nimiipu people. The culture formed around salmon has shaped a unique knowledge system that aids Nimiipu in adapting to changes, while the actual presence of salmon provides both the ability to practice culture (such as ceremonies) and the security of a continued relationship with valued salmon. Although this relationship is formed around the ability of both salmon and Nimiipu people to adapt to changes, the capacity of either to adapt is finite.⁶⁷ Therefore, climate change presents a challenge for Nimiipu people. Their relationship to salmon, and with it the continued independence of their culture, relies on how Nimiipu and salmon adapt to the changes in front of them.

For the Nimiipu, climate change brings with it a troubling set of questions regarding sovereignty and salmon. What effects will climate change have on salmon? Can the Nimiipu and salmon adapt to these changes? In the worst case, is it possible for Nimiipu sovereignty and autonomy to continue without the fish who have given them so many tools to adapt and be resilient, both materially and culturally? These are questions without definite answers. Just as Nimiipu people have relied on salmon to provide them with a path for sovereignty in the past, they will continue to do so in the face of climate change. Colombi states that “Just as salmon has been key to native society, culture necessitates that it play a central role in native nation building.”⁶⁸ He dubs the continued use of salmon to lift the Nez Perce nation as “Salmon Nation building.” Nimiipu people are already proactively addressing Salmon Nation building in a

climate change era. They have, for example, developed a climate change adaptation plan for a watershed in their traditional homeland, developed a carbon sequestration effort, and continue to work with the Columbia River Intertribal Fishing Commission (CRTIFC) to protect salmon.⁶⁹

Salmon is central to Nimiipu sovereignty in the context of climate change. As climate change alters riparian systems and salmon health, it may harm the relationship between Nimiipu and salmon. Climate induced glacial melting, increasing temperatures, and erosion all present immediate threats to salmon health. These challenges will undermine Nimiipu sovereignty by distancing Nez Perce people from salmon. In *Salmon and His People*, many of the interviewees offered variations of the statement that “if we lose salmon, it will cripple our people.”⁷⁰ This sentiment hints at a complex, underlying dynamic. Salmon have, over time, developed a rich capacity to adapt to environmental changes. Nimiipu people have learned from salmon and come to depend upon them to provide a basis for cultural health, sovereignty, and resiliency in the face of change. Stories about salmon, sustenance provided by salmon, and the centrality of salmon to Niimipu religion and tradition all demonstrate how salmon holds a key to Nimiipu sovereignty. Even as Nimiipu depend on salmon, both salmon and Nimiipu adapt together to changes in their shared home. However, some changes threaten both the basis of Nez Perce adaptability and the autonomy of salmon. Climate change is one such challenge. While Nimiipu and salmon have adapted to changes such as dam building and commercialized fisheries, the changes have come at a cost. Salmon runs are a fraction of what they used to be. Moreover, the land and autonomy that Nimiipu people lost from colonization and decimation of salmon populations are incalculable. Modern climate change poses a major challenge to the adaptive capacity of the Nimiipu and salmon peoples. In doing so, it threatens the basis of Nimiipu cultural autonomy. Nimiipu

struggles to maintain sovereignty during climate change are not an isolated event in the native Northwest. Instead, they are part of a long effort by native people to maintain their autonomy in the face of externally imposed changes.

In western Canada, as along the Columbia, colonialism severely weakened native sovereignty by destroying traditional gathering places. Settlers drastically altered the landscape as they came into native-controlled areas. During the colonization of the Tsawataineuk Kwakwaka'wakw people around Kingcome Inlet, for example, settlers quickly claimed what was once productive gathering land and converted it to agriculture and pasture.⁷¹ As Nancy Turner has noted, attempts to mitigate the influx of settlers were ignored. The testimony of Chief Chesaholis provided evidence about the destruction caused by livestock to the roots of first foods. "[We] asked them to keep their cattle at home, but they never pay any attention to whatever we say to them."⁷² The lack of regard for native rights and sovereignty over their traditional gathering places was systemic throughout British Columbia and resulted in widespread loss of valuable gathering spots.⁷³ Moreover, it impacted the health of first-foods species, many of which depended on active management by native peoples. In effect, colonization reduced the health of first-foods species and destroyed the infrastructure that allowed First Nations people to gather. More broadly, destroying gathering places badly damaged cultural and societal independence by undermining the foods and land that function to maintain cultural health and autonomy in the native Northwest.

The Swinomish Tribe of the Puget Sound is facing effects similar to those experienced by the Tsawataineuk in the past. Swinomish people have identified that the health of their first-foods species and the security of tribal gathering sites are threatened and that important cultural gatherings and practices that are part of what it means to be Swinomish are also at

risk. However, there is an important difference in cause for the Swinomish people: the threats come from climate change. In response to these threats, the Swinomish tribal government has created a climate change impact assessment, and from it the Swinomish Tribal Climate Change Adaptation Action Plan, to ensure that the threats caused by climate change are both well understood and prepared for.⁷⁴ A major emphasis of the Adaptation Action Plan is identifying how climate change poses threats to the Swinomish community as a whole, i.e., to its sovereignty and ability to autonomously exist. A second emphasis is determining the direction to take moving forward in order to adapt to these changes and preserve the health of the community. The Swinomish have identified first foods as important for community cohesion, food security, ceremonial use, knowledge transmission, and self determination. In short, first foods are vital for sovereignty. The Swinomish Plan also has broader applicability as a model for tribal and First Nations communities to identify current challenges to sovereignty brought on by climate change and to plan for the future. The emphasis on first foods within the report demonstrates how critical traditional food use is to the continued sovereignty of native Northwest peoples and shows that the use of first foods will be a central issue for maintaining sovereignty in the face of climate change. The anticipated and ongoing effects of climate change described by the Swinomish Climate Change Adaptation Action Plan are similar to earlier, colonial effects on first foods. Comparing climate change impacts on the Swinomish people to earlier colonial impacts on people in British Columbia demonstrates how weakening first-food health and native ceremonies conspired to reduce native sovereignty. Undermining gathering, whether by colonial action, changes to the ecosystem, or declines in species health, reduces community cohesion and self-determination as it weakens native culture and reduces native sovereignty.

Climate change is quickly threatening traditional fishing and shellfish gathering sites of the Swinomish people. Just as colonial impacts on salmon were a struggle for political control of the Columbia, Swinomish struggles to retain their fishing sites are an issue of community sovereignty. Specifically, sea level rise and ocean acidification are eroding the ability of Swinomish people to fish.⁷⁵ Sea level rise is quickly threatening the Swinomish reservation, as up to 15% of reservation uplands are at risk of inundation, including valuable gathering sites.⁷⁶ Shellfish, an important traditional food, are unable to live in overly acidic ocean water. As the Puget Sound becomes more acidic because of climate change, shellfish may not be able to adapt, as young shellfish cannot calcify their shells in water that is too acidic.⁷⁷ In effect, the Swinomish are dealing with a wholesale attack on their capacity to provide themselves with traditional foods. While limits to traditional foods have economic and dietary impacts, they also pose a threat to the ability of the Swinomish people to exercise self-determination. The Adaptation Action Plan identifies self determination as one of five indicators of community health. The report notes that self determination is “unique in that, unlike the four previous indicators, asserting self-determination was not necessary until externally imposed trauma occurred.”⁷⁸ In other words, colonization and climate change share in their ability to disrupt indigenous self determination. Both fall under the definition given of “externally imposed trauma.” The document makes the more subtle point that self determination becomes a necessary component of community health precisely because traditional sources of self-determination and sovereignty are being threatened. Thus, self determination is no longer a given when the basis of self sufficiency, first foods, is threatened. The rapid loss of shellfish gathering and seining sites because of sea level rise is, in this light, an erosion of the basis of Swinomish authority and ability to self determine. For that reason, the

Adaptation Plan must explicitly identify self-determination as a factor that must be maintained moving forward. Until recently, the intact culture and ecosystem guaranteed continued access to first foods, which in turn formed the bedrock upon which Swinomish sovereignty was based. Only with the damage done to first foods has self determination become a necessary concern for Swinomish people.

Additionally, with declines in the health of first foods, Swinomish people may lose the ability to practice important traditions. Ceremonial use is another of the five indicators of community health. The majority of people interviewed for the Adaptation Plan felt strongly that “gatherings and ceremonies... *would be changed or impossible without natural resources such as Seafood*” [emphasis in original].⁷⁹ Without being able to practice traditional ceremonies and gatherings, such as the First Salmon ceremony celebrating the arrival of the first salmon of each major run, the very identity of the Swinomish people becomes threatened.⁸⁰ This problem is not limited to Swinomish people, but instead, is important for gatherings throughout the Northwest that depend upon first foods. From British Columbia south along the coast to the Columbia River, First-foods ceremonies are conducted to honor certain foods for their role in allowing the continuation of native culture and life.⁸¹ Today, Nez Perce and Swinomish people are now experiencing climate changes threatening their ability to gather and continue to exercise their cultural heritage, just as they and others have throughout colonial history in the Northwest.

Moving Forward in an Age of Climate Change

As climate change becomes ever more a part of the public consciousness, an increasing number of narratives are emerging to describe climate.⁸² Among these narratives is a discourse of native peoples and climate change. In this discourse, there is an emphasis on first foods and their vulnerability to climate change. Underrepresented

in this discourse, however, are cultural understandings of climate change impacts on native peoples and first foods. Instead, first foods are largely treated as a quantity to be maintained and preserved in the face of climate change. Although this view is helpful in moving forward with policy and adaptation efforts, it fails to justify the importance of first foods to native peoples and stops short of examining issues of traditional foods in a culturally appropriate context. In contrast, by using examples of historical and current roles that first foods play in native cultures in the Northwest, it is possible to gain a stronger understanding of how climate change will affect indigenous people. This understanding extends beyond the loss of quantifiable resources and begins to explore the cultural ramifications of climate change.

The cultural importance of first foods in the Pacific Northwest is broad and multifaceted. Family and sovereignty are two fruitful examples of the cultural importance of first foods, while also highlighting the negative impacts climate change can have on native culture. However, they are just that: examples. First foods are integral in many aspects of native Northwest peoples' societies, including religion, economy and the passing of inter-generational knowledge. For example, many nations continue to rely on salmon for economic well-being.⁸³ First foods are important for indigenous well-being precisely because they occupy so many roles in native communities. This makes it critically important to understand exactly how climate change will impact first foods and how cultures can act to adapt to and mitigate these effects. Without exploring how the changes will impact native economy as well as the native family and sovereignty, it will be difficult for native communities to prepare themselves.

In addition to drawing comparisons between aspects of native culture and society, it is necessary to look to the past in order to inform the future. Changes brought on by colonization can illuminate current struggles with

a changing climate. Looking back gives perspective on how impacts to first foods affect community health. Changes to first-foods use that could be presented as new challenges, such as the loss of culturally important gathering places, are better understood in light of past loss of land and gathering rights. Colonization contextualizes first-foods use and climate change. Without discussing both the residual effects of colonization, and the similarities between colonization and climate change, indigenous struggles to maintain first-food use cannot properly be understood. Taken out of context, the gravity of these issues is difficult to appreciate.

Additionally, spreading awareness to the public at large that the stakes for native communities includes both a cultural and a natural resource issue may be necessary to drive public support to protect first foods. For these reasons, viewing first foods and climate change in light of cultural significance is critical to the continued well-being of native communities. Presenting first foods only as a quantity or resource does nothing to explain why and how first foods are important to native cultures. Although it is unfair, native communities today must jostle with other narratives and agendas within the climate change discourse. Both drawing from the past and explaining parts of the cultural importance of first foods strengthen native claims that first foods must be protected from climate change. Efforts like the Swinomish Climate Change Adaptation Action Plan give a strong model for other tribal and First Nations communities moving forward. To protect the critical relationships between first foods and indigenous people, First Nations and tribes are planning for effects of climate change on all aspects of their culture. Native people must be recognized for their important leadership roles both in confronting past abuses of traditional food and land, and in their groundbreaking work preparing and adapting for another set of changes to the Northwest.

Notes

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