CONFLICT TO COOPERATION: AN AXIOLOGICAL ANALYSIS OF COLLABORATIVE RESOURCE STEWARDSHIP IN THE NISQUALLY RIVER WATERSHED

by

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Here I evaluate collaborative stewardship planning in the Nisqually River Watershed to see how values about human-nature relationships are represented in watershed stewardship practices. To do so, I review planning documents and testimonial sources with a conceptual framework that studies environmental values by combining approaches from hermeneutic phenomenology with the conceptions of human-nature relationships outlined by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). Looking at the data this way shows more precisely how values are represented within and influence the efficacy of planning outcomes. This study investigates relatively unexplored factors in socioecological decision-making and resulting stewardship practices. Enhancing our understanding of how resource conflicts happen and are resolved, and how values inform the process/outcome of collaborative stewardship practices is incumbent for coping with and overcoming future environmental challenges around the world. Such studies are necessary for successfully navigating present and future contradictory uses and identities associated with resource conflicts. In this work I trace how contexts of conflict become cooperative, demonstrate how values emerge in Nisqually planning contexts, while showing how hermeneutic phenomenology and IPBES are helpful for both *studying* and *practicing* collaborative stewardship.

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I also want to acknowledge all the communities of knowledge that made this project possible. This work and its findings could not have happened without the labor of those who live and work in the Nisqually Watershed every day, those who developed IPBES, wrote the histories, and so on. I want to conclude with acknowledging that the case study site of this project is situated on Indigenous land—home to the Nisqually Tribe, land that the State of Washington on behalf of the United States dispossessed the Nisqually people of in the 1854 Treaty of Medicine Creek. I hope this thesis does justice to this region's history.

Contents

List of Figures

List of Tables

Chapter 1: Introduction and Background

I. Introduction

The Nisqually River Watershed hosts a diverse riparian habitat that supports a complex socio-ecological system revered for its biodiversity and contributions to human cultures and societies. The Nisqually River Watershed is considered nationally significant as it is the only river to have its headwaters in a national park and its delta in a national wildlife refuge (Nisqually River Council 2020, 1). Locally, the watershed is revered as a beacon of identity and sense of place for people of all backgrounds due to the myriad of cultural, economic, and ecological contributions it offers. Related to these contributions, the watershed signifies a decisive success story for environmental justice and collaborative watershed stewardship. It is a prime case study site due to its proximity to both urban and rural settlements and consequent diversity of stakeholders, its protected status as a "river of statewide significance," mixed land uses, and history of conservation and struggles over resource rights and access (NRC 2020). As a site of notable biological and cultural diversity, alongside its legacy of conflict and mediation and its modern status as a beacon of collaborative watershed stewardship, the Nisqually Watershed narrative embodies how environmental values inform the outcomes of ecological stewardship plans and practices.

The environmental values that correspond with the unique success of collaborative stewardship processes in this case study are investigated under a framework that combines concepts from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and hermeneutic phenomenology. IPBES provides an approach to understanding values and decision-making that informs my chosen method of coding for specific values represented in watershed stewardship plans and reports; and hermeneutic phenomenology is a philosophical tradition that informs my relational, interpretive lens of evaluating the explicit and

implicit values of human-nature dynamics embedded in the dataset. I combine these frameworks to argue that the incorporation of environmental philosophy into science-policy interfaces such as IPBES strengthens such approaches in complementary ways. *I predict that by synthesizing these approaches to environmental values, and tying them back to decision-making and policy creation, we can better understand how effective collaboration processes occur across diverse interests and complex contexts.*

The conflicts, and resolution processes, within the Nisqually Watershed have been well-studied and widely appraised as an environmental justice success story (i.e. Wilkinson, Grossman). Applying an axiological[1] lens to this case study site will more precisely reveal what and how values show up during planning processes and how this could inform plan outcomes, and ultimately, explain human attachments to place. In order to accurately interpret value formation and expression in this watershed, we must first have a comprehensive understanding of the myriad of contextual factors: geography, cultural and land use history, important policies, and academic approaches relevant to this work.

II. Research Questions and Hypothesis

This project explores the practical applications of environmental philosophy for policymaking and ecological stewardship. This work began back in 2021 with the question of how and why human cultures develop relationships with glaciated landscapes, and how to interpret the ecological values and practices that emerge because of these relations. The Cascades, and Mount

1 Axiology studies the nature of value

Rainier especially, seemed like an obvious place to explore this set of questions due to its layered history of human civilizations powered by the region's innate biodiversity and natural resources.

When I discovered hermeneutic phenomenology in an environmental philosophy class, I wondered whether its relational and interpretive lenses could reveal the often elusive and obscured processes of value formation and its connections to conflict/cooperation. This is not a simple question. To philosophically understand land use and resource interdependency in this way requires comprehensive background knowledge of historical, cultural, political, and ecological factors of which I have spent the last two years studying. It also requires a framework of interpretation to analyze the events and processes studied in the research. IPBES supplied this structure, an axiological approach to ecosystem science and policy, to guide my investigation into the phenomenological relationship between human-nature values and their impact on political and ecological processes.

I chose to explore these inquiries through a conceptual framework that combined my interest in hermeneutic phenomenology with the structure that IPBES provides. This synthetic framework was developed to help answer a two-pronged research question: first, *what new insights can be found about a prominent case study on conflict resolution and collaborative ecosystem stewardship -when studying the values at stake- by applying an axiological framework based on hermeneutic phenomenology and the IPBES Values Assessments?* Because I want to understand how values influence environmental conflict and cooperative stewardship, I tailored my own framework and method of data analysis that combines lenses from hermeneutic phenomenology and IPBES. Inspired by IPBES' approach to values within science and policy, I am testing whether

the increased incorporation of diverse, pluralistic values in ecosystem services and management results in more effective outcomes.[2]

Therein, it follows that I am investigating how the expression and prevalence of specific values by watershed stakeholders changes and/or corresponds with various relationships to the ecosystem and its resource contributions; i.e. *If differing experiences of place influence the development (and expression) of varying specific values and subsequent interactions between stakeholders, how are these relations represented in stewardship processes?* To answer this, I used my developed conceptual framework as a guide to interpreting (via codes and themes) the specific values evoked within collaborative policy and planning documents that represent diverse stakeholder interests. This methodical application of the CF may better reveal the plurality of values that are present in collaborative decision-making processes, furthering our understanding of precisely how values underpin decision-making processes. Aligned with pre-existing literature and studies on value pluralism in ecosystem management, my analysis supports that a diversity of values in planning leads to more egalitarian, democratic, and just planning outcomes. The methodology I developed to conduct this analysis may contribute invaluable insights as to exactly how this occurs. To reiterate, I predict that applying IPBES and hermeneutic phenomenology lenses to decision-making discourses can help us better understand how effective collaboration processes take place among diverse interests coming from complex contexts. This work contributes to growing research on the role values play in socioecological processes and makes a case for hermeneutic phenomenology as a useful lens for such studies.

2 Effective outcomes are defined in this work as and measured by sentiments of stakeholder satisfaction and the presence of established initiatives for cultural-ecological protection and enhancement.

A note on researcher positionality: My personal interest in resource use and conflict resolution is motivated by an understanding that these conflicts are predicted to increase in frequency and intensity as climate change progresses. This work is motivated by my curiosity and desire to see how values play into these issues, and whether a better understanding of values can engender fair solutions to these conflicts. I was drawn to this case study because so much of environmental studies is learning about what *is not* working/effective, and I wanted to investigate a story where meaningful progress has been made towards environmental justice. Despite having no personal connection to the Nisqually Watershed (being from Illinois) I find the story that I describe throughout the rest of this chapter to be deeply fascinating and inspiring. I acknowledge that none of this research would be possible without the work and contributions of the stakeholders that I study, primarily the Nisqually Indian Tribe and Nisqually River Council.

III. Geographic Context

The Nisqually River watershed spans 720 sq miles in the Puget Sound region (Gordon 1995, 23). Its headwaters originate from the Nisqually Glacier at the summit of Mount Tacoma/Rainier[3] at 14,411 ft, coursing into the valley until it terminates in the estuary that flows into the Nisqually Delta in Puget Sound.[4] Like other Puget Sound watersheds, the Nisqually's 78-mile course provides habitat for several types of salmon, including threatened Chinook and coho,

3 Mount Tacoma is Mount Rainier on most maps. The name Mount Rainier came to be when colonial explorers discovered the Puget Sound region, but in this work the mountain will be referred to by its original name, Tacoma/Tahoma, or Təqʷuʔməʔ, in accordance with the expressed desires of the region's indigenous population. (see: "Changing the name of Mount Rainier? The new effort from Washington tribes" by Deedee Sun for KIRO 7 News (April 23, 2021); Blee, Lisa "Economies of Place" 2009, 421-422).

4 The Nisqually Glacier is one of six glaciers on Mount Rainier that originate at the summit, the mountain's peak is home to 25 glaciers in total making it the most glaciated peak in both the Cascades range and the entire contiguous United States (Lapp 2020).

an assortment of waterfowl, varieties of flora, and marine life like shellfish. It is not only the only river to have its headwaters in a national park and delta in a national wildlife refuge, but it is also southern Puget Sound's single largest freshwater source according to the Washington Department of Ecology (1987). Labeled as Water Resource Inventory Area 11 under the Watershed Management Act (RCW 90.82 1998), this watershed encompasses: three counties (Pierce, Thurston, and Lewis); three sub-basins (Yelm, McAllister, and Mashel/Ohop); the towns and cities of Yelm, Eatonville, Lacey, and Olympia; a military base; agricultural and timber lands; the Nisqually Indian Reservation; the Alder and LaGrande dams; the Billy Frank Jr. National Wildlife Refuge; Mount Rainier National Park; the University of Washington Experimental Pack Forest; and the Gifford-Pinchot National Forest (Nisqually River Council 2020, 1). The river and its basin is a primary source of fresh groundwater and surface water, providing essential habitat for salmon, waterfowl, shellfish, and human populations in the region. Unlike more developed basins in the region, the Nisqually Watershed is still abundantly forested[5] (Nisqually River Council 2019, p. 16). Due to the abundance of federally and state protected lands, the Nisqually is considerably less degraded than some of its neighboring watersheds; yet because of the abundance of resources and associated interests within the watershed, the Nisqually River Basin has a long history of shifting land uses.

IV. Stakeholders Overview

Most of the following stakeholders are mentioned throughout the geographic and historical reviews, so this section will briefly preview each stakeholder involved in the Nisqually River

[5] "approximately 196,000 acres are zoned as forestland and managed either as private commercial, state, or federal timberlands. Up to an additional 100,000 acres of the watershed are forested, including numerous small private commercial or non-commercial forestlands as well as parks and protected areas" (Nisqually River Council 2019, p. 16)

Council and describe its structure, to then outline which stakeholders publish reports relevant to the dataset selected for my inquiry. According to the most recent publication of the Nisqually Watershed Stewardship Plan (2020), there are almost thirty member agencies of the Nisqually River Council:

- Nisqually Indian Tribe
- City of DuPont, Town of Eatonville, City of Lacey, City of Olympia, City of Roy, City of Yelm
- Citizens Advisory Committee
- Lewis County Board of Commissioners, Thurston County Board of Commissioners, Pierce County Council
- Pierce Conservation District, Thurston Conservation District, Lewis County Conservation District
- Tacoma Public Utilities
- Puget Sound Partnership
- University of Washington, Pack Forest
- Washington State Department of Agriculture, Department of Ecology, Department of Fish and Wildlife, Department of Natural Resources, Department of Transportation, Department of Commerce, Parks and Recreation Commission, Secretary of State
- National Park Service: Mount Rainier National Park
- US Department of Defense: Joint Base Lewis-McChord
- US Fish and Wildlife Service: Billy Frank Jr. Nisqually National Wildlife Refuge
- US Forest Service: Gifford Pinchot National Forest

Their relationships are summarized by Figure 10 from the NWSP (2020):

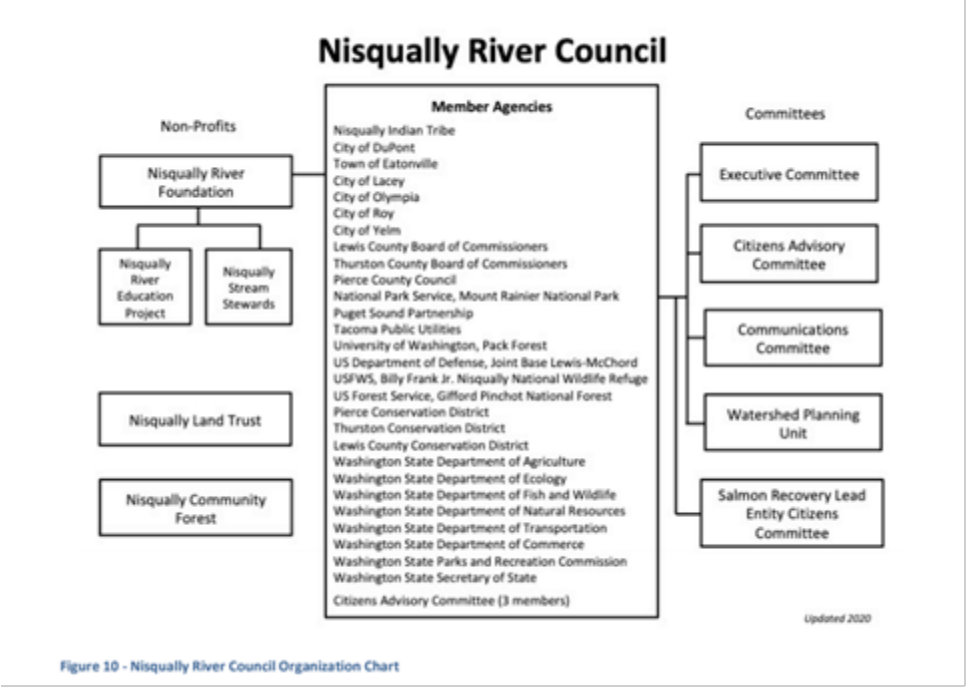


Figure 1 Nisqually River Council Structure (NRC 2020)

These modern partnerships are the result of the implementation of the 1987 Management Plan, where several of the represented groups were once adversaries from the colonial era up to the Fish Wars of the mid-twentieth century, such as the Tribe, the Army base, and the Washington State Department of Fish and Wildlife. For the most part, these groups have avoided litigation or direct conflict since the establishment of the NRC thanks to improved interagency relations and institutional support for resource sovereignty and deliberation.

The NRC's adjacent non-profits and committees serve multiple functions summarized in this table:

Table 1 Nisqually River Council Structure

Nonprofits	Nisqually River Foundation	501(c)(3) non-profit providing staffing/funding power for NRC; made up of seven board members and four staff members that support conservation projects. Direct the NREP and lead the Stream Stewards project.

	Nisqually River Education Project (NREP)/Nisqually Stream Stewards	Connects students & teachers to the watershed via "activities like Eye On Nature field trips, salmon tossing, and water quality monitoring"
	Nisqually Land Trust	"The Land Trust's conservation priorities are guided primarily by the NWSP and by the Nisqually Chinook Salmon Recovery Plan and Nisqually Steelhead Recovery Plan…has the authority to accept gifts, grants, and bequests of money or land and to acquire real property. It also engages community volunteers in restoration and stewardship activities… governed by an independent board and a five-year strategic plan."
	Nisqually Community Forest	A working forest managed to benefit local communities through forestry & tourism jobs, recreation, education, and wildlife habitat. Protects ~22 mi of shoreline along Busy Wild Creek and its tributaries, which are critical to the recovery of threatened steelhead trout and Chinook salmon. Conjoins the Land Trust's 2,500-acre Mount Rainier Gateway Reserve.
Subcommittees	Executive Committee	Called to meet about time-constrained issues when the full Council cannot meet in regular session. In this capacity, the Committee may act for the full Council, but it can still override the decisions of the Executive Committee. Membership includes the chair and vice chair of NRC and the chair of the CAC.
	Citizens Advisory Committee	20 member advisory body with broad stakeholder representation. Requires that 2/3 of membership are residents and/or land owners. Citizen input to the NRC.
	Communications Committee	Coordinate community outreach
	Watershed Planning Unit	"The Nisqually Indian Tribe is the designated lead agency for state funding and reporting for watershed planning under RCW 90.82 and 90.94. The Planning Unit is a voluntary intergovernmental association with no independent authority, and all decisions subject to approval and implementation by member governments."

	Salmon Recovery Lead Entity Citizens Committee	"The NRC serves as the Citizens Committee for the Nisqually Salmon Recovery Lead Entity Program. The Nisqually Indian Tribe is the Lead Entity for Salmon Recovery in the Nisqually Watershed, and works annually with a technical advisory group (the Habitat Work Group) to rate projects proposed for state salmon recovery funds based on strategic technical assessment"

All information provided by nisquallyriver.org, nisquallylandtrust.org and the NWSP (2020).

The reports analyzed in this study represent the diversity of leadership in watershed planning associated with the NRC. The dataset includes reports from 1987-2022, the majority of which were authored by the NRC itself and contracted consultants, Thurston and Pierce Counties, local universities, USFWS, EPA, Washington DOE, and the Nisqually Indian Tribe and NWIFC.[6] To contextualize these groups' role in the planning process, I will provide a broad overview of the region's history to elaborate on the key players and events that shaped modern stewardship.

V. Historical Background

i. Land Use History: Pre-Contact

Prior to first contact, dozens of distinct Native American groups inhabited the mountains and foothills of Western Washington, spanning the coastal Olympic Range to the state's interior beyond the Cascades. Mount Tacoma, where the Nisqually River begins, is specifically located on Nisqually, Yakama, Puyallup, Muckleshoot, and Upper Cowlitz ancestral lands (NPS).[7] This

6 There are, of course, many individual and group stakeholders beyond the scope of this brief overview of major players/authors. My project focuses on specifically *Nisqually* Watershed agencies and groups, with the acknowledgement that these agencies are part of a larger political infrastructure in the region that contributes to leadership in stewardship in numerous ways beyond the drafting of reports, plans, and educational content. Many of these are conservation nonprofits like Long Live the Kings, coalitions like the NWIFC, and citizen and recreation groups like Ducks Unlimited. The sheer amount of agencies with vested interest in conservation and stewardship is a testament to the pre-existing structures that create the conditions for such representative groups to express conservation values and take action towards those goals.

7 U.S. Department of the Interior. (n.d.). Associated tribes of Mount Rainier. National Parks Service.https://www.nps.gov/mora/learn/historyculture/associated-tribes-of-mount-rainier.htm

diversity contributed to various dialects and customs that distinguished groups of people, but there were several socio-ecological factors that united all the region's peoples. These factors were the five salmon runs that shared Mount Tacoma's watersheds with human inhabitants, the abundance of red cedar trees that coated the hillsides, and Tacoma itself: the "white mountain," that dominated the horizon with its heavily glaciated peaks demarcating "where the waters began" (Lapp 2020, p. 45). Historians such as Cecilia Svinth Carpenter and Marian W. Smith note that these features informed cultural identity and sense of place for millennia. Carpenter writes in *The Nisqually People, My People* that "The Nisqually River became the thread woven through the heart and fabric of the Nisqually Indian people."

Before settler arrival in the late eighteenth century, distinct villages were interconnected via these natural landmarks, developing expansive economic and cultural systems through trade and familial relationships (Blee 2009, 423). Tacoma's glaciated watersheds played an integral role in developing the cultures and economies of the villages they sustained. These watersheds "did not provide formal political boundaries, but served as organizing structures of social unity" (Lapp 2020, 40). Traditional notions of usufruct rights informed the clashing views of property and stewardship in value conflicts over land/resource use that emerged in the century following Washington's statehood. Like other native people throughout the Americas, the colonial era ushered in disease and wars that disrupted life as it had been known for centuries prior. As ownership and land use regimes transferred from one power to another, historians[8] note that the region's indigenous peoples were adaptable despite this upending of cultural norms, using their

8 Blee, L. (2009). *Mount Rainier and Indian economies of place, 1850–1925.* Western Historical Quarterly, 40(4), 419–443. https://www.jstor.org/stable/40505517

long standing knowledge and history with the land to maintain negotiating power and participate in cultural exchange and evolution. This exchange caused a confluence of valuations of the land and its resources.

ii. Land Use History: Treaties and Post-colonization

English naval captain George Vancouver was the first European explorer to survey the coasts of the Pacific Northwest. Landing in Puget Sound in 1792, he gave English names to the landmarks we still call Puget Sound, Mount Rainier, Mount Hood, and Mount Baker today (Williams 1911, 98). These are the names that label official maps, but interest in original Native American place names exists in the historical record dating back to the nineteenth century. Like other colonial territories, once Euro-American religious and trader settler groups put this region "on the map," prospective settlers flocked to this place rumored to be of great beauty, abundant resources, and "unsettled" land. In the 1830's, English explorers established a Hudson's Bay Company (HBC) trading post near the mouth of the river, naming it Fort Nisqually after interacting with the local *squalli-absch* people. Soon after, agriculture and livestock production redefined prairie use in the lower watershed due to forces like the HBC's ancillary, the Puget Sound Agricultural Company (Gordon 1995, 97).

After a few decades of early-contact changes in land use and rapid population growth, the Treaty of 1846 transferred this British-occupied region over to American control (Gordon 98). At the same time, the Donation Land Claim Act of 1850 was also passed, promising settlers hundreds of acres of land-- land that was not yet ceded by the region's original residents (American Friends Service Committee 1972, 16). To quell tensions over the questionable legality, the Donation Land Claim Act prompted increased state control over the region. By 1853,

Washington was declared an official territory of the United States. After these initial land grabs, the American Frontier lured Euro-American settlers to the Pacific Northwest where settlements grew into towns and later into burgeoning cities known today as Olympia, Tacoma, and Seattle. Settler-brought diseases and belief systems disrupted indigenous lifeworlds, and the region's original inhabitants had to quickly adapt to the socioecological disruptions. During this, General Isaac Stevens was appointed the first territorial governor and superintendent of Indian affairs. Stevens implemented policies that rapidly colonized the region. Within one year, Stevens had strong-armed a dozen treaty agreements with tribes across the Pacific Northwest (Wilkinson 2000, 11). The Treaty of Medicine Creek was authored by Stevens in 1854 and left little to no room for negotiation with the involved tribes. The treaty consisted of thirteen articles that dispossessed the Nisqually, Puyallup, Steilacoom, Squawskin, S'Homamish, Stehchass, T'Peeksin, Squiaitl, and Sahehwamish tribes and bands of Indians of their homelands and most of its resources; restricting them to three reservation territories on low quality terf. Ultimately, this was an agreement that protected white property while limiting Indigenous property rights, a paradigmatic shift from pre-contact to post-colonial notions of property and resource use. The verbiage of Articles 3 and 8 particularly illustrate the coercive nature of the treaties:

> "The right of taking fish, *at all usual and accustomed grounds and stations*, is further secured to said Indians *in common with* all citizens of the Territory, and of erecting temporary houses for the purpose of curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses on open and unclaimed lands: Provided, however, That they shall not take shellfish from any beds staked or cultivated by citizens, and that they shall alter all stallions not intended for breeding-horses, and shall keep up and confine the latter" (Treaty of Medicine Creek 1854, Article 3, emphasis my own).
>
> "The aforesaid tribes and bands acknowledge their dependence on the Government of the United States, and promise to be friendly with all citizens thereof, and *pledge themselves to commit no depredations on the property of such citizens*. And should

> any one or more of them violate this pledge...the property taken shall be returned, or in default thereof, or if injured or destroyed, compensation may be made by the Government out of their annuities" (Treaty of Medicine Creek 1854, Article 8, emphasis my own).

Article 3 of the treaty is especially significant to the civil rights struggles of the twentieth century. Chrisman (2008) identifies three main reasons for its inclusion: to get the tribes to sign, to get them to sign as quickly as possible, and to guarantee a subsistence food supply so the government would not have to supplement the communities as they transitioned to agrarian lifestyles. Stevens explicitly promised, "this paper secures your fish" (Wilkinson 2000, 55). He did not, however, make clear the implicit assumptions underlying the verbiage of the treaty. The reservation allotments were based on the premise that native communities were not properly using the land according to the settler worldview, they were designed to dispossess the treaty tribes of their homes and resources and coerce peaceful assimilation (Chrisman 2008).

For all the land taken via treaties, the U.S. government promised only a meager sum of $32,500 to be allotted to the affected tribes and reservations over a twenty-year period (Treaty of Medicine Creek 1854, Article 4). The treaty, especially the reservation allotment, was generally considered unfair by the tribes; in response, the famed Chief Leschi of the Nisqually Indian Tribe led protests through present-day Olympia, Washington demanding fairer terms that ensured Indigenous sovereignty from the encroaching colonial government. These protests resulted in the Puget Sound Indian Wars fought from 1854-1856. Tragically, Chief Leschi was persecuted by the settler government and sentenced to death in 1858 for his leadership in the resistance (Lapp 2020, 70). For the rest of the century, settler domination intensified as tribes were forced to the periphery on reservations. Because of the Treaty of Medicine Creek, the Nisqually Indian Tribe's land claim shrunk from the entire watershed, hundreds of thousands of

acres, to a mere 5,000 acre reservation (Gordon 1995, 71). Meanwhile, the ceded land was allocated to a growing settler population for permanent settlement, mining, agriculture, hydroelectric power, timber, railroads, recreation, and military bases (Gordon 31). By the beginning of the twentieth century, the sublime wilderness aesthetic, large-scale farming, and resource extraction such as industrial timber and fishing operations defined land use in the region. During World War I, another two-thirds of Nisqually reservation land was seized by nearby Fort Lewis for military operations (Blee 2009, 441; Carpenter 2008, 17). The reservation decreased from 5,000 acres to 1,650 acres of the middle watershed (Gordon 1995, 71). The events of the colonial era colored the ecological, social, and political trajectory of the region for the rest of time to come.

MAP: LAND OWNERSHIP AND MANAGEMENT IN NISQUALLY WATERSHED

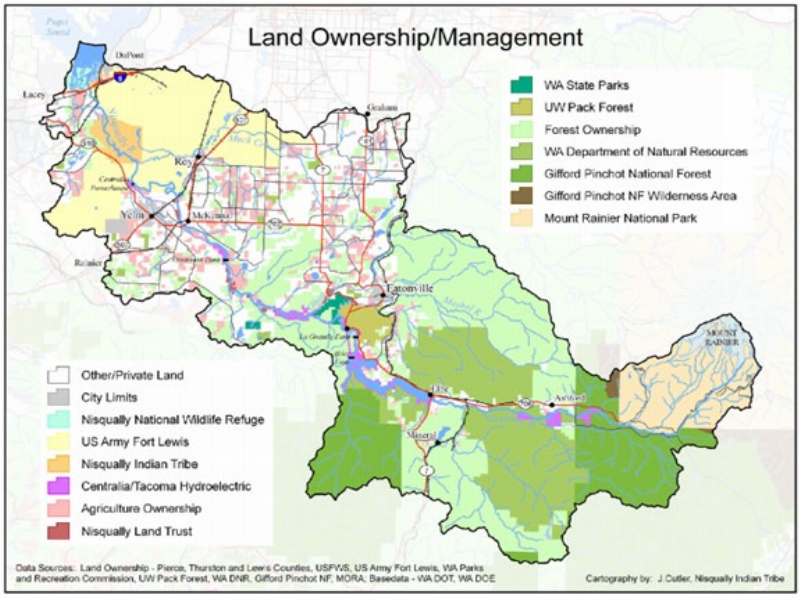


Figure 2 Land Ownership & Management Map (NRC 2011)

iii. Industrial and Commercial Land Uses

By the beginning of the twentieth century, Western Washington was becoming a powerful economic force, funded by energy and timber industries, tourism, and agriculture. This

development caused a decline in health and biodiversity across the watershed. Important to later restoration efforts, disruptive diking ushered in a new era for the Nisqually River. The first dike was implemented by a railroad company in 1875 (Billy Frank Jr National Wildlife Refuge 2021). Then in 1904, local entrepreneur and farmer Alston Brown purchased large plots of land, now home to the Nisqually National Wildlife Refuge, and constructed concrete dikes to secure freshwater from the estuary for his farm. This decimated the region's salmon runs and within a few decades, Nisqually fishers, known as the "salmon people," no longer had access to salmon stock in their ancestral homelands due to both ecological and political forces (Wilkinson 2000, 4). Due to diking and the conversion of prairie to pasture, the Nisqually estuary lost nearly 50% of its former area, this habitat loss tanked salmon populations (Milne et al. 2012, Ch 4 p. 80). The industrial farming of livestock on the prairies of the lower watershed degraded the land and river while simultaneously displacing the region's original inhabitants, both salmon and people. At the same time, salmon was commodified and settler-owned canneries contributed to the staggering decline[9] (Grossman 2017, 39; Cohen 1986; Knutson 2010). Salmon stocks were depleted by the introduction of all forms of industry, from diking and agriculture, to timber, damming, and railroad development.

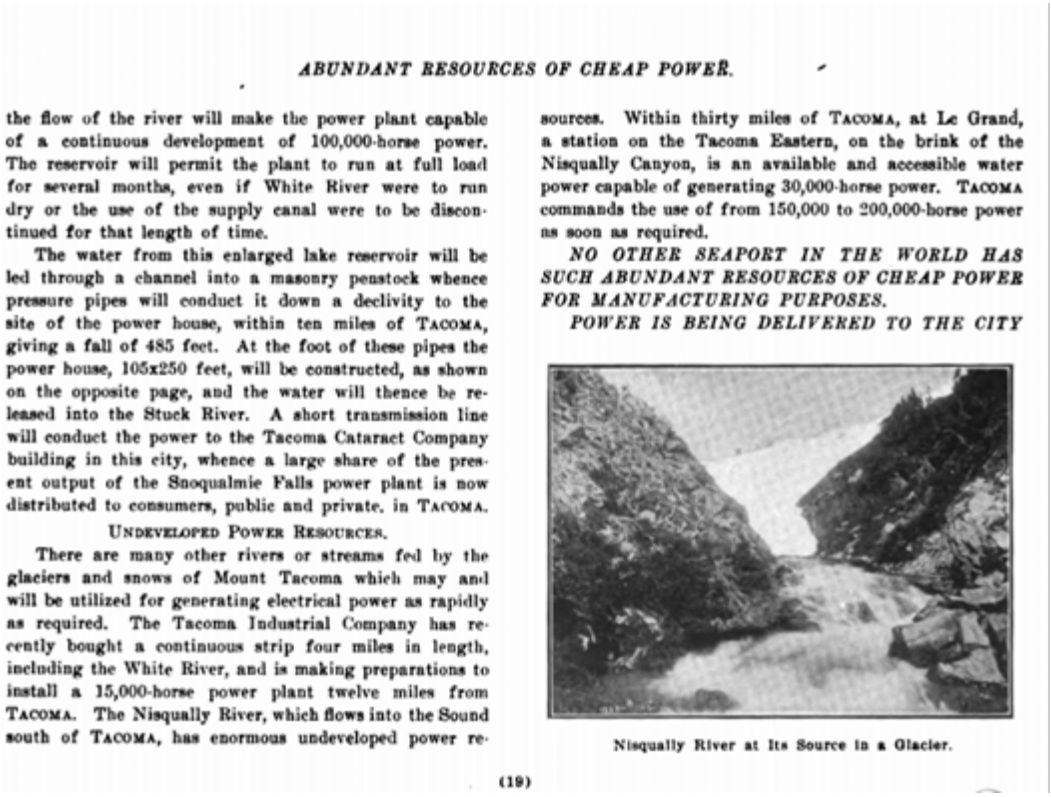
The development of railways and roads further contributed to prairie, riparian, and forested habitat loss. Railways and roads were built for efficient travel across the watershed's many facets, from cities to farms to factories, from human developments to the "wilderness" welcoming them within the bounds of the national park (Gordon 1995, 48; Pratt 1904). The development of transportation in the watershed also expanded a budding timber industry in the

[9] "the exploding non-Indian population took the prime fishing sites and the state closed them off to tribal members, in the process racializing harvest locations and allocation" (Grossman)

beginning of the twentieth century. Companies like the Pacific National Lumber Company, St Paul & Tacoma Lumber, and later Weyerhaeuser helped develop small towns throughout the watershed and established lumber as a major export industry in the region. Today, the largest private timberland holders in the watershed are Weyerhaeuser and Hancock Timber (Nisqually River Council 2019, 16). Even though no logging was to be conducted within the bounds of the national park, the railroads, Mount Rainier tourism, and timber were nonetheless intertwined industries during the region's rapid development throughout the twentieth century. The more accessible transportation became in the watershed, the more people could move to this region in search of work and recreation. As hamlets grew into towns, and towns into cities, these modern settlements needed an energy supply to sustain their growing populations. In response, cities like Tacoma and Centralia set their sights on the region's many rivers.

Tacoma Public Utilities began the Nisqually River Project in 1912, which built the Alder and LaGrande dams in 1945 via an FERC license; while "the City of Centralia also operates a diversion dam and hydropower facility in the central watershed near Yelm, built in 1929 and relicensed by FERC in 1997" (Nisqually River Council 2019, 56). These projects formed Alder Lake, which today serves as a biological and recreational sanctuary in a region suffering from declining salmon stocks due to dams and other forms of habitat degradation. In historical hindsight, zealous enthusiasm over industrial development, as seen in sources like Pratt's 1904 account of industrial development near Tacoma, reads as an omen. Headings such as "Inexhaustible Supply of Power" followed by paragraphs praising the region's "enormous water power which has its origin and source in the snow-capped and glacier-buttressed dome of Mount Tacoma. The mountain from which TACOMA takes her name is an inexhaustible reservoir of power whose efficiency is immeasurable," demonstrate a naive eagerness for development that

characterized this time, with little foresight of future consequences (Pratt 11). Here, a shift from valuing the watershed as a source for all life, to a source for all *energy* is clear. Despite its proximity to nationally protected lands, at this time the watershed's immense intrinsic and cultural qualities were overshadowed by its potential as an economic resource.



ABUNDANT RESOURCES OF CHEAP POWER.

the flow of the river will make the power plant capable of a continuous development of 100,000-horse power. The reservoir will permit the plant to run at full load for several months, even if White River were to run dry or the use of the supply canal were to be discontinued for that length of time.

The water from this enlarged lake reservoir will be led through a channel into a masonry penstock whence pressure pipes will conduct it down a declivity to the site of the power house, within ten miles of TACOMA, giving a fall of 485 feet. At the foot of these pipes the power house, 105x250 feet, will be constructed, as shown on the opposite page, and the water will thence be released into the Stuck River. A short transmission line will conduct the power to the Tacoma Cataract Company building in this city, whence a large share of the present output of the Snoqualmie Falls power plant is now distributed to consumers, public and private, in TACOMA.

UNDEVELOPED POWER RESOURCES.

There are many other rivers or streams fed by the glaciers and snows of Mount Tacoma which may and will be utilized for generating electrical power as rapidly as required. The Tacoma Industrial Company has recently bought a continuous strip four miles in length, including the White River, and is making preparations to install a 15,000-horse power plant twelve miles from TACOMA. The Nisqually River, which flows into the Sound south of TACOMA, has enormous undeveloped power resources. Within thirty miles of TACOMA, at Le Grand, a station on the Tacoma Eastern, on the brink of the Nisqually Canyon, is an available and accessible water power capable of generating 30,000-horse power. TACOMA commands the use of from 150,000 to 200,000-horse power as soon as required.

NO OTHER SEAPORT IN THE WORLD HAS SUCH ABUNDANT RESOURCES OF CHEAP POWER FOR MANUFACTURING PURPOSES.

POWER IS BEING DELIVERED TO THE CITY

Nisqually River at Its Source in a Glacier.

(19)

Figure 3 This image, taken from a pamphlet called "Tacoma: Electric City of the Pacific Coast" written by Louis W. Pratt, and produced by the Tacoma Chamber of Commerce and Board of Trade in 1904, captures the enthusiasm over natural resources beheld by industrial interests at the turn of the twentieth century. Statements like "There are many other rivers or streams fed by the glaciers and snows of Mount Tacoma which may and will be utilized for generating electrical power as rapidly as required," or "NO OTHER SEAPORT IN THE WORLD HAS SUCH ABUNDANT RESOURCES OF CHEAP POWER FOR MANUFACTURING PURPOSES" express highly instrumental values of the watershed and its resources, directly tying resource use to the presence of glaciers.

iv. Conservation In & Surrounding the Watershed

Establishing Mount Rainier National Park

Amidst the emergence of extractive industries, concerned parties convinced Congress to preserve Mount Rainier National Park in 1899, mostly because they recognized its recreational, aesthetic, and scientific value. The park's proximity to three major urban areas promoted its protection from the development ongoing throughout the late nineteenth and twentieth centuries. Its urban location meant the mountain was often viewed in an urban perspective, "to the people of Seattle and Tacoma, Paradise Park was a part of the Puget Sound cities' recreational domain" (Catton 1996). Because of the local urban interest in the mountain, the tourism industry boomed not long after the founding of the park. This, alongside booming industry in the cities, encouraged the development of railroads and highways in the area throughout the early twentieth century (Pratt 1904, 33-35). The urbanization of the Tacoma region was aided by processes of industrialization, but the protection of the mountain spared it from these same developments. Instead of succumbing to Western development schemes like much of the Eastern United States, Mount Rainier's sublime features were preserved and became a symbol of American heritage and contentious wilderness values. Today, its glacial peaks watch over a developed landscape bracing itself for the impacts of climate change and associated environmental concerns.

Other Protected Sites

Unlike many other watersheds near the Salish Sea, the Nisqually Watershed is fortunate in that many habitats within it are protected and have been for much of its modern history. The Nisqually Watershed contains multiple protected parks situated on culturally and ecologically significant lands. The Nisqually State Park is the most recent addition to the watershed's many protected areas. Sights were set on the establishment of Nisqually State Park in 1989, when Washington State Parks[10] introduced a statewide program for acquiring preservation sites. By

10 Partnering with the Washington Wildlife Recreation Coalition (WRC)

the beginning of this century, State Parks procured enough funding to purchase land for preservation (Washington State Parks and Recreation Commission 2009, 5). In planning, State Parks consulted a committee that provided input from stakeholders such as citizen and environmental interest groups, the Nisqually Indian Tribe, the Nisqually River Council, the Nisqually Land Trust, and local governments/agencies (SPRC 2009). In 2012, the Tribe acquired enough capital to purchase even more acreage, buying back their traditional lands. These lands span significant cultural sites to the Tribe, and the Tribe made agreements with the State to be equal partners in the planning process (Historical Research Associates 2020). In 2019, the State of Washington formally declared that the Nisqually State Park would be the first new park in decades (p. 9). The NSP embodies the region's varying land use history and biodiversity, with a diverse landscape that tells the history of settler colonialism and the presence of industry such as timber and agriculture.

The Park is bordered by private timberlands, rural housing developments, land owned by the Nisqually Land Trust, and the University of Washington Experimental Pack Forest/Center for Sustainable Forestry (Historical Research Associates). The UW Pack Forest is an experimental forest established in the twentieth century that conducts outdoor education and biological research. It partners with many other stewards in the region, including the Nisqually River Education Project and Nisqually River Council more broadly. The Pack Forest, next to Mount Rainier, is among the longest protected sites in the watershed. Additionally, the Billy Frank Jr. Nisqually National Wildlife Refuge is another long term player in protecting and enhancing the watershed's biodiversity while also providing unique recreation opportunities. It was initially founded in 1974 as the Nisqually National Wildlife Refuge to protect the Nisqually River Delta under the authority of the Department of the Interior's designation of the estuary as

a National Natural Landmark, incorporating it into the National Wildlife Refuge System. The Refuge oversaw the first major restoration project in the delta, by purchasing "1,285 acres of diked grasslands, freshwater marshes, and tidelands" using revenue from Duck Stamps sales (USFWS 2005). The land was former Brown Farm property, and over the years there were several projects to remove all the dikes and restore the landscape. These restoration projects were necessary to create habitat for migratory birds and salmon. In the 2000's, the estuary underwent a $12 million dike removal project in which the Tribe took on a leadership role (Robinson and Alesko). Following the death of Nisqually activist Billy Frank Jr[11] in 2014, the Refuge was renamed in his honor.

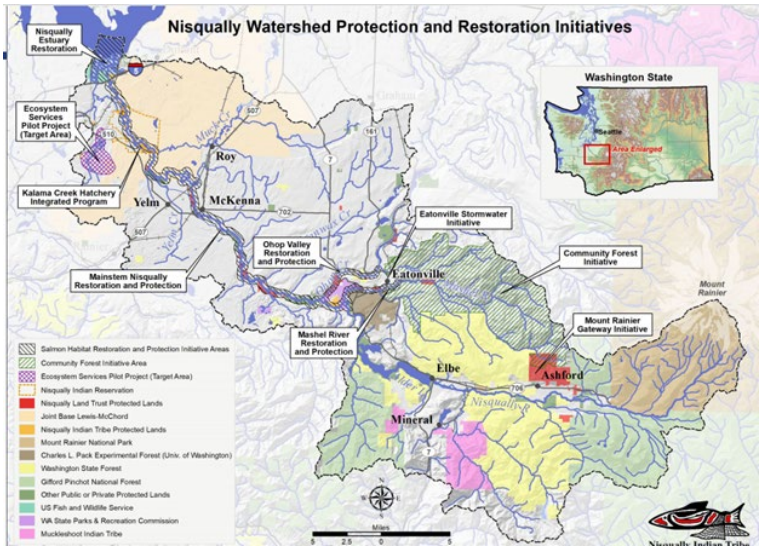


Figure 4 Map of Restoration Initiatives (NRC 2020)

Figure 4 shows a recent survey of all the restoration projects ongoing in the region. The Nisqually Watershed is uniquely fortunate to contain so many federally and state protected areas, a likely

11 Nisqually treaty rights leader and NWIFC chairman

factor in its ability to model effective co-stewardship. All of the aforementioned land use history is the basis for the Nisqually Watershed conflict and resolution that marked ideological changes towards land use in the latter twentieth century.

v. Litigation to Cooperation

There were soon more stakeholders using the watershed's resources than ever before, leading to the modern decline in quality and quantity of resources and biodiversity in the watershed. Following colonization, federal and state governments and associated regulatory agencies established policies that functioned to delegitimize indigenous land claims, promote economic growth in the region, and degrade the region's biodiversity. Before long, various stakeholder motivations and values of the land began to clash. The rapid rise of industry in the twentieth century brought unprecedented growth and increased efficiency of commercial fishing techniques which, alongside burgeoning sports fishing industries, threatened the viability of both the commercial salmon fisheries and the tribally controlled inshore fisheries (Knutson 2010). As a result, harvest allocation was a highly debated issue at this time. Throughout the early 1970's, treaty-tribal fishers took only about five percent of the total salmon catch because commercial fishing operations caught the majority of the run before it reached the spawning grounds that the tribes harvested from for ceremonial, subsistence, and commercial uses (ibid). As salmon populations declined from overfishing and habitat loss, the state's resulting conservation measures disproportionately restricted tribal resource access more than common-law commercial fishers. Not only were reservation locations increasingly policed by regulatory enforcement agencies such as the Washington Department of Game, traditional net-fishing practices were also outlawed (Grossman 2017, p. 39). This increase of state power over treaty tribal fishing lands resulted from federal "termination" policies introduced in the 1950's and '60s. In 1957, the

Washington State Legislature adopted federal policies established by Public Law 280, which effectively extended state and federal power over reservation property, squandering treaty-ensured sovereignty (Chrisman 2008). Because of this policy, tribes were restricted to fishing only on reservation land-- and even that right was sometimes limited.

a. The Puget Sound "Fish Wars"

As a series of court cases would demonstrate, this policy directly violated the "usual and accustomed" fishing grounds article in the 1854 Treaty. Various court rulings throughout the twentieth century attempted to re-establish treaty-fishing rights[12], all of which ultimately culminated in *U.S. v. Washington* phase one (1974) and phase two (1980) (Chrisman 2008). This contention around the legality of fishing stoked the flames of conflict between fishing interests in Puget Sound, framing the divide between treaty and non-treaty fishers. Throughout the twentieth century, the battle over salmon and shellfish was posited as a value conflict between state-controlled conservation concerns and indigenous treaty rights. To challenge the power of the state, the tribes co-opted the colonizer's framework and took to litigation to ensure their sovereign share of the harvest. But before this era of litigation was ultimately successful, members of the tribal fishing communities in Puget Sound had to first adopt an array of tactics to regain resource legitimacy and reclaim dispossessed power.

Tribal members continued fishing "illegally," abiding by the treaty rather than its recent upheaval in contemporary federal and state policy. Some did so for their economic survival, such as community leader and founding member of the Survival of the American Indian Association

[12] Such as *U.S. v. Winans (1905), Tulee v. Washington (1942), State v. Satiacum (1957), Washington v. McCoy (1963),* and *Sohappy v. Smith (1969)* --to name a few.

(SAIA) and later chairman of the Northwest Indian Fisheries Commission (NWIFC) Billy Frank Jr. Others, like Robert Satiacum, illegally fished to strategically generate legal cases that would establish favorable precedents for treaty fishers (Chrisman 2008). These early efforts were initially unsuccessful and met with lots of pushback from state interests such as Walter Neubrech, the head of enforcement for the Washington Department of Game. Due to incendiary rhetoric from the likes of Neubrech, native fishers were portrayed unfavorably in the media, undermining any legal gains they may have made at this time (Chrisman). In response, the tribal fishing community and grassroots activists adopted a diversity of tactics to gain public favor and legal legitimacy throughout the late 1960's into the '70s.

By the mid-20th century, conflicts between the Washington State Department of Fisheries & Game, nontribal fishermen, and the region's tribes erupted over fishing rights. Thus began the pinnacle of conflict between native and non-native resource interests in the region, the era of the Puget Sound "fish wars." Treaty rights groups[13] took up tactics from the Civil Rights Movement's diner sit-ins and began engaging in fish-ins in the 1960's. This strategy helped reframe the narrative on treaty fishing, folding arrests and incidents in PNW native communities throughout the 20th century into a larger legacy of civil rights advocacy and protest (Chrisman 2008). However, tribal sentiments[14] towards this approach were not unanimous at this time; some viewed the relentless, uncompromising advocacy and direct action efforts of some groups to be counterintuitive to efforts aimed at cooperation across stakeholders and reforming the tribes' public image. The Affiliated Tribes of the Northwest Indians, for example, wanted to strengthen

[13] Such as the Survival of the American Indian Society (SAIA), the National Indian Youth Council (NIYC), and the NAACP

14 I refer to sentiments throughout this thesis. By sentiments I mean the views or attitudes held about an event/phenomena/situation-- it encompasses values and means to represent various perspectives about a given subject that are articulated by stakeholders.

its partnership with the Bureau of Indian Affairs, and feared that this more radical activism movement would undermine their reconciliatory goals. Despite these strategic differences, the shared goal across the diverse tactics employed by the Indian fishing rights movement of the '60's was to achieve the return of a significant portion of the salmon runs to traditional tribal fishing interests.

The employment of more militant tactics by groups like the SAIA and/or individual tribal members such as Billy Frank Jr. and Sr, the McClouds, or the Bridges family, resulted in intense stand offs between native protestors and state enforcement authorities. After decades of police violence against treaty protest fishers, often taking place on Nisqually land known as Frank's Landing, enough light had been shed on this injustice so that the public, even in nonnative fishing communities, began to empathize with the tribes' civil rights struggle (Wilkinson 2000). A battle that took place in the Puyallup River on September 9th, 1970 marks a major turning point in public opinion and resulting legal gains. After years of advocacy and militant resistance in Puget Sound watersheds, there were now powerful witnesses at the scene that would change the course of history. These witnesses included not only the press, or celebrities such as Marlon Brando, but also (fatefully), U.S. Attorney Stanley Pitkin-- who was among the many tear-gassed by the State Police that day (NWIFC 2016). Only nine days after this battle on the Puyallup River, Pitkin filed *U.S. v . Washington,* a case where the federal government acted as a trustee for fourteen treaty tribes in the region in this suit against Washington State (Chrisman 2008; Kushman 2010). This is the federal court case that eventually led to the Boldt verdict in 1974.

b.The Boldt Decision

The series of court cases and associated fish wars in the Pacific Northwest reached its climax with the Boldt Decision in 1974, effectively reaffirming the tribes' rights to fish in

accordance with the terms dictated in the Medicine Creek Treaty. “At usual and accustomed grounds” and “in common with” as quoted from the treaty were interpreted by Judge Boldt to mean the tribes had a right to fish both on and off reservation waters, which also designated the tribes up to 50% of the harvestable salmon and steelhead catch all while honoring their traditional fishing customs (Boldt Decision 1974; NWIFC 2016). This 50% figure was adjusted later on due to varying interpretations of the verbiage “in common with,” as understood at the signing of the treaty (Wilkinson 2000, 52). Overall Boldt’s initial interpretation granted significant power to the tribes to self-determine their own harvest practices and locations, as long as they complied with staffing, enforcement, and structural requirements in cooperation with other local stakeholders and governments (Grossman 2017, 42). Thus, the state’s power was reduced significantly. Following Boldt, the state could only intervene in conservation enforcement if it was “reasonable and necessary” for the health of the fish populations and all other avenues of intervention had already been exhausted (Grossman, quoting *Boldt*). No longer the sole authority on conservation enforcement in Puget Sound watersheds, the role of the Washington Department of Game/Fish and Wildlife was decentralized and deprioritized in favor of more diverse stakeholder participation and leadership in watershed management, much to the chagrin of some stakeholders. Furthermore, the terminology “reasonable and necessary” used by Boldt spurred debate over where the authority on conservation practices was truly granted, and whether this power was still ultimately held by the state. Due to this uncertainty, the state at this time refused to adjust its regulatory practices accordingly and perpetuated an us vs. them attitude among the public.

Because of both the unclear language and dominant culture at the time, this initial ruling did not go unchallenged. Groups of non-native fishers, local residents and business-owners, and

state officials fought to overturn the ruling throughout the 1970's. Opposition against tribal sovereignty has a long history in the PNW that is traceable back to the colonial era. The fish wars of the mid-twentieth century exacerbated these tensions, and the Boldt Decision catalyzed a new wave of opposition led by those that believed the ruling unfairly privileged the resource rights of indigenous stakeholders at the expense of non-native resource users. Such resistance was simultaneously bottom-up and top-down, coming from both average citizens and official representatives. Enraged non-native groups staged their own fish-ins, targeted tribal fishers, and burned effigies of Judge Boldt in the streets following the decision, influenced by pervasive rhetoric spread by media and governmental interests (Wilkinson 2000, 58). Figures like Walter Neubrech and his ally, State Attorney General Slade Gorton, promoted the popular belief that the ruling gave tribal fishers an unfair advantage on the basis of "race and ancestry," going as far as to appeal the decision to the U.S. Supreme Court in 1979[15] (Grossman 2017, p. 43; Williams & Neubrech 1977; Cohen 1986). The Supreme Court upheld the ruling, but it did slightly alter Boldt's interpretation of resource access to make it more flexible. The Supreme Court considered tribal rights to the harvest to be contextually variable, rather than a set percentage of 50% as Judge Boldt determined (Knutson 2010). This decade of back-and-forth on the ruling and debates over whether it brought justice or injustice to fishing communities, and its unclear practical implications inflamed tensions between stakeholder groups and demonstrated a need for clarification on the initial ruling so that effective restoration and stewardship processes could finally begin.

15 Notably, the Supreme Court wrote in a footnote: "other than some desegregation cases in the South, the civil disobedience by Washington State officials is the single greatest act of defiance of federal law witnessed in this century" (quoted by NWIFC 2016).

In the aftermath of the Boldt Decision, salmon stocks continued to decline amidst the controversy over resource sovereignty.[16] While all parties wanted to restore salmon populations, continued disagreement between interest groups as to *how* this is done and *who* would do it led to a period of inaction that cost the region even more of its biodiversity. The lead tribal attorney in *U.S. v. Washington,* David Getches, remarked that "The number of fish dropped while we were in the courtroom arguing over who got the fish" (Grossman 2017, p. 44).[17] Phase I of the Boldt Decision neglected to specify conservation issues beyond harvest rights, so a second ruling was needed to define rights concerning habitats and hatcheries (NWIFC 2016, p. 3). Judge Orrick took over for a retired Judge Boldt in 1980, alarmed by plummeting salmon populations, and ruled affirmatively on hatchery and habitat questions, stating "Were this trend to continue, the right to take fish would eventually be reduced to the right to dip one's net into the water…and bring it out empty" (*U.S. v. Washington* 1980; NWIFC 2016, p. 3). *This is perhaps the most important realization to come out of this litigious saga: the greatest violation of fishers' rights, regardless of their ethnic background, would be the disappearance of the commonly valued resource altogether.* Debate over harvest allocations -which pitted common interests against each other- was a more divisive issue than habitat or hatcheries were, for the discourse that followed Phase II of the Boldt Decision changed course; instead emphasizing a need for cooperation that transcends historic socioeconomic divisions between stakeholders (Cohen 1986, 140). Both tribal and nontribal interest groups steadily adopted more conciliatory attitudes and approaches toward co-management; partially because litigation was so fatiguing and costly and partially due to a gradual, collective realization that the enemy was not other resource stakeholders but rather

16 By 1988, eight salmon stocks were listed as threatened and one as endangered (Grossman 2017, p. 44).

17 Quote is from Alex Tizon's "Twenty Five Years After the Boldt Decision" Seattle Times, February 7, 1999

the loss of the resource itself caused by habitat degradation and depleted hatcheries. Moreover, it cannot be understated that the precedent established by litigation greatly influenced this cooperative turn because,

> "Resource companies were terrified by the implications of Boldt II and anticipated that the tribes would continue their string of federal court victories from harvest issues to habitat issues. But the tribes didn't have to pursue Boldt II in the courts, because industries were willing to come to the negotiating table with the tribes, out of fear of the long and financially paralyzing lawsuits that would result if they did not" (Grossman 2017, 48).

c. "Era of Cooperation"

Because of Boldt Phase II, co-management relations in the 1980's were characterized by cooperative attitudes between tribal and recreational fishers, and also tribal and state governments-- a dramatic shift away from the prevailing attitudes of the last several decades. In this time, stakeholders increasingly expressed more common values and goals due to a combination of both top-down and bottom-up cultural-political changes that informed a newly shared environmental ethic. Despite the political limbo immediately following the 1974 ruling, long-lasting partnerships that developed between unlikely partners in the late '70's set the tone for cooperation in the post-Boldt era. Beginning in 1977, Coast Salish tribes such as the Nisqually were joined by some white fishermen, and later on Braget Farm, in opposing the development of a nuclear power plant and other industrial superports[18] in the region (Grossman 2017, p. 45, 60). The Nisqually Delta Association, the Nisqually Indian Tribe[19], and Ken Braget of Braget Farms resisted industrial development in the estuary throughout the late twentieth century, establishing

18 Sponsored by the timber industry, namely, Weyerhaeuser

19 Making use of its re-established treaty rights

such a strong relationship to the point that when Ken Braget passed away in 2006, he left all of his property east of the River to the tribe (Georgina Kautz 2011 interview). This allowed the tribe to conduct a massive habitat restoration project of undiking the estuary, converting it from farmland and incorporating it into the national wildlife refuge. Such projects "would not have been possible without buy-in from local farmers such as Ken Braget and Jim Wilcox, whose cooperation with the Nisqually showed that healing the watershed also involves healing the divisions between Native and non-Native neighbors" (Grossman). The Nisqually River Watershed is more fortunate than others for its long-term relationships between stakeholder interests, especially between the Tribe and farmers. Such partnerships, and legislative attention in the '70's, helped protect the Nisqually Delta from the brunt of development.

The legitimacy the Boldt Decision granted tribal interests helped institutionalize native sovereignty and stewardship practices in Puget Sound in many ways, giving the Tribe an overdue seat at the table to develop relationships with other stakeholders and collaborate more effectively with other tribes, governments, citizen's groups, businesses and more (Grossman 2017, p. 62). Throughout the rest of the twentieth century, the Nisqually Indian Tribe strengthened its sovereignty by engaging in formal partnerships with various local institutions, such as intertribal coalitions like the Northwest Indian Fisheries Commission (NWIFC), or multi-stakeholder coalitions like the Nisqually River Task Force and River Council. The NWIFC was founded by Pacific Northwest treaty rights leaders, appointing activist Billy Frank Jr. to the position of chairman. The group functions as a (occasionally contentious) "forum to unite tribes with very different histories, economic interests, and fishery policies," as directed by the Boldt Decision to develop cooperative relations and joint management strategies amongst tribal interests (Grossman 42). The NWIFC and its representative members are central to all issues concerning

resource sovereignty and salmon rehabilitation in Puget Sound watersheds, acting as a leader in stewardship by conducting many studies and publishing reports, in addition to policy-setting and implementation.

The NWIFC and its members often mention the impacts of the Boldt Decision when describing stewardship challenges and successes in Puget Sound watersheds up to today. Their voices have shaped much of the public's perception of the fish wars since, framing it as a catalyst to cooperation. Quinault leader Joe DeLaCruz stated that he "saw the 'fish wars' as a catalyst to bring people together…Once Boldt happened, it gave us a unified voice…it took the fish wars to move a lot of this stuff along" (Grossman 46). Billy Frank Jr. shared similar sentiments, seeing the negativity of conflict as a precursor to modern constructive relationships.[20] Sentiments such as these suggest there was relative consensus in the tribal fishing community about the positive impacts of the Boldt Decision for both intertribal relationships and native-nonnative relations.

This is not to say that tribal perspectives were unanimous. In fact, conflict remains *between* tribes concerning differences over commercial and cultural salmon harvest. More powerful groups, like the Nisqually, established commercial tribal-treaty rights fisheries which created some inequities in tribal catch. Peter Knutson identifies the source of this disparity,

> "Whereas in precontact times, economic and technical limitations generally assured a natural distribution of the salmon runs between tribes, post-contact integration into the capitalist economy and concomitant use of modern fishing technology overcome these limitations. Using modern fishing technology, a tribe

[20] A 1999 edition of *NWIFC News* quoted Frank saying, "I can remember when our people...were sneaking around digging clams because we weren't able to dig clams in broad daylight. Today we are managing those clam beds…We don't have to hide anymore…We are only on this earth a short time, walking through this life, to try and make a difference…We have already made a difference" (Preston 1999)

possessing superior location to intercept returning salmon can virtually cut off the return of salmon to upriver and down-Sound tribes" (2010).

Thus, the region's native peoples are at a crossroads between tradition and the realities of capitalist modernity, causing rifts between groups who adjusted to colonialism in different ways. The Boldt Decision may have alleviated the problem of non-native groups acquiring the majority of the resource, but it could not account for the challenges that would develop amidst variable power dynamics in tribal fishing communities. While the post-Boldt era is renowned for the emergence of cooperative attitudes, it is necessary to acknowledge that this cooperation was at times marred by new challenges that emerged in the '80's and '90's, such as rapid population growth. Population pressures and residential development caused a disjointed sense of place that resulted in intertribal litigation over resource access, as some feared that salmon/environmental management would become an "industry" rather than an honest stewardship practice (Grossman 2017, p. 51). Like any other interest group, desired management strategies are not uniform between the tribes. Despite this, the tribes still model and prioritize collaboration through their work with the NWIFC and related institutions.

Building on the momentum of budding partnerships and related policies[21] from the 1970's, in 1985 the State Legislature ordered the Washington Department of Ecology to convene the Nisqually River Task Force under SHB 323 with the goal of formally uniting stakeholder interests and actions in the Nisqually Watershed. The Task Force envisioned a new stewardship

21 i.e. the 1972 Washington State Shorelands Management Act. WA Governor Daniel Evans' administration played a huge role in this initial push for preserving the estuary and developing the national wildlife refuge following the state SMA and the federal Migratory Bird Conservation Act. Despite these policies, salmon populations continued to decline-- necessitating actions and policy setting that incorporated a greater variety of ecological stewards.

regime that balanced the region's economic, natural, and cultural resources; focusing on balancing local property owner rights with those of all citizens, maintaining the rural landscape and economy, flood control and developing emergency warning systems, fish and wildlife protection, and public access to the river (Nisqually Watershed Stewardship Plan 2011, p. 1). The Task Force was composed of a variety of interests: industries such as timber, hydropower, and agriculture were represented, as were conservation and environmental groups, private landowners, the Nisqually Indian Tribe, and several resource management agencies.

This planning group developed the 1987 Nisqually River Management Plan. This plan was the culmination of efforts by the Task Force's Oversight Committee, six technical committees, two citizen committees, and public testimony at each of the meetings. Following these efforts, the plan was adopted by the legislature in June 1987, incorporating over a dozen elements that addressed a spectrum of issues in the watershed. The plan also called for the formation of the Nisqually River Council to act as a continued interagency effort that would protect and enhance the watershed through "education, advocacy, and coordination" (NRC 2011, 4). The Council was a non-regulatory coordinating body, in which the Nisqually Tribe had a founding and leading role. Beyond the Tribe, the Council consisted of nearly two dozen other governmental and public entities, at local, state, and federal levels. In addition to the participation of formal governing bodies, the Council was also advised by the Nisqually River Citizens Advisory Committee to incorporate citizen representation in future planning efforts. Robinson and Alesko note that, "Significantly, its intent was not to sue, but rather to build camaraderie and cooperative spirit with other governments as well as landowners and other entities along the River. The objective was to build a team dedicated to returning the River, as much as possible,

to its natural state" (Robinson & Alesko, 10). Due to these initiatives, by the 1990's the implementation of collaborative stewardship practices and plans had finally begun.

As Grossman opines, "Perhaps the most advanced example of a watershed council in the PNW, and perhaps the country, is in the Nisqually Watershed," due to its continuous commitment to collaboration on both a governmental and grassroots scale (2017, 58). All of these aforementioned top-down planning efforts paved the way for relationships to form between individual stakeholders who were united by the planning process, sharing a place at the decision-making table. This confluence of interests, and values, required significant compromise, compromises that could only come about by fairly and intentionally interacting with the needs and values of all involved parties. This feat goes beyond policy or formal processes, it is a testament to the overall character and goals of those involved in the planning process. Closely studying the articulated sentiments concerning relationships between stakeholders reveals the substance of these dynamics that contributed to the Nisqually Watershed's relatively successful stewardship planning and implementation processes.

These efforts were not easy or seamless. Participants in the process recollect the challenges the Task Force and Council faced, especially in its beginning days. Large economic forces like Weyerhaeuser Timber, Wilcox Farms, Tacoma Power, and the Army base were reluctant, worried this stewardship process would force out their interests (and profits). One prominent debate between these interests and the Tribe/allied environmentalists concerned creating a small zone in the watershed that banned logging, animal agriculture, and other types of development. On this issue, Robinson and Alesko recounted this pivotal moment in the deliberations,

> "The task force was deadlocked for months. One rancorous night, Billy Frank rose to speak. "I'll never forget this," recalls farmer Jim Wilcox. "Billy said, 'We've got to stop this right now. I want everybody to know that we want Weyerhaeuser Timber Company to continue to operate and own the land along the river. We want Wilcox Farms to keep farming. We don't want to do anything that's going to put them out of business"" (p. 9).

Here, a respected community member and leader took a cooperative position that reassured all involved parties that their needs and interests were of primary concern. Thereafter, Frank proposed a compromise on the zoning buffers and cooperative efforts continued from there. After this, the Army base offered a site for a tribal fish hatchery[22]and Tacoma Power offered to fund it (Robinson and Alesko, 10). Gradually, once dichotomous interests were converging without sacrificing any party's fundamental values or rights.

This collaboration process was based on healing historic wounds (both against the land and its people), establishing trust between former opponents, and engaging in an intentional dialogue between diverse values. All of these processes sowed the seeds of compromise, as different stakeholders accommodated the worldviews of others. Values over economic and cultural wellbeing became the common vernacular for communicating about shared goals. For example, the director of Save Our Wild Salmon "observed that the very notion of "harvesting" fish as a family lifestyle is an important commonality between tribal and commercial fishers" (Grossman 2017, 49). While a NWIFC policy analyst believed "that the only way tribes convinced local communities to protect salmon was to promote a healthy sustainable economy," and other tribal representatives concurred that economic ties between reservations and neighboring communities was a determining force in collaboration (Grossman). These

22 This development was partially the product of conciliatory attitudes held by the base, and partially the product of Frank pressuring the Army for a hatchery since the base is on traditional fishing grounds-- leveraging the Boldt ruling for sway (Grossman 2017, p. 58).

interpersonal and interagency relations were continuously strengthened by a series of acts and stewardship planning processes throughout the last four or so decades.[23] As a result, co-management became standard practice.

New nuances and perspectives from the impacts of the Boldt Decision are still emerging today-- but it is generally accepted that this ruling, and policies in support of it, created the conditions for generative collaboration efforts that persist to the present day. Because of the precedent established in the original Nisqually River Management Plan, by the 1990's restoration efforts finally began. At this time, "less than five percent of the Nisqually River stream banks were in some form of permanent stewardship," and by 2009 that figure was at 73%, accomplishing a major objective set by the management plan (*Yil-Me-Hu* 2009; Robinson and Alesko, p. 4). The Nisqually Indian Tribe's natural resources director, David Troutt, estimated in that same interview that "We are now well on our way to achieving our goal of 90 percent." This progress is impressive considering the growing population and expanding development happening in the region at the same time. The Nisqually River Council is not stopping there though, the entity continues to regularly publish updated stewardship plans and launch new restoration projects. In the beginning of the twenty-first century, the NRC revised and updated the 1987 Management Plan and adopted the Nisqually Watershed Stewardship Plan in 2009 (Nisqually Watershed Stewardship Plan 2020, p. 1). This stewardship plan was developed because the original Management Plan did not span the entire watershed, only considering the Nisqually River's riparian corridor and the lower part of the Mashel River (Washington State Parks & Recreation Commission 2009, p. 4). This revised plan is a testament to the NRC's

23 These acts are discussed in depth in the section on collaborative watershed management.

responsiveness to the needs of its environment and communities, it is a more holistic approach to watershed management, hence the substitution of the term management for "stewardship." The Plan emphasizes the interconnectedness of people and the watershed, and curates goals to foster cultural, ecological, and economic wellbeing.

Making progress on such lofty goals in the twenty-first century is no simple undertaking. The watershed currently faces unprecedented challenges that threaten collective interests across stakeholders. This could be addressed either through continued cooperation, or succumb back into divisive conflict and lengthy litigation. Despite the NRC's best efforts, salmon and other marine wildlife remain in decline due to new threats related to development and habitat loss, surrounding urban population growth, and climate change and glacier melt (NWIFC 2011; 2020). Roads and culverts in particular are an issue that the state and tribal management authorities remain at odds over. Culverts are disruptive to salmon habitat, and projects like the development of I-5 and bridges over the Nisqually River have exacerbated their effect on salmon populations. With this issue, litigation was unavoidable. NWIFC tribes filed a suit against the state in 2001, alleging culverts violated the right to habitat determined in Boldt Phase II (Grossman 2017, 52). Regardless of the suit's success in the courtroom, the state continued to drag its feet on taking action, which has caused tension with other stakeholders in the region (Robinson and Alesko, 8). Such concerns remain prevalent in more recent reports published by the region's tribes (NWIFC 2011; 2020). At the very least, it seems that fishers, hunters, and recreationists of all backgrounds are finally in agreement that the leading cause of biodiversity is not overharvest by any particular group; rather they face a common enemy in unsustainable development and habitat loss (Grossman 2017, 53). This shared understanding generates more holistic partnerships and problem-solving.

The overarching purpose of this relational review of colonization, litigation, and cooperation is not to exegete a history that has been discussed ad nauseum, but rather identify how groups with varying interests and values evolve from a context of conflict to developing processes of cooperation and collaboration. It is important to understand the myriad of local, geopolitical forces influencing how shared values about nature have evolved over time in order to assess the efficacy of stewardship practices following the Boldt Decision. Therefore, all of these cooperative relationships must be traced back to their roots, for examining the dynamics between diverse decision-makers informs how decisions are made and implemented.

vi. A Common Enemy: Climate Change and Habitat Loss

Along with the rest of the region, the Nisqually Watershed is enduring many modern environmental challenges around Mount Tacoma and the Salish Sea. This is problematic because the watershed is an integral part of the region's identity and sense of place, partially because the glaciated peak from which it flows is among the most observable and culturally impactful peaks in the U.S. The Nisqually Glacier is considered one of the most accessible alpine glaciers in the lower 48 due to its proximity to urban centers and the paved Nisqually Vista Trail lookout located in the most frequented visitor center in the national park. As a result, its changes in size were well documented by scientists and naturalists that studied the park's glaciers and their geologic and climatic contexts.

In as early as the 19th century, geologic studies on glacial recession at Mount Tacoma were conducted and associated recession with climate change.[24] As the Nisqually Glacier

24 "Are all of the glaciers that flow from the mountain wasting away? If we find this to be the case, what climatic change does this indicate?" (Russell 1898: 408).

retreated rapidly up the mountain over the twentieth century, these changes were regularly recorded by geoscientists via photographic technology and calculations.[25] The ice that once seemed eternal to first explorers was much more impermanent than initial judgements suggested. This recession is not exclusive to the Nisqually Glacier, throughout the twentieth century it was confirmed that every glacier on Mount Rainier was decreasing in size each year, with the exception of a colder period in the 1970's (Brockman 1938; Heliker et al. 1984; Driedger 1986; Williams 2022). Modern retreat is attributed to the increasing severity of anthropogenic climate change and the recent onslaught of record-breaking heat waves and droughts sweltering the Pacific Northwest (White et al. 2023).

The National Park Service and US Geological Survey have recorded most of the available data on the Nisqually Glacier's recession. This data has been incorporated into the Nisqually Watershed Stewardship Plan updates in recent years. Glacier loss is an unprecedented threat to biodiversity and water availability in the watershed, for the Nisqually River drainage basin sources its streams from the Nisqually, Wilson, and Van Trump Glaciers (and the Muir Snowfield) on Mount Tacoma. This Nisqually-Wilson Glacier complex covers about three square miles, and its mass balance has decreased remarkably since the beginning of the twenty-first century (NRC 2019, p. 20). Table I.3.1 from the same report demonstrates the area loss associated with glacier melt.

25 Brockman, "The Recession of Glaciers in Mount Rainier National Park, Washington" The Journal of Geology (1938); Veatch, "Analysis of a 24-Year Photographic Record of Nisqually Glacier, Mt Rainier National Park, Washington" USGS & USDOI (1969); Heliker et al., "The Nisqually Glacier, Mt Rainier, Washington, 1857-1979: A Summary of the Long-Term Observations and a Comprehensive Bibliography" USGS (1984)

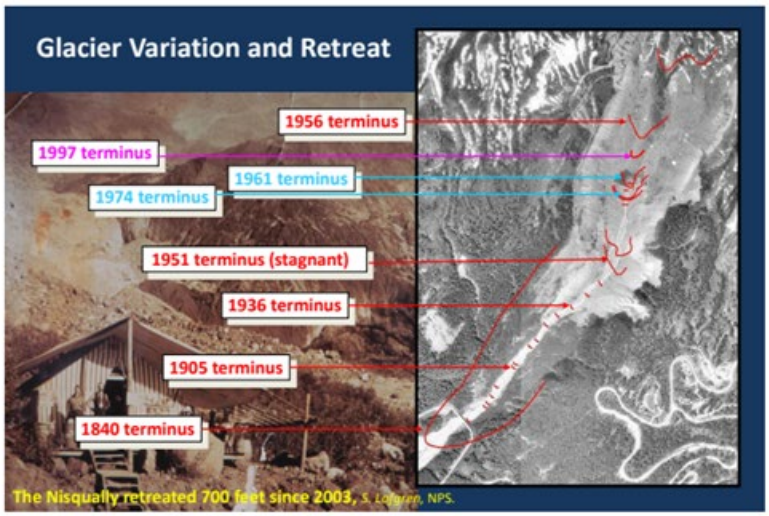
TABLE I.3.1: CHANGE IN EXTENT OF NISQUALLY-WILSON GLACIERS, 1896-2015
Source: Mount Rainier Geology & Weather[17]

	1896	1913	1971	1994	2009	2015
Area, mi^2	3.87	2.54	2.34	2.41	2.32	1.62
Area, km^2	10.03	6.59	6.07	6.25	6.00	4.19

Figure 5 S. R. Beason "Change in glacial extent at Mount Rainier National Park from 1896-2015" (2017) (NRC 2019, p. 21)

The most recent watershed stewardship plans identify key challenges linked to climate change: glacial loss and ice stagnation, changes in precipitation and declining snowpack, and consequently an increased likelihood of hazards such as glacial lake outburst floods, debris flows, and higher peak flows, which all produce excess sediment that could disrupt habitat (NRC 2019). These trends have long been in motion, the data shows that peak flows have nearly doubled since the 1970's, "from 387 m^3/s in 1972 to 626 m^3/s in 2009" (NRC, p. 23). Furthermore, studies also predict that shifts in precipitation patterns will alter the watershed's hydrologic calendar, "with peak snowmelts predicted to occur 4-9 weeks earlier by the 2080s, causing higher winter flows and lower summer flows" (NRC). The effects of snowmelt and snowpack, and its relation to recession, are demonstrated by Figure I.3.1 from the stewardship plan:

FIGURE I.3.1: NISQUALLY GLACIER VARIATION AND RETREAT
Source: Mount Rainier National Park[18]



Over the same period, the glacier contributed between 12-33% of total runoff for summer streamflow in the Nisqually River.[19] Winter snowpack at Paradise is also a major source of snowmelt runoff in the upper watershed, with snowpack water equivalent totaling 78.9 in a 2016 analysis by the Washington State Department of Health – the highest of any watershed in the state.[20] Mean average annual precipitation throughout the watershed was 103 inches in 2011.[21]

Figure 6 Nisqually Glacier Variation and Retreat (NRC 2019, 22)

Scott Beason, Mount Rainier National Park's geologist, described the Nisqually Glacier's rapid retreat and its potential consequences in a recent interview[26]: "The Nisqually lately has been retreating about one meter every ten days…This is just climate change before our eyes" (Chavez 2022). This retreat will affect aquatic life from the mountain to Puget Sound, and in about a century Beason predicts that there will be less water available for hydroelectric power, which is the source of about two-thirds of electricity used in Washington state.

The impacts of glacier melt are already observable both at the glaciers' termini -as Beason and the NPS show- and in the lower watersheds, too. Decreasing glacier mass causes increased flooding since the loss of ice creates more surface area for runoff. This newly open ground creates more problems due to albedo, since dark ground absorbs more heat than white ice, which causes

26 "Mt. Rainier glaciers quickly fade" by Bridget Chavez KIRO 7 News, December 29, 2022.

higher temperatures and even more melting (Puget Sound Institute 2020, p. 36). This melt and associated runoff spells trouble for aquatic life downriver. Runoff carries sediment, which is evolutionarily necessary for estuarine habitats that support species like salmon; but because of the rapid pace of glacier melt, the necessary flows of sediment are being disrupted, too. Combined with erosion caused by sea level rise, once the glaciers recede far enough there will not be enough deposition of sediment to help level out eroding estuary landscapes. In the meantime, sediment is entering the lower watersheds too quickly, disrupting salmon habitat (Williams 2022). The loss of glaciers also means the loss of cold water sources that salmon depend upon. Williams describes the ice as a "giant storage tank," that is especially important for maintaining cool river flow in the dry summer months. Cold water is essential for salmonids' biological function, affecting their metabolism, uptake of oxygen and nutrients, and energy for feeding and avoiding predation (Williams). Without glaciers, salmon stocks are at risk of collapse. This threat to habitat, more than any other conflicts over harvest thus far, threatens resource availability for *all* stakeholders in the region.

The impacts of glacier melt are closely associated with, and exacerbated by, habitat destruction via human development. Throughout Puget Sound, "Concern about the future of estuaries is further amplified because so many natural deltas in the Sound have been lost due to building dams, which alter river flow and compound sediment; farm and industrial development; and shoreline armoring" (Williams). Limiting development and rewilding wherever possible (through methods like building cold water refuges, more hatcheries, and removing culverts) is the way forward for twenty-first century co-stewardship strategies. Mitigating the worst of climate change's impacts on Puget Sound requires more than scientific innovation, it will require political willpower and collaboration on an even larger scale.

The attention devoted to so many varying land uses lays out important context for how certain value types emerge, converge, and diverge. Here I have outlined how historically disparate uses and perspectives became as unified as they are now. These newfound cooperative attitudes manifested in policy throughout the rest of the twentieth century and are still prioritized in policy today. The following section reviews how these policies translate into practice.

VI. Political Background

i. Overview of Watershed Management Policies Relevant to the Case Study

The Boldt Decision set a precedent for a new "era of cooperation" between the state, tribes, and industry that manifested in a series of federal and state level policies affirming rights belonging both to stakeholders and the land itself. Several policies throughout the rest of the twentieth century further fostered the conditions for contemporary collaborative watershed management: healing historic wounds and restoring relationships among diverse stakeholders, especially between Washington tribal governments, commercial interests, and State agencies. In anticipation of the discussion of collaborative stewardship to follow, it is important to outline the overarching political contexts that made such cooperative efforts feasible. What follows is a cursory overview of substantial policies for watershed stewardship in Washington and an explanation of how they engender cooperative decision making and stewardship in the state.

Federal Water Resources Planning Act of 1965

Cooperative watershed policy in the State of Washington actually predates the Boldt ruling. The Federal Water Resources Planning Act of 1965 in particular marked a formal turn towards

strengthened coordination around water resources management that characterized much of the second half of the twentieth century. This act set out to be the “most ambitious attempt for nationwide federal and state coordination for river basins" (Genskow 2001, p. 18). Unfortunately, such large-scale river basin management was largely ineffective; but this act did introduce important themes of intergovernmental coordination and shared responsibility that influenced state and local policies implemented throughout the end of the twentieth century (Genskow 19). Later policies passed in 1971 and 1972 furthered formal water and resource conservation initiatives.

RCW 90.54.800 and RCW 90.58

In 1971 the Washington Water Resources Act was created to address issues of hydropower development and riparian conservation. It aimed to create opportunities for “balanced development of cost-effective and environmentally sound hydropower projects,” protect economic, cultural, and ecological interests of citizens, and “significant values associated with the state's rivers”[27] (RCW 90.54.800). Of note, it mandated that public feedback be sought and incorporated at all stages of water planning discussions (NIT 2007, 96). In 1972 the Shoreline Management Act was passed, requiring municipalities with shorelines to implement Shoreline Master Programs to prevent harmful development patterns along the state’s shorelines (RCW 90.58). Importantly, the SMA declared the Nisqually River as a “river of statewide significance” (Washington State Parks and Recreation Commission 2009). Acts such as these were the basis of the founding of the Nisqually National Wildlife Refuge and other influential preservation sites in the watershed.

27 I.e. fish and wildlife populations and habitats, water quality and quantity, unique physical and botanical features, archeological sites, and scenic and recreational resources

The Nisqually River Management Plan 1987 & TFW 1986

These policies set precedent for the Washington Department of Ecology's convening of the Nisqually River Task Force in 1985, which produced the 1987 Nisqually River Management Plan (and resulting Nisqually River Council[28]) approved by the state legislature in 1987. The Nisqually River Management Plan, the product of a new partnership between the Washington Department of Ecology, the Nisqually Indian Tribe, and local municipalities, set the tone for all of the stewardship plans and intergovernmental agreements set in the watershed since then (Robinson & Alesko, 10). The Nisqually Indian Tribe, emboldened by two successful Boldt rulings, could now take up leadership on watershed management. Around the same time, the Northwest Renewable Resources Center suggested the region's timber companies convene with regional tribes and reach an agreement in the Timber, Fish, and Wildlife Process (TFW) in 1986. This was a consensus-based process that "acknowledged tribal co-management authority over natural resources and recognized a "balance of power" among the main players," which in turn encouraged a more locally appropriate approach to resource management (Grossman 2017, 47). One manifestation of this local approach is the state's development of Water Resource Inventory Areas along watershed boundaries, instead of defaulting to political boundaries.

1989 Centennial Accord and 1999 New Millennium Agreement

In 1989, Governor Booth Gardner and 26 of the federally recognized Washington tribes institutionalized co-management into state policy with the signing of the Centennial Accord

28 The structure of the Task Force and Nisqually River Council is discussed in depth in the section on stakeholders. The circumstances of its convening are encompassed in the historical overview of the watershed.

(Robinson & Alesko, 10). The Centennial Accord recognized that "the parties share in their relationships particular respect for the values and culture represented by tribal governments," allowing the state and the tribes to commit to nurture a "collective ability to successfully resolve issues of mutual concern" (Grossman 2017, 50). This agreement also included plans for economic development and educational strategies for teaching students about tribal rights and cultures. The Centennial Accord was strengthened a decade later by the New Millennium Agreement. This 1999 agreement established continued partnership and equal political power between the state's government and tribal governments into the twenty-first century.

1998 Watershed Planning Act (RCW 90.82) & Salmon Recovery Planning Act

Another impactful policy from this time was the State of Washington's 1998 Watershed Planning Act (HB 2514, Chapter 90.82). The act was approved by the state legislature in 1998 to "provide a forum for citizens of the watershed to develop and implement locally based solutions to watershed issues"; to meet "the needs of a growing population and a healthy economy statewide; and advancing these two principles together, in increments over time" (NIT 2007, 1). The act led to a Memorandum of Agreement in 1999 that established the Nisqually Planning Unit.[29] The Nisqually Watershed's planning history, unlike most other watersheds in the region, precedes the development of this act which is a likely factor for the Nisqually Indian Tribe embracing the Act and the successful implementation of its outlined requirements (NIT 2007, 2). A key element of the Act was the implementation of WRIA boundaries that required the leadership of a planning unit. The Nisqually Indian Tribe became the lead planning unit in WRIA-11, the only tribe impacted by the WMA to take on the role. Around this time, the Salmon Recovery Planning Act

29 Discussed in the section on stakeholders.

was also enacted after several Puget Sound salmon stocks were listed as threatened under the 1973 Endangered Species Act (Ryan & Klug 2005, 492). Therefore, the Watershed Planning Act and Salmon Recovery Planning Act heavily influenced the stewardship plans developed at the turn of the century and up to today. The most recent policy, the 2018 Washington Streamflow Restoration Act, builds off of the policies that were informative to the twenty first century Nisqually Watershed Stewardship Plan. This Act was recently integrated into the NWSP as an addendum to address issues of water consumption (NRC 2019).

Similar to developments in ecosystem services discourse, collaborative approaches to watershed management/stewardship are a developing field in how we conceptualize resource management and land use. Collaboration was incorporated into formal policy as a community-conscious approach empowered by the political context outlined above. Since the beginning of this century, the literature on collaborative ecological stewardship has grown to better understand this relationship between top-down and bottom-up planning authorities. There is increasing scholarship on watershed management and decision-making processes, and many among them have cited or studied the Nisqually River watershed and its planning body as prominent examples of modern co-stewardship. To contextualize my inquiry into factors for effective collaboration, the following is a brief review of this expansive scholarship based on the work done by Kenneth Genskow (2001), Ryan & Klug (2005), Cronin & Ostergren (2007), and Zoltan Grossman's study of the Nisqually River Watershed in *Unlikely Alliances* (2017).

ii. Definition of Collaborative Stewardship/Management

Collaboration is a reciprocal approach to decision-making that involves multiple stakeholders. It is a "commitment to a definition of mutual relationships and goals; a jointly

developed structure and shared responsibility; mutual authority and accountability for success; and sharing of resources and rewards" (Mattessich and Monsey 1992, 7). According to Genskow (2001), collaboration is effective because it creates space for a "sustained dialogue to resolve differences and advance a shared vision among multiple interests," in turn allowing for a focus on true, shared *interests* more than assumed *positions* so that negotiators can create a win-win situation for all stakeholders (26). Collaborative watershed management groups are voluntary associations of a broad array of stakeholders which often include: state and federal agencies, elected officials, community members, and tribal, agricultural, industry, and environmental representatives. These decision-making and planning bodies are typically unified geographically over a shared watershed to collaborate on issues concerning the sharing and preservation of the watershed's resources. These individuals, groups, and agencies partner together due to their relationship to these specific geographies and their corresponding "intimate knowledge of their natural wealth" (Grossman 2017, 58). Because of this, collaborative councils and associated planning entities create roles for non-governmental players and user stakeholder groups such as fishers from all demographic backgrounds.

Watershed councils are commonly collaborative in the state of Washington thanks to a series of state-level acts that encouraged this approach. Collaborative planning dynamics can emerge either from top-down or bottom-up origins, either governmental or grassroots efforts, respectively (Cronin & Ostegren 2007, 528). In some cases, such as in the Nisqually Watershed, the originating forces can be a combination of the two. Collaborative efforts are often products of tumultuous histories of litigation over resource rights and use, prompted by stakeholders looking to avoid the complications and costs of relying on the courts to determine land and resource rights.

Collaborative approaches are still rare across the United States, but some favorable examples are prominent in the Pacific Northwest and the Nisqually Watershed is a notable case.

iii. Factors for Effective Collaboration

Cronin and Ostergren (2007) generalize six factors that influence tribal participation in collaborative watershed management. This study is important to the case of the Nisqually River because it is a prominent example of interagency partnerships involving tribal representation in the United States. The factors that influence tribal involvement and partnership outcomes are identified as the following: cultural connection to aquatic resources, political and legal standing, relationships between tribal/nontribal communities and associated agencies, a common recognition of the benefits of collaboration, consistent and visionary tribal leadership, and resource accessibility. Understanding these factors can inform better watershed stewardship that encompasses a "full range of values" (Cronin and Ostergren 2007, 527).

Kenneth Genskow (2001) also identifies a series of factors that determine the level of success these types of watershed partnerships experience. This work takes tribal participation into consideration within the case studies, one of which covers the Nisqually Watershed. Genskow defines contextual/external factors in watershed initiatives as pre-existing outside conditions that are, at least initially, beyond the influence of the partnership. These factors are: the ecological context/setting and related resource concerns, demographics and socioeconomic setting, situational history/salience of issues, and the regulatory and programmatic context. Organizational, or internal, factors are conditions that exist within the partnership and therefore fall under the direct influence of stakeholders and partners. These factors include the manner in which the partnership is formed, its composition and levels of participation, trust, structure of the

partnership, its operational process and direction-setting, focus, leadership, staffing, governmental support, interactions with the public and other groups, funding, the watershed plans themselves, and the way these partnerships are evaluated (37). Across collaborative management studies, trust, leadership, staffing, and access to resources like scientific studies and funding are major determinants in a collaborative group's successful implementation of agreed upon watershed plans and policies.

Pertinent to the case of the Nisqually River and the work of the Nisqually River Council, the 1998 Watershed Planning Act established a formal process that allows local governments and communities to collaborate on water resource use and conservation in their local basins. Ryan and Klug (2005) analyze how the Watershed Planning Act signifies the beginning of top-down recognition and support of collaborative planning, some of which had already been taking place prior to the 1998 act, i.e. the Nisqually River Council is a collaborative body that had been operating since 1987. Nonetheless, the Watershed Management Act signifies an official, governmental recognition of the value of collaborative planning in a region with a litigious history of resource conflict. While exact planning structures may vary, watershed planning since this act is often characterized by consensus decision making (493). This study corroborates the factors identified by other analyses of collaborative planning, crediting plan success to the presence of a consistent and capable coordinating body, pluralistic viewpoints, effective communication, strong leadership, steady funding and long-term resources access, and allowing ample time for the construction of necessary relationships across decision-makers (Ryan & Klug 2005, 494; Leach et al., 2000; Sommarstrom, 2000; Wondolleck & Yaffee, 2000; Margerum, 2002a). Ryan & Klug also support that adequate funding, effective leadership and management, and interpersonal trust and commitment are incumbent to the success of the collaboration project (494). The Watershed

Management Act (AKA Watershed Planning Act), among other policies discussed further in the summary of related policies, is an example of the convergence of grassroots activism and stewardship with intergovernmental coordination. The literature suggests that combinations of top-down legitimacy and institutional support, in tandem with pre-existing grassroots relationships and stewardship strategies/knowledges, are crucial for success.

This intricate relationship between formal and informal approaches to collaboration is well-represented in the history of Nisqually River planning processes. Cooperative attitudes and values amongst stakeholders coupled with legal backing and governmental support created the conditions for a successful partnership across a diverse group of interests. Most, if not all, of the factors identified for successful collaboration are present in the Nisqually case study. There are several identifiable factors that outline what makes the Nisqually Watershed's collaborative approach so effective.

The juxtaposition of accounts of conflict and cooperation in *Unlikely Alliances* (2017) alongside the factors for tribal involvement and stewardship success presented by Cronin and Ostergren (2007) demonstrate how and why collaborative watershed planning was a success in the Nisqually context. For example, much of the controversy surrounding the Boldt Decision was spurred by different stakeholder groups who all shared a strong connection and entitlement to a common resource, fish. In the case of the Nisqually Watershed, both the Nisqually Tribe and fishers from other backgrounds (i.e. sport or commercial) had distinct cultural connections to this aquatic resource. One example (of many) of this shared appreciation is demonstrated by Bill Robinson, a sportfisher and regional staff director for Trout Unlimited[30] who "compared the tribal

30 Trout Unlimited is a national conservation organization where anglers advocate for good, native fish habitat.

reverence of the natural world with sportfishing's outdoor traditions and believed that both groups hold sacred places in "different places in the heart"" (Grossman 2017, 49). These sentiments from Trout Unlimited demonstrate that a formerly adversarial relationship over time transformed into one of trust and solidarity. Furthermore, due to leadership across agencies like Trout Unlimited and the Northwest Indian Fisheries Commission, a friendly working relationship developed among once opponents. Thus, leadership was a major factor in the collaborative outcome and the expressed cooperative attitudes documented by Grossman and others.

As for political clout, the Nisqually Indian Tribe certainly has that, too. Resource companies and the state had learned their lesson from Boldt I and II, and were weary of pursuing litigious strategies any longer. Instead, industries sat at the negotiating table with the tribes "out of fear of the long and financially paralyzing lawsuits that would result if they did not" (46). The litigation route upheld the Washington tribes' right to harvest and habitat, numerous times. As a result, the tribes had significantly more negotiating and political power. The Nisqually Indian Tribe has since utilized this legitimated power to lead the charge in regional watershed planning. The final factor for tribal involvement in watershed planning is the availability of resources such as funding. As demonstrated by the amount of plans and projects, the stakeholders in the Nisqually Watershed thankfully have relatively consistent access to such assets. The Nisqually River Council and the Planning Unit have been able to source funding for projects and studies from a myriad of sources, such as the EPA and the USFWS (Genskow 95). It should be appreciated that nearly every factor of planning success discussed by Genskow (2001), Ryan and Klug (2005), Cronin and Ostergren (2007), Robinson and Alesko, and Zoltan Grossman (2017), is represented in the Nisqually Watershed.

iv. Critiques/Challenges to Collaborative Models

It is erroneous and utopian to characterize collaborative stewardship models as perfect, streamlined processes. Despite its many potential benefits and demonstrable efficacy, these models are ineffective in contexts with power imbalances, value conflicts, or where the involved parties do not see cooperation as the best option available to them (Genskow 2001, 26). Additionally, some question whether these models actually address environmental concerns due to confusion and debate over how to measure their success. There is also skepticism about how representative participation functions, and whether collaboration is de facto the best forum and process for dispute resolution (28). In some cases where parties are not ready to voluntarily resolve a dispute, it may be more advantageous to pursue a judicial approach that produces clear winners and losers; or attempt other alternative dispute resolution strategies such as negotiation, mediation, and arbitration (34).

Furthermore, some fear this approach deplatforms expert knowledge and governmental power by giving regular citizens more decision-making power; or speculate that collaboration is ultimately inefficient and produces no measurable outcomes. There is also the question of whether watershed boundaries, such as those outlined in the Watershed Management Act, are appropriate management units (Cronin & Ostergren 2007, 528). Ryan and Klug (2007) discuss other challenges, primarily issues of interagency coordination and trust. Local governments must have (and often lack) the capacity to effectively plan and fund projects: they must consider technical expertise, participation incentives, and the amount of time and resources projects of certain scales require (Ryan and Klug 2007, 491). As for trust, building it between opposing interests is a time-consuming endeavor that discourages many from collaborative approaches. However, studying the outcomes of the Watershed Management Act shows that "those planning groups with previous

experience, such as the Nisqually, appear to have benefited from the time they had already invested in planning or other collaborative activities. They were able to build upon their previous efforts and move into more substantive discussions a bit earlier than other groups" (503). In this way, the conflicts around the Boldt Decision were necessary precursors to the collaborative decision-making that characterizes stewardship in the watershed today. Therefore, collaborative stewardship could be described as an end goal, not the first solution, of deliberative processes.

v. Collaboration's Value for Environmental Justice and Conflict Resolution

Collaborative stewardship is closely tied to alternative dispute resolution and environmental justice principles. While all of these processes typically begin at the grassroots scale with decision-makers themselves, their principles are now employed by federal and state institutions such as the EPA, FWS, FERC, and NPS-- even the most powerful agencies in the nation recognize that conflicts are avoided or more easily resolved when all impacted stakeholders are granted voice and agency. The United States Department of the Interior uses an Environmental Collaboration and Conflict Resolution (ECCR) approach to resolve resource conflicts in a collaborative manner. It conceptualizes collaboration and conflict resolution like a river flowing from its headwaters all the way downstream (a convenient metaphor for the concept's application in my work).

> "Upstream the waters may be relatively clear and calm, conflict may bubble up periodically but is readily resolved. This is an ideal environment to collaborate, build and advance relationships. Situations where collaboration works well include development of new policies and maintaining existing relationships with external stakeholders. As you move downstream, water speeds up, there may be more turbulence as water hits rocks, and there may be periodic impasses as water picks up debris. This is similar to those situations where there is a history between groups with some level of conflict. Planning processes as well as policy and/or program implementation are more effective and efficient when conflict management and prevention techniques are used. By this time, the water has traveled quite a long way. Downstream the waters can be rough and turbulent. This is similar to situations where the there may be longstanding conflict that has been simmering for years, the absence of relationships and tools like assisted, or facilitated negotiation and/or mediation can be effective"[31]

Such philosophies toward environmental conflict and resolution contain transformative potentials for natural resource management in the United States. Understanding and using such an approach possesses the power to prevent more "Fish Wars" and promote more "eras of cooperation." Avoiding divisive conflict is more necessary than ever given the cooperation required to

[31] US Department of the Interior (2016). *Natural resources and environmental conflict resolution.* (2016, May 24). https://www.doi.gov/pmb/cadr/programs/natural-resources

effectively address the collective challenges of climate change. In order for these processes to prevail, they must be politically, psychologically, and philosophically informed: they must be equipped to holistically understand and include diverse values and perspectives on ecological stewardship.

This chapter contextualizes the ecological and political dynamics I assess in my case study. In it I reviewed the watershed's geographic context, its land use history from the pre-contact era to today, future uncertainties and climate change projections, and linked these contextual factors to policy and collaborative stewardship theory. All of this context is important to have in order to accurately interpret value expressions in the selected dataset. The following chapters will explain my conceptual framework and methods of analysis, and finally show how all of these factors manifest in plans and reports about watershed stewardship in the region.

Chapter 2: Theoretical Frameworks

The first chapter discusses the ways the watershed has been valued over time but does not articulate *how* values develop and become embedded in articulating institutions. To understand this, it is helpful to assess this context using several theoretical frameworks that study value formation and expression. This chapter will describe debates in ecosystem services scholarship, how IPBES responds to these debates and how I employ IPBES' definitions of value, and how these values are identified in the data via interpretive techniques in hermeneutic phenomenology.

I. Ecosystem Services and How Values Matter

I review ecosystem services (ES) because it is an academic and practical field that measures how nature's services and resources are valued, identifying how these phenomena are important to people. Ecosystem services recognizes that in order for an ecosystem service or benefit to be qualified as such, it must first be *valued* by people-- this value is then reified in social and economic institutions. Thus, there are many ways to qualify nature's value, which has spurred much debate over how to evaluate benefits from nature. These variations provide insight on the nuances underlying how values are expressed in planning and testimonial literature. The debate over valuation approaches in ES is applicable to historic debates over how the watershed's contributions are used and appreciated by various interests, signifying the multitude of ways to approach valuing nature. Ecosystem services examines human-nature relationships through various lenses, which makes it an appropriate platform from which to begin my own investigation. The following section tracks the development of this concept from its academic origins into science-policy interfaces like the 1992 CBD and 2005 MEA, and up to IPBES today.

Ecosystem services scholarship originated in the United States as early as the 1970 Study of Critical Environmental Problems (SCEP 1970), which first used the term "environmental services," (Haines-Young & Potschin-Young 2010, 111). The specific term "ecosystem services" originated in 1981, and was soon used in science, planning, policy, and associated academic fields in the late twentieth and into the twenty-first century (Chaudhary et al. 2015, 30). After the concept was clarified via contributions from scholars like Daily & Ehrlich (1992), interest in ES as a valuational framework increased as it was incorporated into international policy platforms such as the 1992 Convention on Biological Diversity (CBD) and the 2005 Millennium Ecosystem Assessment (MEA) (Kull et al. 2015). Scholarly and political interest in studying and applying ecosystem services frameworks accelerated especially after it was used in the MEA. The MEA is influential because it constructed a valuation framework relevant to policy, defining ecosystem services simply as "the benefits ecosystems provide to human wellbeing," (MEA 2005). What counts as benefits has prompted much debate and has been examined and expanded by scholars such as Gretchen Daily, who in 1997 offered a more robust description of ES:

> "the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfill human life. They maintain biodiversity and the production of ecosystem goods such as seafood, forage, timber, biomass fuels...In addition to the production of goods, ecosystem services are the actual life support functions such as cleansing, recycling, and renewal, and the conferring of many intangible aesthetic cultural benefits" (1997, p. 455).

These definitions link ecosystem function to various human uses. Ecosystem services is therefore a theoretical and practical attempt to take into account, as much as possible, all the potential values that an ecosystem contributes to human livelihoods. Exactly *what* is being valued and *how* it is being valued by ES frameworks has inspired much discourse throughout this century in attempt to specify its broad conception of value. Kull et al. (2015) summarize several critiques of ES

approaches (critiques which IPBES addresses in its approach to valuation): Ecological views allege ES obscures or simplifies biological functions in an attempt to ascribe socioeconomic value to them. Other scholars have critiqued dominant ES paradigms for inadequately accounting for and incorporating diverse social and cultural values within human-ecosystem relationships. Another stance argues that ES is a narrow neoliberal approach that commodifies nature to reduce it as a means to an end for capital. With these perspectives and more in mind, Kull et al. assert that the utility of ES conceptions of value depends on how they are applied. Thus, much work in this field pertains to developing more comprehensive ways to account for various types of nature's contributions to people and best practices for evaluating them; work that IPBES has most recently expanded.

An example of the difficulties brought by ES' ambiguity is found in how we approach quantifying or qualifying "function," a recurring term in ecosystem services and related plans and reports. There are many ways to go about evaluating function, as Haines-Young and Potschin-Young (2010) discuss. ES scholars like Costanza et al. (1997) and Daily (1997) first used function to "indicate some capacity or capability of the ecosystem to do something that is potentially useful to people" (Haines-Young & Potschin-Young 2010, 116). But others note that function can have multiple meanings in ecology, capability being one of them; yet it could also more generally refer to basic natural processes like the water cycle. Meanwhile, others suggest we abandon referencing function in ES entirely. This ambiguity is articulated well here:

> "The presence of ecological structures like woodlands and wetlands in a catchment may have the capacity (function) of slowing the passage of surface water. This function can have the potential of modifying the intensity of flooding. It is something humans find useful – and not a fundamental property of the ecosystem itself – which is why it is helpful to separate out this capability and call it a function. However, whether this function is regarded as a service or not depends upon

> whether 'flood control' is considered a benefit. People or society will value this function differently in different places at different times" (Haines-Young and Potschin-Young 2010, 115).

While ES attempts to offer a valuational framework to assess ecosystems and their benefits to people, critiques about how these valuational parameters are devised -such as with the term 'function'- demonstrate the practical limitations to such frameworks. Haines-Young & Potschin-Young grapple with the difficulty of defining what service even means, "The contingent nature of services suggests that it is unlikely that we can ever devise any simple, generic checklist of services that ecosystems or regions might support" (2010, 117). Instead they recommend that services, such as those outlined in the MEA ought to be treated more as a list of service-benefit themes that change depending on a given context. They conclude that "concepts like 'processes', 'functions', 'services' and 'benefits' should be seen more as prompts to help sort out the complexities of a given problem rather than as a set of watertight definitions that ecosystems have to be squeezed into" (2010, 118). This difficulty in valuation highlights how values underlie anything we perceive to be of benefit or service to humanity, a subjective issue that entails a variety of perspectives and worldviews that traditional ES has historically struggled to incorporate in theory and practice.

This open-endedness in defining the study and methods of ecosystem services and function lends to discussions about how to value ES once they are identified. ES discourses tend to place emphasis on the economic and ecological value of ecosystems, imparting utilitarian values onto ecosystems that center either their potential contributions to human economies or their intrinsic biological functions. Daily appeals that ES had to start with use values because market logics are so dominant and therefore it was important for ES to appeal to this logic to begin including a broader range of nature's value in economic systems (1997, 458).

It is no surprise that ES frameworks are constructed in the dominant, universal language of capital. This has been at the expense of other less mainstream ways of expressing value. The priority placed on the value types outlined by Daily has left a gap in ES that humanities scholars began filling in the twenty-first century. Increasingly, academics are advocating for combined, pluralistic approaches to ecosystem services and nature's value-- as seen in new science-policy interfaces such as IPBES. Scholars are now recognizing and dismantling the dichotomy between anthropocentrism and biocentrism, reconstructing alternative conceptions of ecosystem services to better represent the myriad of *relationships* that exist between human and ecological systems (Haines-Young & Potschin-Young 2010, 131; Chaudhary et al. 2015, 25). Recognition of embeddedness, rather than difference, between socioeconomic and natural systems has allowed the prevalence of a broader understanding of relational values in related debates. ES is a way of framing human-ecological relationships, an ontological and epistemological concept that is meant to help us communicate the many values of natural systems (Kull et al. 2015, 126). Thus, its foundation can be adjusted to incorporate more worldviews.

An internationally significant example of this paradigmatic shift in ES discourse is the emergence of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in the 2010's. IPBES is an independent, intergovernmental body that results from a United Nations resolution that was introduced in 2010 with the goal of strengthening "the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being, and sustainable development" (IPBES 2023). IPBES is notable because it draws on expertise across all scientific disciplines and many -previously excluded- knowledge communities (i.e. citizen science, indigenous/local knowledge) "to provide policy-relevant knowledge and to catalyze the implementation of

knowledge-based policies," in governments, private sectors, and civil society (IPBES). This purpose responds to critiques of limited paradigms in earlier science-policy interfaces like the CBD and MEA.

IPBES advances the contributions from the CBD and MEA, expanding notions of nature's benefits to encompass more diverse ways of valuing nature. Its updated term for nature's benefits/ecosystem services[32] is nature's contributions for people (NCP), "all the contributions, both positive and negative, of living nature (diversity of organisms, ecosystems, and their associated ecological and evolutionary processes) to people's quality of life," a broader scope to values that incorporates cultural and indigenous/local perspectives (Diaz et al. 2018, 270). I employ IPBES' definitions of value and NCP and apply it to a renowned watershed stewardship case study's published plans and reports to test its efficacy as a value framework and see what types of values occur most often in actual ecosystem services applications.

II. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

i. IPBES' Definition(s) of Values and Valuation

My framework adopts IPBES' conceptualization of values and valuation as outlined in Chapters 2 and 3 of the Values Assessment (2022). In this report, IPBES shows the importance of assessing diverse values in biodiversity assessments; a perspective I apply in my philosophical reflection of stewardship sentiments in the Nisqually Watershed. Values are understood here as the importance, goals, and beliefs that people associate with and assign to various facets of

32 In the conceptual framework introduced by Diaz et al. (2015), IPBES, similarly to the MEA, still used nature's benefits to people, defining it as: "All the benefits (and occasionally losses or detriments) that humanity obtains from nature" (14).

nature[33] (Pascual et al. 2017; Balvanera et al. 2022, 1). These values vary across sociocultural, historical, ecological, and political contexts so consequently the values people hold for nature are influenced by how they interpret and embody their relationship to nature itself (Balvanera et al. 2022). Such approaches to value and nature are relevant from a hermeneutic phenomenological approach because they also conclude that the process of valuing nature "is expressed by individuals, groups, and societies in either explicit perceivable forms or implicit and allusive ways," which require interpretation (Termansen et al. 2022, 13; Drenthen 2015).

Before describing IPBES' utility in my conceptual framework, I will first summarize IPBES' usage of certain terminology, like values and valuation to justify its use in tandem with hermeneutic phenomenology. IPBES distinguishes values from valuation in Chapter 3 of the IPBES Values Assessment (2022). According to IPBES, valuation is the process of identifying and documenting expressed values, it is how researchers qualify values given/expressed by a stakeholder. With valuation, there are *methods* and *approaches*: a valuation method is "a procedure for eliciting and articulating values of nature," and approaches are "higher-level assumptions, ideas or beliefs that underpin methods. They translate key decisions on how a method is to be applied or how the information generated by methods is to be interpreted," thus approaches inform the method like how an approach of hermeneutic phenomenology informs my method of thematic analysis (Termansen et al. 2022, p. 14). Similarly, "valuation processes" refer to how nature's values are interpreted or assessed, how valuators choose and use among a myriad of methods to fit the needs of the research context since these processes are adaptable to specific temporal

33 "Nature is understood by IPBES and by the values assessment in an inclusive way, encompassing multiple perspectives and understandings of the natural world, such as biodiversity and those perspectives of indigenous peoples and local communities who use and embody concepts like Mother Earth" (Díaz et al., 2015a)

contexts (Termansen). In this thesis, the "valuation method" I developed is rooted in hermeneutic phenomenology and thematic analysis[34], the aggregation of a philosophical approach and a widely-used research method. Valuations can be conducted from economic, biophysical, sociocultural, ILK (indigenous and local knowledge)/holistic, and health perspectives (Termansen et al. 17). While my own meta-valuation is rooted in sociocultural and ILK perspectives due to its philosophical orientation, my project examines all relevant valuation perspectives within the data that suggest how specific values are represented in planning and decision-making processes.

IPBES' analysis of valuation involves recognizing and including a variety of value typologies into decision-making since, "a multiplicity of actors (e.g., different stakeholder groups) and value types (i.e. broad and specific values) surround a decision-making context. Understanding which and whose values are at play requires valuation processes that capture value plurality and articulate it for better informed decisions" (Termansen et al. 2022, 13). Pluralistic valuation supports that incorporating the full range of nature's values manifests in more comprehensive conservation/resource management policy, an increased understanding of socio-environmental conflicts, and fosters a collective celebration and acknowledgement of the importance of all of nature's components. Diverse valuation methods and perspectives contribute to value pluralism; this premise established by IPBES is informative to my treatment of how values emerge in the case study.

With the relationship between values and valuation summarized, the types of values defined by IPBES and their application here may now be introduced. IPBES' conceptualization of

34 As the rest of this section and the methods chapter demonstrates, IPBES is part of my valuation approach in that it provides the definitions for the specific values I code for in the data using the method of thematic analysis.

value/valuation, specific values, shared values, explicit and implicit value expression, power and institutional values, and its call for value pluralism are especially influential to the interpretive coding framework I developed. To ground this project's framework, I must first situate how some of these key concepts are understood and employed by IPBES.

ii. Worldviews, Broad/Specific Values & Value Indicators

IPBES defines several dimensions of values that are relevant in valuation and policymaking such as worldviews, broad and specific values, and value indicators. While these are all important for IPBES' conceptual framework, I only code for specific values (with consideration given to indicators)[35] due to the practical limitations of this study. Therefore, extra attention will be given to those concepts while only providing a brief overview of the others. IPBES' dimensions of values are also summarized in Figure 2.5 from Chapter 2 of the Values Assessment:

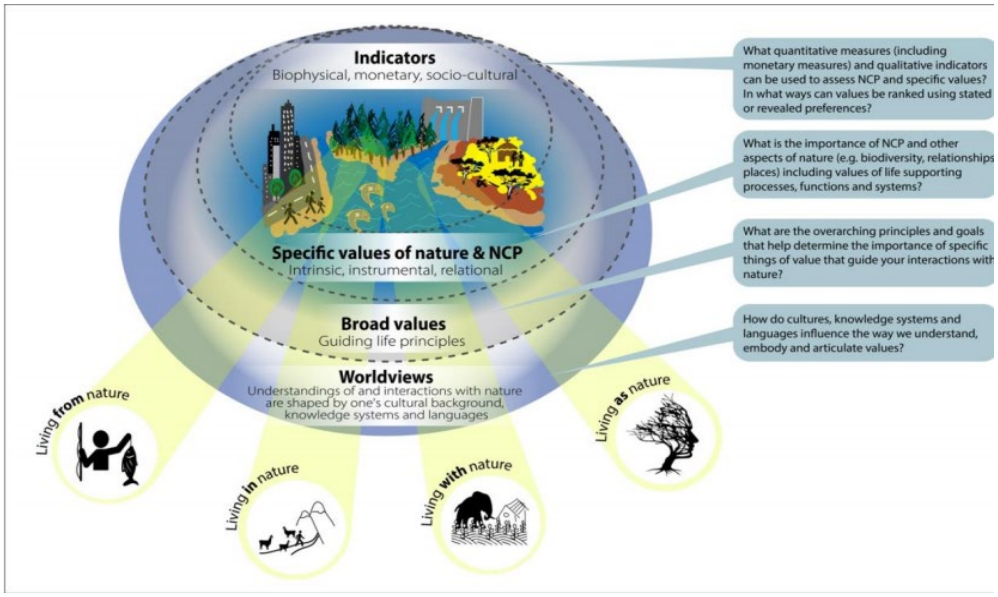
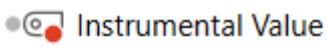


Figure 7 IPBES Values Diagram (Anderson et al. 2022, 17)

35 IPBES' understanding of indicators was useful in developing my code index – see Chapter 3

Worldviews are constituted from diverse knowledge systems, languages, and perspectives surrounding human-nature relationships, similar to the phenomenological concept of the lifeworld[36] or natural attitude. Broad values derive from worldviews and express overarching life goals or guiding principles such as sustainability or justice (Anderson et al. 2022, 4). Specific values[37] are judgements of the importance of things/situations expressed in particular contexts; categorized as instrumental, intrinsic, and relational values. These are more precise descriptions of why nature's contributions to people (NCP) and human-nature relationships are important to individuals and groups. According to IPBES, "These categories provide opportunities for more conceptually rigorous, practically effective, and ethically-based valuation policies and practices that balance different sectoral needs and stakeholder interests," and considering these types of value expressions can reveal how perspectives on nature and NCP diverge (i.e. conflict) or converge (i.e. collaboration, alliances) (Anderson et al. 4-5). Differentiating between instrumental, intrinsic, and relational values when analyzing planning documents can help identify dominant values in decision-making, and where and how under-representation of certain values occurs. IPBES finds that most ecosystem services and biodiversity reports emphasize instrumental and intrinsic values at the expense of relational values. Hence, in my analysis I code for specific values to see if this is the case in the Nisqually Watershed. These specific values, as used here, are defined as:



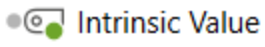
36 "the world in which we live in the natural attitude of everyday life…The phenomenological idea of the lifeworld has to remind us of all the presuppositions that underlie scientific and technical knowledge," the lifeworld is day-to-day lived experience and innate knowledges associated with it (Van Manen 2017, p. 133)

37 See definition of specific values in Figure 2.12 below, taken from Chapter 2 of the IPBES Values Assessment

Instrumental: "The value of an entity as merely a means to an end" (Arias-Arevalo 2017, 43)[38]. Alternatively, in the IPBES Nature Futures Framework (2022) instrumental values refer to the importance of "nature for society." In their traditional conception, instrumental values connote utilitarian motivations for valuing 'nature.' These are more of an extractive expression of the human-nature relationship, where a resource or ecosystem's worth is measured by the benefits it provides to humans. Instrumental values are more ends-oriented, focused on the product rather than the process of human-environment interactions and relations. Instrumental values tend to be anthropocentric and develop from/within market or utilitarian logics. IPBES identifies that these are the most common value types in biodiversity and ecosystem services management plans and reports to-date. At the end of this section I discuss how specific values are coded in my review; here I list indicators for instrumental codes and give an example of this value in context:

Indicator terms[39]: profit, commercial use, resource development, exchange, capital, supply and demand

Example: "This study finds that 12 of 23 ecosystem services across 18 land cover types in watershed give people between $287,600,000 and $4,165,990,000 in yearly benefits"(Earth Economics 2009, 5).



Intrinsic: "The value of nature, ecosystems, or life as an ends in themselves, irrespective of their utility to humans" (Arias-Arevalo 2017, 43). However, Muraca and Himes (2017) clarify that nothing perceived and valued via our experience is independent of human judgment (p. 3). In this way, intrinsic values are the value humans/societies associate with nature's existence regardless of its potential benefits to people. These are values about nature that see "natural entities as ends in-and-of themselves, expressed *without reference* to people as valuers," i.e. *nature for nature* (Anderson et al. 2022, Fig. 2.12). Intrinsic values are defined in many ways across the literature, but what is common across all definitions is that they describe the importance of natural entities without linking it to human benefits/uses. These values are sometimes difficult to detect because they are often scientifically expressed; as experts that write reports unconsciously express these values when discussing biodiversity indicators/functions (Anderson et al. 62). Debates around the expression of intrinsic value for NCPs like regulatory services reflect the significance of participants/roles in valuation processes, the voices behind the value (see Fig. 2.21). At the end of this section I explain how specific values are applied in my methodology and how I use interpretive

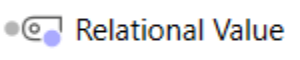
38 Here I use Arias-Arevalo's definitions for specific values because they most closely match how I used specific values to interpret values in the dataset, but IPBES' Values Assessment and Diaz's 2015 Conceptual Framework provide more expansive definitions of specific values that are beyond the scope of my interpretation.

39 These terms are inspired by IPBES' concept of value indicators and are developed in my project in the developed code index

techniques to navigate the difficulties that come with determining intrinsic values in the data [see pg. 79]. Below, I describe some code indicators and provide an example of this value in context:

Indicator terms: land/wildlife preservation, habitat enhancement and protection, right to exist, ecological functions, biodiversity

Example: "We envision: self sustaining wildlife populations, abundant stocks of wild salmonids, diverse native ecosystems" (Nisqually Land Trust 2016, 9).



Relational: "The importance attributed to meaningful relations and responsibilities between humans and between humans and nature" (Arias-Arevalo 2017, 43). More simply put in the Nature Future's Framework: nature as culture/one with nature. Relational values typically emphasize cultural connections to nature, community networks concerning both nature and people, sense of place and belonging, and issues of identity and meaning-making. These values are historically under-represented in the field of ecosystem services because traditionally the types of institutions, agencies, knowledge, groups and individuals that would express such sentiments are excluded from formal decision-making arenas. At the end of this section I discuss in detail how specific values are applied in my methodology. Here I'll provide indicator terms for codes and offer an example of this value in context:

Indicator terms: reciprocity, interdependence, enjoyment and identity, recreation and livelihood, wellbeing, care/stewardship, intergenerationality, cooperation/partnership[40]

Example: "Sustainability is founded in a belief that stewardship is an everyday practice, that we all have a role to play, and that all of the watershed's voices are essential" (Nisqually Watershed Stewardship Plan 2020, 8).

The overlapping relations between these specific value definitions is outlined in Figure 2.12 below:

40 When coding, I coded collaborative sentiments as relational because they often signified a moral responsibility to both nature and other people and their values concerning nature.

2.2.3.2. Specific values categorized as intrinsic, instrumental and relational values

Specific values are opinions or judgements of the importance of specific things in particular situations and contexts (e.g., the importance of water quality) or states of affairs (e.g., the importance of enacting water quality regulations; see *Figure 2.12*). They have also been referred to as 'assigned' (Rokeach, 1973) or 'contextual' values (Kenter et al., 2015; UK NEA, 2014), or simply 'importance' (IPBES, 2015).

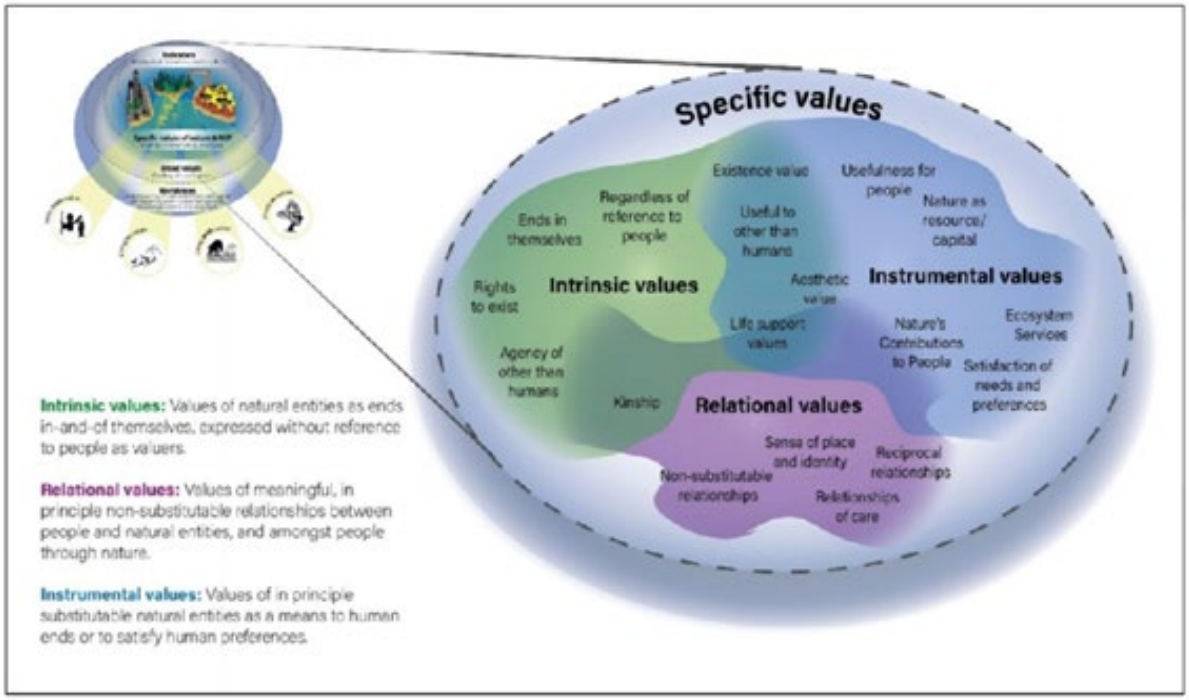


Figure 2.12. General visualization of nature's multiple specific values. Core definitions, examples and fuzzy boundaries are displayed for each value type.

Figure 8 IPBES Specific Values (Anderson et al. 2022, 31)

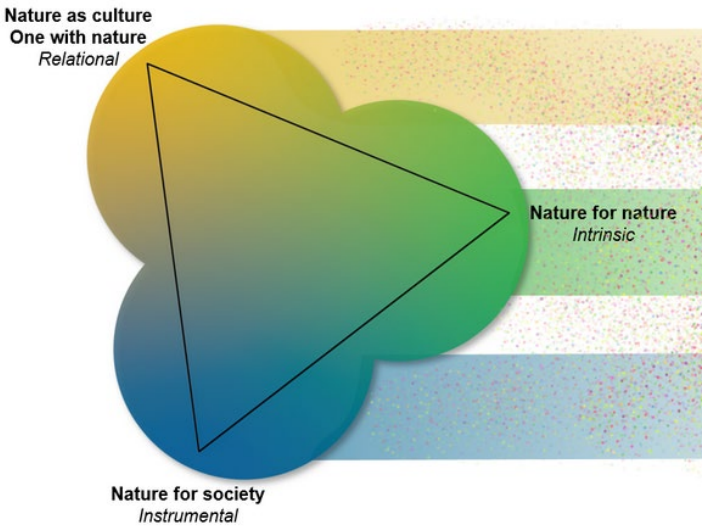


Figure 9 IPBES Nature Futures Framework (ipbes.net/scenarios-models)[41]

The above definitions guide how the evaluator observes the occurrences of specific values in the data, found in this text via biophysical, economic, and sociocultural indicators that correspond to these value types. It is important to note that these specific value categorizations are not mutually exclusive, and they often overlap. In my review of the data, I often saw specific values occurring one after the other or even simultaneously. For example, commercial fishers may be motivated to use the resource because of economic incentives, but they also commonly develop an occupational identity via this relation to the resource. Therefore, a value expression from a commercial fisher may be represented by a combination of socio-cultural and economic indicators that convey the plurality of values that inform this relation. Because indicators are often

41 From ipbes.net/scenarios-models: "*The nature futures framework presents three value perspectives of nature in a triangle. In the "nature for nature" perspective, people view nature as having intrinsic value, and value is placed on the diversity of species, habitats, ecosystems and processes that form the natural world, and on nature's ability to function autonomously. The "nature as culture"/one with nature perspective primarily highlights relational values of nature, where societies, cultures, traditions and faiths are intertwined with nature in shaping diverse biocultural landscapes. The "nature for society" perspective highlights the utilitarian benefits and instrumental values that nature provides to people and societies. The coloured circles associated with each value perspective blend together where they intersect, indicating that they are not mutually exclusive.*"

multidimensional and subject to interpretation, I note the presence of indicators when documenting specific values but they are not coded in themselves.

iii. Formation of Shared Values, Value Expression, and Institutional Power

Another important contribution from the IPBES values assessments is the analysis of how shared values[42] are formed, especially in the context of power dynamics and the influence of certain institutions. These factors inform how values are formed and expressed, impacting *which* discourses around values occur and *how* discourses influence collective values. Because societal institutions such as governments and markets constitute and influence the domains in which worldviews and related values are formed, value formation and expression are inherently social and relational (Anderson et al. 2022, 63). Some of the most commonly shared values in societies and communities contain environmental dimensions- take for example, the collective pride many Pacific Northwesterners express relating to the region's natural resources.

Values develop through both individual and social processes, and through encounters with nature. Over the long-term, values may form from collective socialization. An example of a collective value formed over a long time is the reverence held for National Parks in the United States due to recognition of the land's intrinsic value via historical-political processes and associated institutions that justified the parks' founding based on their unique and irreplaceable qualities. IPBES quotes Everard et al. (2016) and Ishihara (2018) to say, "Long-term formation of shared sustainability-aligned values involves recursive interaction between individuals, groups and culture… and progressive rippling out of values from niches to broader society through social

42 "Shared values are the broad and specific values that people express collectively, in groups, communities, and across society as a whole. They can be formed through long-term processes of value formation and socialisation and shorter-term processes, such as group deliberations" (Anderson et al. 2022, p. 6)

learning and cross-sectoral institutionalisation" (Anderson et al. 2022, 64). Laws that protect national parks and corresponding educational initiatives that promote their preservation exemplify these processes at play. Shared values also arise from shorter-term processes like deliberation that occurs in conflict resolution. In my case study, the period from litigation to cooperation demonstrates the exchange and convergence of values on a grassroots level, while at the same time, also showing how values converged due to more institutional, deliberative processes following the Boldt Decision. The shared values around conservation in the watershed are the product of years of cross-cultural conflicts and later deliberative dialogues that mediated attitudes held by individual stakeholders and their larger identity groups; as well as the shorter-term processes of coming together to reach consensus on conservation policies.

Understanding nature's values requires closely studying the diverse ways they are expressed or articulated, for the way people value nature depends on their perceivable relationship with it. It is important to understand how nature's values are expressed because they shape not only how we interact with nature itself, but also determine the actions we take and the attitudes and relations we form about each other and society. Nature's values influence and are influenced by diet, occupation, art, sciences, essentially all facets of human society. Thus, these values may be expressed implicitly through everyday, mundane practices like cooking or working. Values may be made explicit in contexts like policy and decision-making, litigiously via informal and formal conflict, through persuasive or informational writing, or when directly discussed in a research inquiry. Whether explicitly or implicitly expressed, "people perceive, interpret, judge, and relate to nature in very different, and sometimes, incompatible ways," and because of this some voices and values may be given inequitable weight or importance over others due to systemic or

interpersonal power imbalances (Díaz et al., 2015a; IPBES, 2016, 2019a; Pascual et al., 2017; Balvanera et al. 2022, p. 5).

Conveniently, IPBES offers a direct example of such imbalances with watershed management. In a study on a glaciated watershed in Latin America, values and power struggles implicitly expressed in watershed management were analyzed with a focus on when land use rules favor more powerful actors than others (Arias-Arevalo et al. 2017). Such implicit value prioritizations are often embedded in power structures that underlie resource and land use conflicts in watersheds especially, as IPBES also regards in the struggle over resource sovereignty in the Klamath River Basin (Anderson et al 2022). Much of the groundwork done by IPBES scholars is directly pertinent to the observation and interpretation of values in the Nisqually River Watershed. Its understanding of how systems and histories inform a diversity of value expression and formation, and how this translates to decision-making processes, is especially applicable to the case study site.

iv. Incorporating Relational Values in Policy and Planning Reports

IPBES' review of national biodiversity strategies and action plans found that instrumental values dominate the narrative in biodiversity and ecosystem services planning, and more research is needed on how to incorporate diverse values in policy/planning processes. IPBES observes that "Incorporating a dynamic and relational understanding of values would help move these policies beyond the extant dichotomy between people and nature… that is part of the predominant anthropocentric worldview behind a central prioritization of economic growth and instrumental values, often to the detriment of other values" (Balvanera et al. 2022, 85). Environmental scholars identified a need to reimagine and broaden the language we use to express the values embedded

in human-nature relationships; but it is not enough to reconceptualize environmental valuation in academia, we must implement pluralist principles in policy-making and stewardship practices, too. To achieve this relational reorientation in dominant ecosystem management narratives, we must dissect and understand how values manifest in current and past ecosystem management narratives. By doing so, gaps in inclusion may be identified along with the way values inform the outcomes of stewardship plans. To implement such insights in policy, "mainstreaming diverse values into new forms of corporate and civil governance…means developing the capacity, time and resources to shift the *focus from solely material well-being to wider goals of reciprocity*, care and justice that are grounded in different socio-cultural groups and *languages*" (Balvanera et al., 87). Just as rigorous scientific and economic valuations must be conducted in proposing any major policy, socio-cultural valuations must be common-practice as well. This is partly what I address in my own study.

With the various elements of IPBES defined, I can explain how they are applied alongside hermeneutic phenomenology to develop a conceptual framework used to analyze the data. IPBES offers helpful vernacular for exploring the relationship between policy and values in my study, but it is not a method of valuation. As discussed on [page], to conduct a valuation of stewardship planning I used hermeneutic phenomenology as a methodological approach. From this, I turned IPBES' specific values into codes to be interpreted via a method of hermeneutic thematic analysis. This process will be explained in the methods chapter, and hermeneutic phenomenology will be introduced in the next section. For now, I will preface how IPBES is relevant to my analysis of the data.

Specific values and related indicators informed how I coded the data. Recall that in my discussion of ecosystem services I described the challenges of establishing one-size-fits-all parameters for ES valuation; my conceptual framework relieves some of this difficulty with clearly defined values provided by IPBES and the contextual awareness of hermeneutic phenomenology. Pluralist value frameworks and reflexive approaches to interpreting such values in context helps ensure that more diverse values are identified in this study than in traditional ES valuations. To navigate the subjective nuances of evaluating sentiments about NCP, I developed a code index of indicator terms to help accurately detect *what* is valued, by *whom*, and *why*. This code index, elaborated in chapter 3, logs indicator terms and examples that correspond to instrumental, intrinsic, and relational values. Often, these indicators appear in complex contexts that require advanced interpretation, and this need is met with hermeneutic phenomenology.

This interpretative process is exemplified by returning to the nuances surrounding the concept of "function" in evaluating ecosystem services [see pg. 72]. Coding for terms like function shows how interpretive techniques alleviate some of the ambiguities that arise when qualifying the varying value(s) of NCP. In my review, references to ecosystem function are coded as intrinsic value in the data when the author(s) does not explicitly link function to human dependence; if function is not directly tied to goods and services then my hermeneutic assumption is that the ecosystem function is being valued in itself. In cases when ecosystem function is explicitly connected to human benefit or wellbeing in the phrase, then it is coded as an instrumental or relational value according to the prevalence of other keyword indicators[43]. In this way,

[43] These indicators and examples were introduced with the definitions of each specific value and will be referred to throughout the discussion on methods as they informed how I coded for specific values.

hermeneutic phenomenology is an important element for verifying my identification of codes throughout the data, without an interpretive lens the definitions of specific values alone would not sufficiently reveal the nature of value expression in the dataset. The following overview of hermeneutic phenomenology will further illustrate how this approach adds to the IPBES framework, and how together they inform my combined conceptual framework.

III. Hermeneutic Phenomenology

i. Phenomenology

Phenomenology is a philosophical tradition associated with Edmund Husserl and Martin Heidegger, but academic interest has taken the tradition far beyond Europe and appropriated its methodologies in universal ways.[44] Researchers from various academic fields such as nursing, pedagogy, and psychology use phenomenology in their qualitative research (Sloan and Bowe 2014; Guillen 2019; Van Manen 2016). Increasingly, it is used in environmental studies to better understand human-environment relationships (Seamon 2013; Drenthen 2015). Its inclusion here intends to advance the applicability of phenomenology, specifically hermeneutic phenomenology, in environmental valuation.

Phenomenology is an inquiry into the meaning of daily lived experience to demonstrate that it is far more complex than we initially perceive (Van Manen 2016, 42; Laverty 2003; Guillen 2019). Phenomenological investigations unveil the embedded meanings of what constitutes "Being," through description and/or interpretation of any given phenomenon; starting from the analysis of perspective in the first person and seeking out the qualitative essence that informs the

44 i.e. Latin American Philosophy, decolonial philosophy, feminist philosophy

relation between experience and being. Unlike most qualitative studies, instead of *explaining* something with the goal of attaining an *answer*, it *questions* something towards the ends of tracing its *origins* (Van Manen 2016, 74). In doing so, phenomenology discovers how understandings and attitudes about a phenomenon emerge.

A fundamental concept in phenomenological inquiry is the lifeworld, a term for how we live in the natural [taken-for-granted] attitude of day-to-day life (Van Manen 133; Seamon 2013, 145). The lifeworld, and corresponding natural attitudes, are studied by phenomenologists to better understand unconscious and conscious experience. Phenomenology methodically doubts dominant empirical attitudes rooted in scientific naturalism to unveil the subjectivity embedded in our knowledge of all phenomena. Phenomenologists understand stories and encounters from "the perspective of values, norms and practices in general," to interpret greater meaning underlying lived experience (Guillen 2019, 220). Thus, it is a useful paradigm for rethinking our preconceptions of the natural environment because phenomenology takes taken-for-granted relational experience, like our relations with nature, and uncovers the meaning within it. Importantly, because of its antagonism to Western paradigms of scientific naturalism, it is a helpful lens for exploring and critiquing conceptions of instrumentally-informed ecosystem services and understanding environmental justice dynamics.

ii. Hermeneutic Phenomenology

Phenomenological research is often descriptive, focusing on the structure of meaningful, evocative, lived experience (Laverty 2003, 27). Meanwhile, hermeneutics complicates and expands this descriptive approach by incorporating interpretation. Phenomenology is hermeneutical when its method is interpretive and primarily oriented to the explication of *texts*,

more than solely lived experience (Van Manen 2016, 132). As Heidegger said, "language is the house of being," wherein language, thinking, and being are intrinsically related (Van Manen 110). Hans-Georg Gadamer[45] argued hermeneutics could "integrate the progress of science and thought by means of language" (Guillen 2019, 220). To accomplish this integration, hermeneutics attempts to understand the *other* through both explicit dialogue and what is implicitly conveyed in the exchange or encounter. Hermeneutics begins when someone seeking to understand a subject expresses their connection to it through language; it is less about developing a dogma of understanding and more about clarifying the "conditions in which understanding itself" happens via discourse (Laverty 2003, 25). The hermeneutic approach I employ is axiologically oriented to understand how values are expressed in varying contexts.

In hermeneutics, a text must be engaged with an open mind that accounts for the text's overarching significance/meaning; emphasizing a holistic view of the text's message, rather than honing in on "narrow and selected statements" (Van Manen 2016, 132). Accordingly, the text must be considered relative to the political, historic, and environmental conditions from which it originated. While total immersion in this original context is the goal of hermeneutics, we know that it is not possible for a researcher to wholly emplace themselves within any text's origin. Yes, a text needs to be approached with openness and sensitivity to its historical context, but it is impossible to ever place oneself in a foreign history-- and also unnecessary/undesirable from a hermeneutic perspective. Instead, hermeneutics places the interpretation of “text in the context of one's own social-historical existence” (Van Manen 133). Put otherwise, "every encounter involves an interpretation influenced by an individual's background or historicality" (Laverty 2003, 24).

45 A student of Heidegger and is widely considered the founder of philosophical hermeneutics

This understanding from historical meanings is not merely recursive or exegetical, rather it is a product of the dialogue that occurs between history, the text, and the reader (Drenthen 2015). For this reason, I am assessing not only stewardship narratives, but also to my role in assessment as an outside researcher.

Interpretation is inherently intersubjective and contextually-specific; for in a way we begin to embody history when we interpret a text, placing ourselves in a narrative to attain an understanding of it (Drenthen 2015, 4). This is a large reason why I pay so much attention to history in this work, I could not interpret the data without it. Hermeneutics engages in discourse on the historically influenced presentation of meaning and relation to those who study it. Drenthen cites, "The awareness of the fact that one belongs to an interpretation of history that one cannot fully appropriate leads to what Gadamer calls 'historically effected consciousness'..."The soul of hermeneutics," Gadamer famously said, "consists in the possibility that the other could be right.""' (Drenthen). Hermeneutic phenomenology's attention to such historical intersubjectivity means it is a powerful tool for understanding how diverse experiences lend to at times incommensurable perspectives on socio-ecological problems and moral issues concerning experienced injustice.

iii. Descriptive and Interpretive Concepts:

The Epoché & Reduction, Bracketing, Reflexivity, and the Hermeneutic Circle

Epoché & Reduction

Hermeneutic methods derive from descriptive phenomenological concepts called the epoché and reduction, and bracketing. Essentially, and for the sake of this analysis, the epoché is the mode of opening ourselves to the world as experienced, a priori, and liberating this experience

from presuppositions or prejudice[46] (Van Manen 2016, 220). The epoché is a moment of unadulterated openness and receptivity, while the phenomenological reduction is the enlightened observation or understanding we are able to glean from the space opened by the epoché (Van Manen 61). These concepts raise concerns over how such openness is possible, whether it is realistic. Despite the transcendent aims of empiricism, humans are incapable of wholly discarding any and all preconceptions before approaching a given subject. With this in mind, phenomenologists discuss bracketing within reduction.

Bracketing

Bracketing is a way to document and recognize external, individual or group influences/ prejudices when identifying the phenomenological essence in the reduction. Because the reduction's goal is to truthfully describe subjective experience and then systematically understand its contextual constitution, one must theoretically abandon their own pre-understandings or biases (Guillen 2019, 219). Bracketing facilitates this setting-aside of subliminal biases, a reflective approach to described experience that demands (perhaps superhuman) accuracy and awareness from the researcher. To accomplish this, Van Manen advocates for explicating those presuppositions throughout the study to account for when they inevitably occur. Thus, bracketing makes explicit researcher positionality or *reflexivity*, a "process in which researchers are conscious of and reflective about the ways in which their questions, methods and subject position might impact the data" (Sloan and Bowe 2014, 1297). I applied reflexivity and bracketing in my review of the data by frequently logging memos when I observed my own biases or misconceptions about the data creep in. Bracketing and reflexivity have important methodical applications here,

46 Prejudice as it is used here is interchangeable with presupposition, more than bias. It is a pre-judgement, a belief or knowledge that is held before encountering a new phenomenon, one that can be transformed by such encounters.

encouraging awareness of my own perspective as I evaluate the perspectives present in the narrative, engaging in a kind of intersubjective exchange with the data.

Reflexivity, Intersubjectivity, and Distanciation

In reality, such a transcendent descriptive outcome is practically unattainable. Intersubjectivity involves instead a transformative dialogue between two (or more) subjects, where new horizons of meaning/understanding are formed. This fusion of horizons "is a dialectic between the pre-understandings of the research process, the interpretive framework and the sources of information" (Laverty 2003, 30; Koch 1995). It is where ideas, values, and worldviews converge. Ecologically, our understanding of nature is always part of such ongoing conversations that articulate its meaning as it impresses itself in our individual and collective consciousness (Drenthen 2015, 12). Unlike the epoché, *meaning's origin is found within this reflective discourse*, not in some primal realm (Van Manen 2016, 98). It is therefore questionable whether an interpreter could ever fully depart from their immediate situation. So a hermeneutic approach,

> "asks the researcher to engage in a process of self-reflection to quite a different end than that of phenomenology. Specifically, the biases and assumptions of the researcher are not bracketed or set aside, but rather are embedded and essential to the interpretive process. The researcher is called, on an ongoing basis, to give considerable thought to their own experience and to explicitly claim the ways in which their position or experience relates to the issues being researched. The final document may include the personal assumptions of the researcher and the philosophical bases from which interpretation has occurred (Allen, 1996; Cotterill & Letherby, 1993)" (Laverty 2003, 8).

Because these interpretative dialogues entail the subjectivity phenomenology aims to describe, hermeneutic scholars argue descriptive phenomenology inherently involves some element of subconscious interpretative processes. Essentially, hermeneutics is a servant of phenomenology because, "whatever appears in consciousness is already the work of the

constituting ego (i.e. subjectivity). And in this constitution process, the interpretive is already at work" (Van Manen 2016, 137). Hermeneutic phenomenology leans into the subjectivity within the researched-researcher relation rather than force a falsely 'impartial' stance in this relation. The consciousness of meaning inherent to interpretation is called *distanciation*, a reflective moment that occurs when signifying the meaning of a text. No linguistic interpretation is possible without the foundation of lived, apriori, experience. Distanciation is the acknowledgement that all interpretation is possible only by product of lived experience, thus demonstrating an important phenomenological presupposition to hermeneutic inquiry (Van Manen 2016, 138). Simply put, hermeneutics believes that a text cannot be interpreted without prerequisite experience. For example, I could not identify a type of value in the data without first having encountered that value in prior inquiries and experiences.

Context and The Hermeneutic Circle

To reiterate, while descriptive phenomenology attempts to do away with all prejudices, hermeneutics embraces contextually given prejudice within its interpretation of these exchanges in order to gain a fuller understanding of the subject. Hermeneutics assumes that all knowledge consists of prejudice. Prejudice in mainstream scientific/academic contexts is usually conceived to be the opposite of sound judgment, but hermeneutics views prejudice to be embedded in any honest, rigorous interpretive study. Any interpretation of an encounter is automatically informed by an individual or group's background or history, so "prejudice cannot be traced back to a single source-- prejudices are deeply embedded in historical consciousness," and this complexity of human understanding can never be resolved by rules or methods (Van Manen 2016, 133). Thus, instead of drawing reductionist, but "objective" conclusions, prejudice is radically accepted viz. reflexivity in hermeneutic inquiry.

This is not to say that hermeneutic researchers ad hoc accept bias to an extent that it clouds the rigor or accuracy of their interpretation, but rather that prejudice is acknowledged and accepted in such a way that it actually enhances the study's rigor. The culmination of such reflexivity and intentionality in hermeneutics is the hermeneutic circle, a term that describes "the movement between the way of being the interpreter and the being that is revealed by the text" (Guillen 2019, 220). This movement shifts between the parts and the whole of the text; interpreting its meaning as it emerges in the dialogue occurring between the researcher, each individual part, and the context of the whole document (Sloan and Bowe 2014, 1296). The circle eventually "ends" when the researcher reaches a temporary place of understanding and meaning that is free from internal contradictions, however it is better understood as a continuous process of engagement with ever-shifting meanings (Laverty 2003, 25). This ongoing process is elaborated by Drenthen,

> "We are always already situated in the 'hermeneutic circle', in which the meanings we seek to understand are always already speaking to us. It makes no sense to ask what the 'true' or objective meaning of a particular experience would be besides the cultural interpretation because this question itself would be nonsensical: we always already live in an interpreted world" (Drenthen 2015, 3).

While not an exhaustive account, these are all ways of accessing and understanding the relational positions between subjects involved in qualitative research. Any approach in hermeneutic phenomenology incorporates the epoché, reduction/bracketing, reflexivity, or the hermeneutic circle in some way. These concepts explain and justify the prejudices inherent to interpretive qualitative approaches. The previously outlined concepts inform the lens applied to the thematic analysis developed in the research method. Now that their definitions and nuances are established, their application to axiological analysis can be clarified.

iv. Applications

Interpretation in Practice: Language, Tone, and Discerning Explicit and Implicit Meaning

Van Manen, despite attempting to establish a phenomenology of practice, concedes that there is no set method for hermeneutic phenomenological research due to its highly contextual nature. For hermeneutics, all understanding is a product of dialogue(s), so "human existence cannot really be approached as a methodical problem," and there is no method for truth (Van Manen; Laverty 2003, 24). So, hermeneutics is *not* appropriating phenomenology to formulate a precise or technical method of interpretation. It does not offer a set of rules that may be applied to social science research, rather it provides a lens from which to understand the data as it presents itself. This lack of structure creates an added challenge for qualitative studies, because “it requires sensitive interpretive skills and creative talents from the researcher. Phenomenological methodology, in particular, is challenging since it can be argued that its method of inquiry constantly has to be invented anew and cannot be reduced to a general set of strategies or research techniques" (Van Manen 2016, 41). Because of this, there are many approaches to hermeneutic phenomenology. Broadly, however, phenomenological methodology entails the adoption of an attitude of attentiveness and reflexivity. This is practiced through aforementioned concepts such as bracketing and the hermeneutic circle. The common denominator of such method(s) is an orientation around the interpretation of language.

Language is the crux of the framing methodology used here, as it is how values appear in the data. Since, "understanding can only come about through language," language, understanding, and interpretation are intertwined concepts within hermeneutics (Sloan and Bowe 2014, 1295). Therefore, "the world is represented by language and language is only real because the world is represented within it," linking language to ontology (Sloan and Bowe). From this (and like IPBES

does), we can presume that the language of a text is intrinsically indicative of the held worldviews and values of the person or entity that articulated it, which are translated via the interpreter's lens. Through interpretation, texts can mean more or less than the author originally intended, oftentimes more because texts afford more than one reading (Drenthen 2015, 2). Compared to other kinds of qualitative studies, hermeneutic interpretation requires a degree of imagination from the researcher. The interpretive process, finding meaning using a methodical framework, requires the researcher "to see it [the imagined subject] other than it has been seen before and integrate it into a new semantic context," which I do when mining for values in stewardship sources (Madison 1988; Laverty 2003, 30). Applying such a lens to the dataset texts sheds new light on planning and policy writings by retrospectively assessing them using interpretive frameworks. This project's method is a creative process, a reflective exercise designed to examine the efficacy of my selected frameworks within an actual case study.

An interpretive model of understanding elucidates meaning every time we encounter a text that presents itself as significant yet does not blatantly explain *why* it is significant, therefore necessitating interpretation (Drenthen 2015, 5). Policy is a prominent example of text containing self-evident significance without always articulating why or how that is the case, hence the application of interpretive lenses. Interpreting policy language can reveal the reasons that policy came about in the precise manner it did. Typically, phenomenological interpretation concerns highly evocative texts such as poetry, plays, novels, and art (Van Manen 2016, 47). It is less often applied to formal, technical texts such as policy and planning documents because discerning meaning in more objective texts is trickier than in highly subjective pieces of writing. Therein, tone is an important indicator of the meaning of any phrase of text. Some phenomenologists believe that in order for meaning to be discerned from a text, it must possess inherent tonal qualities (Van

Manen 264). Applying hermeneutic phenomenology to scientific research and policy settings challenges this notion. Instead, thematic and tonal discernment acknowledges that *everything* that has been written emerged from a particular socio-historical context. Most of the texts in my dataset are technical and consist of words and phrases with weakly embedded meaning; but, meanings are still present no matter how faintly. I chose this method and dataset to test how hermeneutic phenomenology can be effectively applied in policy-setting and decision-making; uncovering the concealed meaning and motivations behind the words written in policy texts and the values represented in deliberative processes.

Discerning tone in this context presents many difficulties. For example, it is challenging to correctly interpret how regulating services[47] are valued in ecosystem services assessments. Regulating services are ecological processes that support all life, such as plant growth, species populations, related food webs, water quantity, and so on. These regulatory, or functional, components of ecosystems are most often referred to in scientific language that emphasizes numerical or technical qualities of the subject. Still, to discuss these ecological phenomena requires a degree of interpretation from the scientific researcher. Unconsciously, the scientist is imparting an inherent value to the phenomena of study they identify, quantify, and explain. Therein, the presentation of scientific facts concerning ecosystems is often a weakly embedded reflection of the imposition of intrinsic value on the subject. This is just one way hermeneutic phenomenology applies to interpreting meaning behind formal socio-ecological documents. The following describes how hermeneutic phenomenological approaches given in the literature provide more precise analyses of texts of all kinds, especially applied to the case study.

47 In practice, they are difficult to accurately code for and include in the same way as relational or instrumental values. As a result, this kind of data for intrinsic value may be underrepresented in my results.

"Methods" of Categorizing Codes and Themes

Sloan and Bowe (2014) outline the function and form of data gathering and analysis in phenomenological methodologies. As a research methodology, hermeneutically reading texts culminates in the identification of 'isolating themes' that correspond with the qualitative method of thematic analysis (Van Manen 1997; Sloan and Bowe 2014, 1292). The outcome of these thematic inquiries is generally a collection of descriptions of meanings for individuals or groups concerning common experiences[48] (Sloan and Bowe 1296). Thematic approaches can identify trends in the way experience is constituted by values, relationships, histories. Rather than search for the fundamental essence of what is described as in descriptive phenomenology, hermeneutic phenomenology searches for interpretive themes that emerge from close reading of a text. These recurring, dominant themes demonstrate what is meaningful, or valuable, about what is being described. Certain themes may correspond with certain voices; the myriad of themes that emerge out of the dataset represent the diversity (or lack thereof) of voices at the decision-making table. Hermeneutic phenomenology is useful because more than usual qualitative research approaches, it allows access to the "ethical, relational and practical dimensions" of long-term, day to day processes such as ecosystem stewardship (Guillen 2019, 222). However, all this has yet to explain how these themes are identified in practice.

-Codes-

Quoting Langdridge (2007), Sloan and Bowe (2014) qualify that "hermeneutic phenomenology prefers not to formalise an analytical method so that the context of the

48 This is why I pay attention to the perspectives of stakeholders, to see how individual values become shared values by virtue of similar experiences and connections

phenomenon itself can dictate how the data are analysed" (1296). Such an open-ended approach requires analytical rigor and creativity since there is no rulebook to this methodology. Hermeneutic phenomenology, viz. the hermeneutic circle, inquiries are tedious, mechanical, and often raise more questions than they answer. Not to mention, the process is contingent on the subject of study. For example, it is easier to interpret subjective accounts like interviews than it is watershed policy documents. In order to glean substantive insights from weakly embedded meanings, it is helpful to combine concepts such as the hermeneutic circle with coding frameworks to bring such meanings to the surface. Guillen (2019) proposes developing hermeneutically-informed methods that observe frequencies and codes recurring terms to catalog and analyze the presentation of experiential content in any text (226). This is where combining hermeneutic phenomenology with complementary frameworks like IPBES may be helpful, for IPBES' value categories could define what to seek in the text.

-Coding Specific Values-

While a hermeneutic framework often relies on codes and categories to organize the range of expression in experience, it simultaneously acknowledges the limitations of this. It is impossible to completely reduce lived experience into categorical abstractions. The documenting of value frequency and key terms is simply a step in deconstructing the overarching discourse to see what values emerge across articulating interests/institutions in the dataset. In coding with methods that entail hermeneutic reflexivity, one must tolerate ambiguity and contradiction which inevitably occurs in the source material, resist the urge to give meaning to every little thing, and oppose the tendency to categorize according to known schemes unless they fit within the protocol description (Guillen 2019, 226-227). In this case, the protocol is guided by IPBES' Value Assessments, so in this example my interpretive process only accounts for specific values defined by that framework.

Adherence to pre-established parameters helps avoid confirmation bias of our own presuppositions about the text. It is important to emphasize here that discernment and coding is where the issue of researcher subjectivity is particularly salient; as Guillen (2019) states "Different readers can assess different fundamental meanings and this does not indicate that one interpretation is better than the other," but idiosyncrasies are still significant and should be taken into consideration to account for the researcher's role in interpretation.[49]

-Interpretive Data Extraction-

In efforts to systematize this subjective, open-ended approach and make it practicable in qualitative inquiries, Guillen describes several text marking methods that guide interpretation. Among those outlined in Guillen (2019), selective text marking and line-by-line marking are the most appropriate choices for coding for values outlined in IPBES' framework. Selective text marking searches for terms in any given phrase "considered especially fundamental or revealing of the issue or experience being described," (Guillen). For example, a three or four line mission statement within a stewardship plan may convey various distinct themes or values depending on the vocabulary used. Line-by-line analysis is similar in its search for significant terms, but looks for them within a larger group or sequence of phrases. With such approaches, it is possible to discover or generate supporting evidence for thematic units.

All of this is applicable to socio-ecological case studies. Environmental hermeneutics as it is used here enables us to understand our relationships with ourselves, each other, and the natural world, by placing dominant narratives under a microscope. Drenthen describes its potential to

49 In this way, hermeneutic phenomenology is best suited for a team of skilled researchers, much like IPBES.

examine the technocratic approach to landscape management, a notion that inspired my project's adoption of IPBES as a lens (Drenthen 2015, 6). Furthermore, Drenthen writes that environmental hermeneutics combines the previously discussed philosophical theories with case studies, as I do with the Nisqually River Watershed: a place with many resources and associated land ethics, and alongside it, potential meanings and interpretations. Additionally, the relational emphasis within hermeneutic phenomenology makes it an ideal lens to investigating conflict resolution and collaboration. Applying hermeneutic phenomenology may yield new substantive insights about environmental perspectives, especially those that influence tangible resource conflicts.

Understanding and Conflict

Hermeneutic inquiries often share a concern with other social constructivist environmental theories regarding conflicting interpretations of the environment. Constructivists argue that nature is a social construct, a projection onto inherently meaningless/valueless objects. In their view, conflicts that arise between environmental interpretations ought to be analyzed from a political angle. But political analyses have yet to uncover the *essence* of these conflicts, and from a hermeneutic perspective leave some fundamental questions about the formation of meaning and value untouched. Hermeneutics is promising for these types of questions because it "is a way of learning how to deal with such conflicts of interpretations…hermeneutics does not just take note of the different interpretations in a debate, but it also attempts to stage a conversation between these interpretations, a dialogue in which both parties open themselves to coming to an agreement about the matter itself" (Drenthen 2015, 11). For this reason, I find hermeneutics to be particularly valuable for discussion of environmental conflict and resolutions over resource use; because as Drenthen notes, "Conflicts about rewilding in cultural landscapes, for instance, often involve a clash of ethical positions that read the landscape differently" (p.13). Deconstructing these

divergent readings can help reconstruct new collective narratives about nature that embody a greater diversity of meanings, reframing dualist positions to pluralist ones.

Drawing on Drenthen's work, my employment of critical hermeneutic phenomenology could reveal that the core of moral conflict is not sourced where the conflicting parties tend to believe. As Drenthen says, many conflicts concerning restoration that appear to be about empirical issues actually implicate collective "meaning of particular places and how we, both as humans in general and inhabitants of a local area, need to relate to nature and to very specific places" (Drenthen 2015, 12). The phenomena are more complex than they first appear. This opens the interpretive possibility that conflict over issues such as instream flow amounts, glacier melt, and salmon rehabilitation in western Washington watersheds is not only about the ecosystem itself and/or its use value, but also about the embedded values that inform human-nature relationships, and consequently, individual and collective identity formation. At last, values take center-stage in this methodological discussion.

Axiology and Hermeneutic Phenomenology

While some qualitative studies view values as barriers to objective conclusions, or emphasize some values more than others, limiting the inclusion of all possible values between the subject-object in qualitative research has increasingly been called into question by scholars associated with both hermeneutic phenomenology and IPBES (Laverty 2003, 26; Muraca and Himes 2017; Diaz et al. 2015). As IPBES and other studies testify, the elimination of certain values from serious consideration within research contexts has resulted in the loss of certain experiences and knowledges associated with meaning making. To neglect diverse values in inquiries involving human lives is a gross oversight that will result in incomplete, or inaccurate, accounts of a phenomenon or given problem.

Axiological phenomenology proposes that human values are not merely ethical categories, they belong to the domain of values present in *daily life.* Therefore, ethical values are phenomenologically given in lived experience, embedded in the lives we share with others. The ethical is always already contained by the feelings and relationships we share with others, both human and non-human (Van Manen 2016, 98). As Muraca and Himes (2017) describe, "In daily life, we don't first run into an object, then observe it, and then judge it, rather we are already immersed in value-led relationships that evoke what matters and becomes thereby an object for us" (p. 2). These relations extend to those we share with landscapes and resources. Drenthen's environmental hermeneutics explicitly relates experiences of nature to ethical implications/dimensions. As he states, "moral experiences of nature and moral meanings of nature come into play as soon as we start articulating our relationship with the world," a notion from the earlier discussion on language and understanding; he continues that "in this process, we transform the neutrality of space into a meaningful place, that is, through interpretation…[we create] a meaningful and inhabitable world that we can live in" (Drenthen 2015, 7).

Thus, a major interest in environmental hermeneutics is understanding and interpreting pre-existing environmental ethics in the hopes that the new insights and knowledges from this process will give us a way to rethink human-nature relationships.

Summary

This section defined hermeneutic phenomenology as it is used here; discussing its descriptive origins and interpretive uses with the epoché and reduction, bracketing, reflexivity, and the hermeneutic circle, and concluded with how these theories are applied. In summary, hermeneutic phenomenology explores meaningful experience as it is expressed through language.

Meaning and experience can be accessed and better understood via the epoché-reduction, through bracketing and the hermeneutic circle, and with reflexive attitudes. These theories are practiced through various interpretive methods, studying language and tone to discern both explicit and implicit meaning and identify recurring themes using categories and coding protocols that guide text analysis. These practical applications yield practical insights about the essence of conflict and values, which could contribute to a growing discourse about value pluralism and including more diverse valuations in environmental fields. I apply these techniques, alongside IPBES' value definitions, to interpret values within planning and testimonial sources in the dataset.

Chapter 3: Methods

Introduction

At the onset of this research, I intended to use hermeneutic phenomenology to analyze varying values toward glaciated watersheds in the diversely populated Puget Sound region. This is a broad inquiry so, due to practical limitations such as time and data availability, I narrowed this approach. I chose a specific watershed with a prominent history of varying land use regimes and resource conflicts. Selecting a case study with so much pre-existing documentation of various stakeholder positions made it possible to analyze how their values emerge in planning and educational sources, instead of relying exclusively on interviews typically used for phenomenological inquiry. Due to prevalence and accessibility, I opted to evaluate both watershed stewardship plans and pre-existing mixed media testimony sources from regional stakeholder groups and individuals. With these sources, I employed hermeneutic phenomenology to test how stakeholder values translate into policy contexts by studying the collaborative planning documents and reflective discourse surrounding these efforts.

On its own, hermeneutic phenomenology is an open-ended approach to analysis. To guide my assessment of the selected sources, I adopted a more precise coding paradigm from the concepts within IPBES studies. From there, I synthesized concepts from hermeneutic phenomenology and IPBES to create a combined conceptual framework to apply to my systematic literature review of planning sources. In my review, I employed techniques from thematic analysis and grounded theory to test the efficacy of my framework and identify common value-laden themes in regional stewardship efforts. These themes may describe how values are represented and the impacts of their representation, and the results will indicate how effective my conceptual framework is. Out of the many tried and failed experiments in method and precision of data

collection, this method I ultimately developed best answers the research questions that have been looming over this project for the last two years.

Systematic Literature Review

According to Xiao and Watson (2019), systematic literature reviews consist of eight general phases: 1) formulate the research problem; 2) develop and validate the review protocol; 3) search the literature; 4) screen for inclusion; 5) assess quality; 6) extract data; 7) analyze and synthesize data; and 8) report the findings (103). A preliminary literature review yielded the conceptual synthesis of hermeneutic phenomenology and IPBES, a form of framework synthesis. The second, systematic, review yielded the bulk of my empirical data, an assessment of stewardship policies and practices in the case study site using codes influenced by the established conceptual framework to find relevant themes. The intent of these reviews is twofold: develop a practicable conceptual framework from hermeneutic phenomenology and IPBES to test its applicability on a case study site, and use this framework to code and thematically analyze stewardship planning and policy documents to see what and how values are represented within them. This review of the data could reveal the role values play in the outcomes of collaborative planning processes in ecosystems with histories of complex resource conflicts. The following section will explain the framing, review protocol, data selection, quality control, and data extraction and analysis that constituted the method behind my research.

1) Framing the Research Question

So far I have reviewed hermeneutic phenomenology and IPBES, and their applications. Together IPBES and hermeneutic phenomenology inform my conceptual framework, i.e. my philosophical approach to data collection. In this context I define conceptual framework as, "a network, or "plane," of interlinked concepts that together provide a comprehensive understanding

of a phenomenon or phenomena. *The concepts that constitute a conceptual framework support one another, articulate their respective phenomena, and establish a framework-specific philosophy*…"[50] (Jabareen 2009, 51, emphasis added). The concepts included in my conceptual framework are interpretation, reflexivity, the hermeneutic circle, and IPBES' specific values. The combination of these concepts develops the philosophical constructs that guide coding and analysis: I borrow these concepts from their respective frameworks to develop one that enhances my interpretation of value-formation and decision-making in collaborative watershed stewardship in order to gain a more holistic understanding of these processes. I explore how to adopt and combine complementary frameworks to qualitatively attain a new way of *understanding* axiological phenomena in watershed contexts. In doing so, I test IPBES' methodical compatibility with hermeneutic phenomenology by analyzing how people value nature's contributions in ways unique to their shared or individual experiences with them.

From my research questions I developed a methodology to better understand exactly *how* such values are represented in policy and practice. Therein, my methodology tests whether the way people value nature, as expressed within policy and planning documents, can be attributed to predetermined subcategories. In essence, developing this conceptual framework supports my aims of combining the categorical concepts provided by IPBES with the methods of inquiry given in hermeneutic phenomenology. Philosophically, conceptual frameworks are indeterminist by

[50] "…Conceptual frameworks possess ontological, epistemological, and methodological assumptions, and each concept within a conceptual framework plays an ontological or epistemological role. The ontological assumptions relate to knowledge of the "way things are," "the nature of reality,"...The epistemological assumptions relate to "how things really are" and "how things really work" in an assumed reality…The methodological assumptions relate to the process of building the conceptual framework and assessing what it can tell us about the "real" world"

design, highlighting instead the myriad of relations between concepts and systems. Practically, these observable relations can be supported and their correlations verified through qualitative devices such as comparisons, codes, and thematic deductions. For this hybrid approach, there are techniques to data collection and analysis that offer helpful processes and possible insights. The method I developed to apply my conceptual framework is inspired by popular qualitative methods like thematic analysis and grounded theory.

2) Review Protocol: Methodologies and Methods

I devoted most of my early research process to experimenting with developing and validating various review protocols based on the conceptual framework given by IPBES and hermeneutic phenomenology. The resulting approach for my review of the data is a hybrid methodology that incorporates qualitative review techniques such as framework synthesis, thematic analysis, and grounded theory. Jabareen (2009), Javadi and Zarea (2016), Xiao and Watson (2019) provide an overview of systematic literature review typologies and qualitative methods that were informative to my process of source selection and data extraction/analysis. My method adopts these popular approaches to assess the efficacy of my conceptual framework through developing corresponding codes to assess themes.

Framework synthesis

A loosely applicable approach to my own systematic review is framework synthesis, as defined by Xiao and Watson (2019). Framework synthesis establishes "an a priori conceptual model of the research question by which to structure the coding of the literature (Carroll et al. 2013; Dixon-Woods 2011)" (Xiao and Watson 2019). In this approach to conceptual development, the predetermined conceptual framework is modified as evidence is collected. Such adjustments characterized much of my analytical process when using codes and drawing thematic conclusions.

Over the years, my original framework significantly changed from its initial conceptualization. In developing my conceptual framework, my a priori approach adjusted with changes in my understanding of IPBES, its utility in hermeneutic phenomenology, and how this is best applied across various sources. The types of data assessed in this study changed over time, and therefore the framework I used for review protocol had many iterations.

Thematic analysis

Of the many possible qualitative methods to choose from to test my conceptual framework, I selected thematic analysis. Thematic analysis is ideal because it is interpretive, broad, and flexible yet still applies a defined system to yield concrete conclusions from the qualitative study. As its name suggests, thematic analysis (TA) "is a method for detection, analysis, and reporting the themes in the data," this data can be interviews, political documents, or other evocative sources (Javadi and Zarea 2016, p. 34). The method is associated with "content analysis (Christ 1970), phenomenology (Benner 1985), and ethnography (Aronson 1994)" (Javadi and Zarea 2016). It is also often used in Interpretive Phenomenological Analysis (IPA) because of its flexible, interpretive qualities. Like hermeneutic phenomenology, it closely examines and interprets how themes -and associated experiences- are expressed in the data in explicit and tacit ways. This made it a suitable method for my research question. It is relatively straightforward, too. Thematic observation is structured by six general phases:

1. Familiarizing oneself with the data: Reading/gathering the source material before coding to have an overall understanding of what is being studied. i.e. Reviewing all the policy documents before coding to gauge their similarities and differences and comprehend the major conservation issues and proposed solutions the studies evaluate.

2. Generate initial codes: Establishing codes based on a pre-established paradigm for understanding the data. i.e. I generated my codes using IPBES' qualifications of specific value types. While IPBES scholarship provided the definitions of my codes, my process of discerning their occurrence in the data used hermeneutic phenomenological techniques. This leads into the third phase;
3. Deriving themes via. coding: Codes will identify emerging themes in the data. i.e. My codes for relational values will reveal themes pertaining to quality of life and interconnectedness to the environment. My interpretive categorization is guided by my inclusion of hermeneutic phenomenology in my conceptual framework, seeing the data as it is in context and ever-aware of my own judgments.
4. Review the themes: Once all the data is coded, review the prevalence of themes that provide new understandings related to the research question(s). i.e. Assessing the quantity and various qualities of the themes (such as who is speaking to them, to what ends they are expressed), can enlighten how values commonly emerge in policy documents and subsequent stewardship practices.
5. Define and name the themes: Do as such, and provide examples that support these conclusions. This is where themes are refined and "You reach what the theme says and what it is about and what aspects of the data are covered by the theme," here one can also identify subthemes and hierarchies of meaning in the data (Javadi and Zarea 2016, 38). i.e. Theme statements concerning the value of fishing may have multitudes of instrumental or relational meanings, revealing political and cultural contexts for those held values.

6. Produce a report: Draw conclusions based on the prevalence of certain themes in the data. Support these themes in the context of the larger conceptual framework (Javadi and Zarea 2016).

A well-defined code system is necessary to find themes in thematic analysis, since themes are the outcome of the coding process. Codes label parts of the data that contribute to overarching themes across the literature. Thus, I am not coding for themes; themes are a way to summarize and outline similarities across the data found in a coding system. As opposed to the specificity of codes, themes summarize the overall nature of experience of the subject: making meaning of the experience in examining its structural components, how often it occurs, how it is expressed in the data as shown by the codes (Javadi and Zarea 2016). This study of experience and the description/interpretation of common themes is why I adopt TA under a conceptual framework based in hermeneutic phenomenology. Additionally, the use of codes is why the framework adopts concepts from IPBES. Combining these frameworks with the method of TA uncovers emergent analytical themes across the data that help answer part of the research question, where the themes identified pertaining to specific values explains how these values are represented in policy and planning documents. Thematic analysis is a way to assess how certain values manifest in socioecological policy and stewardship practices.

While such highly interpretive and flexible approaches to the data have many benefits, if interpretation is not informed by a set theory/protocol before evaluation begins, this flexibility can contribute to weakly supported themes and conclusions-- especially when coding and interpretation is conducted by an independent researcher (Xiao and Watson 2019). Therefore, before approaching the data itself, I ensured I established a solidified conceptual framework that

had checks and balances[51] to account for unhelpful amounts of methodological flexibility. I spent much time developing the review protocol and strengthening the theoretical basis for my codes before tackling the data in any meaningful way. I used TA as a method *to concretely assess value types in policy documents and find connections to planning outcomes*. In summary, my method is testing for substantive insights and my methodology is testing for theoretical insights. In addition to identifying value-laden themes, I am also testing whether combining IPBES with hermeneutic phenomenology adds rigor and depth to the interpretations derived from thematic analysis.

Grounded theory

The theoretical experimentation in this project is influenced, but not determined, by conceptual framework analysis and grounded theory as discussed by Jabareen (2009). Jabareen, drawing on work by Glaser and Strauss, proposes these techniques to account for some of the theoretical limitations of simple qualitative studies like thematic analysis. Like thematic analysis, grounded theory relies on coding paradigms for conceptual development. Rather than only pulling themes, it tries to also discover theory from the systematically obtained data; developing a "context-based, process-oriented description and explanation of the phenomenon, rather than an objective, static description expressed strictly in terms of causality" (Jabareen 2009, 52). It shows the dynamic underlying ontological and epistemological systems in value-formation, which is what I attempt in developing an axiological approach to studying watershed stewardship. Jabareen calls this grounded theory technique *conceptual framework analysis*, which contains similar -but more reflective- steps compared to the procedure outlined by thematic analysis. This technique, like hermeneutic phenomenology, "suggests a continuous interplay between data collection and analysis," that is incorporated into the analytical process (Jabareen 2009, 53). In adopting this

[51] Described in detail in the section discussing coding

technique for analysis, I can test the merit of my conceptual framework in addition to attaining the substantive results on specific value expression in the data.

These systematic literature review techniques and methods informed the layers of my review protocol. Such review allowed for meaningful, grounded application of my developed conceptual framework and assisted me in acquiring usable, significant data from the dataset. Importantly, creating such a thought-out protocol helped reduce researcher bias and subjectivity in my study by implementing theoretically-backed parameters (Xiao and Watson 2019, 103). In all, these qualitative methodologies and associated methods were selected due to their interpretive extension beyond what is explicitly in the data, establishment of codes, and their potential utility for expanding upon theories pertaining to policy and environmental ethics.

3) Searching For and Selecting Sources for Analysis

After establishing their conceptual foundations, I then set out to test these hybridized methodological frameworks in the literature itself. I spent much of this project considering the best source literature/data to assess in my study. This work began by reviewing historical narratives around shifting land use practices and values among urban and rural populations near Mt. Tacoma. Doing so provided necessary context for understanding the historical development and evolution of specific values in the case study site. Yet these sources did not directly answer how these values manifest in ecological decision-making in the region. There were two other types of sources that went beyond primary and secondary historical accounts: spoken testimonies from the region's stakeholders and the reports/plans published by stakeholder representative groups and agencies. Therefore, instead of solely seeking out narrative sources, I investigated how historical narratives emerge in meaning-laden sources such as interviews and planning documents. There are a plethora

of related sources that discuss watershed stewardship in the case study site, so I narrowed my search inquiry to a few specifications.

Diverse Stakeholder Representation

To find sources pertaining to watershed stewardship policy and planning I primarily conducted backward searches[52] from a select few, but significant, stewardship plans that I obtained at the beginning of my project. As I read those plans and analyzed their bibliographies, I identified other key policy and report documents that related to multiscale conservation and restoration plans across time and place in the watershed. Rather than use databases, I just conducted internet searches to reach public-facing websites hosted by watershed stewards from federal, state, county, and tribal agencies/groups that published full watershed conservation plans and stewardship reports. These documents were mostly found on "resources/publications" pages from the Nisqually River Council and its ancillary organizations, the NWIFC, the Nisqually Indian Tribe, Pierce and Thurston Counties, the EPA and USFWS, and the Washington Department of Ecology. This was to ensure that most major agencies, and their associated plans, involved in stewardship in the Nisqually Watershed were represented in my review.

Equal representation of agencies was challenging because some, like the NRC, have produced more reports due to their specific purpose/mission. While the NRC is the primary authority on planning due to SHB 323[53], agencies with many other focuses such as the Nisqually Tribal Council, EPA, and USFWS have also contributed to planning processes and published literature and were therefore included. The inclusion of diverse report authors helps compare and explain similarities and differences among values and themes discovered in the coding process.

[52] Xiao and Watson 2019, 103.

[53] 1985 Session Laws State of Washington p.850-851

Furthermore, many of the documents selected were referenced in other stewardship plans across the watershed, informing my reasons for including them. This cross-referencing assured that the plans were similar enough in terms of the content they cover and their motivations for drafting the reports. The same considerations went into locating audiovisual sources. While tribal perspectives were more prominent in this type of media, I ensured that the selected interviews represented - and/or were published by- a range of stakeholder groups, as seen in Table 12.

Temporal and Topical Scope

All the planning sources selected for the first review contain some combination of the terms "Nisqually River/Watershed/Basin," in the title to ensure the same geographic scales were covered[54], along with some variation of "stewardship/management/implementation plan/report/guide" to ensure they were drafted for similar purposes. From this, shorter summary documents were excluded from analysis in favor of their lengthier, more detailed parent documents. However, there was no set page limit for the selected plans, as the documents ranged from a dozen pages to several hundred. The shorter documents had narrower scopes, focusing on certain elements of conservation planning or brief status reports/updates, while longer documents were typically labeled as full regional comprehensive plans. Longer documents, for practical purposes, were reviewed before coding to rule out sections for analysis that did not directly relate to human relations/uses of the Nisqually River and its tributaries.

For example, transportation planning sections in county documents were excluded because they are mostly beyond the scope of the research question, watersheds. Such sections often include minor mention of habitat quality, but because these sections were embedded in larger reports that

[54] Non-specified, region-wide (Puget Sound-scale) plans and reports were excluded, with the exception of reports that contained chapters or sections about the Nisqually River. Each source had to contain prominent sections on Nisqually River stewardship.

more explicitly discuss socio-ecological issues in other sections concerning topics like utilities, recreation, etc., they were excluded. These topical exclusions, and explanations for exclusion, are outlined in the source summary table. In sum, local planning documents that did not mainly focus on watershed stewardship were excluded from analysis, and some sections in the comprehensive plans (marked in the data table summaries) were excluded due to irrelevance and/or time considerations. To track the evolution of stewardship planning and values over time, the dataset spans the entire "era of cooperation," beginning with the establishment of the NRC in 1987 up to today, 2023. A list of each planning document's publication year, title, issues covered, author agency, and selected sections for coding, is given in Table 11.

It was important to also study supplementary documentaries and interviews that cover the watershed's transition from resource conflict to collaborative stewardship in order to phenomenologically analyze stakeholder attachments to place and resources; to explore how these values present and correspond in complex planning contexts and the other dataset. Descriptions of those sources are included in Table 12. These sources showcase tribal perspectives mostly around fishing and resource sovereignty, but some perspectives from state agencies, recreational, and commercial representation is also given. These sources are included to supplement the often tacit expression of values in planning documents, giving more voice to the stakeholder values that underlie the development of such reports. The sample sizes are smaller due to the limited amount of data that adequately covers varying stakeholder perspectives, but are meant to emulate what stakeholder interviews could have contributed to better understanding the precise role values have in policy formation.

Narrowing the Dataset Between Review 1 and 2

The selected dataset was condensed more in the second round to enable more thorough data analysis. To make it simpler to refine codes and identify representative themes, I limited the planning document sample from 28 to 12, focusing on ten plans authored by the Nisqually River Council and two county plans from the early 1990's. I chose these sources because they encompass the most diverse stakeholder perspectives given the collaborative structures that drafted them, namely the NRC. The county reports were included because they were some of the only plans I found from the 1990's. Additionally, they were selected because they were the most straightforward to code. Other documents from the first dataset were much longer and even broader in scope while these plans are generally more concise and less technical, ensuring less error in interpretation. The planning documents that were selected for the second review are highlighted in green on the document table [see Appendix].

4) Quality Assessment

Once methods and the data corpus are decided, systematic literature reviews require quality assessment to reduce risk of error (Xiao and Watson 2019; Snyder 2019). To ensure credibility, experimental models established in the literature review must be easily replicable and comparable to other studies in similar fields. To attain this quality and prevent reinventing the wheel, I took inspiration from similar studies that utilize IPBES in watershed stewardship studies like Arias-Arevalo's 2017 study on specific values in the Otun River Watershed. Influence from this research design ensured that my understanding and implementation of codes that cover specific values was accurate to other pre-existing studies. Because my research is independent and philosophically focused, I simplified the methods employed in that study and focused only on coding for specific values with thematic analysis. This simplified approach ensures less user-error and more clarity for future replication of my study. While time restricted my ability to compare one case study with

another, applying the same conceptual framework and methods to a comparable case study site could strengthen the conclusions reached studying the Nisqually Watershed with this lens. This is a potentially valuable contribution to the work established here.

Snyder (2019) identifies a series of guidelines to assess the quality of literature reviews: ensuring the research design is substantiated by pre-existing research; that the motivations, research questions, and methodologies are clearly stated throughout; that the selected approach is appropriate among the pre-existing literature; there are clear parameters around searches for sources and criteria for exclusion/inclusion; the process for extracting data are clearly and accurately described; risk for data abstraction was demonstrably eradicated; modes of analysis clearly outlined; and the results are clearly reported and usable (338). Thus far I defined the research questions and theoretical underpinnings, traced accordingly the conceptual origins of my review protocol, justified the methods chosen to conduct the review, and explained what sources were selected for review and why. The bulk of the work in this project went into the data extraction and analysis itself, the final, results-oriented, phases of the literature review process.

5) Data Extraction Using Codes

Developing a Code Index

All the data collected in my study was framed by pre-established codes and interpretive procedures. I coded deductively across the dataset, applying predetermined codes to the data rather than having the data inform the codes I develop.[55] In line with TA methods and exemplary studies (Arias Arevalo 2017), I developed predefined codes based on the IPBES conceptual framework and interpreted themes from these codes identified in the data based on hermeneutic

[55] I began this project with inductively coding documents, before I adopted IPBES into my framework. Deductive coding helped resolve the issues I encountered concerning consistency of interpretation.

phenomenological techniques. To code, I referenced the parameters outlined by the code index (see Table 13) and looked for supporting evidence in each line and paragraph of the selected sections of the reports; but before coding I first perused the source material to ensure I understood its overall purpose and the sum of its contents. This initial perusal allowed me to also identify and exclude elements of the source material that were extraneous to the scope of my codes, i.e. procedural/technical planning elements that did not directly speak to the *value* of nature[56]. I sought out evidence that indicated the presence of *specific values*, yet some sections of these reports lacked strong explicit or tacit evidence for the presence of any kind of value. However, Javadi and Zarea caution against excluding *any* evidence within the source document. Due to time considerations, this was not always possible; but when exclusion was necessary I ensured the sections were excluded respective to set criteria concerning the scope of the project[57]. Because of the time spent conducting initial reviews and scoping, I had a road map of what to code when I revisited each document.

The tools I used for data extraction were a code index informed by my conceptual framework and a software to store and sort my data called MAXQDA. Using these tools, I assessed the documents, line-by-line and section-by-section, to find phrases that evoked value expression. In order to do this, the words that correspond with evoked values must be clearly established. Establishing precise definitions was one of the most elusive aspects of data extraction and analysis,

[56] They often spoke to *qualities* of the natural landscape, but without necessarily attributing value to it. Sections that did so were excluded from the coding -but still read- and are marked in the data tables.

[57] i.e. If the section's focus fell outside the geographic scope (i.e. the entire Nisqually basin), or the purview of human-nature relations/valuations. I focused more on thematic and issues-based considerations in the reports more than technical logistics of implementation simply because those are easier to code for.

since values emerge so variably. Following review of the data's contents I constructed a code index derived from various IPBES values assessments and supporting studies. The code index, or codebook, contributed to a "well-designed form" that increased the efficiency of the code system and reduced the amount of judgements I had to make when assessing the text (Xiao and Watson 2019, 107). This strategy is another buffer against researcher error in subjective research. The resulting code index is a living document, edited as my understanding of key terms shifted from encountering the data. It is by no means exhaustive, it functions more as a *guide* for what kinds of words and tones imply value typologies. In it, I grouped indicator terms/concepts according to the pre-established definitions of specific value types, including justification for doing so and examples that inform the respective classifications. Therefore other researchers can modify, expand, and improve upon the guide I developed. This index is summarized in Table 13.1-13.3, in the Appendix.

Indicator Terms for Interpreting Explicit and Tacit Values

Some terms considered in the index recur in the context of multiple specific values throughout the text, but their distinctive contexts and hermeneutic interpretation helped discern which code category the common term in context belonged to. For example, sustainability is not a very reliable indicator term because it has intrinsic, instrumental, and relational dimensions. It implies relational value because of the very definition of the term, the ability to meet the needs of the present without compromising future generations. However, it is often given in anthropocentric contexts too, such as "sustainable industry." Here, sustainability takes on a meaning of providing towards human-ends, which connotes instrumental value. But sustainability is also used in sole reference to natural ecosystem functions, such as sustainable amounts of wildlife populations. Other terms such as conservation or restoration presented similar issues of multiple possible

interpretations depending on the surrounding text, i.e. to what *ends* are these values included (cultural, ecological, economic)? These terms are coded according to how they are used (the context) with reference to the *subject* of the coded sentence or paragraph: i.e. whether the author/speaker is speaking from a vested interest in tradition, nature itself, personal gain, wider industrial pursuits, or some combination of these motivating sentiments.

Because of these nuances, each of the codes were identified and interpreted both within and outside their given context and were not based on the presence of codebook terms alone. For example, if a value-laden phrase was expressed in the context of a paragraph of other statements that signified other value types, it is coded in itself and compared to surrounding coded values to see its relation to those subjects. Thus, the approach to extracting codes was a combination of line-by-line and section-by-section analysis. Some documents were so diverse that expressed values changed with every other line or subject, while some documents contained entire sections dominated by certain specific values. Sometimes, I coded a phrase as "mixed" value instead of relational, intrinsic, or instrumental value when it connoted multiple meanings at once, labeling what terms indicated what type of value in the sentence. It all depends on what indicator terms are used and the detectability of explicit and implicit meanings given by their context.

One of the greatest difficulties was coding for explicit versus implicit value. More explicitly value-laden phrases often contained indicative terms such as "important, provides, supports, values, contributes, focuses, honors, affects, appreciates, believes, prioritizes" that demonstrated the subject's relative significance to the evaluator (often the author of the report or those stakeholders whose perspectives are represented by the report) or subject of the sentence. To begin coding each document, I often searched for such terms in MAXQDA to find the easiest segments to code first. Meanwhile, more tacit pieces of data often discussed elements of watershed

stewardship without directly stating its connection to human values. These types of statements tend to describe general characteristics of phenomena in the watershed, implying its importance by including it in the report at all without, however, saying *why* it was important to discuss in the report. For more obscure manifestations of value expression in the data, the code index was coupled with contextual interpretation (using hermeneutic phenomenology) to determine whether more was really said. In general though, because of these difficulties I devoted more attention to value-laden sections of data such as listed goals, mission statements, issues, and objectives. As Javadi and Zarea note on these challenges, "you can give highly different codes to an extracted content and it is possible that you do not give code to a content at all, give one code or many codes," so while I considered every line for potential codes, I did not force codes onto the phrase if it did not strongly evoke any greater implicit value or meaning (2016, 36). This interpretation is where data extraction becomes data analysis.

6) Data Analysis

Data analysis formally begins once all the documents in the dataset have been coded. In reviewing the codes, I reread each coded segment in context to ensure it was coded accurately to the code-index and true to the context of the phrase itself. In analyzing each code, I ensure there is sufficient evidence supporting their respective categorizations. If the supporting evidence was unclear or incorrect, I either re-coded the segment or deleted it entirely. This revistation of the codes is part of the recursive process of thematic analysis, it is also very similar to the concept of the hermeneutic circle. To revisit this concept, the hermeneutic circle is a dialogue between the text, its context, and the researcher's own reflective understanding. The hermeneutic circle suggests, similar to thematic analysis, that by reviewing the text and context previously understood one way, a new additional understanding may emerge in another subsequent review. It is an

exchange between the parts and the whole of the data. For example, once I complete coding and revisit the first document I coded, I may find that my understandings of the coded segments have changed based upon my interactions with other codes in other documents. Hermeneutic analysis is the constant revisitation of previously held understandings in order to generate more critically reflexive, meaningful insights. Thus, the first step to analysis is reviewing and revitalizing initial understandings of the data to ensure the most accurate and consistent representation/interpretation possible. From these interpretations of the codes, themes are derived that help inform broader theoretical insights.

This type of analysis is more interpretive, latent, than semantic. It goes a step above describing the codes and resulting themes as they appear; attempting to justify why these patterns of meaning emerge in the manner they do in pursuit of theoretical insights (Javadi and Zarea 2016, 36). Such reflections require that the researcher consistently logs their initial and final interpretations of the data, identifying what evidence they use to find themes, and articulating how these codes and themes contribute to their overall understanding of the data and the research question itself. This cyclical, reflexive method of coding ensures that the data is categorized consistently. I did this by logging memo's and comments in MAXQDA to track shifts in my thought process as I coded, tracking the evolution of my understanding of codes across various contexts. To finalize themes, the codes must be compiled and refined to construct thematic maps. MAXQDA is helpful in this process of data compilation, revisitation, and interpretation. It uses analytical tools that find common words and phrases associated with the coded segments that can aid the researcher in defining a set of themes that can be used to answer the research questions. To do so MAXQDA gathers all the coded segments in an easily-navigable list so that it is possible to identify and compare recurring themes around stewardship values, any inaccuracies in the coding,

and the frequency of value types across the dataset. From that, the themes can be associated with evidence from the codes and compiled in a table similar to Table 4 from Arias-Arevalo (2017). The summation of this analysis will be included in the results and discussion sections.

The nuances and results of the data analysis will be discussed in the forthcoming results and analysis chapter. Here I just described how the methodological frameworks of this project became a usable research method. To do so, I conducted a systematic literature review to synthesize a dual-framework from hermeneutic phenomenology and the IPBES Values Assessments (2022). This framework was tested via a grounded theory approach, coding data to assess the practicality of the proposed conceptual framework. Specific values are identified in the dataset using code systems inspired by thematic analysis. For my method, I developed a code index given by IPBES' definitions of specific values, and my lens of analysis adopted techniques in hermeneutic phenomenology. This approach is an experimental mode of qualitative assessment of watershed stewardship policy documents, seeking to discover how values inform the drafting and implementation of stewardship plans and reports.

Chapter 4: Results and Analysis

Results

One thing was clear before data analysis even began: the Nisqually Watershed contains an abundance of conservation initiatives thanks to the leadership of the Nisqually River Council, the Nisqually Indian Tribe, and steady political and financial support from state and federal agencies and non-governmental organizations. This attentiveness towards addressing socio-ecological problems in the watershed enabled lead agencies to generate the political and financial resources necessary to implement a remarkable amount of restoration, conservation, and educational programs-- too many to fully assess in this study alone. Hence, the sources that were coded in the first review compared to the second review of the dataset were significantly condensed. To compensate for this narrower scope, I selected the reports, plans, and public facing sources that represented the widest variety of interests over the entire span of the "era of cooperation."

Review of Dataset and Process

From an initial dataset of 28 planning sources in the first round of codes, (9 published by the Nisqually River Council, 5 published by local counties and municipalities, 7 published by state and federal agencies such as the Department of Ecology and USFWS, and 7 published by the Nisqually Indian Tribe and the NWIFC); my second round of codes was limited to a dozen sources published by the Nisqually River Council and Lead Planning Unit from 1987 onward. This time period was selected to see if expressed values changed over time in planning sources. Given that the Nisqually River Council is constituted of representation from all levels of governance and citizenship[58], I presumed reports from this planning body would most holistically represent the

[58] See stakeholders section: pg. 10

greatest variety of interests in planning given its diverse structure.[59] Secondary criteria for exclusion when condensing the dataset considered how difficult the source was to accurately code in the first round, as marked in memos. Highly technical documents, often hundreds of pages long, were excluded in the second round because most of the value expression within them was tacit and challenging to accurately detect. Because I lacked a team to compare interpretations with, I excluded documents where the rationales for the majority of the coded segments were the most subjective, and therefore the most subject to error.

As for the testimonial sources, their publishers, content covered, and represented perspectives were less uniform than the planning documents due to data accessibility and varying purposes for publishing (i.e. educational, historical testimony, news reporting, etc.). The purpose of their inclusion is to supplement the value perspectives identified in the planning documents and to identify how values present in the planning process manifest in the day-to-day experience of stewardship from the planners/participants themselves. The selection of representative audiovisual/testimonial sources by no means comprehensively represent all interests in planning and stewardship, but are meant to supplement the qualitative insights from interviews typically used in ethnographic/political phenomenological research. In two rounds of review, I transcribed, coded, and analyzed a dozen of such sources: Nine videos, short documentaries, or interview testimonies geared toward public education and awareness, and one transcript from a panel of regional native civil rights leaders on the Boldt Decision's impact on modern stewardship to see what issues and perspectives organically arise in discourses on planning coordination. The

[59] The Upper Nisqually community plans from the early '90s are an exception in source author selection because without them there would have been no data from the 1990's to compare to the oldest and most recent reports, not to mention they include the highest amounts of direct public participation

frequency of codes from these sources were not documented nor analyzed in the same way as the planning documents because the transcripts were much briefer than the planning document dataset and often contained less variation in represented specific value types. Instead, these more subjective sources are compared to themes and findings gathered from the planning dataset to support and contextualize the sentiments found in them.

Using MAXQDA

MAXQDA was instrumental in tracking and compiling the data for summary and analysis. While I mostly coded manually, i.e. reading each line and paragraph myself rather than using keyword searches and automatic coding to ensure context was taken into consideration, I did begin coding each document by using a feature to search for terms and phrases that signify value, such as "important, value/valuable, provides, benefits, contributes," etc. This step identified the explicit values first, and provided contextual orientation for digging deeper into the document to find accompanying implicit value expression. After the first round of codes were completed and I narrowed the scope of analysis, I used the document summary tool in MAXQDA to review all the coded segments (recoding erroneous ones in the process), along with the most common words and contextual phrases, to see what issues and sentiments arise most often in each document. After the second review was complete, I pulled summary tables and files that listed all the coded segments in each document and compared the results across each source. I grouped the coded segments according to the specific values they represented and tracked the most common terms and phrases to begin compiling the coded segments into theme statements that represented values from across the dataset. I recorded code frequencies as provided by MAXQDA to see if this quantitative data

could describe the prevalence of codes in the dataset and identify any trends.[60] At this stage, I found about ten emerging themes that I was able to then condense into five generalized theme statements, discussed below.

What I Found: Codes & Emerging Themes

The summary tables represent common sentiments across the dataset, but do not holistically represent every coded item because that is hundreds of pages worth of data. Consolidating and reviewing all the data in this way makes it possible to begin finding themes and see how experiences/perceptions of place translate to specific value categories. The codes include both explicit and implicitly expressed values, and those represented in the summary tables were intentionally selected to represent a range of issues and ways of valuing nature's contributions to people across the watershed. This review of prevalent intrinsic, instrumental, and relational values excludes examples when these values occurred together, so there is an added section in this summary that accounts for instances of mixed value. Many of the selected segments are from stated goals, visions, action items, and mission statements within the reports because these sections most clearly express values about nature's contributions to people and help contextualize the motivations behind stewardship plans.

Intrinsic Value

Intrinsic values account for the smallest proportion of value types represented in the planning documents, roughly 16% of the entire dataset and less than 25% of any given source. This may be because planning documents are drafted *by* and *for* humans and human use of the land and its natural resources. As a result, topics such as ecological function, which could be coded as

[60] This quantitative assessment is not enough to verify trends in value types, as it is possible that the code quantities were skewed by researcher ability to qualify certain codes or phrases more than others. It is merely a way to gauge the thoroughness of my own interpretation of the data

intrinsic, were often instead categorized as something else because their mention involves some tie to human benefits. Intrinsic values may also be the least prevalent because of difficulties devising the parameters of this code category in particular. Some reports included sections of dozens of pages devoted to data on biological indicators about the watershed and its resources. This data, due to its highly technical tone, is challenging to pinpoint as strictly intrinsic. Questions arise, such as why is this data included? Is it here for human benefit, or to discuss the biological phenomena in itself? In situations where I was uncertain, I did not code the segment, keeping in mind the advice from Javadi and Zarea (2016) discussed in the methods chapter-- careful not to force a code in confusing contexts.

That said, all of the segments coded as intrinsic limit the discussion of ecological properties to what IPBES qualifies as "nature for nature," remarking on the phenomena in itself and its benefits offered (or impacts on) only to biodiversity and habitat health, rather than human ends. The most common subjects of these codes were fish and wildlife like shellfish, salmon, waterfowl/birds, other game species, riparian habitat, forests, and ecosystem processes like instream flow and nutrient cycling. Many of the codes highlight the interdependencies between ecosystem processes, and how some elements of the ecosystem provide important services for other elements. Goal and vision statements coded as intrinsic values articulated a desire to protect habitats or species to maintain their role in vital ecological processes, celebrating biodiversity in itself, such as: "We embrace a diverse landscape that can simultaneously support essential ecological functions, viable populations of all native species" (NRC 2011, 30). For more examples, see the summary table below. In total, intrinsic values account for 205 of the 1,276 coded segments in the dataset. This scarcity should be reviewed in further studies that reestablish the parameters of this categorization.

Table 2) Stewardship Plans: Intrinsic Value

Year	Title // Publisher	Intrinsic Frequency w/ example(s)	∝ value types in document
1987	Nisqually River Management Plan; Nisqually River Council	N=17 1. Anadromous fish habitat should be rehabilitated and enhanced (6) 2. Wetlands and estuarine areas should receive special protective measures. Other special habitats and features should be evaluated for protective needs. (6) 3. Existing wetlands should be maintained for multiple purposes including absorbing floodwaters, recharging groundwater, cleansing water of pollutants, and providing wildlife habitat (17)	17/96= 17.7%
1992	Nisqually Sub Area Plan; Thurston County Planning Department	n=3 1. Goal: maintain the land and water environments required by… wildlife habitat (10) 2. Goal: promote and enhance the wildlife habitat throughout the planning area and protect the nisqually wildlife refuge from adjacent developments (19) 3. Committee believed natural values could be destroyed from development project (41)	3/48= 6.25%
1994	The Upper Nisqually Community Workshop Report	n=11 1. We value: pristine natural beauty, forests, rivers, still protectable and restorable (14) 2. We value: Natural beauty and wildlife (27) 3. We value: wildlife, trees, forests, rivers, lakes (40)	11/81= 13.58%
2003	Nisqually Watershed Management Plan; WRIA 11 Planning Unit (Tribe and NRC)	n=48 1. Current instream flows need to be assessed to determine their adequacy in meeting fish habitat needs (88) 2. Action: Protect fish habitat and improve shoreline protection (114) 3. protect the integrity and character of wetlands, streams, other valuable wildlife habitats, critical aquifer recharge areas (34)	48/225= 21.33%
2007	Phase IV Nisqually Implementation Plan; WRIA 11 Planning Unit	n=5 1. Support protection of instream resources 1(3) 2. Stated desire for uses that benefit fish and wildlife, water quality, or other instream resources or related habitat values (23) 3. …meeting the needs of fish and healthy watersheds statewide… (1)	5/68= 7.35%
2009	Natural Economy of the Nisqually Watershed; Earth Economics	n=34 1. different ecosystem types provide different services, forests provide flood protection, wetlands provide habitat (5) 2. the importance of wild pollinators to food crops means that wild habitats near croplands are necessary to keep populations of pollinators intact…loss of forest and farmland in the Puget Sound lowlands continues to be a concern, and likely affects the natural pollination functions of forests and riparian areas (47)	34/206= 16.5%

		3. Forests and individual trees play an important role in regulating the amount of oxygen in the atmosphere and in filtering pollutants out of the air, including removal of tropospheric ozone, ammonia, sulfur dioxide (43)	
2009	Nisqually Watershed Stewardship Plan Priorities; NRC	n=28 1. All natural populations are self-sustaining (3) 2. Wildlife habitats have been protected and expanded (5) 3. Goal: There is adequate in-stream flow for ecosystem functions (11)	28/118= 23.7%
2011	Nisqually Watershed Stewardship Plan; NRC	n=12 1. Our waters, from glacier to Sound, run clean and clear, fish and wildlife thrive in our streams, forests and prairies (13) 2. We embrace a diverse landscape that can simultaneously support essential ecological functions, viable populations of all native species (30) 3. Properties are designated as important for habitat if data suggests that at certain times of the year they support elk, salmon/steelhead, waterfowl, Garry Oaks, native prairie, or other selected species or priority habitats. (34)	12/90= 13.33%
2011	Good Neighbor Handbook; NRC	n=10 1. Ideal salmon habitat includes natural streambanks with mature trees and vegetation growing along the banks, clean gravel beds in the stream where salmon can lay their eggs, and deep pools with large fallen woody debris in the creeks to hide, rest, and feed. The streamside forest ecosystems also need the returning salmon… (9) 2. There are many different plants and animals that depend on healthy streams and wetlands for habitat (18) 3. Trees that fall into a stream also create valuable fish habitat in the stream (18)	10/58= 17.2%
2016	Strategic Direction; Nisqually Land Trust	n=5 1. we envision: self sustaining wildlife populations, abundant stocks of wild salmonids, diverse native ecosystems (9) 2. goal: permanently protect critical lands in the watershed (11) 3. our vision is to protect, restore, and manage the natural and essentially wild aspects of this river (9)	5/33= 15.15%
2019	Nisqually Watershed Stewardship Plan 2018 Status Report; NRC	n=20 1. Ecosystem functions perform best where biodiversity remains robust, and biodiversity is in turn reliant on intact ecosystem processes (49). 2. Alpine lands continue to support diverse biological communities (24) 3. Diverse communities of native fish, wildlife, and plants are thriving (54)	20/167= 11.98%
2020	Nisqually Watershed Stewardship Plan Third Update; NRC	n=12 1. Nisqually supports extensive salmon and steelhead runs (1) 2. Goal: Protect, restore, and enhance ecosystem function (13) 3. Goal: Protect and enhance biological diversity (14)	12/86= 13.95%

∝ values dataset			205/1276= 16%

Instrumental Value

Instrumental values are reportedly the most common type of specific value expressed in mainstream ecosystem policy and planning, according to IPBES. My review of the dataset from this case study supports this finding. Instrumental values occurred more frequently than intrinsic or relational values, comprising about 40% of the coded segments across the dataset, or 519 codes. Segments were coded as instrumental when they focused on financial wellness and economic growth based on natural resources, markets and jobs connected to resource industries in the watershed, property ownership and acquisition, water supply and quality for human benefit, agriculture, forestry, commercial fishing, hydropower, flood control, and other aspects of natural capital. Often, resource "management" connoted instrumental perspectives while stewardship implied a reciprocity between humans and nonhuman nature more closely associated with relational values. That said, responsible management and perpetuation of sustainable industries were among the most frequent instrumental priorities, suggesting that stakeholders value extraction and economic gain so long as it is sustainable and does not negatively impact the biological and cultural diversity in the watershed.

The coded segments suggest that even economic interests are rooted in a deep appreciation of the land and its resources, and prioritize strengthening local, closed economies as opposed to participating in an open, globalized market system. This may be due to the Nisqually's predominantly rural land uses, where small town lifestyles promote small-scale, local economies, seen in sentiments such as "We embrace a vibrant local economy connected to the watershed and that values the watershed resources" (NRC 2020, 8). The reports from the Nisqually Sub Area Plan

(1992) and the Community Workshop Report (1994) also clearly state desires for local economies, such as "We value: limited commercial growth area, hotel and lodging done to reflect the area, be locally owned" (Upper Nisqually Community Visioning Committee 1994, 28). Notably, the dominance of instrumental values decreases over time, at the turn of the century instrumental values constituted a little over half of the coded segments, and less than a quarter of the coded segments were instrumental in the most recent Nisqually Watershed Stewardship Plan. Perhaps this is due to the NRC adjusting its scope to consider issues of justice over time; or perhaps the character of expressed instrumental values evolved over time to incorporate meanings that could be considered a mix between traditional notions of instrumental value and increased attention to cultural wellbeing. Tourism is a good example of this fuzzy relationship as it constitutes much of the watershed's economy while also connecting people to nature in more than utilitarian ways.

Table 3) Stewardship Plans: Instrumental Value

Year	Title // Publisher	Instrumental Frequency w/ example(s)	∝ value types in document
1987	Nisqually River Management Plan; Nisqually River Council	n= 43 1. Future flood damage should be minimized by limiting development within the 100-year flood plain, and by enhancing the existing emergency warning system. (6) 2. economic enhancement of the natural resource-based economic sectors should be preferred to other economic activities, and the supporting land uses should be protected. (18) 3. encourage fee purchase of those lands where preservation is not compatible with the existing landowner's management objectives (32)	43/96= 44.79%
1992	Nisqually Sub Area Plan; Thurston County Planning Department	n=26 1. maintain the land and water environments required by natural resource based economic activities (10) 2. Goal: enhance agricultural activities or agribusiness within the Nisqually Valley (19) 3. Industrial uses in rural areas…should generally be those appropriate to the lower densities and land uses of rural areas (11)	26/48= 54.17%
1994	The Upper Nisqually Community Workshop Report	n=26	26/81= 32.09%

		1. Envision: affordable taxation, retain hunting areas, support for cottage industries, concentrated business districts, traffic control (31) 2. We value: managed forest with recreation-controlled logging (20) 3. We value: limit commercial growth area, hotel and lodging done to reflect area, be locally owned (28)	
2003	Nisqually Watershed Management Plan; WRIA 11 Planning Unit (Tribe and NRC)	n=118 1. Properly manage the supply of drinking water from the Nisqually Aquifer to relieve pressures on scarce supply in other sub-basins and watersheds and preserve other water dependent resources such as fisheries and agriculture (77) 2. The Planning Unit supports the concept of developing groundwater supply in areas with plentiful supply and least impact to the resource and using this supply as a regional source to augment supply in sub-basins in need (40) 3. water quantity component of the plan addresses water quantity by assessing water supply and use in the watershed and developing strategies for future use (3)	118/225= 52.44%
2007	Phase IV Nisqually Implementation Plan; WRIA 11 Planning Unit	n=37 1. Implementation Plan "must contain strategies to provide sufficient water for: (a) production agriculture; (b) commercial, industrial and residential use; and, (c) instream flows." (12) 2. Water supply availability should be considered in city and county land use planning activities…Adequate water supply should be retained on and provided to designated agricultural land of long-term commercial significance and other important agricultural areas. (12) 3. Providing sufficient water for production agriculture (96)	37/68= 54.41%
2009	Natural Economy of the Nisqually Watershed; Earth Economics	n=111 1. This study finds that 12 of 23 ecosystem services across 18 land cover types in watershed give people between $287,600,000 and $4,165,990,000 in yearly benefits (5) 2. Providing food is one of the most important functions of marine ecosystems…fishing and industries provide direct employment to 38 million people…forests [also] provide food and income (38) 3. Advancing land use planning and building standards is likely one of the most effective ways of protecting high value natural assets and building a more efficient and prosperous economy. Examining ecosystem services within the watershed in light of economic development planning would also be an excellent next step (65)	111/206= 53.88%
2009	Nisqually Watershed Stewardship Plan Priorities; NRC	n=46 1. Objective: Local markets for fisheries have been developed and expanded (3) 2. Objective: There are diversified economic opportunities consistent with the basin-wide community identity (8) 3. The continued operations of the hydropower facilities in the watershed are supported in a way that best protects ecosystem function while also meeting the power needs of the communities (11)	46/118= 38.98%
2011	Nisqually Watershed Stewardship Plan; NRC	n=20 1. We expect that our appreciation will mature in the economic sense as well. As we become more aware of the	20/90= 22.22%

		value of nature in creating goods and services, nature will become a more valuable asset to humans (16) 2. Ignite the economy: Economies grow as opportunities to create value-added goods and services are identified. Appreciation of the environment will lead our engaged community to develop sustainable management practices as well as create market opportunities derived from ecosystem services (18) 3. regional branding effort to label Nisqually-produced products with an Nisqually River Council logo as a means to build consumer to producer connections, promote the continuation of natural resource-based industries, encourage sustainable practices, and promote the Nisqually watershed to consumers, tourists, and others throughout the region (33)	
2011	Good Neighbor Handbook; NRC	n=24 1. The natural environment of the Nisqually Watershed provides goods and services for a bargain and offers a good investment opportunity (6) 2. To better guide investment and more effectively protect natural capital, it is necessary to establish economic values for all the services the watershed provides. Watersheds' goods and services generally have greater value than the sum of the economic assets they contain (6) 3. Productive farmland, ranchland, forests, wetlands, and coastlines provide important natural benefits… In the face of a growing population and a changing economic base, undeveloped lands provide substantial community benefits…fresh food… stormwater management… (27)	24/58= 41.38%
2016	Strategic Direction; Nisqually Land Trust	n=7 1. Goals: ensure financial sustainability of the land trust to support our mission now and in long term, increase revenues from grants and our own assets, build our financial services (5) 2. organizational integrity: we practice sound management, we are honest, effective, and fiscally responsible (10) 3. We envision: clean and abundant drinking water // sustainable working forests and agricultural lands (9)	7/33= 21.21%
2019	Nisqually Watershed Stewardship Plan 2018 Status Report; NRC	n=55 1. Community Forest envisions an ambitious objective of eventually purchasing and managing most of the commercial forestland in the watershed (54) 2. Recreational and tourism destinations are among the Nisqually watershed's most significant economic assets. Tourism and recreation are key to the watershed's economic vitality (125) 3. Volunteers provide the equivalent of millions of dollars of labor value to both public and non-profit organizations in the watershed (74)	55/167 32.93%
2020	Nisqually Watershed Stewardship Plan Third Update; NRC	n=16 1. We embrace a vibrant local economy connected to the watershed and that values the watershed resources (8) 2. Enhance economic viability of sustainable agriculture, forestry, and fisheries (20) 3. We will continually seek new tools for increased efficiency in developing markets for ecosystem services (9)	16/86= 18.6%

∝ value types in dataset			519/1276= 40.67%

Relational Value

IPBES argues for the increased incorporation of relational values in ecosystem management and stewardship practices because cultural consideration and integration are linked to stakeholder satisfaction and just planning outcomes. The Nisqually Watershed has modeled notable inclusion of cultural values from the start of collaborative planning, beginning with the original Nisqually River Management Plan. The 1987 plan tallied almost a third of all coded segments as relational values, a figure that almost doubled in the 2020 NWSP, where relational values made up 63% of the coded segments. This represents a shift in priorities from river management to river stewardship that started in the 21st century. The collaborative management model likely contributes to this prevalence and inclusion of diverse values. In total, relational values represented ~38% of the coded values across the dataset, or 477 of the 1,276 codes. This figure suggests that instrumental and relational values were found rather equitably across the whole dataset, but this could be due to several reasons.

One possibility is that the parameters for coding something as a relational value were rather broad, so this may account for the relatively high density of relational values across the dataset. IPBES counts relational values as nature valued for culture, or expressions of being one with nature. This encompasses all of the spiritual, material, and social interconnections that cause humans to appreciate nature's contributions. Practices such as subsistence and recreational fishing are rooted in cultural traditions, with stakeholders often expressing sentiments of spirituality and identity associated with experiences of nature such as fishing and other forms of recreation like hiking, wildlife watching, and foraging. I also counted educational priorities as relational because

they are motivated by the desire to connect visitors and residents to the watershed to recognize its many values. Additionally, notions of working together, interconnectedness, intergenerationality, partnership/cooperation were also coded as relational because they emphasize relationships between people and people, and people and nature. It seemed that relational value was a category more open to interpretation than intrinsic and instrumental values, which may account for its relative prevalence.

Table 4) Stewardship Plans: Relational Value

Year	Title // Publisher	Relational Frequency w/ example(s)	∝ value types: document
1987	Nisqually River Management Plan; Nisqually River Council	n= 31 1. "Landowners, government resource and development agencies, Indian tribes, and river users should work together to maintain or enhance wildlife populations and habitat within the Nisqually basin (p. 16) 2. "All interpretive and education programs involving the Nisqually River basin should: emphasize the Nisqually River as a whole system with particular focus on the natural resources, archaeological and cultural history and economic values; utilize existing programs, facilities, resources, and materials to the extent that they support the whole river system concept" (28) 3. "Develop an interpretive plan for the general public which promotes an understanding of the river basin." (p. 30)	31/96= 32.29%
1992	Nisqually Sub Area Plan; Thurston County Planning Department	n=18 1. County requirements and programs for housing in rural areas outside community growth centers should encourage residential development that is compatible with small scale farming, forestry, aquaculture, open space, outdoor recreation, rural service levels and generally with the rural character where human use does not overbalance the natural environment (12) 2. Goal: Adopt non-regulatory means of protecting the aesthetic and rural character in the Nisqually Valley, in addition to and in combination with land use regulations (34) 3. NIsqually River fisheries is important for its cultural value to the tribe (40)	18/48 37.5%
1994	The Upper Nisqually Community Workshop Report	n=39 1. "Our upper Nisqually Valley is blessed with one of the world's most majestic scenery, favorable climates, abundant wildlife, pristine air, soil, and water, and colorful histories. We want to retain the small, close knit rural atmosphere: to be the community that preserves and protects our special place for the experience and appreciation of others and future	39/81 48.15%

		generations while strengthening our community pride and bonds to each other" (iv) 2. We value: community involvement and concern - local community active and friendly // peace and quiet of the country and access to recreation // rich and diverse culture and heritage // access to forest lands 3. We value: community pride // lack of rules and control by wealth // preservation of history and heritage // friendly, caring, community minded people who pull together // creative people // people living closer to the earth // people who are environmentally conscious // family values	
2003	Nisqually Watershed Management Plan; WRIA 11 Planning Unit (Tribe and NRC)	n=45 1. provided for locally-based watershed planning with the goal of giving local interests a voice and a forum for collaboration. The intent of this legislation was to allow citizens, governments, and tribes to develop solutions to water issues in their own watershed (1) 2. Reason for pursuing cooperative water supply planning: Identification of groundwater as a finite resource that is vital to human communities, fish and wildlife (28) 3. An understanding of the cultural significance and connection to the water in the sub-basin (77)	45/225= 20%
2007	Phase IV Nisqually Implementation Plan; WRIA 11 Planning Unit	n=19 1. Expressions of the public interest will be sought at all stages of water planning and allocation discussions (96) 2. Local development of watershed plans for managing water resources and for protecting existing water rights is vital to both state and local interests. The local development of these plans serves vital local interests by placing it in the hands of people: Who have the greatest knowledge of both the resources and the aspirations of those who live·and work in the watershed; and who have the greatest stake in the proper, long~term management of the resources (94) 3. public outreach and participation are important components of watershed planning (6)	19/68= 27.94%
2009	Natural Economy of the Nisqually Watershed; Earth Economics	n=56 1. justice and rights are core American values. Rights help frame and define value. Market values do not determine rights...incorporating importance of justice enables ecological sustainability, economic prosperity, and a rising quality of life (8) 2. in determining how to fundamentally improve our quality of life and economy, it is critical to understand that the economy and healthy people and communities reside within a watershed and depend upon healthy natural systems it provides (28) 3. Habitat contributes significantly to other ecosystem services, namely…recreation through wildlife watching and cultural or spiritual values (46)	56/206= 27.18%
2009	Nisqually Watershed Stewardship Plan Priorities; NRC	n=43 1. Encourage community-created identities and infrastructure planning compatible with community values and sustainability goals (p. 2) 2. An integrated system of recreational opportunities is in place that protects the resources in areas which can sustain impact and preserves more sensitive areas (p. 6)	43/118= 36.44%

		3. All of the identified viewpoints in the watershed are under some form of protection that ensures that they will be enjoyed by all, adding to the aesthetics of the watershed (7)	
2011	Good Neighbor Handbook; NRC	n=23 1. “collective input comes from many people in many walks of life, it has a running theme: a deep appreciation of the Nisqually Watershed” (3) 2. “You can help the salmon and the orcas through appropriate stewardship of the streams and wetlands in your own backyard.” (18) 3. “Landowners who value these gifts have options and incentives to preserve their land and their deep connection to it” (27)	23/58= 39.66%
2011	Nisqually Watershed Stewardship Plan; NRC	n=52 1.We live in a watershed where vibrant communities, a healthy natural environment and a prosperous, innovative economy are valued. (19) 2. Facilitate the appreciation, protection, and enhancement of the watershed through education and participation / Watershed residents, visitors, and others have access to a variety of programs and resources which enable and empower them to be responsible watershed stewards (32) 3. Fostering a stewardship ethic by providing interpretive and educational opportunities that emphasize the system of natural, cultural, historic and economic resources of the Nisqually River Basin (47)	52/90 57.78%
2016	Strategic Direction; Nisqually Land Trust	n=18 1.“Our vision is to continue to protect, restore, and manage the natural and essentially wild aspects of the Nisqually River Watershed while collaborating with our local communities to support an ecologically, economically, and culturally sustainable way of life, now and for generations to come…permanently benefit water, wildlife, and people” (4) 2.“Partnership: We collaborate with individuals, organizations and communities to identify opportunities and challenges, devise workable solutions and achieve mutual goals” (10) 3. “Grow the Land Trust’s role as a community institution: Proactively engage with communities within or connected to watershed to understand their needs and achieve mutual goals; educate regional residents…provide opportunities for people to experience land trust properties” (11)	18/33 54.55%
2019	Nisqually Watershed Stewardship Plan 2018 Status Report; NRC	n=79 1. “NRC has evolved to adopt a whole-watershed approach, recognizing the interconnected impacts that regional development, population growth, and community health and economic stability have on the long-term sustainability of the watershed’s habitat, water, and natural resources” (8) 2.“The natural resources of the Nisqually watershed – the forests, the fish and wildlife, the water, and the agricultural lands – co-exist with the community and economy it supports. The natural resources of the watershed are finite and can easily be spoiled. With the looming pressures of population growth, we must redouble our efforts to leave a legacy of one of the healthiest and unspoiled watersheds in the region.” (13) 3.“Community members are informed, engaged, involved, and interconnected with a sense of local identity” (107)	79/167 47.31%

2020	Nisqually Watershed Stewardship Plan Third Update; NRC	n=54 1. foster a vibrant Nisqually River basin that respects and honors scenic beauty of the watershed, the diverse animal, plant, and human life it supports, and the health and productivity of its lands and waters…embraces our past and can serve as a foundation for our future, as we adapt to a changing climate, growing human populations, and risks to salmon, wildlife, and natural resources…respects the traditions and heritage of our watershed, and the lands that are the foundation of its environmental, social, and economic health…sustainability is founded in a belief that stewardship is an everyday practice, that we all have a role to play, and that all of the watershed's voices are essential. (8) 2. The Council will nurture its relationship with the broader community and strive to increase diversity, equity, and inclusion in programs and decision-making. (14) 3. Relationships and communication are key. The Nisqually River Council is the oldest watershed council in the American West, and has provided a forum for education, discussion, and problem-solving for watershed leaders and community stakeholders (27)	54/86 62.7%
∝ value types: dataset			477/1276= 37.38%

Mixed Values

The remaining proportion of values not summarized in the data tables were "mixed" values. I created this category to account for segments where multiple specific values appear simultaneously, or the expressed values were too ambiguous to be reduced to one category. Some examples of mixed or ambiguous values are the phrase, "river of statewide significance" which is repeated throughout the dataset. This designation came from the 1972 Washington State Shorelands Management Act and is coded as a value because it discusses significance, but it is consistently unclear as to *exactly why* it is considered significant. One can assume that it is so broad because the Nisqually is considered important for its cultural, economic, and environmental contributions. The watershed plans also often include phrasing about the purpose of the plan like, "[provide for] balanced stewardship of the area's economic resources, natural resources, and cultural resources" (NRMP 1987, 3); causing me to consider whether the resource values listed were ranked in order of importance. These types of mission statements were often pluralist,

encompassing overlapping value types. Such overlap was common, it was typical to find different value types occurring together or sequentially. While code proximity was not precisely measured, it is something I noted during data collection.

Co-occurring specific values highlights a difficulty in using code categories for qualitative studies: that value expressions often transcend/defy the bounds of categories (especially deductive categories). IPBES acknowledges the reductionist nature of predetermined value categories in its NFF Figure [see: Chapter 2, p.74]. Categories should be treated as a guide to interpretation, not dogma. Including a mixed value category helped account for this flexibility and find instances where value expression was the most pluralist.

Value Expression in Testimonial Sources

Overall, the selected testimonial sources feature a similar balance of specific values, or value pluralism, that are represented in the planning dataset. Because these sources portray stakeholder sentiments from stakeholders themselves, rather than through a filter of the formal plan drafting process, these sentiments were more emotionally and relationally oriented. This meant each source had codes for relational values, while intrinsic and instrumental values did not appear in every coded transcript. The summary table below includes one exemplary coded segment per specific value, per source, to provide evidence for commonly articulated perspectives.

Table 5) Testimonial Accounts

Title // Publisher	Ex: Instrumental Value	Ex: Intrinsic Value	Ex: Relational Value	Represented Interests
Reviving Indigenous Knowledge for Salmon in	N/A	"Forage fish give life to everything in Southern Puget Sound…Forage fish are essential to	"It took awhile to incorporate the traditional knowledge with the science but we're there now doing	Tourism industry, tribe, NGOs (LLTK), WA Dept of Fish and Wildlife

the Nisqually Estuary // Long Live the Kings		salmon, and salmon are essential to orcas"	this project. We're really excited about the possibilities of this work."	
Partnering with the Nisqually Tribe to Restore the Mashel River // WA DOE	The primary tributary to the Nisqually River is…the main source of water for the community of Eatonville	High temperatures and low flows in the summer threaten the habitat and health of the river.	This primary tributary to the Nisqually River is home to the Nisqually Indian Tribe	DOE, tribal
Rivers and Tides: Restoring the Nisqually Estuary // USFWS, Ducks Unlimited	N/A	And there's been a high price to pay for that, and that is a decline of fish and wildlife that depend on estuaries, reduced circulation of water, reduced ability to dampen floodwaters, and even the reduced ability to absorb pollutants"	"To me, it's a refuge. I come down here and get renewed. The old pioneer days in all it was a struggle against nature to develop, to build your home, to raise your food. We've won that battle, now the battle is to preserve some nature"	USFWS, Ducks Unlimited, Tribe, recreationists
Creating a Community Forest: Let's Change the Game by Joining the Game // Tedx Talks	"A community forest would generate at least as much tax revenue as timber harvest currently does, and probably a whole lot more if its done right because we will create more jobs and support more community economic activity"	"…and improves the health of the forest itself"	"We all live downstream from these timberlands and whether we realize it or not we are all affected by them. And I propose that it is now time for us to change the game and to do so by joining the game."	Joe Kane, Nisqually Land Trust, nonprofit NGOs, timber industry
From the Mountain to the Sea // Nisqually River Interpretive Center Foundation	…Neither are the rich timberlands, from which millions of board feet have been logged	Only after their disappearance to we recognize the value of juvenile salmon and other aquatic organisms as anchors against shoreline erosion, filters for particles and pollutants, and barriers to flooding.	Such signs of vitality can be attributed in significant measure to the concerted stewardship of land and water in recent times. Efforts to conserve the Nisqually Watershed have not been motivated by crisis or confrontation, but from the desires of public and private stakeholders to conserve the unique characteristics of this valued watershed.	Land itself, tribal, State (Governor Dan Evans)
Back to the River //	"I think that the way the tribes	N/A	"We're managing Puget Sound here, all of our	Tribal

Salmon Defense	are managing the fisheries are pretty good. There's always gonna be a sustainable fishery in this area because of the way the tribes manage it. They're a lot more sophisticated than the state is at managing the resource"		rivers, our watersheds. To see our fishermen fishing, enjoying life, that's what it's all about. Every day I come down here when they're fishing, it just makes me feel good that our boys and girls are fishing on the river"- Billy Frank Jr	
River of Kings // Chedd-Angier	The power company is not doing this just because they love fish. To get their license renewed, they had to make up for years of holding back water by releasing more than they'd like. And they pay for the Clear Creek hatchery as well.	It's great to see that there are some wild fish here because the whole point of the restoration is really to get the wild fish back in the river, and spawning throughout the river, make the whole river produce salmon	The Nisqually and 19 other tribes here were salmon people, and Billy Frank never lost sight of that	Tribes, hydroelectric companies, DOE
Lifeblood // CaravanLab	"As far as the loss of the fish, some of it has been related to farming activities in the past. But we're finding out how we can improve our farming. A lot of those things we're overcoming now. A lot of things in our industry are more beneficial to the fish and wildlife than the alternative out there"	"Lose that productivity, you lose the river. That river is providing a service."	"Water is the lifeblood…it is the thing that connects us. Water touches all of us and because of that we're going to need all different kinds of people coming together to see a new future…people who have different needs, different histories, people who are unwilling to accept that they're too different to work together to make this place better"	Tribes, farmers, fishers, WA DFWS

The Boldt Decision: A Roundtable Discussion // Journal of Northwest Anthropology	“Overall, if we look at the history of treaties and the pre-treaty, resources were abundant and the first resource management was, of course, was simply "how do I most efficiently harvest these fish?" ... . I got lots of fish, what kind of net, what kind of traps, what kind of gear do I need to take advantage of these?" . . . .and it took its toll on the fish”	N/A	“We are Indian people . . . we do harvest everything . . . we gather our medicines, we harvest out here. The natural world knows, the bears know, the deer and the elk and everything knows, the eagles know that we need them. These are used in our ceremonies and our culture and our way of life. Our prayers . . . that we have the first fish ceremonies.”	Tribal leaders
Georgina Kautz interview // Salmon Defense	“knowing where you come from, understanding that subsistence and ceremony are a big part of it, but also being able to make money off of it is real vital to the tribe”	N/A	“[Braget] was a great friend of ours. What he did was really amazing. Basically, the relationship that we have with everybody in the watershed, the river council, the land trust the nisqually tribe and the leadership this tribe has taken to make those steps possible, and I think we need to find a way to work with everybody with good options that can take us into the future… I think you can learn a lot from the actions that were taken by the tribe.”	Tribal, farmers

Themes

The most common sentiments about human-ecological relations across the analyzed dataset can be generalized in five dominant themes:

I. **Biodiversity:** Stakeholders broadly value maintaining, protecting, and enhancing biodiversity functions such as water quality, stream flow, wildlife habitat, and other

supporting and regulating ecosystem services, for their innate ability to support human and nonhuman life.

II. **Plurality & Balance:** The watershed is widely appreciated for the cultural and biological diversity that it supports; as a result, stakeholders desire to balance its environmental, cultural, and economic values to maintain a high quality of land and life

III. **Ecological → Economic Productivity:** The watershed is valuable for its provisional services that support the health and wellness of both human and nonhuman life and for their potential economic contributions; due to this, stakeholders strive to maintain sustainable natural industries.

IV. **Collaboration → Stewardship Ethic:** The watershed is an epicenter of collaboration where stakeholders work together to solve socio-ecological issues and ensure all interests' needs are fulfilled; thus its stewards value community involvement at each stage of planning and implementation. This inclusivity invigorates a collective stewardship ethic that results in greater community satisfaction.

V. **Cultural Connections & Collective Identity:** The watershed offers opportunities for recreation, education, tourism, resource harvest, health, and spirituality that are valued by all users; such opportunities foster interconnections between diverse user interests as well as between people and place. This celebration of cultural connections ensures just representation of interests that help form shared identities and goals.

The factors that created the conditions for these themes will be discussed in the next section. These themes were represented in every document in the sample selection and capture the value pluralism that exists across the sources. To group codes into themes, I compiled all the relevant coded segments from each document[61] in a spreadsheet, deleted duplicates, and began grouping segments together based on recurring subjects or sentiments. Then, I refined my initial code clusters and crafted theme statements that captured the sentiments of the commonly recurring codes. All of the themes embody dimensions of each specific value and apply across the dataset. To demonstrate this process, below are concept maps of each theme that include examples of corresponding codes across the documents.

[61] more than those listed in the summary tables

Emerging Themes

I. Biodiversity

Stakeholders broadly value maintaining, protecting, and enhancing biodiversity functions such as water quality, stream flow, wildlife habitat, and other supporting and regulating ecosystem services, for their innate ability to support human and nonhuman life.

Key:

- **Blue: 1987-2000**
- **Purple: 2000-2010**
- **Orange: 2010-2022**

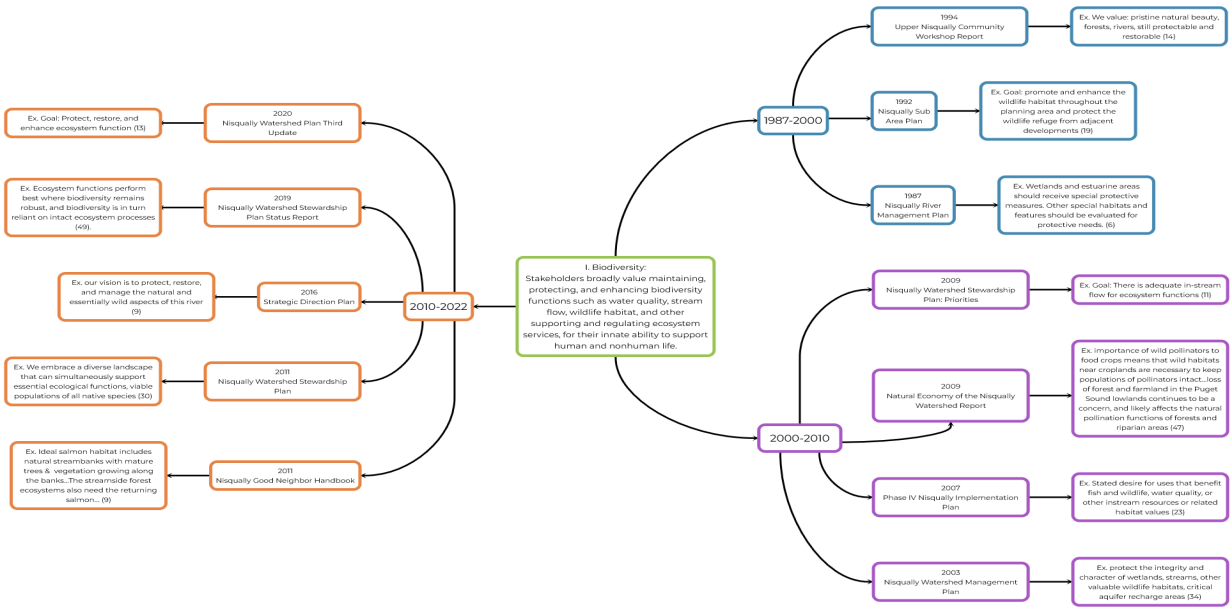


Table 6 Biodiversity Concept Map

II. Plurality & Balance

The watershed is widely appreciated for the cultural and biological diversity that it supports; as a result, stakeholders desire to balance its environmental, cultural, and economic values to maintain a high quality of land and life.

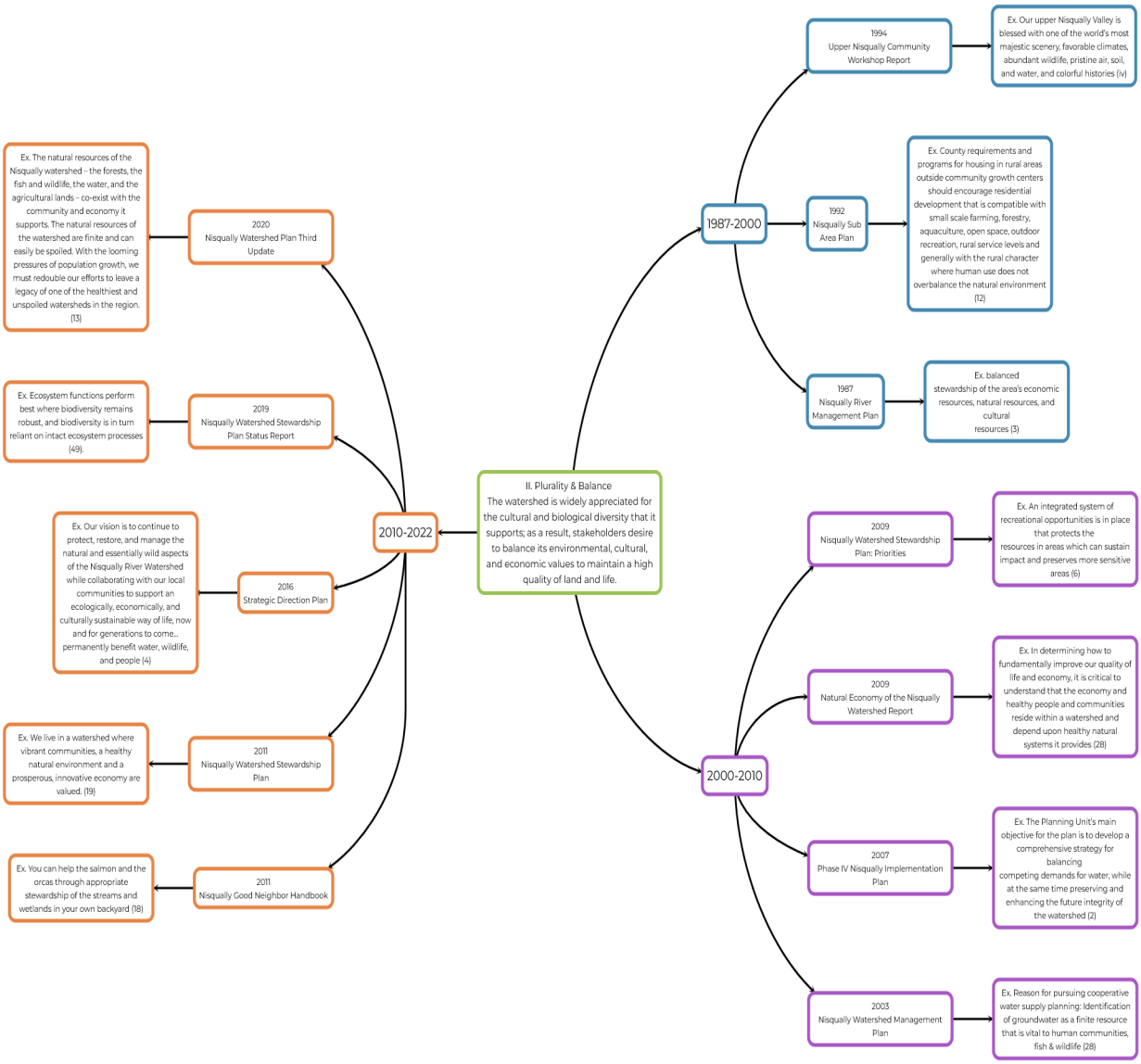


Table 7 Balance Concept Map

III. Ecological → Economic Productivity

The watershed is valuable for its provisional services that support the health and wellness of both human and nonhuman life and for their potential economic contributions; due to this, stakeholders strive to maintain sustainable natural industries.

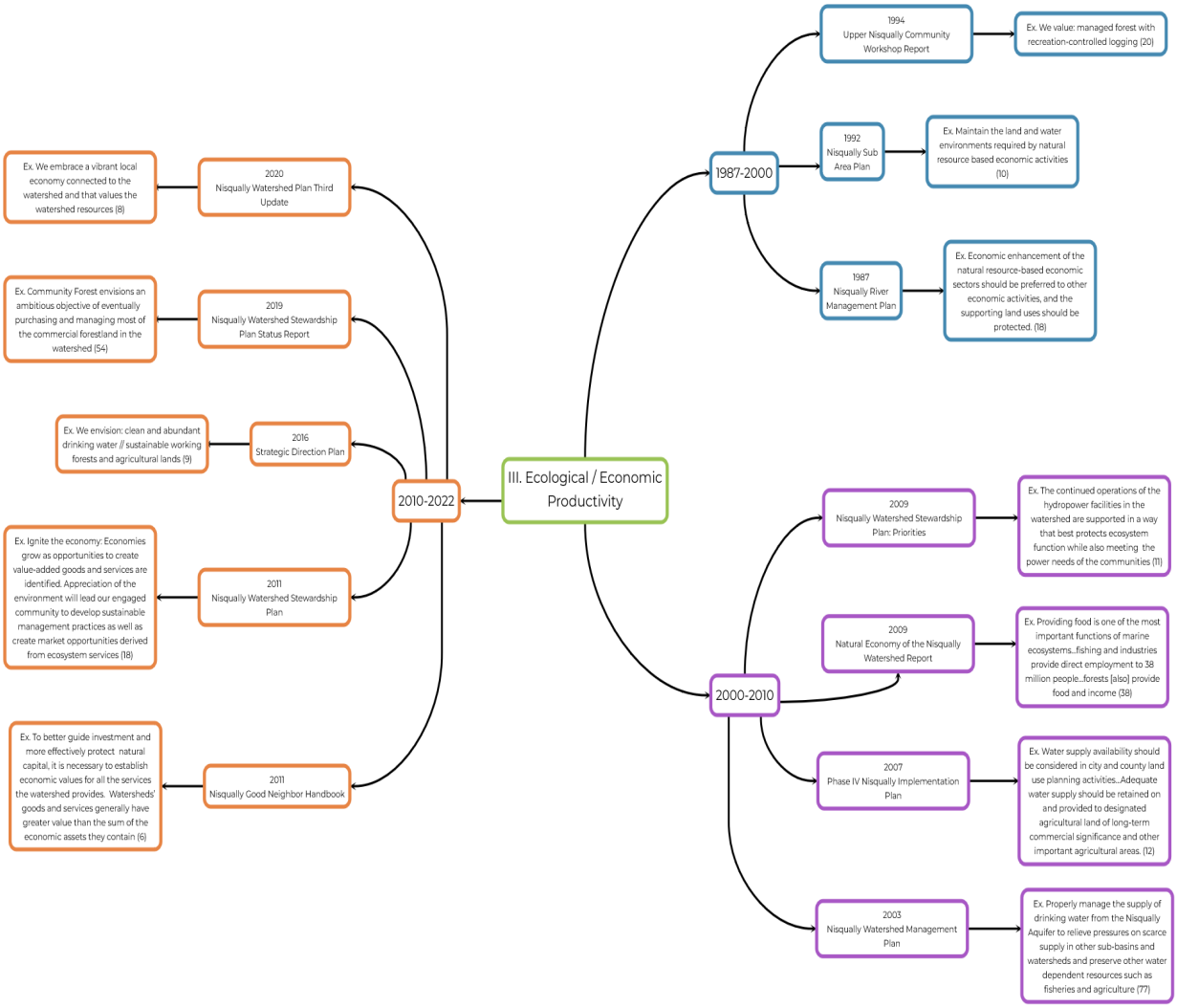


Table 8 Ecological & Economic Productivity Concept Map

IV. Collaboration → Stewardship Ethic

The watershed is an epicenter of collaboration where stakeholders work together to solve socio-ecological issues to ensure all interests' needs are fulfilled; thus its stewards value community involvement at each stage of planning and implementation. This inclusivity invigorates a collective stewardship ethic and community satisfaction.

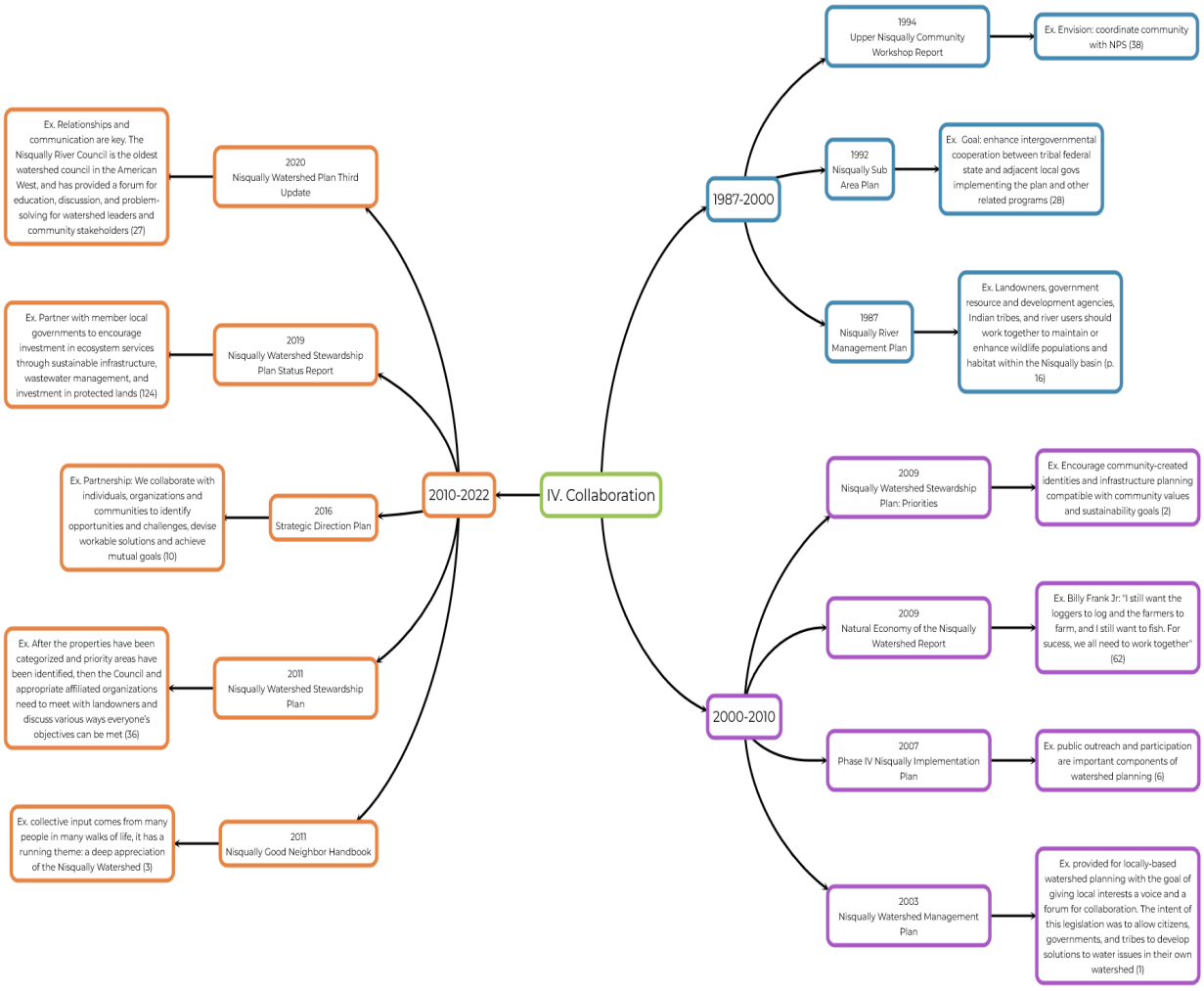


Table 9 Collaboration & Stewardship Concept Map

V. Cultural Connections & Collective Identity

The watershed offers opportunities for recreation, education, tourism, resource harvest, health, and spirituality that are valued by all users; such opportunities foster interconnections between diverse user interests as well as between people and place. This celebration of cultural connections ensures just representation of interests that help form shared goals and identities.

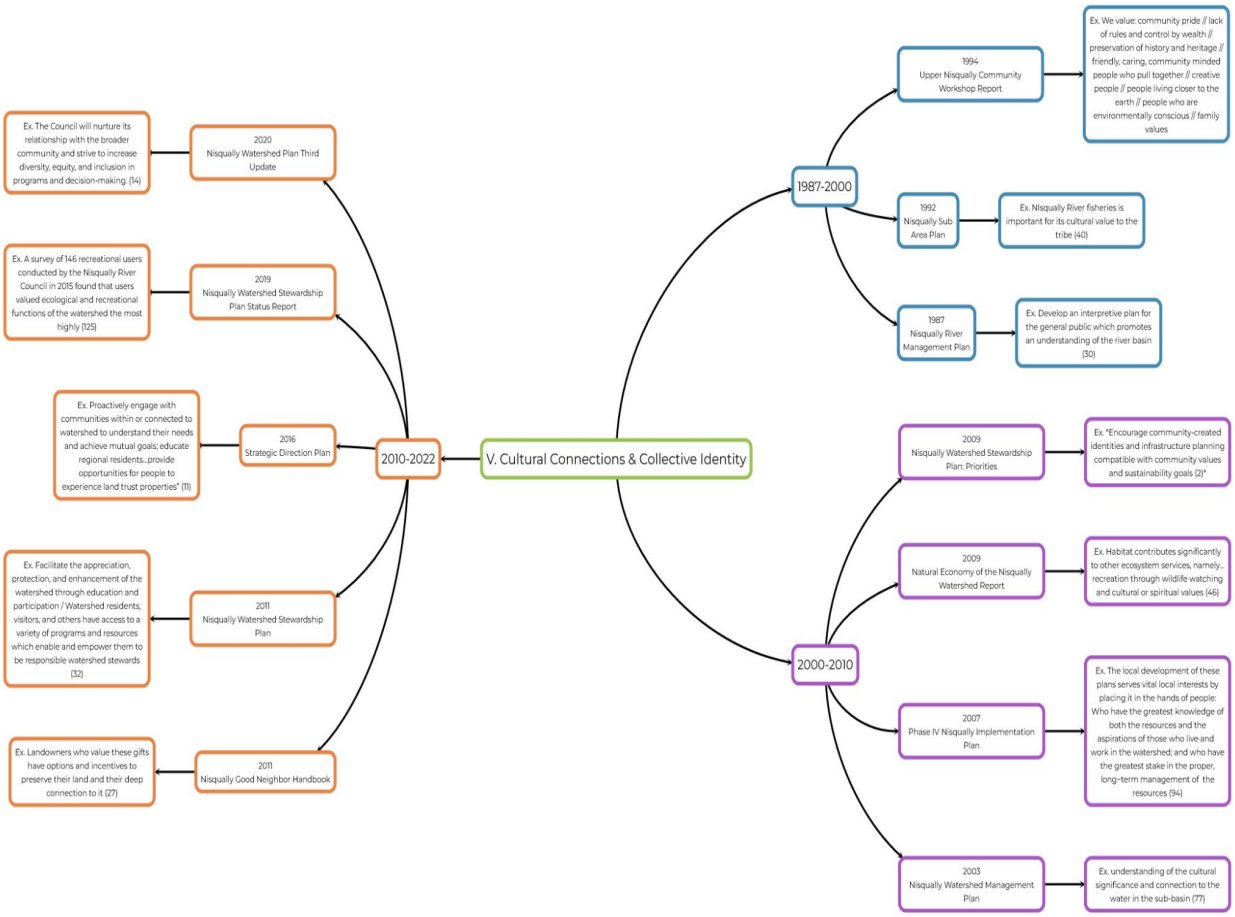


Table 10 Culture & Identity Concept Map

When/Where: Does specific value expression change with temporality?

An underlying assumption in approaching the data was that I expected to observe evolution in specific value expression over the duration of the studied timeframe. Perhaps instrumental and intrinsic values would prevail more than relational values in the initial plans because they were more highly prioritized in ecosystem services literature at the time. Perhaps relational values would be more evenly represented in more recent plans due to decades of policy that emphasize and institutionalize inclusion of diverse stakeholder interests at all stages of planning. Furthermore, the plans' geographic scopes became broader over time: where the 1987 plan focused only on the Nisqually River, by the 21st century the stewardship plans were expanded to account for the entire watershed and all its tributaries. I hypothesized that this increase in geographic scale may correspond with an increased variety of values. The graph below, based on the relative code proportions in each document in the dataset, visualizes these approximated trends in value frequency over time. Note that these frequencies are not the end-all-be-all results, rather a way to make sense of the enormity of qualitative data I uncovered. While the variations in the graph could be due to several factors, it does provide a visual representation of code trends over the dataset; showing that as coded relational values increased, instrumental values decreased, while intrinsic value frequencies were relatively consistent.

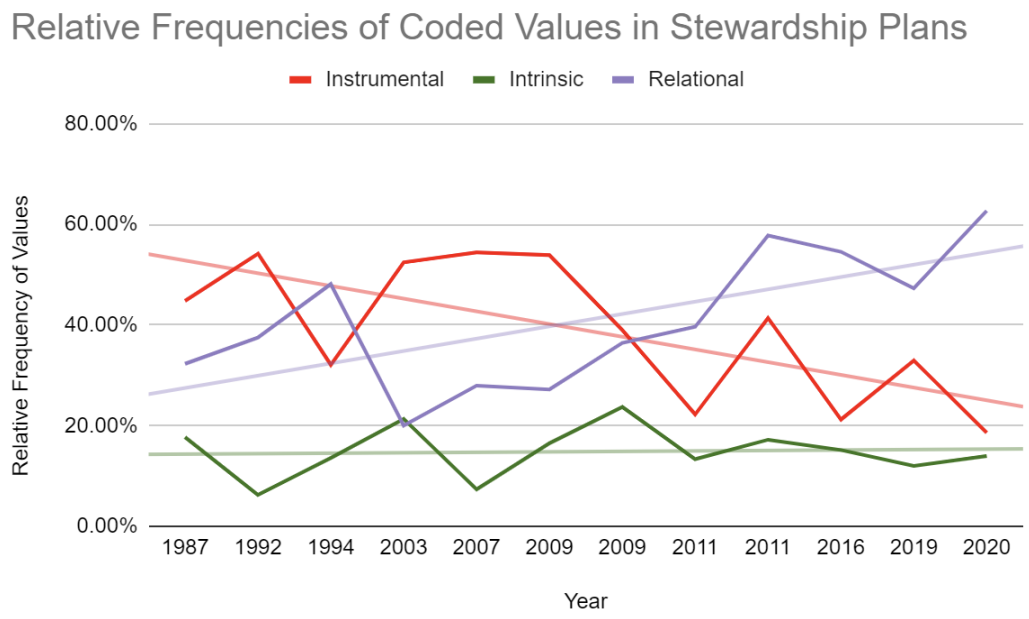


Figure 10 Relative Frequencies of Coded Values in Stewardship Plans

Who: Does specific value expression correlate with certain interests?

Because the documents were mostly authored by the same agency, there were not many codes that singled out specific stakeholder sentiments and most of the coded sentiments reflected the values of the planners, who as much as possible aimed to represent the interests of all stakeholders in the watershed following public review processes. It was difficult to pinpoint precise correlations between these two variables for this reason and because articulating stakeholders were not always recorded (or mentioned to begin with) with each coded segment. Following an overview of the featured codes, I found that relational values, compared to intrinsic or instrumental values, more often related the subject's importance to certain interest groups. These values often linked cooperative stewardship practices back to the benefits they could offer to all impacted interests: landowners, tribes, governments and their constituencies, students, recreationists, and industry interests like farmers and loggers. The interests within instrumental codes often corresponded with various producers (industry and labor) and consumers (i.e.

land/homeowners, food customers, fishers, tourists, etc.); this variety and broad application of this value type is exemplified in coded segments like these, “build consumer to producer connections, promote the continuation of natural resource-based industries, encourage sustainable practices, and promote the Nisqually watershed to consumers, tourists, and others throughout the region” (NRC 2011, 33). Meanwhile, intrinsic values mainly featured habitat and wildlife interests themselves, with an emphasis on salmon vitality.

Chapter 5: Discussion & Conclusion

The above results demonstrate which values were represented across the data, and how they most often occurred; but these findings do not answer *why* this came to be. The following discussion of the results will offer possible explanations for the identified values by situating them in the watershed's historical, political, and geographic context. Then, I will outline how the value pluralism present in the data engenders more effective stewardship practices by highlighting past and recent initiatives led by the Nisqually River Council (and partnering agencies) and their connections to the identified themes. I will conclude by reflecting on my own positionality as a researcher embedded within an assessment of the efficacy of my methodological framework.

Explanations for Value Expression:

Historical & Political Context

As the first chapter highlights, due its biological and cultural diversity the Nisqually Watershed has always been home to complex dynamics around resource use and appreciation. Shifting land use regimes from the colonial era onward significantly reframed stewardship perspectives and opened the watershed to more industrial uses than in the pre-colonial era. The people of the watershed transitioned from subsistence lifestyles that relied on aquatic resources such as salmon and shellfish and alpine resources like glacier-fed streams and forage foods, to colonial systems that harnessed these resources for industrial-scale agriculture and ranching, hydropower, commercial fishing, timber, and more. This shift in land use brought by settler arrival resulted in dispossession of indigenous homelands through both policy and direct violence. Despite this dispossession, the region's indigenous groups fought to maintain their identity and sovereignty, retaining traditional values relating to the land and its contributions to both culture and basic

survival. Meanwhile, the early establishment of protected lands like Mount Rainier National Park, the Experimental Pack Forest, and later the National Wildlife Refuge spared much of the Nisqually Watershed from the same types of dramatic development and environmental alteration that soon characterized neighboring watersheds, which contributed to a culture that valued conservation early on. While these designations were meant to preserve the land and its invaluable resources, *who* benefited from these early conservation measures was not equitable.

As a result, conflicts between seemingly incommensurable values and interests erupted throughout the twentieth century. The balance of power at this time was skewed toward the State at the expense of indigenous interests. The region's tribes, largely led by Nisqually leaders such as Billy Frank Jr, fought to institutionalize their treaty rights to the region's resources and legitimize their sovereignty that had been eroded by a century of State policies. Such movements and corresponding policies transformed top-down political processes in the watershed by granting more decision-making power to a greater diversity of stakeholders. The environmental justice wins from this era, coupled with a long-standing appreciation for the watershed's natural qualities by *all* stakeholders (albeit in their own distinct ways), made co-management a new reality. Thus, the watershed is now known for cooperation instead of conflict. All of these interconnected processes eventually empowered stakeholders with equal platforms that allowed for more balanced representation of value types in policy and stewardship practices established during the era of cooperation. By virtue of having more voices at the decision-making table, political fragmentation was gradually transformed by a collective realization of geographic unity uncovered in deliberative processes in the late twentieth century.

Geographic Context

Following the tumultuous Fish Wars, stakeholders realized that the interests sharing the watershed had more goals and worldviews in common than conflicting. Sentiments across the data suggest that this newfound collectivism is rooted in a shared appreciation of the watershed and its numerous resource values: cultural, provisional, and natural. Across political lines, parties could agree that the mountain and its watersheds were significant for environmental, economic, and cultural vitality despite different historical precedents for believing such. Once interests better understood the watershed itself as a sum of many interconnected parts, they began viewing their own positionalities within it in similar ways. It helped that much of the watershed was already designated as protected land, contributing to an ecocentric culture that understands how human livelihoods depend on the watershed's vitality and unique environmental conditions. Value-laden statements such as "we all live downstream," across the data indicate an awareness that *everyone* benefits from a healthy natural environment (*From the Mountain to the Sea*). As my themes show, a worldview that centered ecosystem interdependence created the conditions for realization of human interdependence.

Here is where phenomenology and notions of lived experience help explain the formation of these collective sentiments. The most fundamental commonality across all who live in the watershed is that they depend on the watershed in many ways. Through intentional engagement with this simple fact, stakeholders across the watershed developed a relatively unified natural attitude that views the watershed as important to the quality of life for all existing within it. This shared geographic context transforms unique, individual appreciations of the surrounding environment into a collective value that celebrates the watershed's contributions to all. This situational awareness became a unifying factor across interests and is highly prevalent in the Nisqually River Council's ethos observable in all its publications. In this way, collective value

formation was enabled via the watershed's political institutions while the region's geography is the foundation of the values upheld by such institutions. Through a geographic lens, we can see how relationships to place itself transforms the relationships between human interests and foster interconnectedness among them. Even in the earliest stages of collaborative planning, like the 1994 Community Workshop, we see how residents value the character and culture of the watershed formed by its unique landscape. Merely being present in place, and in a place that is famous for its beauty and ecological contributions, becomes the fabric for collaboration to maintain such commonly valued resources. The watershed's resource contributions, especially salmon and forests, further contribute to a shared identity centered around the existence of these features. Because human livelihoods are contextually dependent, the landscape itself informs the values beheld by its residents.

Social Context: Participation and Inclusion

This collaborative ethos is the product of formal opportunities for participation at every stage in the process alongside efforts to educate the region's residents about the myriad of values the watershed offers. Because of the precedent for participation established within various policies in the late 20th century, since its founding the Nisqually River Council has deliberately developed planning processes that invited as much participation as possible from every sector: governmental, industry, NGO, tribal, and citizens. In addition to policy, through ancillary programs the NRC prioritized education for its citizens to build public awareness of the region's ecological issues and support for projects to address them. The NRC's prioritization of participation on all scales is an early model of the inclusive goals and framing promoted by IPBES. IPBES endorses that increased diversity in participating groups in policy setting leads to more just and comprehensive planning

outcomes. Because of the region's emphasis on participation in both planning and practice, it is a compelling case study for how pluralist participation engenders effective stewardship outcomes.

Outcome of Collaborative Stewardship

The balance of values across the plans has likely contributed to the Nisqually Watershed's ability to initiate and implement a great number of restoration projects and conservation priorities. Recall that there were originally 28 sources about co-management planning in the NRW in the dataset from the first review. After this initial selection, I uncovered at least a dozen more plans that were not included in my original dataset. The apparently endless amount of planning documents is a testament to the continuous support for co-management planning and implementation that has only grown since the original 1987 plan. All of these plans also embodied the diversity of perspectives that were sought and included throughout the planning process, with consistent representation from the Nisqually Indian Tribe, numerous state and federal environmental agencies, county and city governments, citizen groups, environmental nonprofits, state and national parks, and various industries such as farming and hydropower.

This is all to say that stewardship plans are plentiful in this watershed; but quantity does not always mean quality. Are these plans actually effective in practice? This is more complicated. Each of the plans emphasize a vested interest in follow through and execution, while simultaneously acknowledging that more needs to be done. For example, each plan prioritizes habitat restoration to conserve and enhance salmonid populations in the river and its tributaries; as a result, there are many active projects designated to address this issue.[62] But because the watershed is interconnected to the rest of the highly developed Puget Sound, developments outside

[62] i.e. Nisqually Stream Stewards and other water quality assessment/citizen science programs

of WRIA 11, alongside climate change, limit the potential improvements these efforts could offer. As a result, more recent plans have begun prioritizing inter-watershed cooperation to expand conservation efforts beyond the limits of WRIA 11. Sources like the video by Long Live the Kings or the most recent project update (2022) from the Washington Department of Ecology demonstrate how ecosystem rehabilitation efforts must go beyond the scope of the Nisqually Watershed in order to see significant wild salmonid recovery across Puget Sound. Time will tell whether wild salmon and habitat will be fully revived across the region, but the precedent set by Nisqually stewards offers hope that such recovery is possible with continued cooperation.

A few other examples of follow-through in the 21st century are seen in the estuary restoration project at the Billy Frank Jr Nisqually National Wildlife Refuge in the early 2000's, the recent designation of the Nisqually State Park[63], and the establishment of the Nisqually Community Forest. The removal of dikes and restoration of the estuary on Nisqually NWR property is one of the largest restoration projects of its kind in the history of the Pacific Northwest, and received national and international recognition (Robinson & Alesko). The USFWS, in partnership with the Nisqually River Council and Tribe, has maintained this momentum and continues to prioritize acquiring more working lands to restore back to estuarine and prairie habitat. Such rewilding efforts are frequently articulated as desirable across the plans, for example, the Nisqually Land Trust aspires to "protect, restore, and manage the natural and essentially wild aspects of this river" (2016, 9). To do so requires acquiring more land to apply rewilding practices to, which the NRC and co-managers have continued to do.

[63] an initiative co-led by the Nisqually Indian Tribe due to the area's historical/cultural significance

The watershed is unique in that many recent land acquisitions focused on preservation and restoration rather than development, an undoubted factor in successful plan implementation. Sights were first set on establishing the Nisqually State Park at the confluence of the Nisqually and Mashel Rivers back in the 1980's. In the 2000's, Washington State Parks Commission and the Nisqually Indian Tribe had finally raised enough funds to acquire land and establish the newest state park in Washington. The designation of this park is especially significant due to the leadership role the Tribe takes on. The park is situated on their traditional homelands, so by helping purchase the property the tribe essentially bought back land that was theirs to begin with. Developments like this mark significant progress within a larger "land back" movement that works toward decolonization via land and resource sovereignty. With its leadership role in acquisition, planning, and implementation at this site and across the region, the Nisqually Indian Tribe is bringing its history into the future.[64] The Tribe's reclamation of power and stewardship responsibilities over the years is a testament to how land back and decolonial ideologies are feasibly practiced. The Tribe's involvement goes beyond an ethic of co-stewardship and embodies a rare form of justice and self-determination seldom seen in the post-colonial era. From a justice perspective, co-stewardship can be considered overwhelmingly successful, as tribal testimonies show.

The nonprofit Nisqually Land Trust has also played a major role in buying back working lands for conservation and preservation initiatives. One prominent development in recent years is the establishment of the Nisqually Community Forest, a project proposed around 2010 and implemented only a few years later. Nisqually Land Trust director Joe Kane's 2012 TedxTalk discusses the potential for a future Community Forest project in the watershed. Kane promised this new model of timber management would boost the commercial timber industry while also ensuring

[64] Nick Estes. *Our History is the Future*. Verso Books (2019)

more direct stakeholder input on this extractive industry and its practices in a way that benefits surrounding habitat while creating local jobs. Today, that project is a reality. In this way, we see how instrumental values have evolved over time in the watershed. Whereas timber in the watershed used to be extracted by large corporations without considering anything but profit, the Nisqually Land Trust and its partners are "changing the game by joining the game," and centering the planet and people while doing it. This is the result of diverse partnerships that increase the plurality of values that motivate wise resource management and use.

These projects are just a few larger examples of how visions and goals outlined in the plans became a reality, demonstrating the NRC and related agencies' commitment to developing both comprehensive and achievable stewardship plans. The encouragement of participation at every stage helps ensure continued devotion to seeing out collectively established goals set to benefit all human and nonhuman livelihoods in the watershed. This collectivist approach to planning and implementation exemplifies the value pluralism that IPBES qualifies as essential to effective long term ecosystem policy and practice. Because of projects like these, the Nisqually is frequently referenced as a role model for collaborative stewardship processes across the region.

Efficacy of Conceptual Framework

Thus far I have discussed the substantive elements of the data at length: how codes were represented, how codes became themes, how these fit within the overarching narrative of the case study, and what implications the most prevalent values have for actual plan implementation. Now I will return to the methodological dimension of this study to explore how IPBES and hermeneutic phenomenology made such insights possible.

How IPBES Added to the Framework

IPBES' understandings of specific values and nature's contributions to people were used for devising code categories and setting clear parameters for navigating the worldviews represented in the data. Additionally, IPBES' incorporation of cultural values in policy settings, especially indigenous and local knowledges, was applicable in the Nisqually context given the prominence of indigenous and citizen perspectives included in the planning process. In these ways IPBES provided framing for value qualification in ways that hermeneutic phenomenology could not. At the onset of this project I approached initial datasets inductively, trying to identify codes and themes about environmental values from the data with no real structure to my interpretation. In order to effectively engage in the hermeneutic circle method, having code parameters and a code index established for reference before assessing the data was necessary. This is why I adopted IPBES, whose definitions and valuation approaches complemented concepts from hermeneutic phenomenology. By referencing IPBES' review protocol, understanding its conceptual framework, and studying its value assessment report, I modeled its approach as much as possible within the relatively limited scale of my study. The adoption of these aspects from the IPBES Values Assessment made more precise coding and thematic analysis possible. When coding I referred back to these definitional parameters when categorizations and code qualifications were unclear. In all, IPBES provided a necessary structure that boosted the accuracy and consistency of my codes and ensured this study aligned with existing literature.

Reductive Value Categories?

But just as open-ended interpretation has its pitfalls, so do definitive categories. An argument can be made that reducing something as complex as values into categories is reductive and overly determinist. I wrestled this throughout data collection, as code indicators often overlapped or were too broad/vague to confine to a category with certainty. Not to mention, the

definitions of the codes themselves are subject to various interpretations, as IPBES itself acknowledges with questions concerning notions of beauty; or dually extractive and cultural practices like fishing. These categorical caveats made the hermeneutic approach even more important for clarification. Careful attention to context relieved uncertainties that came up, and subsequent reviews helped me track where my initial understandings of the codes had adjusted to better address the nuances contained within value-laden subjects like fishing or water quality, which are often expressly important for several reasons.[65] This hermeneutic awareness also helped detect and justify implicit vs explicit value expression by referencing the larger context, such as *who/what* is being represented and towards what ends? From these considerations, I conclude that IPBES valuation approaches are strengthened by techniques from hermeneutic phenomenology. By being aware of my own initial preconceptions and contemplating why I had difficulty with some aspects of the data, I produced more carefully conceived coded segments that better accounted for researcher bias and ensured an intentional interpretive process.

Value Pluralism and Data Analysis

Finally, IPBES' pluralistic approach to valuation was fundamental for forming themes from the dataset. The concept of value pluralism helped me limit automatic prejudices about what I expected from certain values, fostering acceptance and appreciation of values in whatever form they were expressed with the knowledge that a diversity and balance of values is desirable in policy documents. The resulting themes all account for the plurality of ways people come to value nature's many contributions, and highlight the interconnections between varying forms of specific values that align with IPBES' Nature's Future's Framework.

[65] i.e. these values could be instrumental, or intrinsic, or relational

Hermeneutic Phenomenology

Hermeneutic phenomenology's interpretive and relational approach to qualitative analysis contextualizes *why* the values appear in the data the way they do. It allowed me to look at the data relative to the socioecological contexts from which it originated and identify corresponding themes. From this lens, I gained new insights on how phenomenological attachments to place inform the character and outcome of collaborative stewardship processes. In addition, because of this approach I came away from the data and the overarching narrative about the watershed with different impressions and understandings than I did before conducting the analysis.

Phenomenology of Place

The sentiments expressed in the data support that geographies and landscapes play an integral role in informing regional identities and people's sense of belonging. Varying experiences of place often lead to varying values about it, while common or unifying experiences promote collective values and norms/practices/behaviors. As mentioned in the section on geographic context, a likely factor for the collaborative stewardship model's efficacy is that there is general consensus across diverse stakeholder groups about the importance of all dimensions of nature's value. While exact reasons for valuing the watershed's many contributions vary with individual and communal experiences, there is collective agreement that all, both human and nonhuman life, have more to benefit from concerted efforts at sustainable co-management than wasting energy on conflicts that strain both relationships and natural resources. As one farmer stated, "It's all a mess because two parties who do want the same thing have been pitted against each other as if they don't" (*Lifeblood*). Once this false dichotomy was recognized across interests viz. deliberative processes, stakeholders have enthusiastically participated in partnerships meant to repair strained

relationships and resources. As a result, several distinct communities across the watershed converged to form a unified body that represents a multitude of perspectives and shared goals.

A major motivation for this research was to gain new understandings about how the relational dynamics between place, people, and values translate into stewardship practices. The spirit of cooperation in the watershed is the product of a long, intentional process of developing a collective natural attitude constituted of pluralist ideals that were reified in plans and practices. The testimonial sources contextualized the planning data with commentary on common perceptions of place and partnerships, which yielded new understandings of how these perceptions inform collective identities and corresponding stewardship practices. The sources documenting stewardship across time and place in the watershed contain insights about how formal partnerships and planning processes constructed a common stewardship ethic that encompasses values from distinct identities within the watershed. The more that collaborative values were articulated, the more entrenched they became in the watershed's collective narrative-- hence, why collaboration is a prominent theme in this study. Through intentional dialogue and sustained commitment to collaboration, stakeholders realized that their values were more aligned than previously believed. These realizations were only made possible by soliciting diverse participation in planning processes, participation that was encouraged by a series of sociopolitical factors.

Implications for Collective Decision Making

These variations in experiences of place and corresponding resource uses make for diverse values in decision making. Some stakeholders prioritized economic growth, some environmental protection, and others cultural heritage. Many valued all of these: one of the greatest takeaways from the data is that these goals and priorities are not mutually exclusive. As projects such as the Community Forest or fish hatcheries demonstrate, these motivations often build off each other and

construct a collective vision of watershed stewardship. Thus, in this case it is a misconception that varying uses and values are inherently incommensurable, rather it is people's understandings and attitudes against certain values that are the source of tension-- not necessarily the value in itself. Awareness of the role such *natural attitudes* themselves play in creating space for diverse perspectives is critical for meaningful deliberation and collaboration to occur.

My assessment finds that unifying platforms like the NRC's devotion to dialogue between values, equitable representation, and incorporation of pluralist values culminated in just decision-making processes and holistic stewardship plans. Across the data, inclusivity and importance of relationship building between collaborators are frequently emphasized. This relational understanding forged by intentional dialogues indicates that phenomenological principles are already always embedded in co-stewardship dynamics. Explicit inclusion of phenomenology in planning contexts can better inform the development of the necessary relationships for conflict resolution and collaboration. Furthermore, the plurality of values across the data aligns with IPBES' call for inclusivity in formal policy setting.

Researcher Positionality and Reflexivity

A signature feature of hermeneutic phenomenological research is not just interpreting the text, but also interpreting the researcher's positionality in relation to the text and the data it yields. This positional reflexivity is achieved by bracketing assumptions about what the data may present before engaging with the text, and during and after. Therefore, discussions of insights gleaned from data analysis also often include researcher reflections on how their understandings of the research question transformed by engaging critically with the data itself and the collection process. Here I will review some assumptions I realized I had going in based on the framing of my research question and initial understanding of the case study's historical, ecological, and political context.

Therein, I will describe how these understandings changed throughout the data collection process and draw some conclusions about researcher subjectivity in qualitative studies.

i. Shifting understandings of specific values in context: Explicit vs Implicit

One challenge during data collection was ensuring my understanding of the conceptual parameters was consistent as I navigated interpreting value expressions across a variety of contexts. Goals, mission statements, and action priorities portrayed values in straightforward ways, i.e. "We value the watershed because x, y, z" or "X is important because Y." It was more difficult to accurately detect implicit sentiments in much of the highly technical planning content itself; as such, these sections in the sources are most vulnerable to errors in interpretation. While referring to the conceptual framework throughout the coding helped, unconscious error would be better eradicated if this study was conducted by a group rather than an individual. That way, variations in interpretation (especially of implicit value) could be deliberated across multiple interpreters instead of cycling through a dialogue between myself, the data, and the conceptual framework. Practicing such inward attentiveness across a dataset is psychologically fatiguing and could reduce the accountability and consistency in code identification. This process was more challenging for implicit value than explicit value, so I focused much of my interpretation in sections of the plans that more clearly expressed value-laden sentiments such as purpose, missions, and objectives, while still reviewing them relative to the plan's overall context.

ii. Subliminal bias against some value types due to ecosystem services critiques?

IPBES critiques dominant ecosystem services paradigms for their overemphasis of instrumental and intrinsic values. I soon realized this informed a subliminal motive to discover relational values in the data to see how their inclusion might explain the successful implementation of the plans; as I understood relational value inclusion to be a precursor to effective valuation and

practice. As I conducted the first review, I recognized this heuristic assumption and reviewed IPBES' definitions of specific values and my code index to curb this implicit motivation in data collection. The resulting frequency of relational values from the second review suggests that this underlying assumption was at least modestly accounted for, but more research is needed to say whether this is an accurate reflection of the data or a projection of my own understanding of relational instrumental, and intrinsic value expression as it changed over time. After reviewing my code protocols I was more intentional in the second review: before finalizing codes, I first identified the subject of the coded segment and pinpointed what type of NCP it represented. From then on, instrumental values were counted for any sentiment that deemed nature as it is extractively used by humans, relational values for how nature (or other people) was appreciated or celebrated, and intrinsic values as nature for its own sake/right to exist. I reoriented my data mining to better account for value pluralism instead of cultural values. In doing so, my data better embodies the myriad of motivations for using and describing nature's contributions in the second review than it did in the first.

iii. Expectations of values corresponding to certain stakeholders

Due to my understanding of historical context surrounding the Fish Wars coupled with exposure to numerous testimonies that portrayed the contradictory uses and values leading up to the era of cooperation, I expected to see more variation in value expression across stakeholders. Instead, the data presented relatively cohesive priorities across all represented interests. This could be because the plans are communally drafted by an agency constituted by a diverse range of interests; or because clearly established common goals shape value expression in the documents to be more pluralist than monistic. Thus, exactly *who* was articulating *what* was often obscured given the collective representation inherent in the structure of planning and document publishing.

For example, my understanding of the dominant values I expected the Nisqually Indian Tribe to express in planning was complicated after data collection. Given my initial impressions of salmon's cultural importance to the tribe, I anticipated finding more relational expression than instrumental or intrinsic. But in the years following the Boldt decision, the Tribe continued to use language that demonstrated an incorporation of Western worldviews that valued resources for their potential economic utility, too. For the Tribe, salmon has always been both a source of *subsistence* and *identity*; this combined instrumental and relational connection is regularly represented within stewardship documents and tribal testimony. They also express value for the salmon's right to live in itself, sometimes due to some felt kinship, but also for the benefits they offer for biodiversity. In conclusion, my initial assumption that I could neatly correlate value types to represented interests was misguided in part due to the collaborative nature of the source material, and in part due to the complexity in motivations for sustainable stewardship practices in modern society across *all* groups.

iv. Expectations of relationship between temporality and value representation

I also anticipated that values would evolve over time: as discussed above the data only hints that this is the case. While the graph does show a slightly inverse trend, another review of the data is needed to confirm whether this trend is accurate to the values across the dataset. Aside from this loose quantitative evidence, there are some qualitative indicators that valuation scopes broadened over time. For example, the shift from river-scale plans to watershed-scale plans indicates a shift towards more holistic valuation. Similarly, the change in verbiage from management to stewardship plan over the years suggests a possible increased acknowledgement of the reciprocal relationship between human and nonhuman life in the watershed. The stewardship

plans place higher priority on human agency in the watershed than the original management plan did which demonstrates a broadening of perspective as time went on.

v. Situating my perspective in the historical context

I studied historical and political backgrounds in depth to ensure I had a comprehensive grasp on planning contexts to tie emerging themes to the watershed's many dynamics of resource use and values. The data shows that the animosity that defined the Boldt Era evidently did not carry over into deliberative planning processes for too long after the era of cooperation began. While some sources discuss the battles and hard compromises in the early days of the Nisqually River Task Force and later Council, it seems that as time went on those conflicts dissipated as partnership became standard practice. Therefore, I did not encounter as many conflicting values or perspectives as I anticipated I might when initially approaching the selected dataset. As a result, understanding the transition from conflict to cooperation required more interpretation that linked the historical context I studied to the plans themselves to fill in those gaps.

vi. Scope and specificity

Finally, I acknowledge that the scope of this study is quite broad and that zooming in on issues around specific resources or stakeholder groups might be a better approach for yielding more concrete conclusions about how the complexities of collaborative planning translate into the plans they produce. However, studying the entire watershed and all elements of its plans established the bigger picture in order to ground more detailed and certain conclusions in the future. This overview of relationships and values on a whole watershed scale detailed the necessary context for more precise interpretations. More research is needed to understand whether the dynamics identified in this broader context apply at more specific scales across the watershed.

Doing so could more accurately enlighten potential stakeholder value correlations and the evolution of values over time and place.

Conclusion

Analyzing this case study in this way outlined the complexities of value expression, conflict resolution, and collaboration which could inform approaches to future collaborative stewardship models in other watersheds. While the Nisqually River Watershed is uniquely well-positioned for such approaches, the stakeholders within it still had to overcome a legacy of conflict and injustice for it to become a story of justice and restoration today. In order to better resolve environmental injustices and inequities in other contexts, it is worth attempting to understand how the diversity of values and worldviews in this study have converged and diverged over time to become the relative success story it is today.

I designed this conceptual framework to explore complex processes of value formation and ecological stewardship. The application of my conceptual framework revealed how these phenomena manifest in cooperative watershed planning dynamics; supporting IPBES' stance that value pluralism in planning is necessary for producing just and effective plan outcomes. Interpretive techniques from hermeneutic phenomenology offer a way to evaluate ecosystem science and policy -and the historical/political contexts they emerge from- in a way that complements IPBES value frameworks. These combined approaches, through thematic analysis, revealed five overarching themes about cooperative stewardship in the Nisqually Watershed. Stakeholders value, in no order of importance: biodiversity, balance, ecological & economic productivity, collaboration & stewardship, and culture & identity. These themes capture the spectrum of specific value expression and are supported by the evidence gathered in qualitative analysis.

I justified the results of this case study based on its historical and political context(s): outlining land use from the pre-colonial era up until the watershed's projected future with climate change. In this, I also discussed the Boldt Decision at length to contextualize the conclusions reached about conflict and cooperation from my assessment of stewardship plans and practices. I then connected this history to how it influenced state policies in the late 20th century and tied this into pre-existing literature on collaborative stewardship.

Then I explained my methods for a systematic literature review informed by my conceptual framework. Those methods were framework synthesis, grounded theory, and thematic analysis. Framework synthesis and grounded theory allowed me to develop and test my conceptual framework on a case study to see whether it was a useful analytical lens. I used thematic analysis to review the data for codes derived from IPBES' specific values. Techniques from hermeneutic phenomenology aided my interpretation of the codes and the conclusions I made. These methods were how I applied my lens of analysis to answer my research questions:

First, I investigated the complexities of conflict resolution and collaborative stewardship by testing a new conceptual framework via the selected methods. The emerging codes and themes suggest that the region's unique historical and political contexts manifested in holistic evaluations of nature's contributions to people in plans, reports, and associated stakeholder sentiments. This finding supports that hermeneutic phenomenology is useful for interpreting how these relations appear in data, and verifies IPBES' stance that value pluralism is important for comprehensive ecosystem science and policy. This blending of approaches is complementary: IPBES provides structure and epistemological authority, while hermeneutic phenomenology adds interpretive reflexivity to otherwise potentially reductive structures in qualitative evaluations.

My second question was phenomenological, seeing how differing experiences of place influence the development and expression of value across stakeholders in the watershed; and how these dynamics impacted stewardship processes. From this inquiry, I uncovered a thematic narrative that characterizes stewardship in the region: the more the land was degraded, the more political and social fragmentation occurred. As issues around land use were addressed in the late twentieth century up to today, there is evidently a correlation between ecological and sociopolitical restoration and sociopolitical resolutions. My analysis explains how the land inherently informs people's relationship to it, and therefore to each other. A collective consciousness of this relation is a likely factor for the continuous momentum in conservation, preservation, and restoration we see today.

Therefore, this case study is a powerful example of how human-nature and human-human relationships are reconcilable if institutions (and individuals) recognize and prioritize shared values through engaging in more reciprocal dialogues with both each other and the land itself. While the exact dynamics that contributed to this watershed's relative success are not easily replicated in other contexts, the *intentionality* embedded in interactions between stakeholders and the land can be studied, learned from, and applied elsewhere. Understanding and embodying this attitude is the first step to actualizing similar successes. Fostering this spirit is essential for building more resilient, representative, and just futures in resource management and policy. Studying this story in this way has personally made me a more intentional, reflective, and relationally-oriented individual. Therein, applying the lessons learned here to other contexts can potentially instill this same spirit in other individuals, and manifest in the institutions that they comprise. As leaders like Billy Frank Jr or Judge Boldt demonstrate, large scale change can often begin with just a few people advocating for an alternative perspective.

Appendix: Dataset and Codebook

Table 11. Watershed Reports & Plans Dataset

Document Group	Year	Title	Author Agency	Pg #	Coded Section	Summary
Nisqually River Council n=9						
First Review: Y Second Review: Y	1987	*Nisqually River Management Plan*	Nisqually River Council/Task Force	40	Entire plan	The first management plan produced by the NRC. Covers mineral and water resources, flood damage reduction, fish and wildlife management, special species/habitats/features, hydropower, economic enhancement, local land use planning, agriculture and forestry land base, recreation, education and interpretation, land acquisition and protection, management entities, and management area boundary.
First Review: Y Second Review: Y	2009	*The Natural Economy of the Nisqually Watershed*	Prepared by Earth Economics for the NRC/ Nisqually River Foundation/ DOE	99	Entire report	Earth Economics' attempt to qualify and quantify the economic value of natural resources in the Nisqually Watershed. It draws on a "whole economy" framework to ecosystem services assessments.
*First Review: Y Second Review: N *difficult to code, mostly quoted already coded docs*	2009	*Sustainable Funding for Nisqually Watershed Planning*	NRC, funded by DOE	23	Entire report	This plan explores how to secure funding for watershed management plan implementation- looking at various funding and organizational structures.
First Review: Y Second Review: Y	2009	*Nisqually Watershed Stewardship Plan Priorities*	NRC	12	Entire plan	A summary of priorities from the 21st century stewardship plan: involved community, fisheries, shellfish management, terrestrial plant/habitat management, aquatic management, wildlife management, recreation/public access/tourism, scenic vistas, sustainable economy, agriculture, green business/industry, forestry, water.
First Review: Y Second Review: Y	2011	*Good Neighbor Handbook: A Guide for Landowners in the Nisqually Watershed*	NRC	32	Entire plan	A handbook to help property owners living and working in the watershed to be better stewards and community members.
First Review: Y Second Review: Y	2011	*Nisqually Watershed Stewardship Plan Update*	NRC	57	Entire plan	An update to the management plan that integrates community, economy, and environment. It updates elements from the NRMP into elements for the 21st century context.
First Review: Y Second Review: Y	2018	*Revitalizing Sustainability and Stewardship*	NRC/Nisqually River Foundation	33	Entire plan	A proposal for funding more in-progress planning efforts in the watershed that provides more comprehensive baseline data on watershed health indicators and "facilitating an inclusive, grassroots

		Planning in the Nisqually River Watershed				planning process to address critical issues" like habitat and water quality degradation, recovering threatened species, and population growth.
First Review: Y Second Review: Y	2019	*Nisqually Watershed Stewardship Plan 2018 Status Report*	NRC	155	Entire plan	An update on environmental/economic sustainability and goals in the watershed
First Review: Y Second Review: Y	2020	*Nisqually Watershed Stewardship Plan Third Update*	NRC	40	Entire plan	An update that includes the fundamentals of the NWSP, updated sustainability goals, and a review of governance, programs, and initiatives.
Regional/Local n=5						
First Review: Y Second Review: Y	1992	*Nisqually Plan: Sub-Area Land Use and Zoning*	Thurston County Planning Department	pg. 9-65	All except appendix items like maps	A plan that reviews comprehensive planning and zoning, goals and policies, planning area characteristics, land use and zoning categories, and action recommendations.
First Review: Y Second Review: Y	1994	*Upper Nisqually Community Workshop Report*	Gateway Communities Project	94	Entire report	This report summarizes a community workshop hosted by the Mount Rainier Gateway Communities Project to partner rural communities, regional governments, and federal agencies like the National Parks Service.
*First Review: Y Second Review: N *Scope too large for thorough second review*	2002	*Pierce County Shoreline Master Program Update*	Pierce County Planning and Land Services	150	pg. 1-120, excluded references, data concerning other watersheds, and summary tables	This plan defines shoreline restoration in Pierce County. It covers multiple WRIA but was only coded for data relating to WRIA 11. It describes broader restoration visions and goals, overviews of the watersheds, dictates restoration priorities, restoration actions/programs/partners, and implementation and monitoring.
*First Review: Y Second Review: N *Lengthy and difficult to code*	2012	*Nisqually River Basin Plan*	Pierce County Public Works and Utilities Water Programs Division	Ch 3, 9, 10	Excluded most of Ch 4, 6.1-6.4, 7.2-7.3, 8.3: hard to code and lots of content	The Basin Plan was designed to serve as a comprehensive guide to storm drainage and surface water management in the Nisqually River Basin. It plans to identify and prioritize capital improvement projects and related surface water management activities.
*First Review: Y Second Review: N *Scope too large for thorough second review*	2021	*Comprehensive Plan Pierce County*	Pierce County	380	Ch. 1-11; 13-14 (no transport element)	With the tag, "Honor the Past -- Look Ahead" this plan describes all the elements of public planning in Pierce County: land use, capital facilities, cultural resources, design and character, economic development, the environment, essential public facilities, housing, open space, parks and recreation, transportation, utilities, and community plans.
State/Federal n=7						
First Review: Y Second	2005	*Nisqually National Wildlife Refuge Final*	USFWS	147	Everything until appendices (1-147),	This document creates a long-term conservation plan for the Billy Frank Jr. National Wildlife Refuge. It describes the planning process, the environmental character of the refuge, management

*Review: N *Scope is site, not watershed, specific*		*Comprehensive Conservation Plan*			excluded most tables	direction, and implementation and monitoring.
*First Review: Y Second Review: N *Scope is site, not watershed, specific*	2009	*Nisqually-Mashel State Park Stewardship Plan*	Washington State Parks and Recreation Commission	48	Entire plan	The plan outlines conservation issues and strategies concerning the newly founded Nisqually State Park.
*First Review: Y Second Review: N *Scope is site, not watershed, specific*	2011	*Nisqually Reach Aquatic Reserve Management Plan*	Washington State Department of Natural Resources	149	pg. 1-80, excluded backmatter i.e. glossary	This plan identifies five management goals for the Nisqually Reach Aquatic Reserve and possible actions to achieve those goals
*First Review: Y Second Review: N *Scope is wildlife issue, not watershed, specific*	2011	*Nisqually Chinook Stock Management Plan*	Nisqually Chinook Work Group: WA DFW, NIT	81	Entire plan	This plan focuses on the recovery of the Nisqually Fall Chinook stock, defining goals and management frameworks concerning hatcheries and harvest management.
*First Review: Y Second Review: N *Scope is not watershed specific*	2016	*Walking Together: Advancing Tribal-EPA Partnerships in the 21st Century*	EPA GAP	64	excluding pg. 49-52, not Nisqually	This is an extension of the EPA's General Assistance Program, seeking to rectify shortcomings in funding for all the planning that transpired following the development of the GAP partnership.
Tribal n=7						
*First Review: Y Second Review: Y *update to 1987 management plan after SHB 323*	2003	*Final Nisqually Watershed Management Plan*	Nisqually Indian Tribe as WRIA 11 PU, w/ NRC	178	Section 1-4 pg. 1-154	An extension of the NRMP, led by the Nisqually Indian Tribe. It describes watershed issues and provides recommendations concerning growth and land use, groundwater resources and supply, water rights, instream flows and water continuity, and water quality. It spans all areas of the watershed: the McAllister, Yelm, and Mashel-Ohop sub-basins. It then recommends implementation plans for each sub-basin's context.
*First Review: Y Second Review: Y *update to 1987*	2007	*Phase IV Nisqually Implementation Plan for Watershed Management in WRIA 11*	Nisqually Indian Tribe as WRIA 1 PU , w/ NRC	139	pg. 1-24; Section 1-6, excluding references and appendices	This is a detailed implementation plan, extended from Section IV of the 2003 Nisqually Watershed Management Plan.

management plan after SHB 323						
*First Review: Y Second Review: N *Scope is too broad for research question*	2011	*Treaty Rights at Risk*	Treaty Indian Tribes Western Washington	35	pg, 1-28, excluded afterword	This is a collaboration between PNW Treaty Tribes in the NWIFC, addressing the cultural values associated with the area's natural resources. It identifies issues concerning treaty rights and use of the region's resources such as habitat degradation, tribal harvest, disparate enforcement of conservation policy, federal involvement, and salmon. It proposes actions the federal government can take to ensure treaty rights to harvest and habitat.
*First Review: Y Second Review: N *Non watershed specific*	2013	*Nisqually Indian Tribe Community Vision Plan*	Nisqually Tribal Council	44	Entire plan	Another plan concerning cultural values that are closely related to the environment, identifying these key initiatives: language, first foods, salmon recovery, habitat protection, climate change, green development, and the State Park.
*First Review: Y Second Review: N *Scope is too broad for research question*	2020	*State of Our Watersheds Report*	NWIFC	390	Only chapter on Nisqually: pg. 151-164	The most recent of regular reports on watersheds in the NWIFC's purview. It finds that population growth led to increased need for wells; but there was little increase in impervious surface despite that. It calls to continue removing shoreline armor, and condemns I-5 development.
*First Review: Y Second Review: N *Scope is site specific*	2020	*Nisqually State Park Interpretive Plan*	Nisqually Indian Tribe	64	pg. 1-33; excluded planning resources and appendices	A tribal led plan for interpretation at Nisqually State Park.
*First Review: Y Second Review: N *Scope is too broad for research question*	2022	*Tribal Natural Resources Management Plan*	Treaty Indian Tribes Western Washington	16	pg. 4-9; 11-15, excluded studies outside scope of Nisqually	Most recent annual report from NWIFC about resources management. Discusses harvest, hatchery, habitat, and wildlife management and regional collaboration on Puget Sound Recovery, water and ocean resources, and forestry management. Sections of the report that focused on specific tribes that were not the Nisqually were excluded due to geographic scope.
n=28						

Table 12. Public Facing Interviews/Testimonies on Cooperative Stewardship

Title	Publisher	Description	Link/Source Location
"Reviving Indigenous Knowledge for Salmon in the	*Long Live the Kings*	A video documenting salmon restoration efforts in the Nisqually River by the nonprofit Long Live the Kings, a key	https://www.youtube.com/watch?v=inY20anomVI

Nisqually Estuary"		player in collaborative stewardship in the region	
"Partnering with the Nisqually Tribe to restore the Mashel River"	Washington Dept of Ecology	"Through the Clean Water State Revolving Fund, Ecology has partnered with the Nisqually Indian Tribe to acquire 1,240 acres of land in the watershed. This is part of a larger project with other community partners and now has protected nearly 4000 acres of critical habitat"	https://www.youtube.com/watch?v=G-HIUU5-OFQ
"Rivers and Tides: Restoring the Nisqually Estuary"	US Fish & Wildlife Service, Ducks Unlimited	A video documenting estuary restoration from the perspective of nonprofits like Ducks Unlimited, federal agencies, and the Nisqually Indian Tribe	https://www.youtube.com/watch?v=bs7fsguISfk
"Creating a Community Forest: Let's Change the Game by Joining the Game"	TEDx Talks	A talk given by NLT director Joe Kane about timber industry and Land Trust partnerships in the watershed	https://www.youtube.com/watch?v=qFAEIDeId1M
From the Mountain to the Sea	Nisqually River Interpretive Center Foundation	PSA-style video documenting the importance of the Nisqually Watershed	https://www.youtube.com/watch?v=_Q5xWSwwpRs
"Back to the River"	Salmon Defense	"tells the story of the treaty rights struggle from the pre-Boldt era to tribal and state co-management. The movie includes the voices and personal accounts of tribal fishers, leaders and others active in the treaty fishing rights struggle."	https://salmondefense.org/projects/educate/back-to-the-river/
"River of Kings"	Chedd-Angier	Featuring "an unusual coalition of tribal leaders, private partners and government agencies... working to restore the river from top to bottom"	http://chedd-angier.com/savingtheocean/Season1/Episode5.html
"Lifeblood"	CaravanLab	A documentary about stewardship efforts in Puget Sound featuring representation from diverse interests	https://vimeo.com/374721957

"The Boldt Decision: A Roundtable Discussion"	*Journal of Northwest Anthropology*	"In July 2005, a roundtable discussion on the Boldt Decision took place...[it] occurred among five men who were directly involved in the events leading up to and following the decision. The transcript is presented here to make it available to a wide audience"	pdf transcript
Georgiana Kautz interview	Salmon Defense	"Georgiana Kautz, Nisqually Indian Tribe, on the restoration of the Nisqually River estuary, interviewed in 2010"	https://tribalvoices.salmondefense.org/georgiana-kautz-on-nisqually-estuary-restoration/
n=10			

Table 13. Codebook

13.1 *Intrinsic Value Key Words*

Intrinsic value: the value of nature, ecosystems, or life as ends in themselves, irrespective of their utility to humans (Arias-Arevalo 2018)		
Indicator:	**Justification**	**Example**
biodiversity	When it is mentioned for its own sake, or with respect to wildlife and ecological function.	"Continue to monitor plant and wildlife communities as indicators of water quality and biodiversity."(NIT 2013, pg. 29)
habitat quality	As mentioned in its own right, to the benefit of natural phenomena rather than human use/livelihood.	"Estuary and delta lands support robust and sustainable habitat for native and recovering species" (NWSP 2019, pg. 37)
species population	Wildlife populations unrelated to human use	"Re-establishing self-sustaining populations is vital to the recovery of these species" (USFWS 2005, p. 112)
beauty	Can also be relational depending on context. Assigning inherent value to something due to its physical features	"Preserving this beautiful river has long been a focus of tribal, state, and local government" (NWSP 2020, pg. 1)

function	Function attributes value to a natural phenomena in itself, or as it supports other ecological elements	"River and stream systems are fully functioning – healthy riparian zones, intact channel migration zones, connected and intact floodplains and wetlands, good water quality, flow regimes that support biological diversity." (NWSP 2019, pg. 25)
preservation	Preservation is more of a prevention of human land/resource use, as opposed to conservation- which tends to support sustainable human use.	"System carrying capacity should be monitored by appropriate resource agencies and facility developments and future plans adjusted where necessary to assure conservation and preservation of the river's natural systems." (NRMP 1987, pg. 27)
dependence	Dependence amongst natural systems, interconnected natural phenomena such as food chains.	"maintenance of these stocks is dependent upon protection of their critical habitats"(USFWS 2005, pg. 55)
right to live/habitat	*Sometimes there is a human role implied in such statements, but much of the motivation for habitat protection is for ecological function itself.	"Protecting existing habitat and the ecological processes that create it is the most important action needed in the short term to increase the certainty of achieving plan outcomes" (NWIFC 2011, p. 10).
life itself	Statements that imply the necessity, importance, or value of a phenomena due to its right to exist independent of human objectification.	"Diverse communities of native fish, wildlife, and plants are thriving" (NWSP 2019, p. 49)
maintenance	Indicating the importance of maintaining natural systems for their own function	"These processes are critical for maintaining nearshore morphology, function and health." (WA DNR 2011, p. 24)
enhancement	In contexts where enhancement is desired of nature's ends alone	"Protect, restore, and enhance ecosystem function"(NWSP 2019, p. 13)
ecological impacts	Impacts discussed solely in an ecological context	"The difficulty in quantifying impacts on habitat value from varying flow regimes in McAllister Creek because it is tidally-influenced" (NWMP 2003, p. 75)
restoration/recovery	Processes that are initiated independent of potential human benefits, only concerning biological welfare	"includes highly valued and critical spawning habitat for Chinook salmon and steelhead trout, and is considered to be one of the most important areas for salmon recovery" (NSP 2009, p. 30)
ecological health	Indicating the desirability or importance of health in the sole context of maintaining functional natural processes	"critical functions of riparian and other wetlands within this water-dominated landscape, wetland preservation is required for the maintenance of a healthy ecosystem" (NWSP 2019, p. 25).

scientific fact, research	monitoring, facts about natural phenomena in themselves. This constitutes much of the data in technical reports, so it is not coded every single instance, only when it is tied to benefiting the environment and wildlife.	"Engage science and technical support to maintain a comprehensive inventory, assessment and analysis of watershed conditions" (NWIFC 2022, p. 15).
protection	Oriented towards ecological, not human or cultural, benefits	"encompass all species and the protection and enhancement of broader ecosystem function" (NCWG 2011, p. 10).
integrity	The quality of ecological components in themselves	"thus providing a more complete picture of the status of water resource availability and environmental integrity in each watershed" (NWMP 2003, p. 13)
biocentric	Statements that center biophysical processes, the focus is on these processes and their inherent utility for maintenance of a landscape and ecosystem	"Alpine lands continue to support diverse biological communities."(NWSP 2019, p. 24)

13.2 *Instrumental Value Key Words*

Instrumental value: The value of an entity as merely a means to an end. (Arias-Arevalo)		
Indicator:	**Justification**	**Example**
market	Market connotes economic exchange where fiscal value is applied to a resource.	"create market opportunities derived from ecosystem services" (NWSP 2020 pg. 15)
product	Product implies commodity, something sold in a market.	"Define the value-based products created within the basin, such as agriculture, forestry, manufacturing, tourism, and services for locals" (NWSP 2009 Priorities, pg. 8)
exchange value	Giving value to resources based on its price in a market.	"All activities that reflect financial exchange within the established corridor should be listed by types of activity, owners, addresses, locations, and scales of activity. It will be important to understand what part such activities play in the overall economic benefits from the area" (NRMP 1987, pg. 28)

utility	Utilities appropriate resources such as water, space, and energy for human use.	"It also provides water planning and utility services to the citizens of Thurston County" (NRC 2009, pg. 16)
dependence	Dependence in a context that connotes human use of and reliance on a resource.	"Lands within this zone should not be developed except for water dependent uses. Development rights for other than water dependent uses should be acquired by transfer or purchase." (NWMP 1987, p. 38)
management	Management connotes more typical ES paradigms that view nature as something to be used and controlled. Whereas stewardship implies more of a partnership between humans and nature, imbued with a sense of responsibility. In my view, and as context throughout indicates, management is imbued with notions of entitlement.	"sustained programmatic funding for eradication and management strategies." (pg. 47)
control	Controlling natural phenomena for human benefit.	"In this context, stormwater control facility means any facility, improvement, development, or property constructed or acquired for the purpose of controlling stormwater runoff in the county, or for protecting the lives and properties of county residents from excess stormwater runoff." (NRC 2009, pg. 16)
monetary	Attributing economic value to nature's contributions.	"need for more comprehensive studies to assign monetary value to all ecosystem services. This study, therefore, likely underestimates the true economic value derived from the watershed." (NRC 2011, pg. 6)
financial	Attributing economic value to nature's contributions, using nature to participate in an economic system.	"Matching can take the form of financial contributions or in-kind goods and services directly related to coordination and oversight functions" (NWMP 2003, pg. 15)
economic	Using nature to participate in an economic system.	"Enhance economic viability of sustainable agriculture, forestry, and fisheries" (NWSP 2020, pg. 26)
harvest, catch	Engaging with a resource for human use and sustenance. Without a coinciding mention of cultural value, harvest is coded as instrumental.	"Nisqually tribal members may harvest salmon for commercial sale according to regulations set by the Nisqually Fish Commission each year based on management objectives and allowable harvest determined by the Treaty Tribes and Washington State co-managers" (NWSP 2019, pg. 82)
profit, revenue	Participating in ecosystem services management to make money.	"Fund expansion and projects with related revenue sources (new and existing)." (NIT 2013, p. 34)

funding	Participating in an economic system to implement conservation and restoration programs implies some instrumental values.	"Future funding to implement this plan will be through a mix of state, local, federal, and private grants and possibly through fees associated with specific actions (i.e., certification programs)." (NWSP 2020, pg. 10)
development	Often associated with land use, too--development implies expanding human economies and land uses for economic growth.	"Economic development of the management area should emphasize natural resource based economic sectors, and the supporting land uses protected by local government planning." (NRMP 1987, pg. 6)
resource use	Using resources for human benefit, especially for economic purposes.	"By producing your own lumber for personal use or for sale, you can often obtain far more value from your timber than by simply selling logs to a conventional mill" (NRC 2011, pg. 23)
property rights	Property, as a part of the economic system, implies ownership of land and other resources.	"districts can acquire, purchase, hold, lease, manage, and sell real property." (NRC 2009, pg 13)
economic impacts	Conserving resources or engaging in other measures to achieve or prevent various economic impacts.	"Obtaining an improved understanding of the hydraulic continuity in the Watershed can help determine how future demands can best be met to minimize impacts on streamflow; and, provide guidance in the development of water resource and water allocation policy addressing continuity" (NWMP 2003, pg. 62)
commercial	Commercial relates to markets, economies, etc.	"Allow only selective commercial timber cutting, so that no more than thirty percent (30%) of the merchantable trees may be harvested in a ten (10) year period of time." (NRMP 1987 pg.14 - 15)
fees, permits	Permits and fees in this context mean charging money or having other requirements in order to access a resource. Permits like use permits imply that the desired land or resource is commodified through an exchange of ownership.	"permits and technical assistance for sustainable land development strategies." (NRC 2011, pg. 17)
growth	Both population and economic growth imply increased resource use for societal needs.	"Economic growth and development fuel our region's healthy economy, yet protecting human safety and natural resources is also important." (NRC 2011, pg. 20)
goods and services	Goods and services=exchange of commodities	"Economies grow with opportunities to create value-added sustainable goods and services." (NWSP 2020, pg. 15)
supply	Supply for human use	"decrease the possibility of contamination of the drinking water supply and to provide reaction time

		for a town to find another water source" (USFWS 2005, pg. 31)
demand	Societal demand for resource, for human benefit	"The Planning Unit's main objective for the plan is to develop a comprehensive strategy for balancing competing demands for water" (NWMP 2007, pg 11)
ownership	Ownership of a resource intertwined with concepts of private property, the belief that resources can be owned/commodified.	"Nisqually Tribe will initiate discussions to facilitate agreements, with its regional partners, on ownership, management, operation, monitoring, and finance of a Regional Water Supply." (NWMP 2007, pg 21)
efficiency	In the context of saving costs, or energy use	"We will continually seek new tools for increased efficiency in developing markets for ecosystem services" (NWSP 2020, pg. 15)
investment	Economic contexts	"Water supply planning creates efficiencies for jurisdictions by maximizing returns in public investments for water supply and mitigation." (NWMP 2007, pg. 20)
industry	To produce commodities based on the region's natural resources i.e. dams/hydropower, fish and shellfish, timber, agriculture…	"Existing industries meet or exceed their current industry standards to enhance the sustainability of the watershed" (NWSP Priorities 2009, pg. 8)
labor	Labor as part of an economic system.	"Volunteers provide the equivalent of millions of dollars of labor value to both public and non-profit organizations in the watershed, supporting science, stewardship, and education activities." (NWSP 2019, pg. 74)

13.3 *Relational Value Key Words*

Relational value: The importance attributed to meaningful relations and responsibilities between humans and between humans and nature. (Arias-Arevalo)

Indicator:	**Justification:**	**Example:**

cooperation	Indicating a desire to work together, across interests, to unite values and interests toward a common goal. A relation of responsibility, care, and trust often present in collaborative stewardship and planning	"broke new ground in cooperative stewardship for the next 18 years" (NWSP 2020, pg. 7)
collaborate	Indicating a desire to work together, across interests, to unite values and interests toward a common goal. A relation of responsibility, care, and trust often present in collaborative stewardship and planning	"Collaborate with local governments on stewardship initiatives." (NWSP 2019, pg. 69)
community	In reference to human cultures and societies; communal networks of resources, anything that indicates individual and collective roles in both social and ecological systems	"This comprehensive plan seeks to develop a place where people can earn a living, be a part of a community, and enhance the environment" (NWSP 2020, pg. 9)
inclusion	representation of diverse interests, desire to bring in varying values and backgrounds into stewardship processes; holistic	"Recognizing and appreciating the vital role that individuals play in the development of sustainable communities, the Council is committed to inclusion and to creating a comprehensive community dialogue." (NWSP 2020, pg. 14)
diversity	Social diversity is always coded as relational, and biodiversity is coded as relational when it is directly linked to resilient human societies.	“ensure that the biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans..." (USFWS 2005, pg. 15) "The Council will nurture its relationship with the broader community and strive to increase diversity, equity, and inclusion in programs and decision-making. "
interconnected	Often linked to integration between human societies/cultures and natural systems. Signals a holistic view of human-nature relations, and all systems overall: economic, ecological, and social.	"whole-watershed approach, recognizing the interconnected impacts that regional development, population growth, and community health and economic stability have on the long-term sustainability of the watershed’s habitat, water, and natural resources" (NWSP 2019, pg. 8)
intergenerational	The ability to relate to generations of past, present, and future; honoring history (of both landscape and human culture), planning for the needs and interests of the future	"We embrace a population with a sense of identity, belonging, and responsibility that spans generations and fits within the broader context of the region and the planet." (NWSP 2020, pg. 14)

human life, wellbeing	Wellbeing is often associated with social and environmental factors. There are examples of biodiversity, healthy habitats, and human wellbeing linked together in the data.	"We embrace a diverse landscape that supports essential ecological functions, viable populations of all native species, economic prosperity, and social wellbeing" (NWSP 2020, pg. 14)
conservation	Preservation is more of a prevention of human land/resource use, as opposed to conservation-which tends to support sustainable human use.	"Balancing recreation and conservation needs" (NWSP 2019, pg. 87)
culture	Any cultural benefits derived from natural resources and landscapes.	"As stewards of our land and water we value our working farms and forests which protect and sustain our natural, cultural, and scenic heritage." (NWSP 2020, pg. 13)
education	Education connotes cultural value and care; environmental education is often mentioned in the interest of strengthening local residents' relationship to the watershed, and sense of its importance.	"facilitate the appreciation, protection, and enhancement of the watershed through education and participation" (NWSP 2020, pg. 21)
heritage	Heritage implies a strong sense of place and history associated with cultural connections to the land and resources.	"Twenty percent of the visitors to the watershed come for heritage tourism, to learn about the area's history" (NWSP 2009 Priorities, pg. 6)
interdependence	Active/intentional recognition and appreciation of humanity's reliance on nature's contributions	"Decreasing the Town's dependence of a surface water source also potentially could improve instream flows in the Mashel River" (NWMP 2003, pg. 101)
identity	Associating place and resources with identity, sense of self and culture.	"Community members are informed, engaged, involved, and interconnected with a sense of local identity" (NWSP 2019, pg. 107)
stewardship	Management connotes more typical ES paradigms that view nature as something to be used and controlled. Whereas stewardship implies more of a partnership between humans and nature, imbued with a sense of responsibility. In my view, and as context throughout indicates, management is imbued with notions of entitlement and stewardship--relational.	"Our vision of sustainability is founded in a belief that stewardship is an everyday practice, that we all have a role to play, and that all of the watershed's voices are essential as we navigate a future with unprecedented challenges." (NWSP 2020, pg. 8)
duty, obligation	Cultural and societal responsibilities owed to resource and landscape protection.	"Direct federal agencies to increase enforcement of federal obligations to protect habitat including the ESA and Clean Water Act...Direct NMFS and EPA to assure that state Shoreline Master Program updates are consistent with all federal obligations involving treaty rights." (NWIFC 2011, pg. 5)

morality	Moral duty to nature that prompts preservation, conservation, and restoration actions. An environmental ethic that leads to agency and desire for stewardship.	"Our Nisqually way of life, including language, beliefs, morality, norms and customs" (NIT 2013, pg. 6)
spiritual	Spirituality surrounding natural resources and landmarks implies cultural connections to these resources.	"A multi-dimensional, holistic, encompassing lifestyle of mental and spiritual, well-being." (NIT 2013, pg. 6)
sacredness, religious	Religious and sacred attachments to place and resources that inform a sense of identity.	"sacred natural resources"
reliance	Active/intentional recognition and appreciation of humanity's reliance on nature's contributions	"rely on for subsistence, cultural practices, and economic development." (NIT 2013, pg. 25)
human impacts	Focus on human impacts on environmentals suggests recognition of the human-nature relationship, a kind of interdependence.	"Watershed residents have access to affordable housing and adequate services exist to minimize the environmental, health, and social impacts of homelessness" (NWSP 2019, pg. 116)
balance	Balancing human needs and ecological function; desiring balance and health in a way that benefits all elements of an ecosystem, including humans.	"Let us protect the Earth and enjoy a balanced and beautiful natural world as the Creator intended" (NIT 2013, pg. 7)
accessibility	Like inclusivity, making sure resource access is equitable and fair; ensuring equal resource and recreational opportunities for community members	"Accessibility of programs for economically and socially diverse community members" (NWSP 2019, pg. 72)
partnership	Indicating a desire to work together, across interests, to unite values and interests toward a common goal. A relation of responsibility, care, and trust often present in collaborative stewardship and planning	"Sustainability relies on responsive governance and engaged communities. The Council will be a model of engaged citizenship by forging partnerships between government agencies, leaders, and communities. The Nisqually River Council's sustainable watershed stewardship process will be valued and utilized by governmental entities and agencies." (NWSP 2020, pg. 16)
sustainability	Depending on context, this term can indicate the existence of value for both social and environmental health and longevity.	"The Council will support and promote sustainable tourism and recreation and jobs rooted in appreciation for the environment"(NWSP 2020, pg. 16)
nature's contributions to people	A term that better captures the interdependent relationship between humans and nature.	"Cooperative water supply planning and the evaluation of a potential regional water supply are important for the following reasons: Groundwater is a finite resource that is vital to human communities, fish and wildlife" (NWMP 2007, pg. 20)

recreation, enjoyment	A human use of nature that can be non extractive, even reciprocal. Enjoying and engaging with environmental elements promotes care for the environment alongside various cultural benefits.	"Develop parks with a high level of service and benefits with amenities such as water access, trails, camping, gathering and recreation areas, art and culture, and with open space/places to relax, breathe, enjoy beauty, access water and nature, celebrate events, and be with family/community" (NIT 2013, pg. 20)
tradition, family	Similar to heritage, appreciation for a place or resource due to cultural lineage: traditions and customs involving nature that have been passed down for generations	"Nisqually State Park is in the heart of the Nisqually homelands, where the Squalli-absch have lived since time immemorial and have resiliently sustained their community, culture, traditions, and language. (NIT 2020, pg 14)
justice	Specifically environmental justice. This code encompasses things like resource rights, right to clean and healthy habitat, right to recreate, right to equitable access to nature, etc. These rights are also relationally extended to animal and plant species' right to life.	"promote social and environmental justice in local communities" (NWSP 2020, pg.22)

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