

Tanana
Chiefs
Conference

Appendix 8: Additional Information about Subsistence Economics, Health Impacts, Environmental Justice and Traditional Knowledge

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Tanana Chiefs Conference

Dena' Nena' Henash - "Our Land Speaks"

Our Vision: Healthy, Strong, Unified Tribes

Our Mission:

Tanana Chiefs Conference provides a unified voice in advancing sovereign tribal governments through the promotion of physical and mental wellness, education, socioeconomic development, and culture of the Interior Alaska Native people



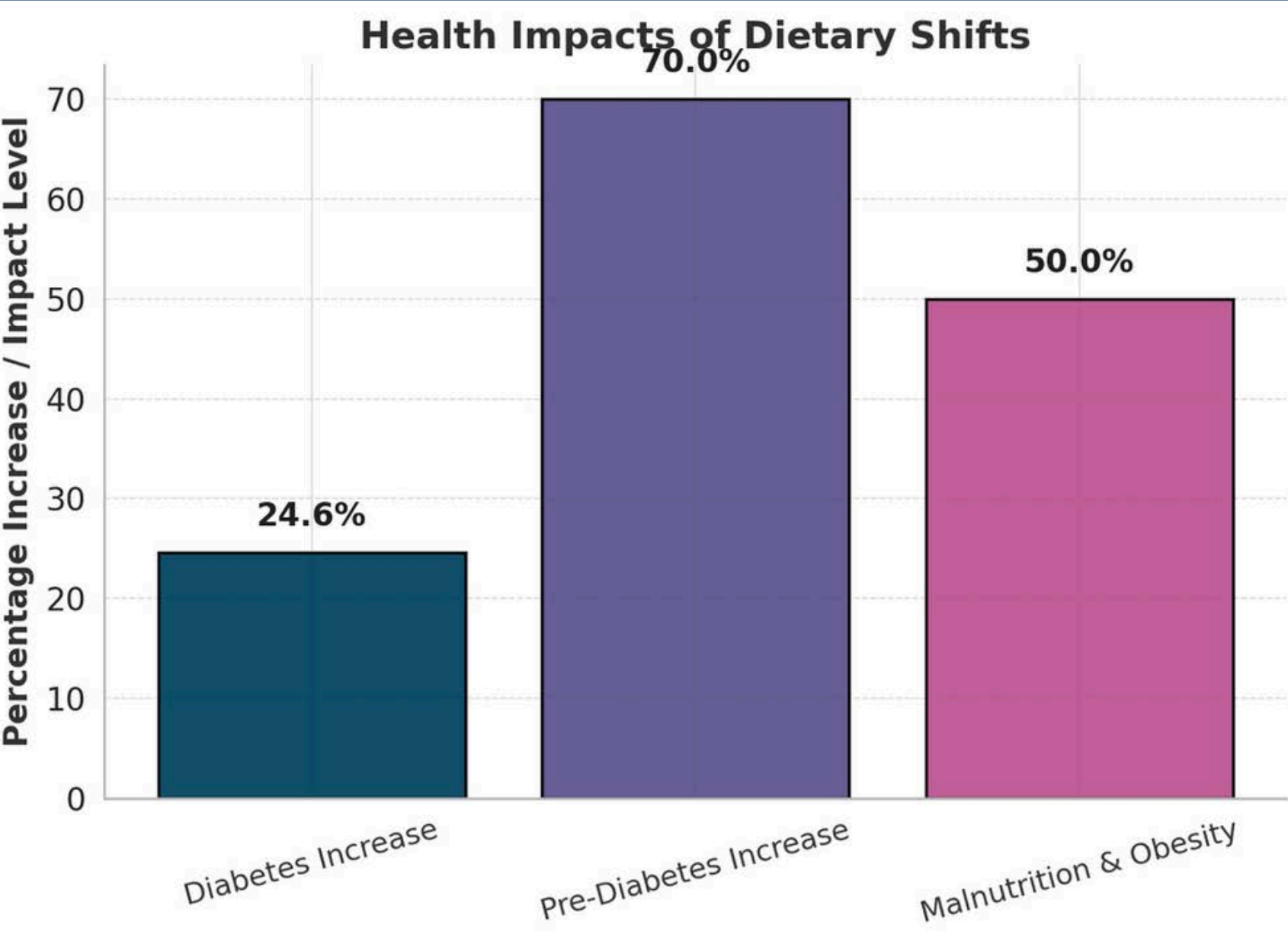
Appendix 8-1

Appendix 8-2

Chum salmon is a staple of the traditional diet, providing lean protein and omega-3 fatty acids essential for heart health and diabetes prevention.

Declining salmon stocks force communities to rely on processed, high-carb, and high-sodium foods.

Shelf-stable, high-sugar, and high-fat alternatives replace fresh, wild-harvested foods.



Chum salmon declines has reduced access to nutrient-dense, high-protein foods.

Increase in patients with	2013 to 2016	2016 to 2019	2019 to 2023
Diabetes	24.6%	11.3%	24.6%
Pre-diabetic patients	21.9%	19%	70%

Health & Nutrition Factor	Traditional Diet (Subsistence Foods)	Western Diet (Market-Based Foods)
Omega-3 Fatty Acids	High – Supports heart and metabolic health	Low – Deficiency linked to heart disease and inflammation
Heart Disease Risk	Low – Natural, nutrient-rich foods	High – Processed foods contribute to cardiovascular issues
Diabetes Risk	Low – Balanced nutrients and lower sugar intake	High – High sugar and refined carbohydrates increase risk
Obesity Risk	Low – Lean proteins and natural fats	High – Processed foods high in unhealthy fats and calories
Sodium Intake	Low – Minimal processed food consumption	High – Processed foods contain excessive sodium
Carbohydrate Intake	Moderate – Primarily from natural sources	High – Refined carbohydrates contribute to metabolic disorders

Appendix 8-2: Financial Impacts to Distribute Salmon



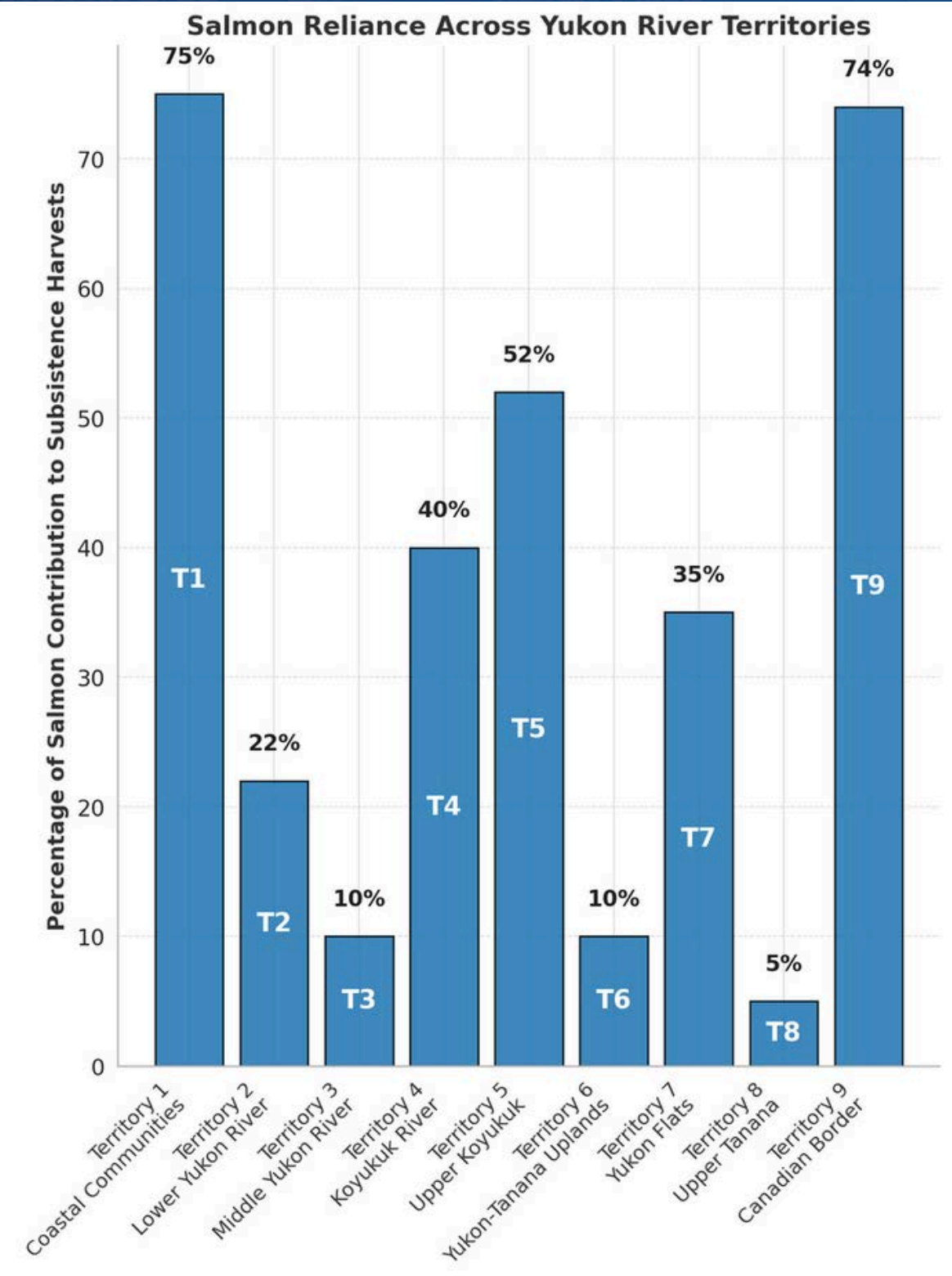
A charter flight unloads Bristol Bay salmon in Venetie, one of the 42 Interior villages that received fish donations.



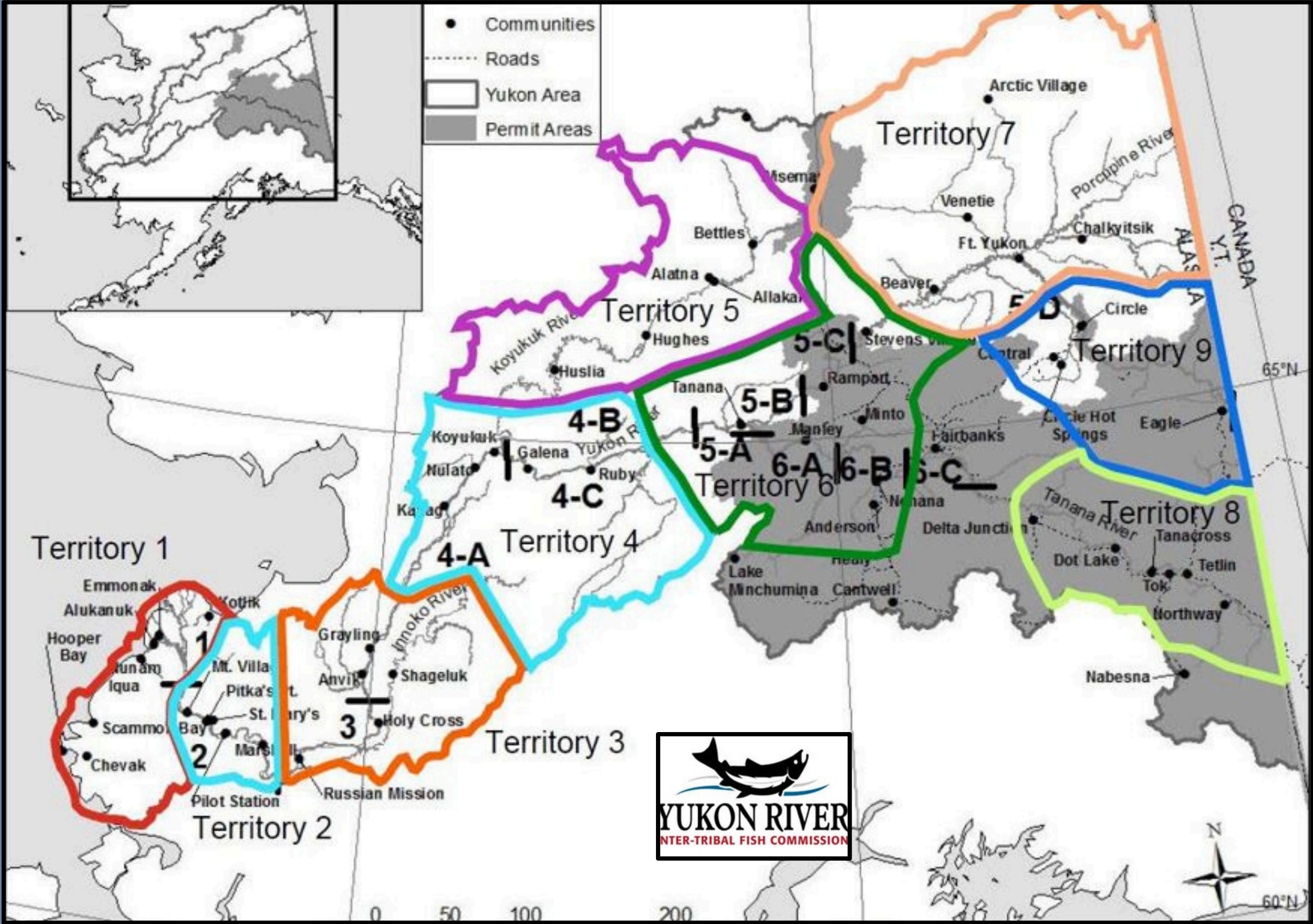
Cost of Emergency Salmon Distribution

- Annual expenditure: \$1.96 million (combined average)
- TCC's direct spending: \$713,866.44 per year (*average*)
- Tribal governments' contribution: \$1,254,640.38 per year (*average*)

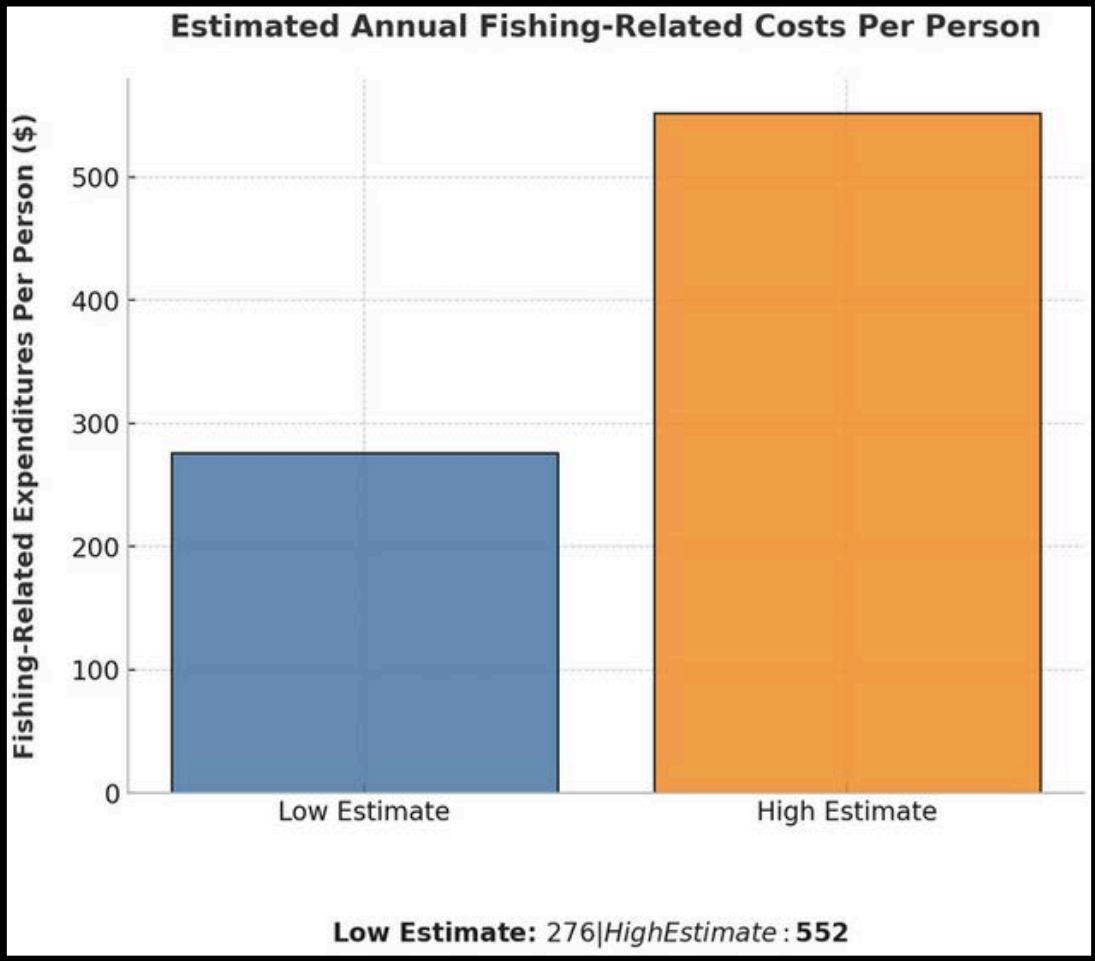
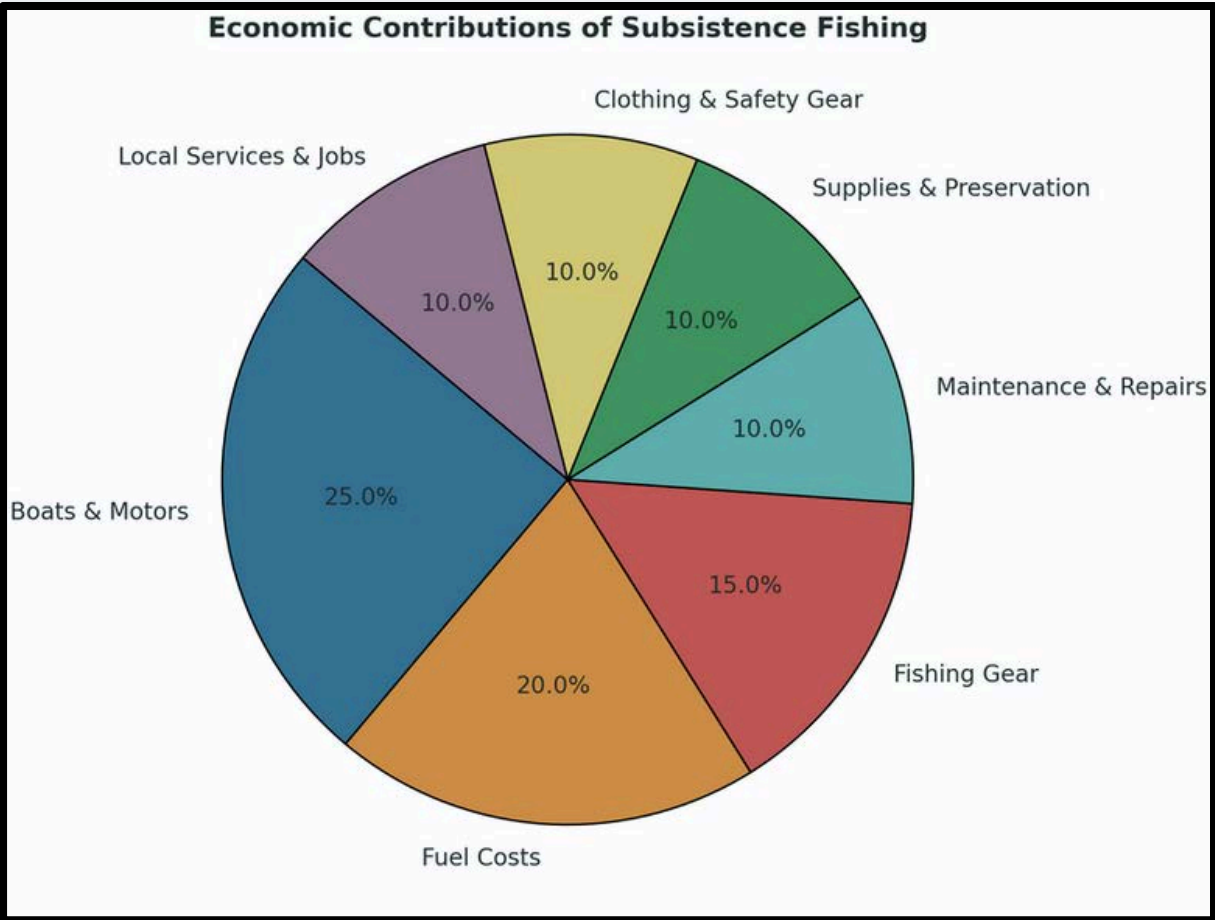
Chum salmon harvests plummeted from 84,438 fish (2010-2014 avg.) to 5,128 in 2020, hitting a low of 704 in 2021 before slight increases to 2,657 in 2022 and 5,947 in 2023.



Appendix 8-3



Appendix 8-3



The subsistence economy accounts for 30% to 80% of a community’s total production and income. Its key components include:

Boats and Motors: Many families invest in motorized boats, allowing them to navigate fishing grounds with ease

Fishing Gear: Expenditures cover essential tools such as gillnets, fish wheels, and other vital fishing apparatus.

Fuel Costs: The operation of boats and journeys to fishing locales incurs considerable gasoline expenses.

Equipment Maintenance: Regular care of boats and fishing gear not only ensures their reliability but also nourishes local artisans and businesses.

Local Services: Utilizing local mechanics and repair shops fosters a circulation of wealth within the community.

Supplies: Acquisitions of fishing lines, hooks, and preservation materials (like salt and canning jars) fortify the local economy.

Clothing and Safety Gear: Investments in suitable apparel and safety equipment support local retailers.

Job Creation: Subsistence activities can spawn seasonal employment in areas such as fish processing and equipment sales.

Support for the Service Industry: Spending on fuel, equipment, and supplies invigorates local businesses, enhancing the overall economic vitality of the village

Key Populations

Summer Chum:

- East Fork Andreafsky River
- Anvik River

Fall Chum:

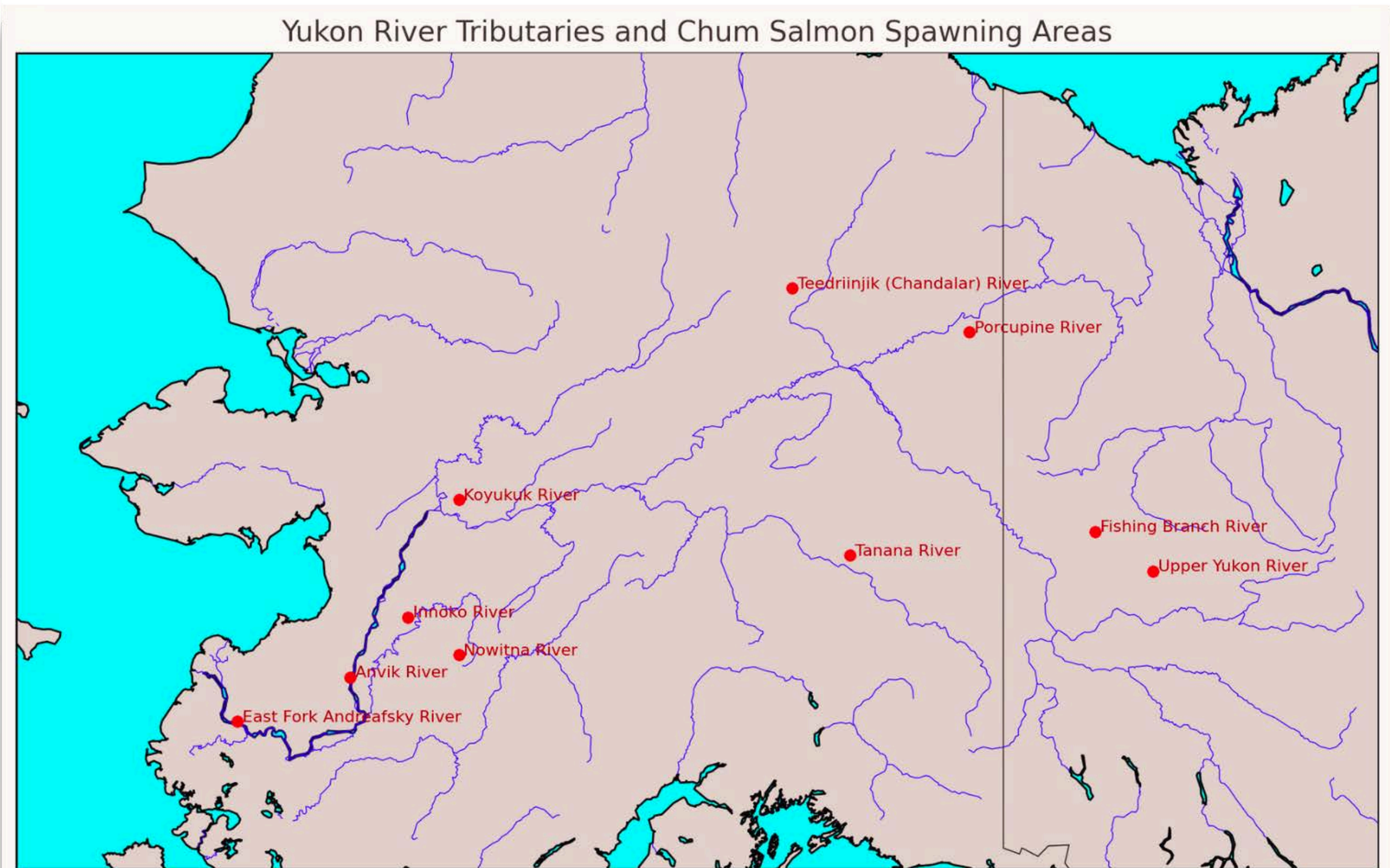
- Teedriinjik (Chandalar) River
- Delta/Tanana River
- Upper Yukon River (Canadian-origin)
- Fishing Branch River (Canada)

Chum salmon have evolved to thrive in specific rivers, making each tributary crucial for species survival.

Chum salmon exhibit strong homing instincts, returning to their natal rivers

Each tributary has specific conditions needed for successful reproduction

Appendix 8-4



Appendix 8-5

Disregard for Traditional Knowledge (TK): Indigenous knowledge, which includes sustainable fishing practices and deep ecological understanding, is often overlooked in favor of Western scientific approaches. This marginalization perpetuates environmental mismanagement and disrupts natural cycles.

Subsistence Rights vs. Commercial Interests

- Commercial and industrial fisheries often receive priority, with regulatory frameworks favoring profit-driven extraction over Indigenous subsistence needs.
- Policies disproportionately restrict Indigenous fishing, limiting access to a traditional food source while allowing industrial fleets to operate with less oversight.

Spiritual and Cultural Erosion

- Salmon is not just a food source but a sacred, living entity within many Alaska Native cosmologies. Exclusion from fisheries management reflects a deeper disregard for Indigenous sovereignty and spiritual connections to the land and water.
- Rituals and ceremonies tied to salmon cycles are disrupted, severing an ancestral relationship that has sustained Indigenous peoples for generations.

Environmental Justice Disparities

- Indigenous communities face environmental racism when resource management policies disproportionately harm their way of life.
- Lack of representation in fisheries governance exacerbates food insecurity, cultural loss, and economic instability, further widening disparities.

"The tribes along the Yukon have completely shouldered all of the ramifications of the salmon collapse, yet they were not the cause of it." — Chief Chairman Brian Ridley

Appendix 8-5

Salmon fishing rituals reflect the deep respect for nature's balance, fostering gratitude and harmony within Indigenous communities. Unfortunately, the decline in salmon populations threatens these spiritual and cultural traditions, impeding the transfer of knowledge to younger generations.

- The criminalization of subsistence fishing and the implementation of restrictive policies disrupt Indigenous spiritual connections to salmon, adversely affecting identity and cultural continuity.
- While communal fishing promotes social bonds and unity, the diminishing salmon stocks fragment these connections.
- Salmon play a central role in oral traditions, symbolizing respect for nature and the interconnectedness of life. Their decline stifles storytelling and cultural expression.
- Indigenous communities have historically acted as guardians of salmon, practicing sustainable harvesting through:
 - Taking only what is necessary
 - Minimizing waste
 - Supporting the entire salmon lifecycle

Disruption of Cultural Tradition

The absence of Elders to impart fishing techniques and cultural values undermines community cohesion. Moreover, Indigenous stewardship—rooted in sharing and sustainability—is frequently overlooked in fisheries management.

Spiritual Connection

The decline of salmon severs vital spiritual ties, posing a threat to Indigenous identity and cultural survival. Salmon symbolize life, renewal, and resilience; their loss endangers deeply sacred traditions.

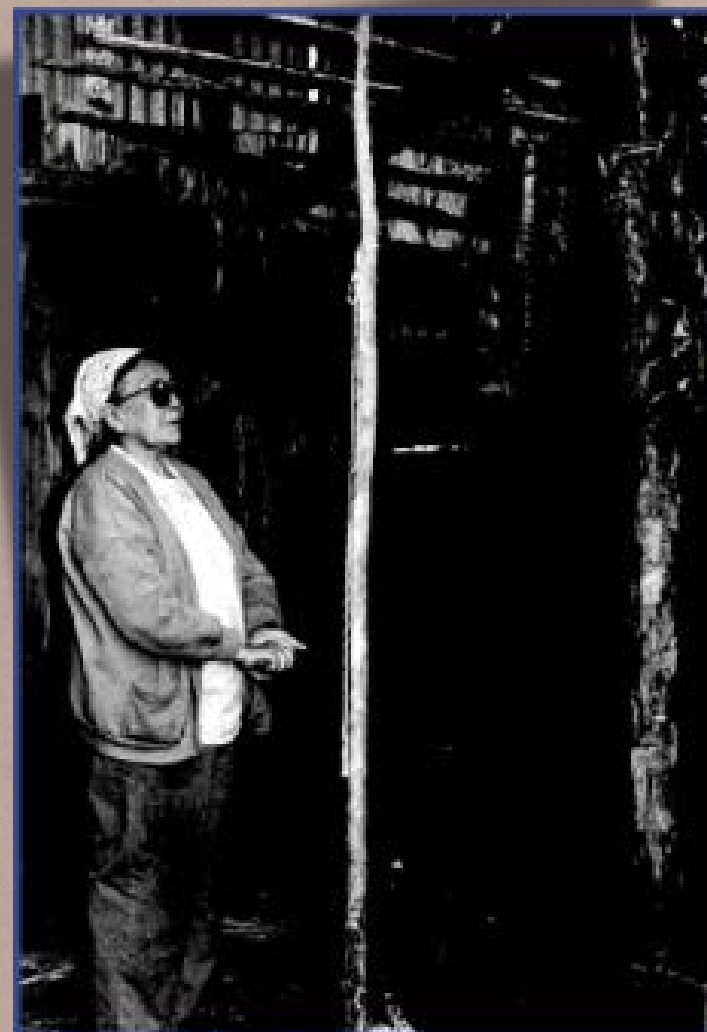




"Going to Fish Camp" Allakaket 1930's - Bergman-Moses Family

**"The first catch is shared with the elders in the village, reflecting local values... Once all elders have received salmon, everybody else in the village has a taste."
— Holy Cross Tribal Citizen**

Madeline Bifelt in her smokehouse in Huslia, Alaska in 1992.



Body



1980's Yukon River - Hazel Strassburg of Galena.

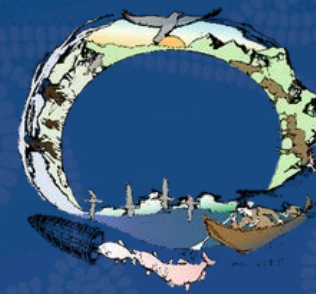
**"If the fish is good, we'll have a good winter. If the fish is poor, we'll have a poor winter. It's not like we can go to a store and pick out our supper. We have to look in our freezer at what we processed."
— Kathy Chase, Holy Cross, June 2004**



Upward Sun River



Permission was graciously granted by the Healy Lake Tribe, Mendas Cha'ag, to present their historical drawings of the Upward Sun River Site.



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Benhti Kokhut'ana Kenaga' (Lower Tanana): Ana Basi'

Deg Xinag: Dogidingh

Denaakk'e (Koyukon): Baasee'/Maasee'

Dihthaad Xt'een Aandeg' (Tanacross): Tsin'ee

Dinak'i (Upper Kuskokwim): Tsen'anh

Dinjii Zhuh K'yaa (Gwich'in): Hą́'ee

Hän: Mahsi' choo'

Holikachuk: Xisigidasidhut

Nee'aanèegn' (Upper Tanana): Tsen'ij

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