



# Indigenizing Salmon Science & Management



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Courtney Carothers & Jonathan Samuelson  
Mat-Su Salmon Science and Conservation Symposium  
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# Origin Story

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## Salmon Connect

- State of Alaska Salmon and People [Nautilus Consulting]
- Racial Equity in Salmon Systems [First Alaskans Institute]
- Alaska Salmon Fellows [Alaska Humanities Forum]
- Salmon Life - Storytelling [The Salmon Project]
- Indigenizing Salmon Management [University of Alaska Fairbanks]

# ISM Project Team

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## Regional Partners & Advisors:

- **Dr. Liza Mack** (Aleut; Aleut International Association), **Karen Linnell** (Naltsiine/Was'ineidi; Ahtna Intertribal Resource Commission), **Dr. Julie Raymond-Yakoubian** (Kawerak), **Freddie Christiansen** (Alutiiq/Sugpiaq; Old Harbor Native Corporation), **Janessa Esquible** (Ojibwe; Orutsararmut Traditional Native Council), **Adrienne Christensen** (Aleut; Port Heiden), **Melanie Brown** (Inupiaq, Yup'ik, and Unangan), **Liz La quen náay Medicine Crow** (Tlingit/Haida) First Alaskans Institute, **Andrea Akall'eq Sanders** (Yup'ik) First Alaskans Institute, **Helena Jacobs** (Koyukon Athabascan; Benozaadleyo Consulting) , **Ben Stevens** (Koyukon Athabascan) Tanana Chiefs Conference, **Angela łot'oydaatIno Gonzalez** (Koyukon Athabascan) First Alaskans Institute



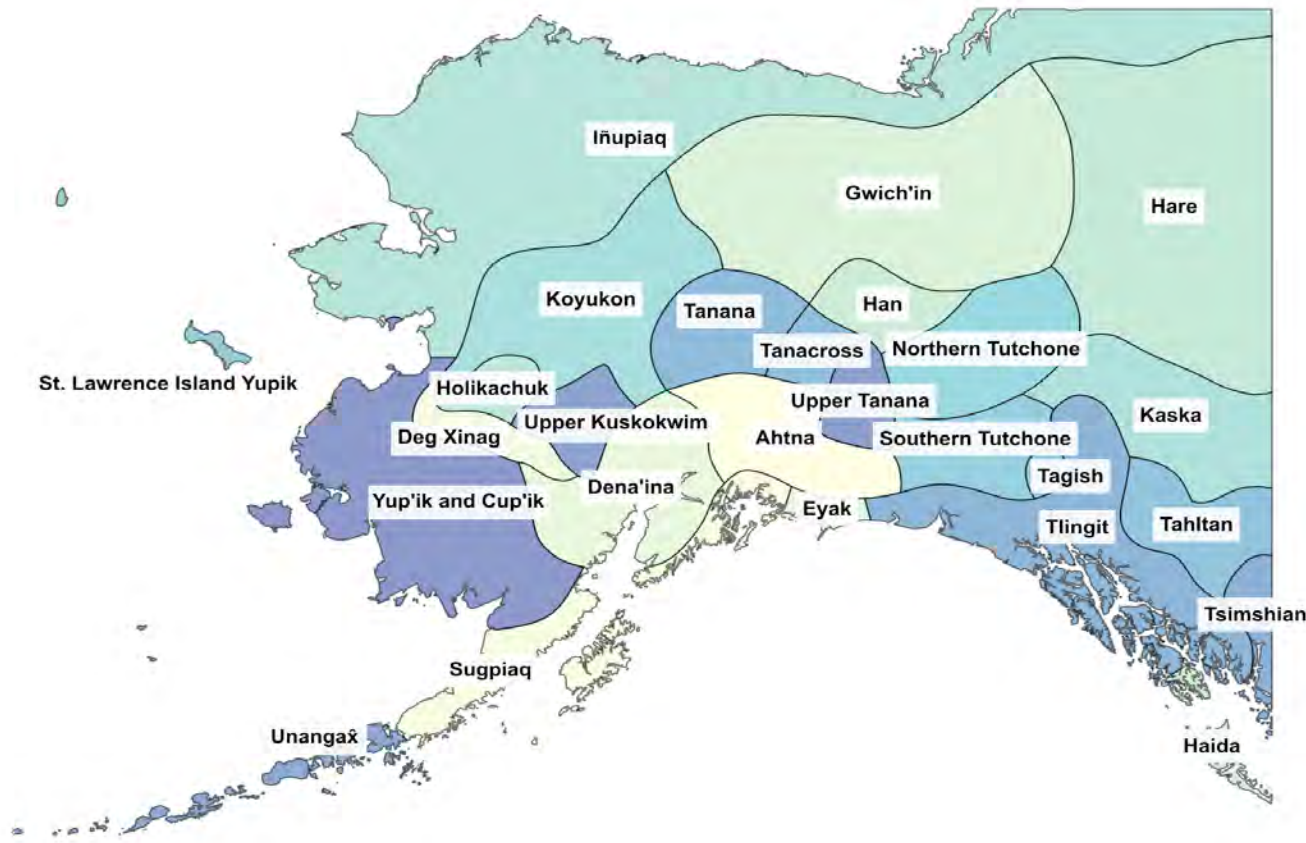
# Project Rationale

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# Project Rationale

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**Inequities in the salmon system are paramount (but often invisible in dominant culture)**

**These stem from history of colonialism, but are perpetuated in current system, including:**

- Marginalization of Tribes and Indigenous peoples, values, and knowledge systems in salmon science and management processes
- Criminalization & restriction of traditional fisheries
- Dispossession of commercial fishing rights from Alaska Native fishing families and communities



*Alaska Natives, despite their long-term relationship with Salmon, have been largely left out of any decisions related to Salmon management. This is unfortunate for the Salmon, for Salmon people, and for the State of Alaska who depends on Salmon as a pillar of the state economy. The forces of colonization have been hostile to Alaska Native people and have led to our current situation, where we find ourselves in a position where our deepest relationships and expressions of spirituality are at times severed by limited or zero openings to live our way of life through the timeless exercise of fishing for Salmon...*

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*...Salmon play an important role today, as they always have in the lives and cultural foundation of Alaska Native individuals, families, and peoples. Children are raised with Salmon as a central presence, another relative, which one must care for, share with, and most of all, respect. This timeless relationship has created a strong foundation, which until more recently children could depend on. Yet, the current management system, which has largely disenfranchised Alaska Native people, has resulted in egregious dispossession of fishing rights and ways of life. Generational knowledge, passed down from grandmas, grandpas, aunties, uncles, and parents are left in the shadows when there are no fish in the net or worse, no net in the river. Salmon give reason and meaning to life in a very foundational sense and teach children how to view the world from the lens of their cultural values.*

WILSON JUSTIN AND JESSICA BLACK (2019)





# Criminalization

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*I didn't do it to break the law. I didn't do it to offend anybody. I did it to challenge that premise, 15 fish per family per year...that is one and a half fish a month, or less... Let me see any of you try and live the life of a whole salmon season, a whole winter on 15 fish. Especially if you have a family of ten or five...I wanted to challenge that forever.*

*...this whole notion in Alaska, because I was an Alaska Native that I was guilty until proven innocent. There is no such thing in Alaska for an Alaska Native that you are innocent until proven guilty. I just found that out. The people that were with me were scared. I was a little worried myself, and they were really scared. And that is really indicative of what happens to an Alaska Native when they get cited for anything. You will see a lot of people in jail that are Alaska Native because they were afraid to go through the legal process. The three guys that were with me were scared.*

*ALBERT KOOKESH (SALMON AND SOCIETY MTG, 2016 )*



# Loss of Rights

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“[A local fisherman] had been fishing in Togiak all his life as a drifter and a setnetter...But then the next year came around [Limited Entry] and he couldn't fish because he didn't -- he never got any of the paperwork, you know, a lot of people didn't speak English; English was a second language...yeah, nowhere near accessible. If you didn't know how to exist in a western paperwork world, you missed out.”

SETNET FISHERMAN IN DILLINGHAM, OCT 2014  
[GRAYING OF THE FLEET STUDY; *FISHERMEN.ALASKA.EDU*]

# Pluralism of Worldviews

## Indigenous worldviews

- multiplicity of knowledge or knowing a little about many subjects
- relationality (e.g., people are related to all of creation, balance through appropriate thoughts and actions)
- dynamic energy and spirit of all things
- nonlinearity and cyclic nature of time; and wholeness
- common sense values: sharing, cooperation, stewardship, equity

## Western worldviews

- knowledge specialization
- time as a linear, measurable quantity or descriptor
- separation of nature and culture
- disconnection and reductionism
- marginalization or erasure of relationality, energy and spirit, or wholeness
- common sense values: efficiency, competition, conservation, equality

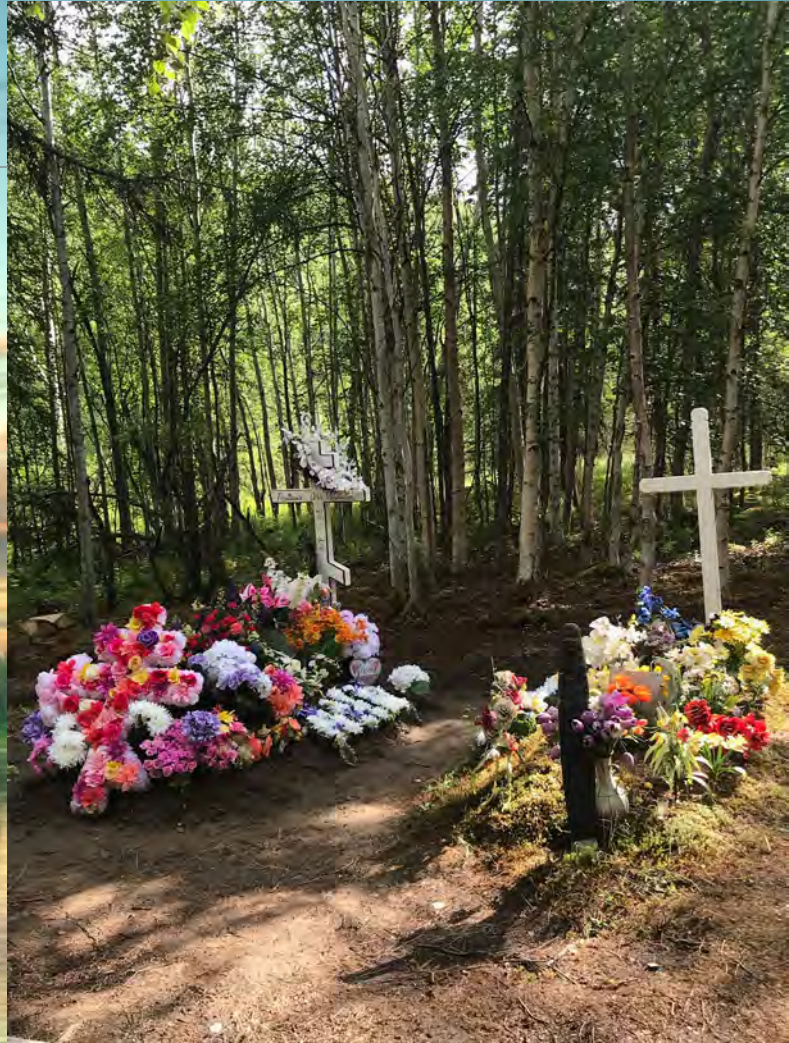
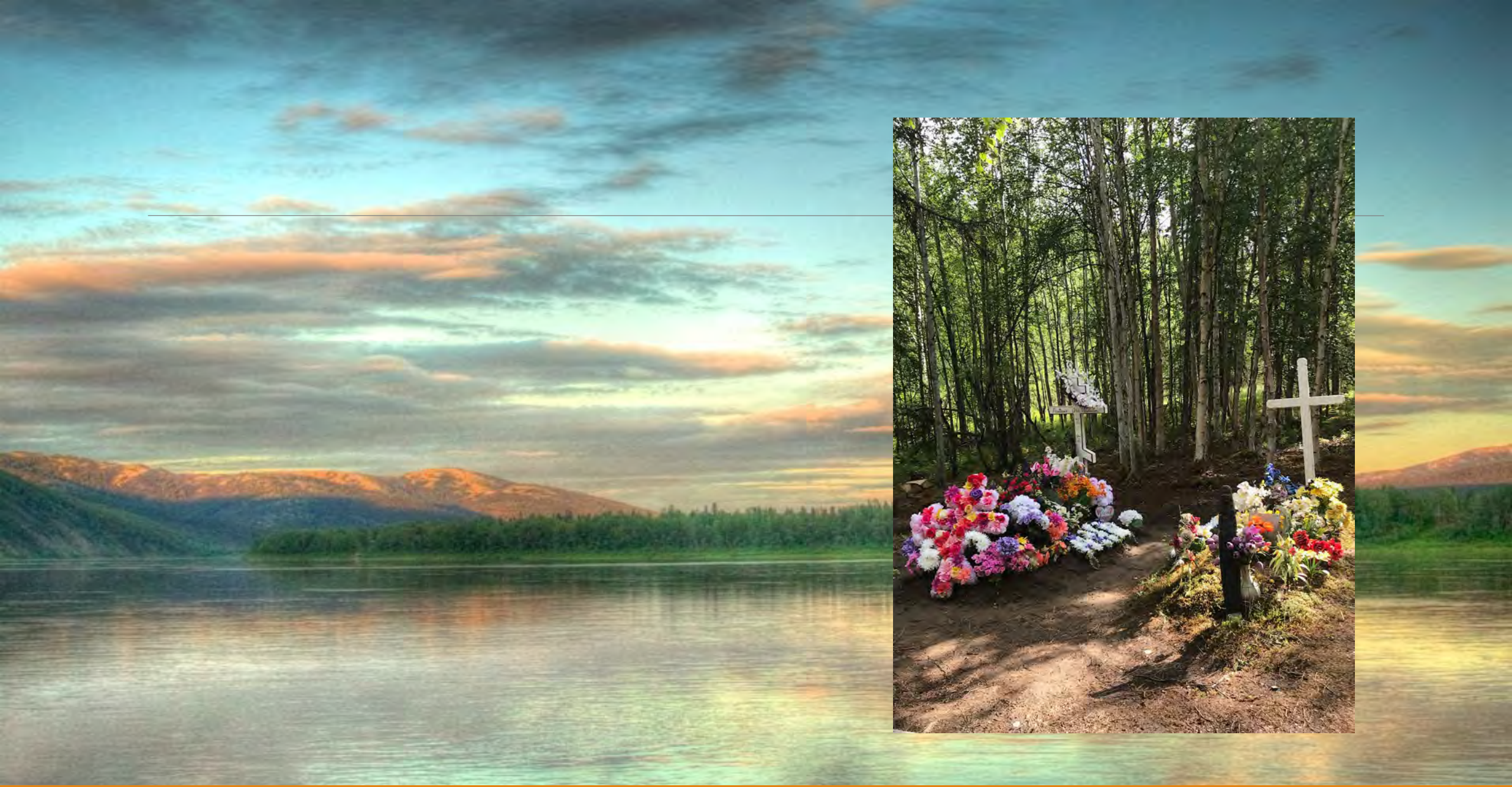


Zack Martin (Ahtna)











# ISM Project Goal

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Document the breadth and depth of Indigenous values, knowledge, and governance systems connected to salmon across Alaska, and to use this wisdom to improve current salmon science and management processes for all.





# Guiding Questions & Objectives

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*(1) What are the Indigenous values, knowledge, management, and governance mechanisms that will improve the long-term sustainability and equity of the Alaska salmon system for the benefit of all?*

*(2) What do we learn about the strengths and weaknesses of our current salmon management system when we view it from Indigenous experiences and perspectives?*

*(3) How can Indigenous values, knowledge, and governance mechanisms be better included in current or alternative management systems?*

# Methods

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## Process-focused

- Indigenous-led
- Building & strengthening ethical relationships
- Connect to local priorities / ongoing work
- Indigenous students/partners in home region

## Indigenous approach

- Circle dialogues
- Multigenerational interviews
- Cultural exchange & deep learning









# Multi-Generational Interviews

- How do you think about the relationships between salmon and people in your culture?*
- How did you learn to manage/steward/care for salmon when you were growing up?*
- Were there rules about harvesting? Sharing? How were the rules enforced?*
- What values did your ancestors use to take care of salmon? Of relationships?*
- What do wish scientists & managers knew about your traditional lands and stewardship?*



Multi-generational interview in Bethel, 2019



# Indigenous Salmon Systems

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All entities have spiritual essence (personhood)

- Salmon, like all beings, are sentient, have agency, & require respectful relationships

People have moral obligations to maintain respectful relations for wellness of all beings

Shared values, e.g., not wasting, equity, sharing, proper human behavior, teaching, practicing

Complex understanding of salmon behavior, habitats and life cycles



Shannon Hardy and Jessica Black cutting Łuk Choo on the Yukon River, 2017



# Salmon Stewardship

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## Stewardship:

- sustaining & enhancing production (transplanting eggs, creating spawning habitat, removing beaver dams, stream flow management)
- harvesting restrictions (size and sex of catch)
- technological innovation (traps, weirs, nets)
- social organization, reciprocity, respect
- spiritual dimensions, ritual and ceremony



Amaqtuuq, amaqaaayak, luuqaanak,  
amaqaayak, amaqsuq, luqaanak, terteq,  
qakiiyaq, uquriliq, caayuryaq, qavlunaq,  
ciayuryar, 00x , ta'ay, pink salmon-humpback  
salmon-humpy, *Oncorhynchus gorbuscha*



# Indigenizing and Decolonizing Approaches

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- Shift research legacies that marginalize Indigenous ways of knowing
- Co-production of knowledge (western and indigenous knowledge systems)
- Recognition of Indigenous rights, self-determination, sovereignty
- Beginning our work on institutional change

*“It is perhaps a reflection of cultural biases and, at the very least, colonial attitudes, that these (Indigenous) management systems, their complexity, and their effectiveness have only recently been recognized by those outside these cultures” M&T 2019*





# Q&A and Consideration for Dialogue

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What thoughts / feeling arise for you when you hear about this project?

Why do we need to be having conversations about Indigenizing salmon science & management?

How can a project like this help us to do better science & management?

How do these ideas connect to the work you do? Your community?

What was your first experience with race and fisheries/marine science?

**Thank you for attention!**  
**Please visit with us & our team for**  
**discussions, dialogues, exploration**



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