



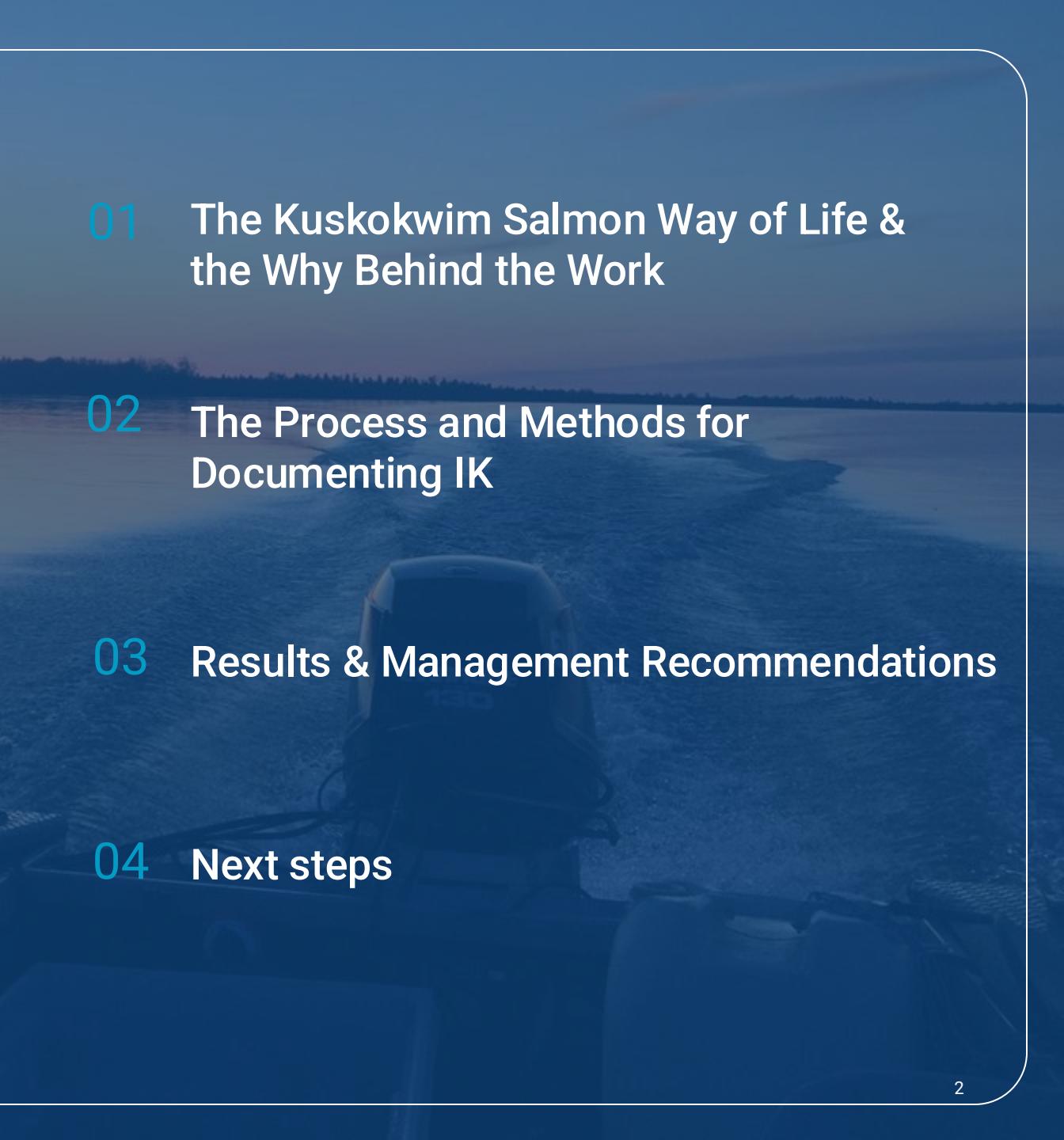
“Salmon are life” – Indigenous Knowledge and ecosystem stewardship along the Kuskokwim River

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NICK JACUK, JON ROSS, DR. COURTNEY CAROTHERS

NOVEMBER 2025 | PICES JAPAN



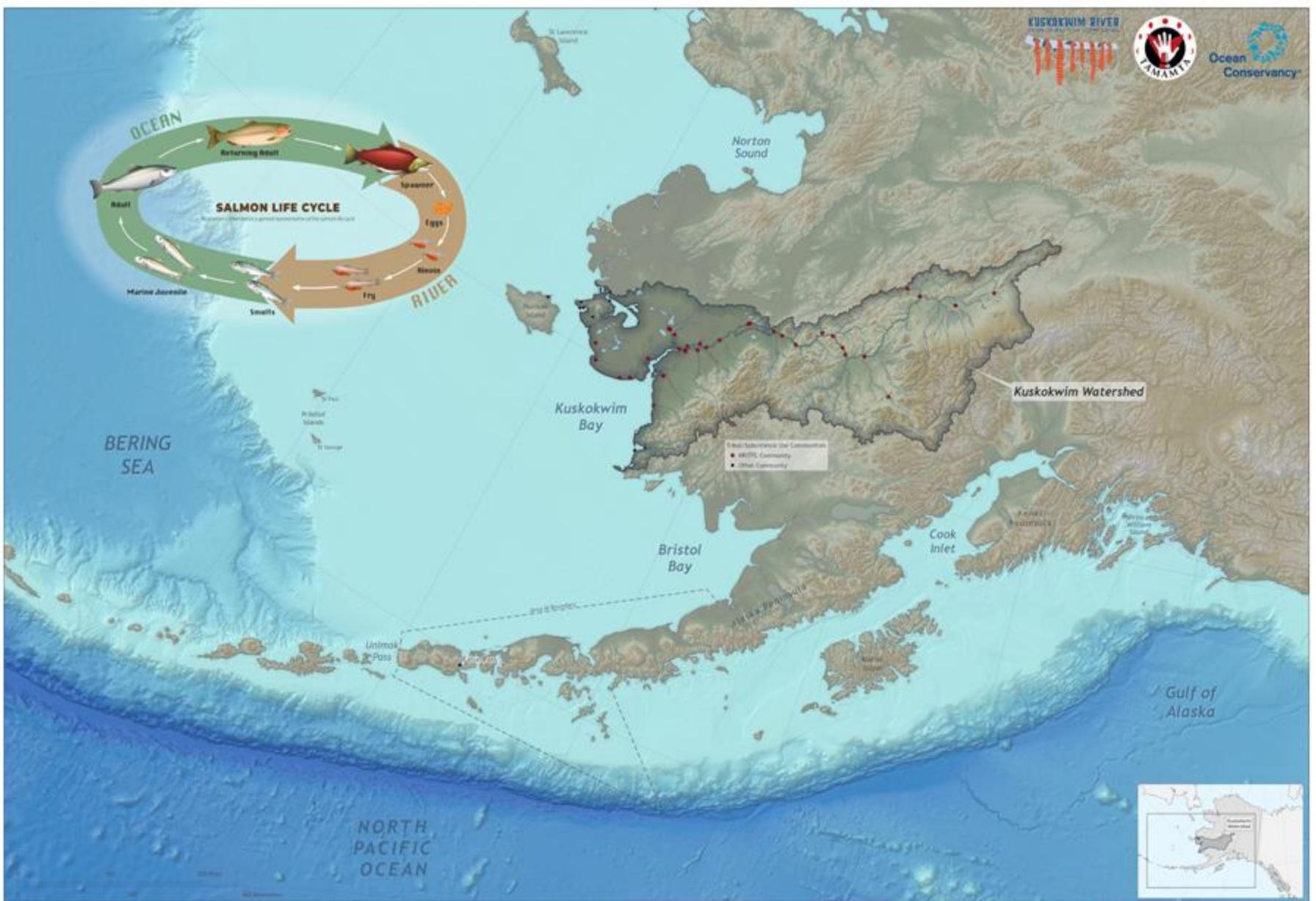
ROAD MAP FOR TODAY



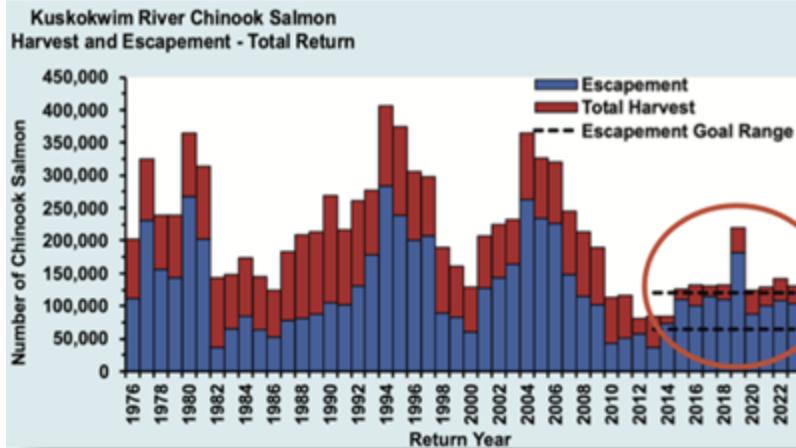
- 01 The Kuskokwim Salmon Way of Life & the Why Behind the Work
- 02 The Process and Methods for Documenting IK
- 03 Results & Management Recommendations
- 04 Next steps

01

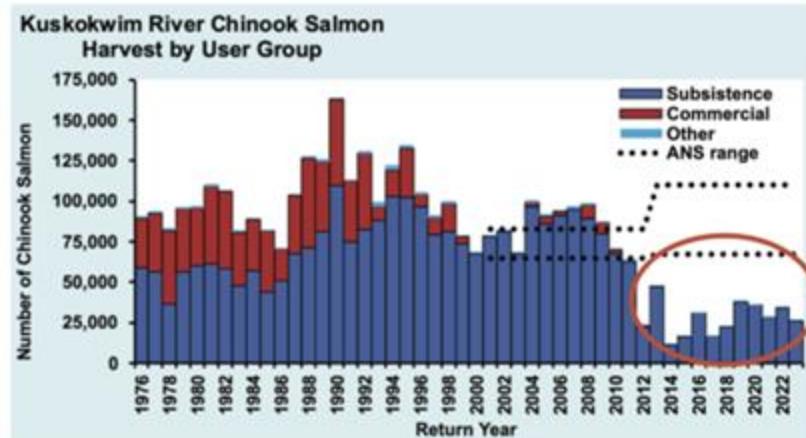
THE KUSKOKWIM SALMON WAY OF LIFE & THE WHY BEHIND THIS WORK



SALMON DECLINES



As a result of sacrifices by subsistence harvesters, the drainage-wide Chinook Escapement Goal was achieved for the past decade including 2023.



To meet escapement goals, "Amounts Reasonably Necessary for Subsistence" (ANS) have not been met since 2010

THEN



NOW



Salmon fish racks during the "days of abundance" compared to today's declines.

INEQUITABLE MANAGEMENT STRUCTURES

- Alaskan Tribes and IK holders do not have equitable representation on management bodies or in decision making in AK
- IK is excluded from science platforms, policy reviews & analyses
- Emphasis on industrial resource extraction over co-stewardship and resource sustainability



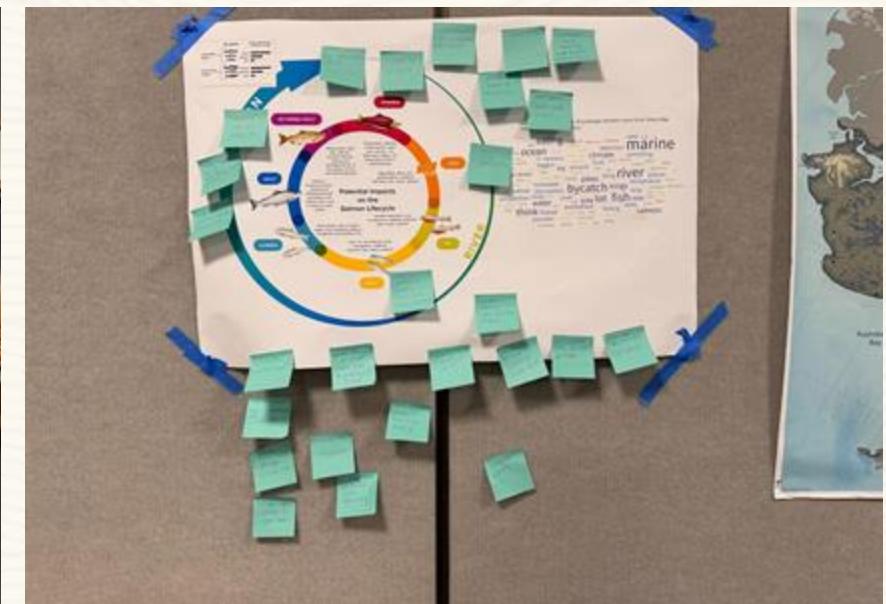
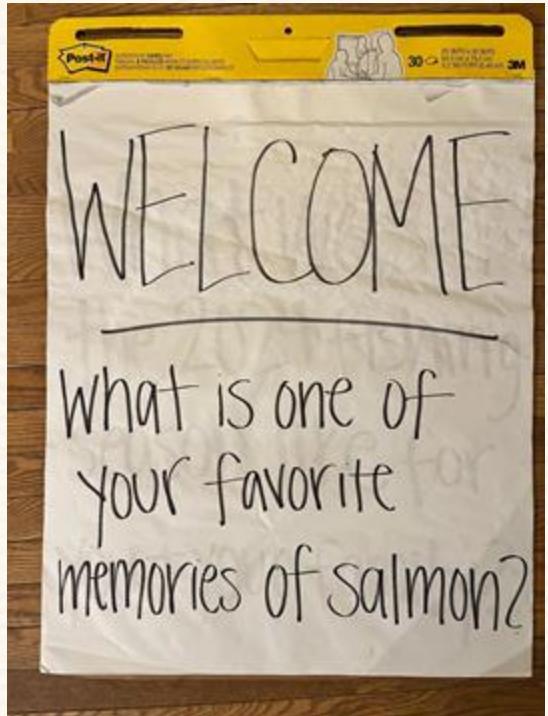
02 PROCESS AND METHODS



INTERVIEWS



PROCESS & METHODS: FALL WORKSHOP



STORYMAP COLLECTION

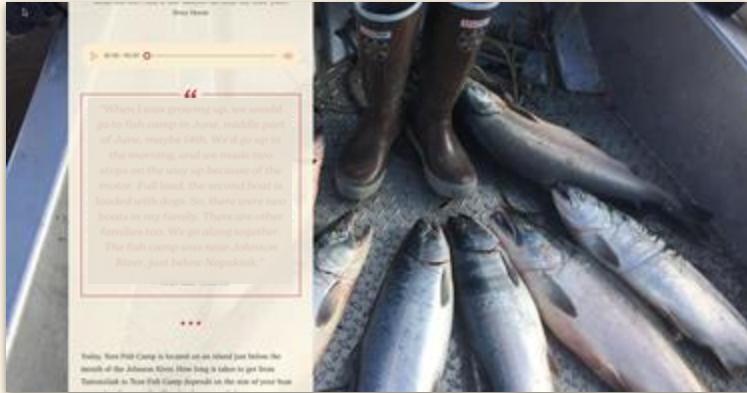
• BENEFITS

- POWERFUL STORYTELLING
- HELP VISUALIZE
- ENHANCED ENGAGEMENT
- THE “WHERE” & “WHY”
- VERSATILITY
- ENGAGING FOR YOUTH



FEATURED EXAMPLES

VOICES FROM THE RIVER



FEATURED INTERVIEWS



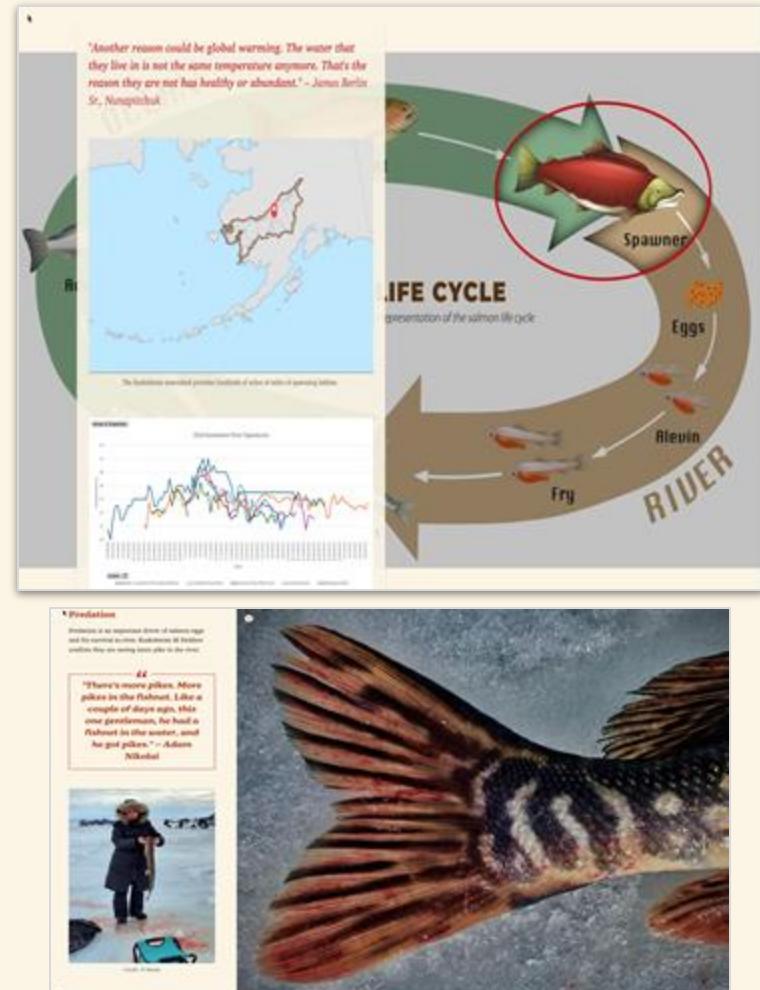
LESSONS LEARNED

Traditional Teachings

We are taught by our Elders many ways to respect salmon, as well as the land and river, so we make sure salmon keep returning to our river. Here are eight key traditional teachings of salmon stewardship taught across the Kuskokwim.

1. Be ready for the arrival of salmon.
2. Work together. Every family member has a role to play.
3. Do not pollute the water. Take care of the ecosystem.
4. Respect the salmon you catch, and take care of it so it does not spoil.
5. Do not waste any edible part of the salmon. Make sure to properly dispose of what cannot be eaten and to carefully clean up your cutting station.
6. Share your harvest, especially with those in need.
7. Put away the fish that is needed for Winter.
8. Listen to your Elders, and when you become an Elder, share these teachings with future generations.

SALMON LIFECYCLE





Collection

Our Salmon Means Life

Storymap and Map Viewer Collection from the Lenfest Kuskokwim River Project

KRITFC/OC
January 14, 2025

Get started

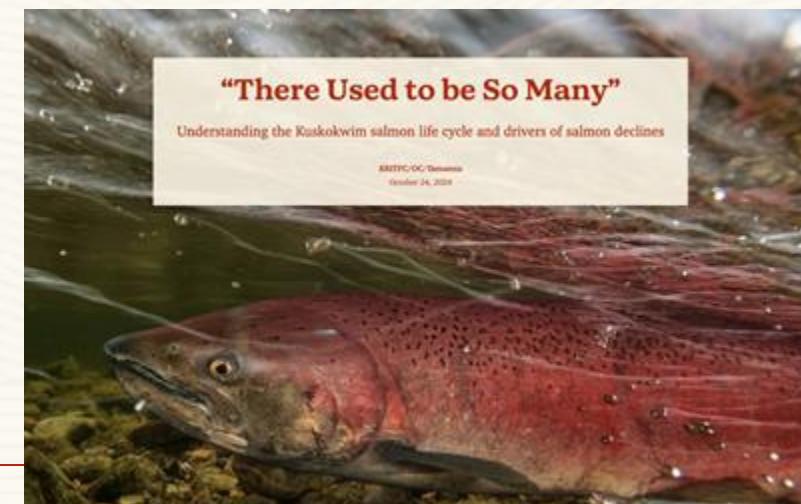
"To us our salmon means life. It represents food. Food, and it's part of your culture. From our parents' and grandparents' time, they said that everything, practically everything, salmon, birds, and the wildlife, used to be lots in the early years."

– John W. Andrew, Kwethluk

Welcome to the Kuskokwim River. Meandering 700-plus miles from the Bering Sea through swaths of tundra and boreal forest into the mountainous passes of the Alaska Range, the Kuskokwim is the first and final channel for the lifeblood of the 33 Indigenous communities residing along its banks: Pacific salmon.

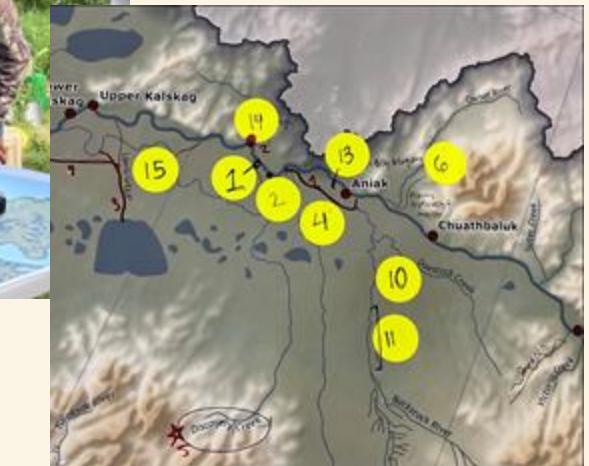
The Kuskokwim River Inter-Tribal Fish Commission, Ocean Conservancy, and University of Alaska Tamamta Program invite you to learn more about the people and salmon of the Kuskokwim River in this StoryMap collection.

This collection was produced with funding from the Lenfest Ocean Program.

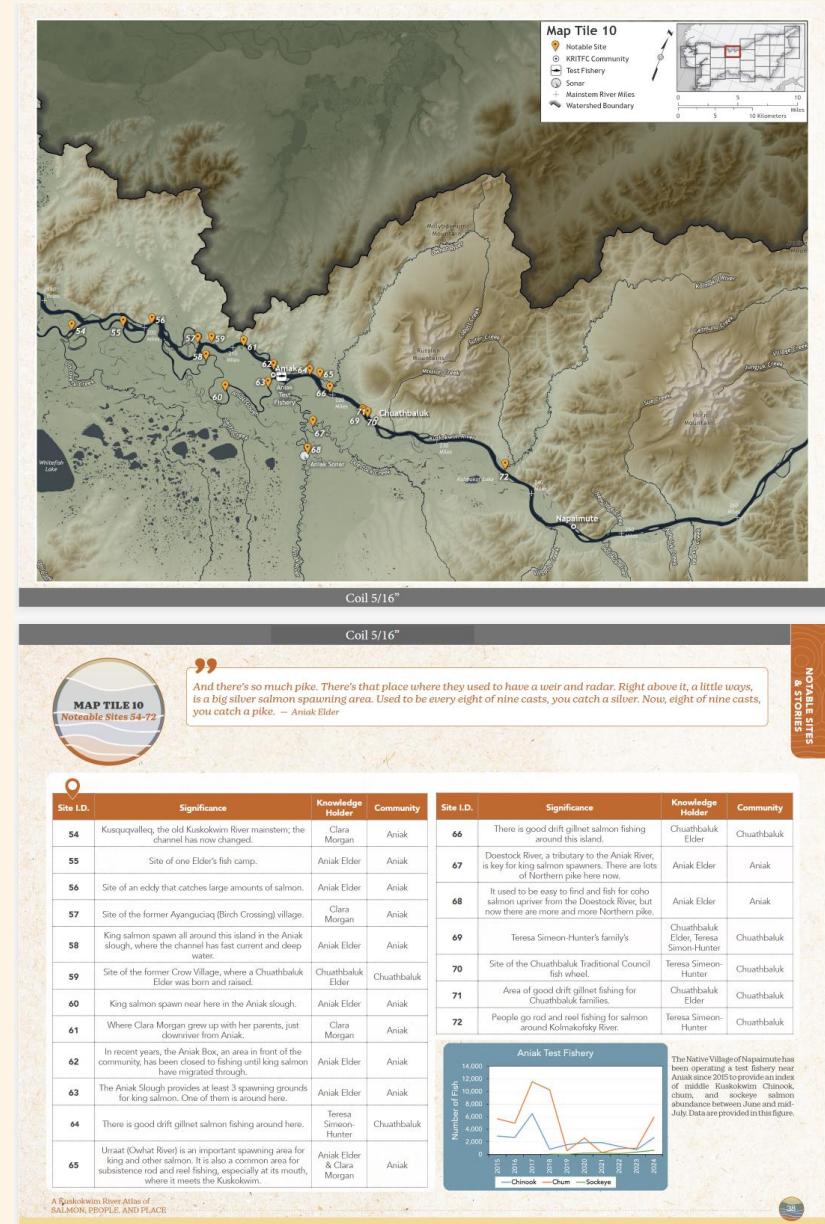
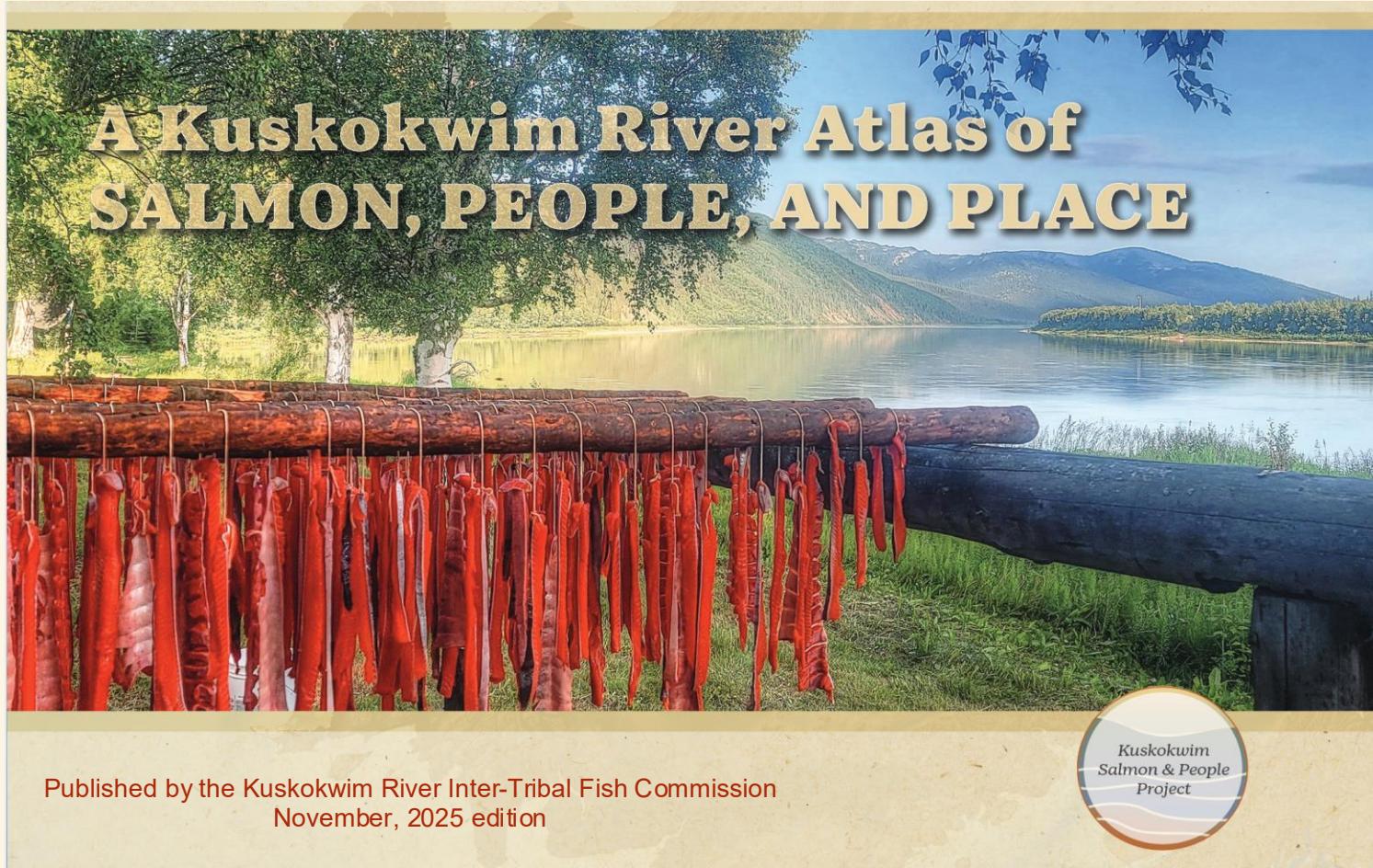


COMMUNITY-BASED MAPPING

Paper maps were used for community engagement & collecting Indigenous Knowledge



COMMUNITY-BASED MAPPING



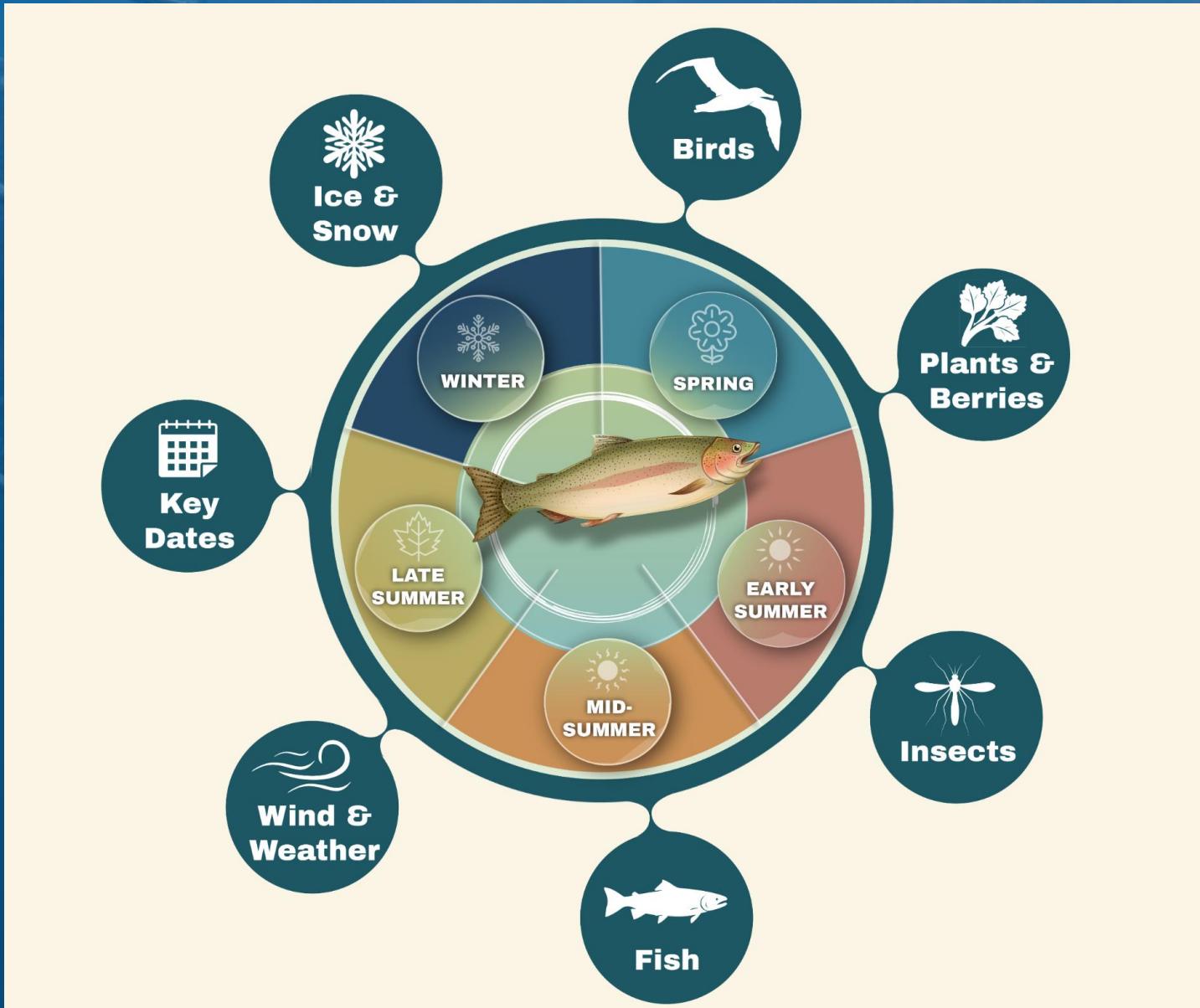
03 RESULTS



03 RESULTS

Natural Indicators

Traditional teachings rely on watching patterns and animal behaviors throughout the seasons. Elders pass this critical information on to protect the natural relationships of the river and their way of life for generations to come.





Natural Indicator Types

Select the categories below to listen and learn what it means for salmon and people of the Kuskokwim River.

BIRDS

PLANTS & BERRIES

INSECTS

ICE & SNOW

KEY DATES

WIND & WEATHER

FISH

Common redpolls



Observation

Flocks of common redpolls are abundant in the wintertime, meaning there will be lots of salmon the coming summer.

Audio

Robert Enoch, Tuntutullak

Red-necked phalaropes



Observation

Red-necked phalaropes (Imaqcaaraat) are laying their eggs which means it's time for Nunapitchuk families to move to fish camp.

Audio

Robert Enoch, Tuntutullak

Migratory birds



Observation

Migratory birds, especially geese, are arriving in a certain pattern to the lower Kuskokwim, means King salmon will arrive in the same pattern.

Audio

James Caggaq Nicori, Kwethluk

Migratory songbirds



Observation

Arrival & abundance of migratory sandpipers/songbirds (curlew, whimbrel, black turnstone, Lapland longspur) means there will be King salmon.

Audio

Noah Wise, Nunapitchuk

03 RESULTS

Drivers of salmon declines



03 RESULTS

Management Recommendations & North Pacific Ecosystem Resilience



03 RESULTS

Management Recommendations



ACCESS, EQUITY, & ACTION
COMMUNICATION & CAPACITY
ECOSYSTEM-WIDE STEWARDSHIP

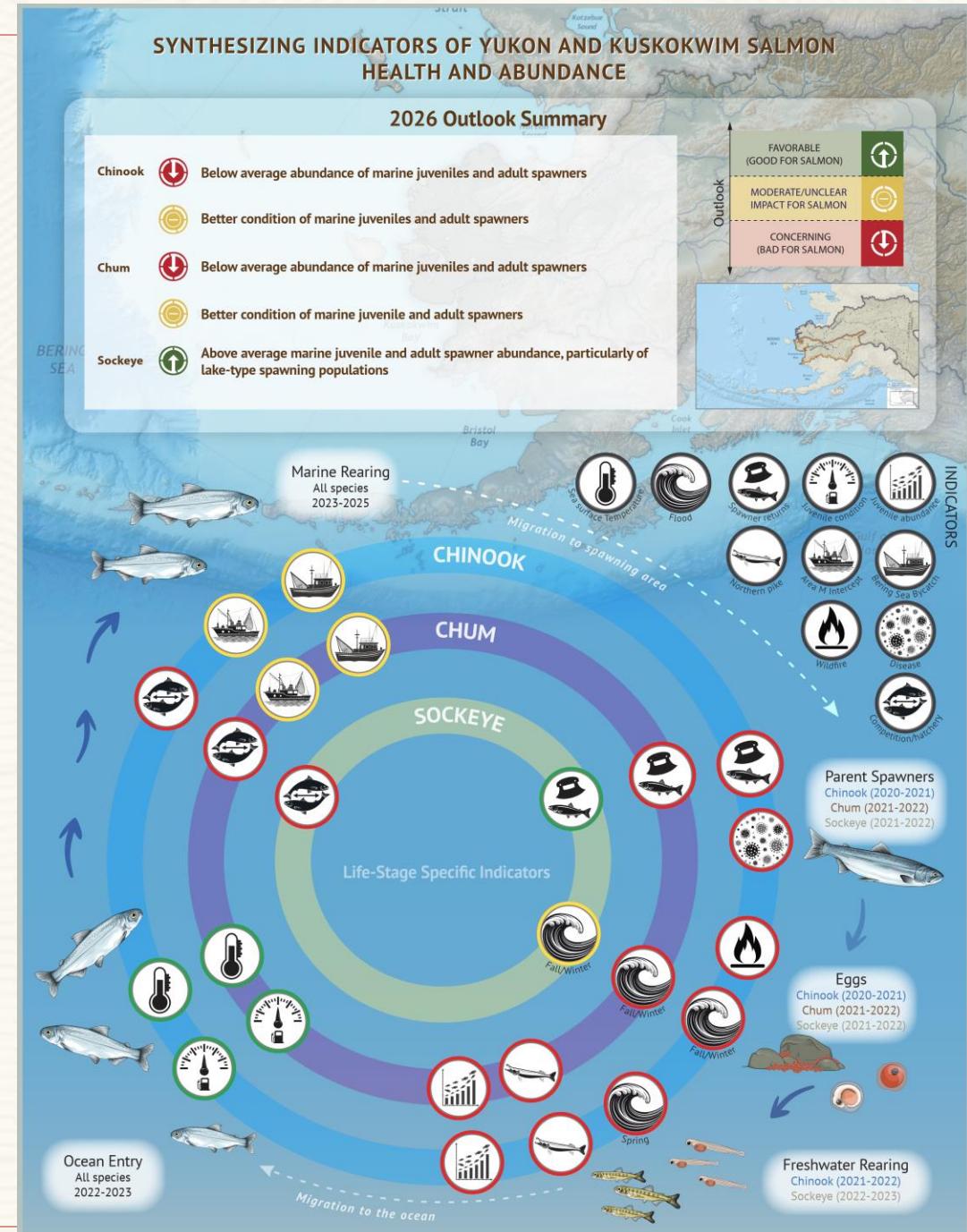


04 NEXT STEPS

SALMON CONCEPTUAL MODELS

Eastern Bering Sea NOAA Ecosystem Status Report

Scan the QR code to see the conceptual models as the **"People & Salmon of Western Alaska"** interactive touchscreen presented at the 2024 World Fisheries Congress.



“

“I believe it's very important to carry on that tradition of gathering subsistence food like this. Right now, we're in the activity of fish camping, and we're gathering salmon right now. And just the other day, we got to watch our middle grandson – Joy was teaching him how to filet a red salmon. And that grandson is six years old. And he was wanting to learn how to filet a red salmon. And Joy taught him that the other day. Seeing those types of activities just warms my heart. And I hope that they continue on doing this activity and practice what we've been doing for generations. That's what I hope for.”

– Martin Andrew, Kwethluk





Quyana, Dogedinh, Chin'an, Tsen'anh, Thank You!

Many thanks to:

Lenfest Ocean Program

Kuskokwim Knowledge Holders: Dora Esai, Dan Esai, Sammy John Sr., Nick Alexia Sr., Adam Nikolai, Marty Runkle, Mr. Runkle, Betty Magnuson, Debbie Hartman, Sophie K. Sakar, Teresa Simeon-Hunter, a Chuathbaluk Elder who wished not to be named, Clara Morgan, an Aniak Elder who wished not to be named, John W. *Aleryuq* Andrew, James *Caggaq* Nicori, Martin Andrew, Noah Wise, Jerry Wassillie Sr., James Berlin Sr., Adolph *Akuvaq* Lupie, Henry *Ungell'aq* Lupie, Robert *Kikikaaq* Enoch, Anna C. Tiday, and an anonymous Knowledge Holder in Tuntutuliak.