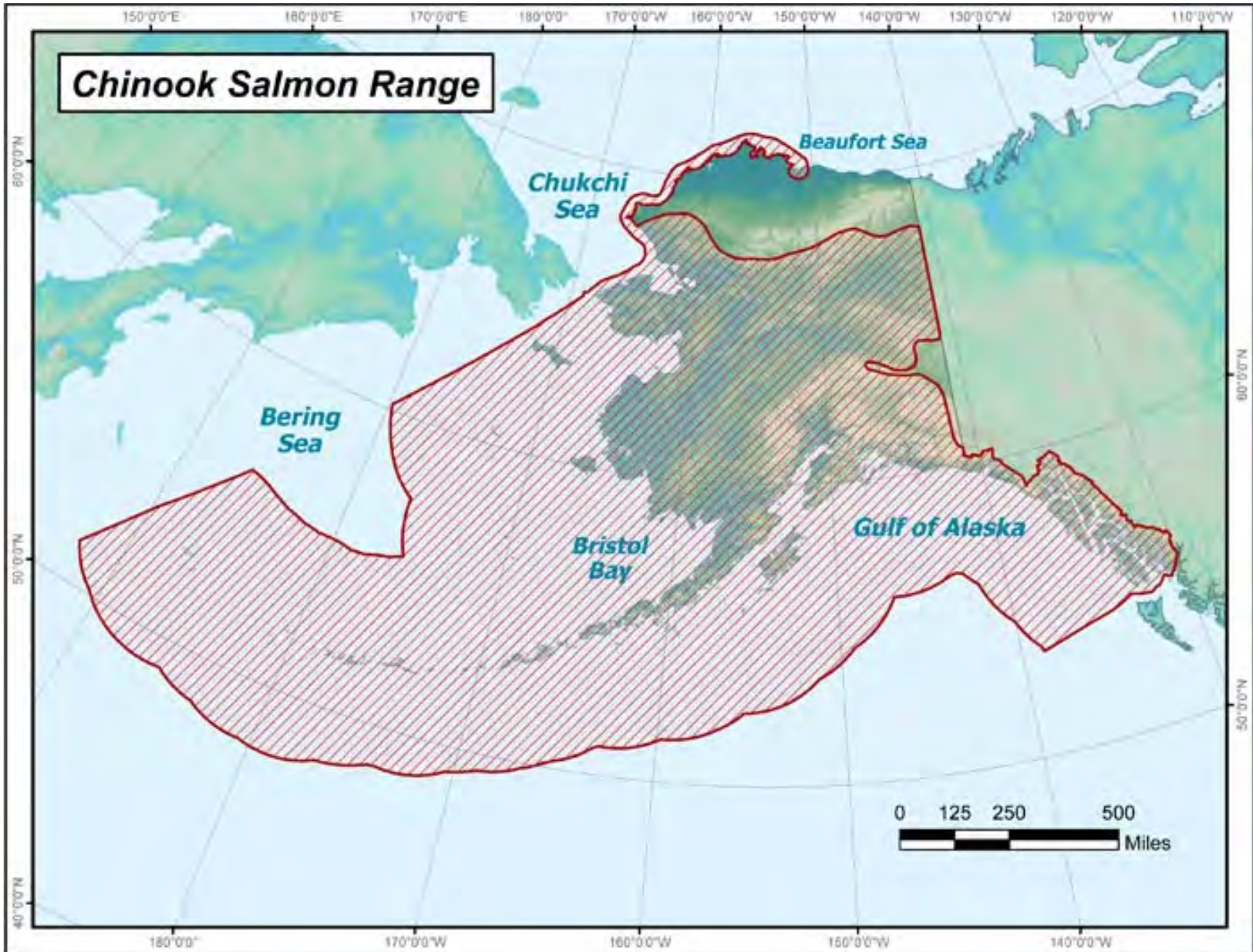




Managing Salmon and Food Security Among Yukon River Drainage Communities

Chief Michael Stickman
Dr. Annette Watson
Arctic Athabaskan Council

Chinook Salmon Range





Pacific Salmon Treaty
escapement goals= 43,500
Chinook

Map courtesy of Ryan Snow, ADF&G.

Yukon River Drainage

Larger than the US state of Texas

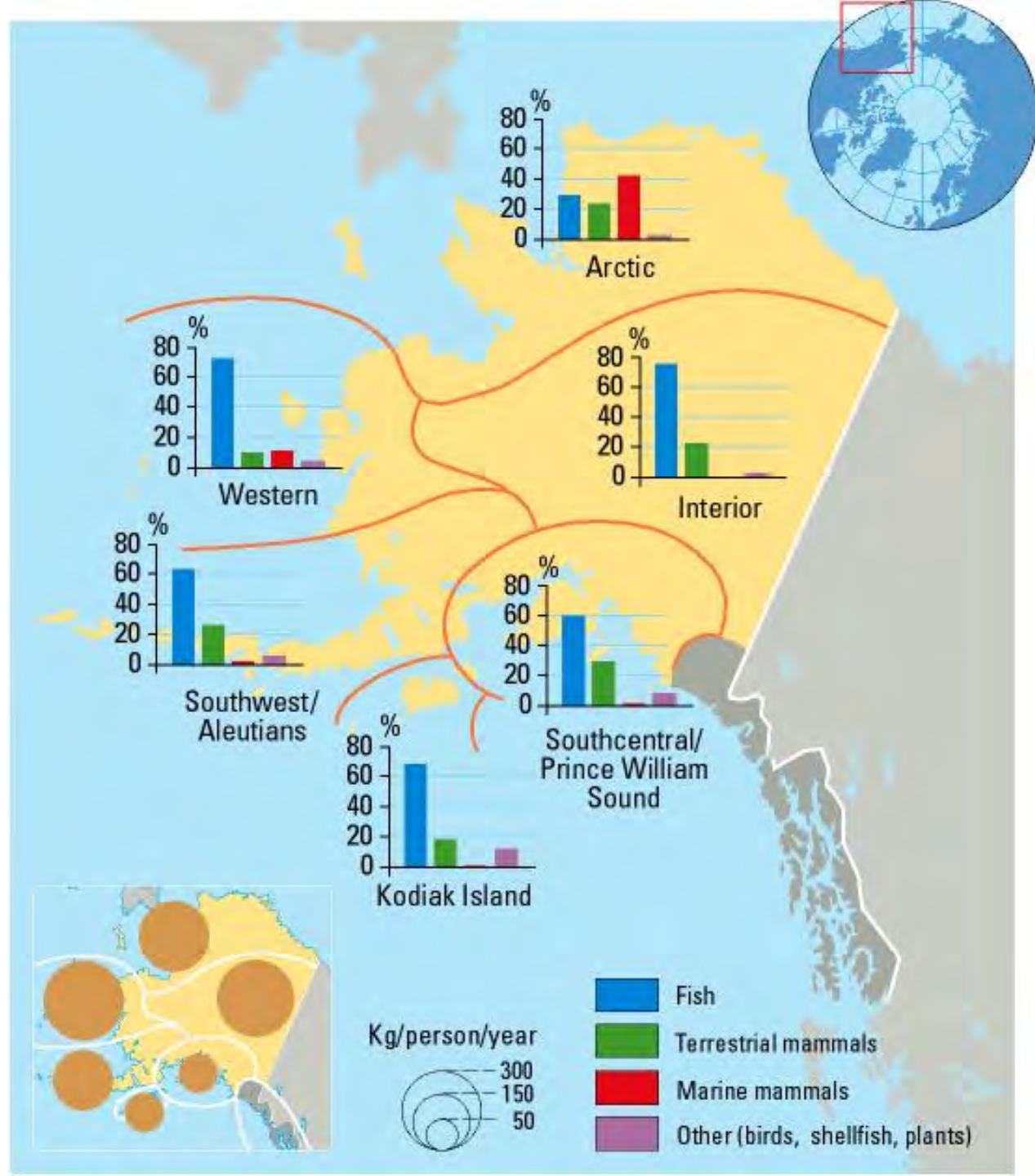
Only one road crosses the 1,980 miles of the Yukon River

Only one dam—outside of Whitehorse, YT

Hosts the longest salmon migration in the world



Subsistence Resource Use



Sources : Robert J. Wolfe, Alaska department of fish and game, division of subsistence, Juneau, Alaska.

Published in : AMAP Assessment Report : Arctic Pollution Issues. Arctic Monitoring and Assessment Programme (AMAP), Oslo, Norway, 1998.

Figure number : 5.5

Salmon Peoples of Arctic Rivers













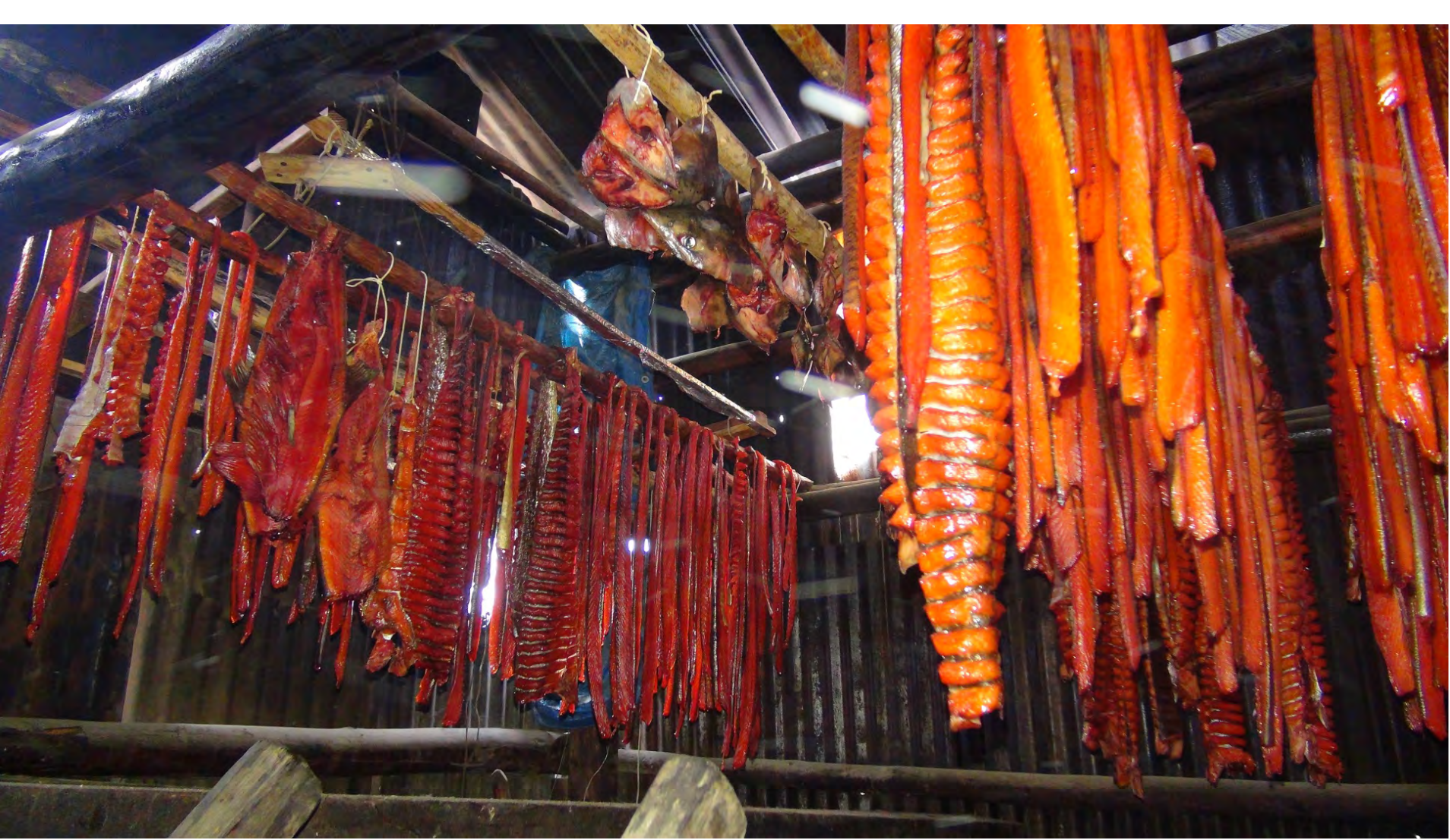






















Commercial interests contribute to Food Security



Summer chum commercial harvest needed in these communities too...
...but were closed for 20 years

Provides the community with opportunities to get cash for other
subsistence needs (gas, oil, ammunition and equipment/gear, etc).



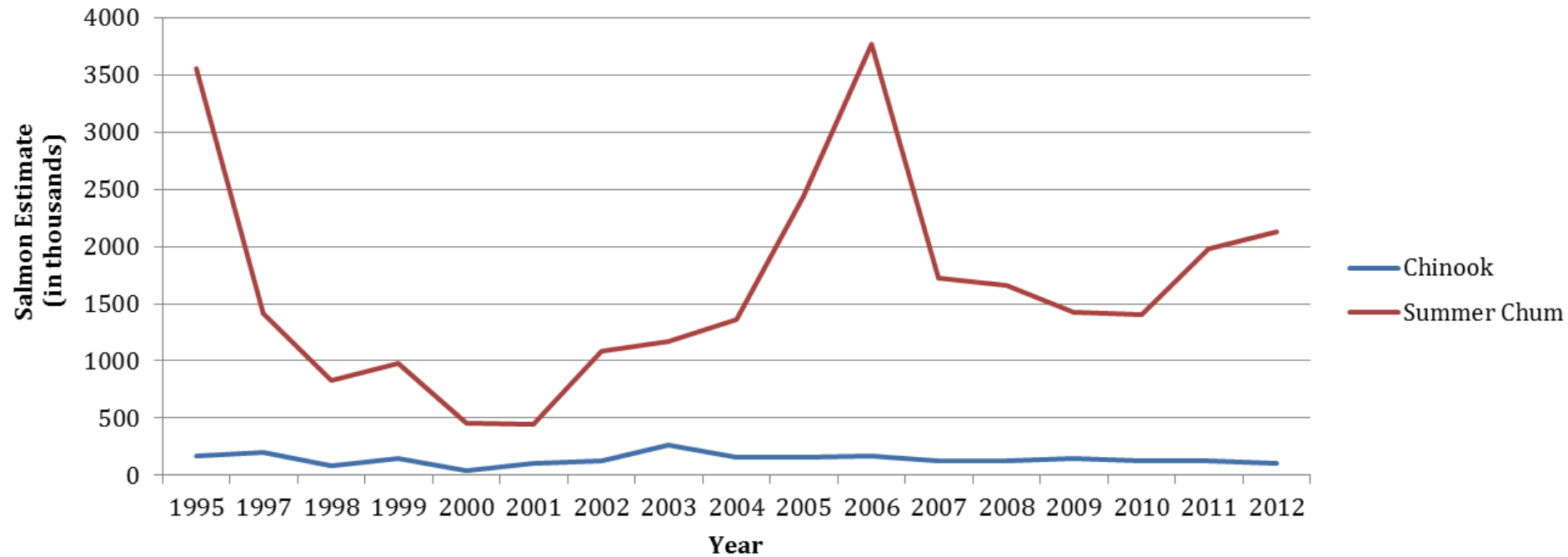
Chinook in Yukon River Drainage
have rapidly declined since early 2000s

Oral history notes chinook large enough to stop a
basket from turning over on a fishwheel

Major size declines in recent years;
Age class for 8yr olds, 7 yr olds decimated

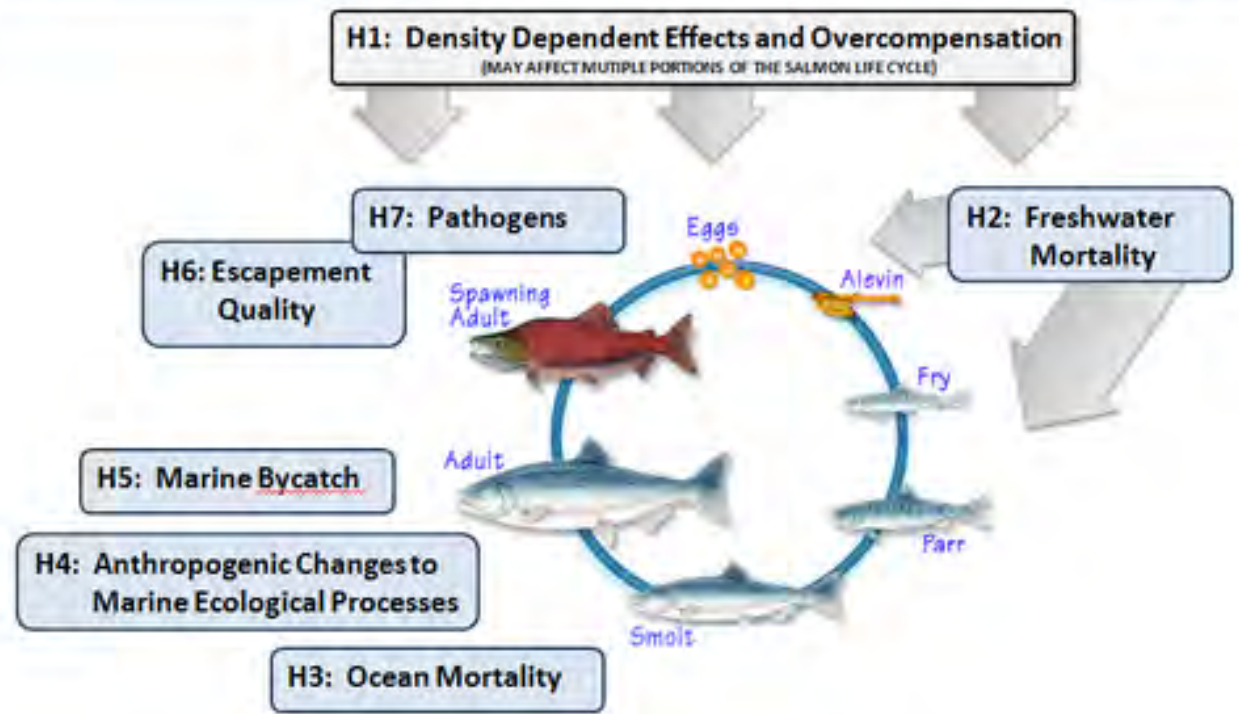
Chinook from mid-1990s

Pilot Station passage estimates of Chinook Salmon (*Oncorhynchus tshawytscha*) and Summer Chum Salmon (*Oncorhynchus keta*) in the Yukon River Drainage



Source: ADF&G, 2013

Seven hypothesized driver of declines addressing different portions of the Chinook Salmon Life Cycle



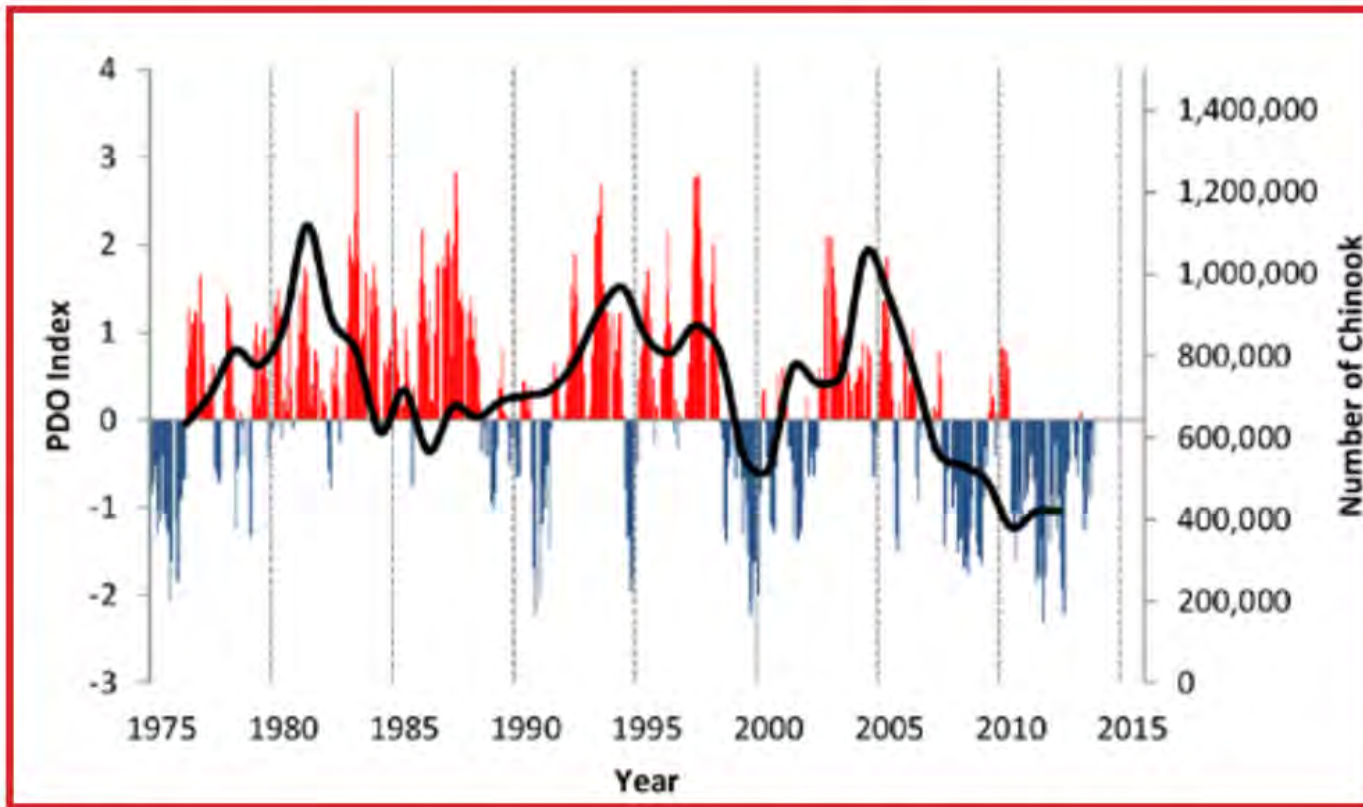


Figure 4. — Pacific Decadal Oscillation (PDO) climate data and the northern index of abundance for 11 Chinook salmon stocks in Alaska and northern British Columbia (BC).

ADF&G, "Chinook News" Summer 2014



One eddy below Nulato used to produce up to 800 kings a day, where Eddie Hildebrand and other families had a net. This was enough to feed two villages. Now the same spot, not more than 20 fish a day.

The river is changing, related to permafrost/erosion; other eddies have also declined in their production....



“competition with ocean fishing” in the Bering Sea

Bycatch 2007 from the pollock fishery: over 100,000; over 47% were genetically connected to Yukon.



Subsistence harvest of Chinook is only 1% of the harvest, 55,000 fish
Yet **food security** is threatened for Arctic communities....



Allakaket, far up the Koyukuk River=Food security in crisis, in part because of decline of Kings

Summer 2014



Indigenous peoples along the drainage have twice ensured escapement goals of the Pacific Salmon Treaty was met:

5 years ago, fishers agreed to let the first pulse go by...

This year, escapement goals were met because new Inter-Tribal Fish Commission participants agreed on a moratorium for the whole run

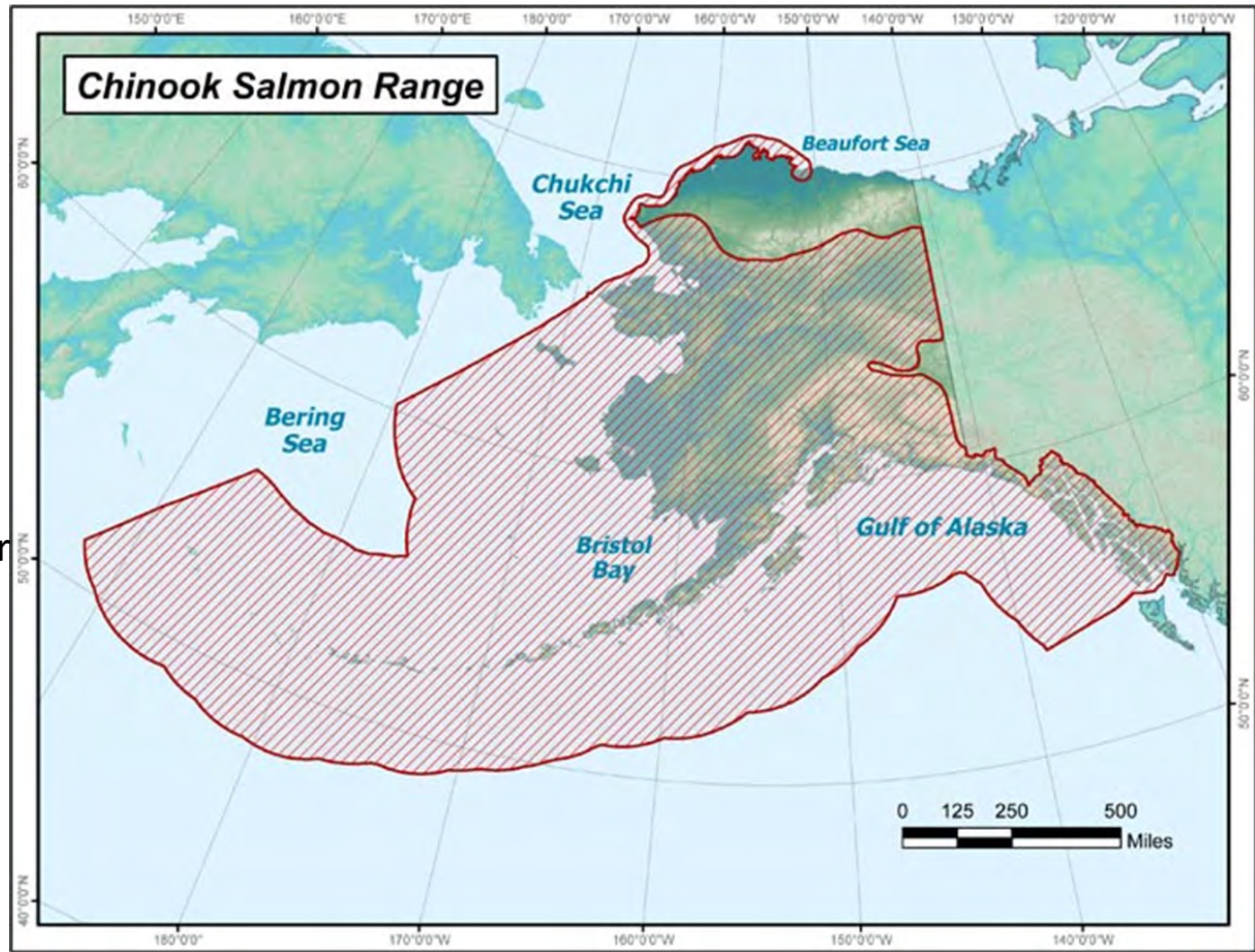


This August: shifting to other species, like sheefish and silver chum salmon—but that impedes on labor required for the moose season

Fractured
management and
monitoring:

NOAA manages
bycatch;

ADFG manages in-river
fisheries under MSY
principles that only
count numbers, not
quality





Managing for food security is not just about managing the numbers of fish
—it is about the quality of the harvest.

It is also about managing one's labor, and managing a community/individual identity—
There are many “Salmon peoples” of Arctic Rivers whose livelihoods are changing

Questions?

