

Alaska Native Subsistence Life Ways Rely on Healthy Ocean Ecosystems

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- For millennia, Alaska Native survival depended upon the bountiful resources of land and sea.
- Natives hold great reverence for the animals, land and sea.
- Native societies possess detailed traditional knowledge of animals and the environment.
- Traditional Knowledge and Wisdom is required for successful hunting, fishing and gathering.

Agayulirararput: Yup'ik Eskimo Way of Making Prayer



John McIntyre performing with his mask, which tells of the shaman who foretold the coming of the first white people.

Photo by James H. Barker

- Drumming and dancing are part of a complex spiritual life which honors the beings that make life possible in the Arctic.
- Immersed in the wilderness of Creation, one becomes increasingly aware of the Creator over a life-time of living the hunting, fishing and gathering life ways.
- This acute awareness conveys the sense that the Creator has established a delicate balance in nature to sustain the web of life.

Social Role of Subsistence Activities



Pulling a Beluga Whale onto Shore, Black River
Fish camp 1980.

Photo by James H. Barker.
Always Getting Ready

- In subsistence societies it is the *relations among people* that wildlife harvesting generates and sustains.
- Fish and wildlife harvesting are critical for the socialization of children, linking generations.
- Social values reinforce the proper stewardship of land and sea resources.
- Alaska Natives maintain cultures of living in harmony with the animals, land and sea.

Economic Aspects of Subsistence



The red globe represents the earth, and the three holes the Yukon, Kuskokwim, and Nushagak Rivers to which the power of the shaman forces the salmon to return.

Fienup-Riordan, Ann. 1996. *Agayuliyararput: Our Way of Making Prayer*. Seattle: University of Washington Press

- Required tools: \$230M is spent annually on fish nets, rifles, snow machines, boats, outboards, trucks, equipment and supplies for subsistence activities.
- Subsistence users would pay up to \$1.7 billion annually to continue hunting, fishing, and gathering.
- About \$40M dollars in retail purchases are made by Alaska tourists annually for Native arts made from subsistence byproducts.

University of Alaska Anchorage
Institute of Social and Economic Research
What's the Economic Importance of Alaska's Healthy Ecosystems?
Steve Holt March 2001

Impacts of Climate Change



US Dept. Of Interior

- Thinning of sea ice and increased open-water roughness, have made hunting more difficult, more dangerous, and less productive.
- Reduced snow cover, and thawing of permafrost all obstruct travel to harvest wild food.
- Long term ecosystem shifts displace the resources available for subsistence, requiring communities to change their practices or move.

Climate Change Impacts on the United States
The Potential Consequences of Climate Variability and Change
Published in 2000

Impacts of Contaminants



Fiona Siobhan Owletuck
4 months old
May 2001

- Pollutants are appearing at elevated levels in air, water, ice and sediment in Alaska's Arctic.
- Pollutants concentrate in the organs of fish and wildlife.
- They pose risks to people who eat whales, seals, walrus, and fish.
- Fetuses and nursing babies are most vulnerable to the effects of contaminants due to their different physiology and metabolism.

"Contaminants in Alaska: Is America's Arctic at Risk?"
September 2000

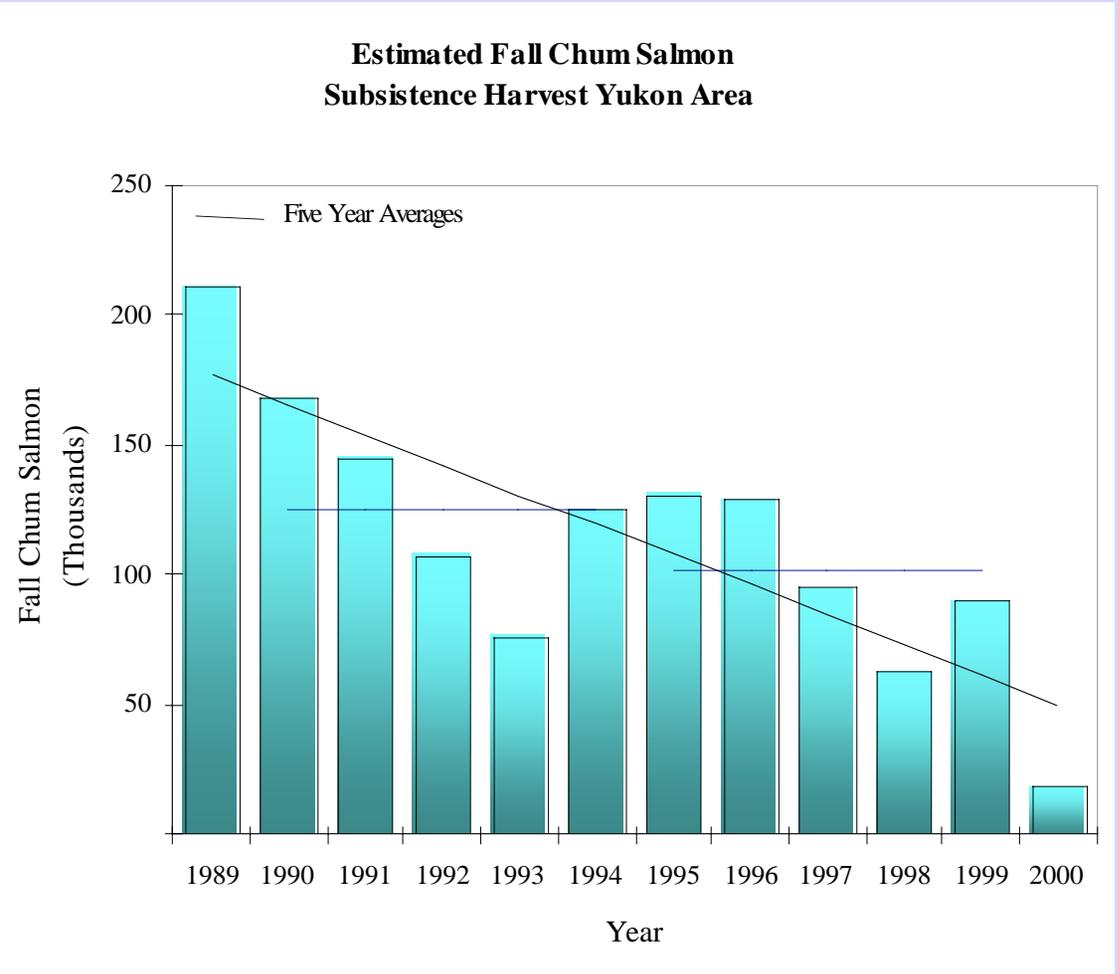
Commercial Fishery Declines

- Bering Sea pollock fisheries:
 - Aleutian Basin (Donut Hole) collapsed and CLOSED 1993
 - Bogoslof Area CLOSED 1992
 - Aleutian Islands: a fraction of its 1980 population CLOSED 1999
- Bering Sea Crab fisheries:
 - Bristol Bay red king crab: population crashed in 1981 CLOSED '94-'95
 - Bairdi tanner crab: overfished CLOSED 1996
 - St. Matthew blue king crab: overfished CLOSED 1998
 - Opilio crab: overfished 1999 expected to CLOSE in 2002
- Kodiak Island red king crab: population crashed 1966-1971:
when the catch declined from 100M to 11M CLOSED 1984
- Gulf of Alaska shrimp fishery CLOSED mid 1980s
- Gulf of Alaska mackerel fishery CLOSED mid 1990s

Gov. Tony Knowles Declares July 2000 Western Alaska Fishery Disaster



Governor Knowles calls for a halt to the catch of king and chum salmon by-catch in the Bering Sea trawl fisheries.



Alaska Department of Fish and Game Statistics:

Year 1987	211,303 Salmon
Year 2000	18,920 Salmon

Partner Traditional Knowledge and Wisdom With Best Available Science



- Most Arctic research does not include northern aboriginal peoples' vast knowledge of the natural environment. As a result, northern research is ineffective (Sallenave 1994).
- Indigenous people of the world possess an immense knowledge of their environments, based on millennia of living close to nature.
- TK&W can provide qualitative information about species presence or absence, time and place of occurrence and abundance.
- TEK is in many instances better suited to answer scientists' many questions (Freeman 1992).

Policy Recommendations:

- Recognize that Alaska Natives are part of the oceans ecosystems and have been for millennia;
- Researchers consult with Alaska Natives through the partnership of Traditional Knowledge and Wisdom (TK&W) on an equal footing with conventional science;
- Implement an ecosystem-based management system which accounts for the effect of fishing on other species, habitat and condition of the targeted species;
- provide incentives that avoid bycatch or minimize the mortality of bycatch;
- minimize adverse impacts on essential fish habitat from fishing;
- Any research and management initiatives need to regard Alaska Native subsistence life ways as sacrosanct.