

# Pacific Salmon in the Rapidly Changing Arctic: Exploring Local Knowledge and Emerging Fisheries in Utqiagvik and Nuiqsut, Alaska

Courtney Carothers,<sup>1,2</sup> Todd L. Sformo,<sup>3,4</sup> Shelley Cotton,<sup>1</sup> John C. George<sup>3</sup> and Peter A.H. Westley<sup>5</sup>

## APPENDIX 1

TABLE S1. List of thematic codes and counts of occurrences in qualitative interview data.

Primary code	Secondary code	Count of occurrences (Nuiqsut)	Count of occurrences (Utqiagvik)	Total
Salmon knowledge	Abundance	43	55	98
Salmon knowledge	Distribution	43	17	60
Salmon knowledge	Name/ID	34	33	67
Salmon knowledge	Run timing	31	37	68
Salmon knowledge	Spawn	18	23	41
Salmon knowledge	Species interactions	0	2	2
Salmon use	Cultural transmission	1	18	19
Salmon use	Fishing locations	81	70	151
Salmon use	Fish processing	9	27	36
Salmon use	Gear	24	51	75
Salmon use	Preferences	35	32	67
Salmon use	Preparation	23	28	51
Salmon use	Selling	9	16	25
Salmon use	Sharing	18	51	69
Salmon species	Chum	33	57	90
Salmon species	Chinook	22	47	69
Salmon species	Pink	27	53	80
Salmon species	“Silver”	7	25	32
Salmon species	Sockeye	7	17	24
Subsistence fishing	Fish camp	33	34	67
Subsistence fishing	Fish quality	6	10	16
Subsistence fishing	History	70	57	127
Subsistence fishing	Learning	7	13	20
Subsistence fishing	Motivation	41	79	120
Subsistence fishing	Non-salmon species	83	117	200
Environmental change	Access to resources	14	7	21
Environmental change	Breakup	8	14	22
Environmental change	Erosion	9	8	17
Environmental change	Freeze-up	9	9	18
Environmental change	Ice conditions	9	8	17
Environmental change	Normal/no change	8	4	12
Environmental change	Outside info-climate	4	3	7
Environmental change	Permafrost	2	2	4
Environmental change	Travel	5	10	15
Environmental change	Unusual species	9	19	28
Environmental change	Water levels	17	5	22
Environmental change	Weather change	18	20	38
Socioeconomic factors	Development	29	16	45
Socioeconomic factors	High cost of subsistence	9	7	16
Socioeconomic factors	Jobs/employment	6	7	13
Cultural dimensions	Elders	29	28	57
Cultural dimensions	Gender	2	7	9
Cultural dimensions	Iñupiaq	3	16	19
Cultural dimensions	Lifestyle change	23	25	48
Cultural dimensions	Spirituality/prophesy	5	3	8
Cultural dimensions	Youth	25	25	50
<b>Totals:</b>		<b>948</b>	<b>1212</b>	<b>2160</b>

<sup>1</sup> College of Fisheries and Ocean Sciences, University of Alaska Fairbanks, 1007 W. 3rd Avenue, Suite 100, Anchorage, Alaska 99501, USA

<sup>2</sup> Corresponding author: [clcarothers@alaska.edu](mailto:clcarothers@alaska.edu)

<sup>3</sup> Department of Wildlife Management, North Slope Borough, PO Box 69 Utqiagvik, Alaska 99723, USA

<sup>4</sup> Institute of Arctic Biology, University of Alaska Fairbanks, 902 N. Koyukuk Drive, Fairbanks, Alaska 99775, USA

<sup>5</sup> College of Fisheries and Ocean Sciences, University of Alaska Fairbanks, 2150 Koyukuk Drive, Fairbanks, Alaska 99775, USA