

**Appendix 1.** Data sources used to assess adaptive capacity among Alaska North Slope communities.

Adaptive capacity domain	Indicator	Measure	Units	Data source
Physical geography	Remoteness	Cost of commercial flight to urban area	\$ per person, round trip	1
	Remoteness	Scheduled air travel time to urban center	Minutes, round trip	1
	Remoteness	Air service quality to urban center, round trip	Number of flight segments, round trip	1
	Remoteness	Daily jet service to community	Y/N	2
	Remoteness	Ice road link to road system	Y/N	2
Ecosystem health	Ecological diversity	Harvest diversity, main subsistence foods (Simpson diversity index)	0 (no diversity) to 1 (infinite diversity)	3
	Development disturbance	Oil and gas activities near community	Development, exploration, none	4
	Harvesting opportunities	Number of whaling seasons annually with a harvest	none, spring or fall, spring and fall	5
Physical infrastructure	Housing quality	Crowded housing conditions	% households living with > 1 person/room	6
	Housing quality	Drinking water and sanitation	% of households with complete plumbing	6
	Housing cost	Housing cost as percentage of household income	% spending > 40% of income for housing	6

Adaptive capacity domain	Indicator	Measure	Units	Data source
	Telecommunications access	Fiber optic cable to community	Y/N	7
	Health care facilities	Hospital in community	Y/N	2
	Public safety facilities	Jail in community	Y/N	8
Human capital	Educational attainment	Any secondary education (post high school), Alaska Native people	% persons age 25 and older, 2005-2017	6
	Educational investment	High school graduation	% graduating within 5 years, 2009-2017	9
	Education investment	Proficiency on standardized reading, writing, math, and science academic achievement tests	Ave.% proficient, 2009-2013	9
Social and cultural capital	Investment in social capital	Sharing of subsistence foods among households	% HHs sharing within + % sharing outside community	10
	Investment in cultural capital	Participation in subsistence harvesting activities	% HHs hunting + % fishing	10
	Investment in cultural capital	Investment in production of subsistence cultural assets	% HHs making sleds, boats, or clothes	10
	Social and cultural capital	Whaling crews organized in the community	Whaling captains per 1000 Iñupiat pop.	11
	Access to Indigenous knowledge	Mostly Iñupiat or both Iñupiat and English spoken at home	% of Iñupiaq households, 2015	10

Adaptive capacity domain	Indicator	Measure	Units	Data source
Financial capital	Diversity of cash economy	Percent employment in local government	Local gov't jobs as % of all jobs, 2001-2014	12
	Local business strength	Village corporation dividend paid in recent years	<\$2, \$2-9, \$10-20, >\$20 per share	13
	Access to capital	Commercial bank office in community	Y/N	2
Institutional capital	Formal local government	City government incorporated under state law	Y/N	2
	Cross-scale governance	Representation on subsistence co-management boards	State plus federal board representatives	14
	Public safety response	Local police officers stationed in community	Number of police officers	8

#### Data sources

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- 11 AEWC, 2018. Alaska Eskimo whaling commission in 2018. [online] URL <http://www.aewc-alaska.org/whaling-villages.html>, and ACS, 2018. Selected social characteristics in the United States in 2018. American Community Survey 5-year estimates. [online] URL <https://data.census.gov/>
- 12 ADLWD, 2017. Worker characteristics. Alaska Department of Labor and Workforce Development (ADLWD), Juneau, Alaska, USA. [online] URL <http://live.laborstats.alaska.gov/alari>
- 13 Village Corporation web sites, accessed March 21, 2019
- 14 ADFG 2018. North Slope advisory committee. [online] URL <http://www.adfg.alaska.gov/index.cfm?adfg=process.acinfo&ac=arctic> (21 March 2019) and USFWS 2018. North Slope subsistence regional advisory council members. U.S. Fish and Wildlife Service, Anchorage, Alaska, USA. [online] URL [https://www.doi.gov/subsistence/regions/ns\\_members](https://www.doi.gov/subsistence/regions/ns_members) (21 March 2019)