

Appendix 2. Data and methods used to assess adaptive capacity among North Slope communities. This file is openly available online with the formulas used to calculate ranks (Web Table 2) at Open Science Framework at <https://osf.io/gzk4f/>, reference number DOI 10.17605/OSF.IO/GZK4F. HH = household. 1 = highest, 8 = lowest.

Color key from rank order:

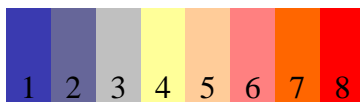


Table A2.1 Geography – data

	Minimum cost of round-trip commercial flight to urban area	Minimum time to urban center, minutes	Minimum # of flight segments to urban center, round trip	Daily jet service (Y/N)	Ice road link to road system (Y/N)
Anaktuvuk Pass	\$383	200	2.0	No	No
Atqasuk	\$673	695	2.0	No	Yes (3rd)
Kaktovik	\$473	500	2.0	No	No
Nuiqsut	\$924	420	2.0	No	Yes (closest)
Point Hope	\$710	555	2.0	No	No
Point Lay	\$936	730	1.5	No	No
Utqiagvik	\$230	300	3.0	Yes	Yes (2nd)
Wainwright	\$669	515	1.5	No	No

Table A2.2 Geography – rank

	Cost to nearest urban area	Travel time (Dept to arrival, shortest)	# of flights to get to and from an urban center	Jet	Ice Road to Urban (Y/N)
Anaktuvuk Pass	2	1	2	2	4
Atqasuk	5	7	2	2	3
Kaktovik	3	4	2	2	4
Nuiqsut	7	3	2	2	1
Point Hope	6	6	2	2	4
Point Lay	8	8	7	2	4

Utqiagvik	1	2	1	1	2
Wainwright	4	5	7	2	4

Table A2.3 Ecosystems – data

Ecosystems		Harvest diversity (Simpson diversity index)	Oil and Gas Activities near community in 2019	Number of bowhead harvest seasons with a harvest
Ecosystems	Anaktuvuk Pass	0.20	None	0
Ecosystems	Atqasuk	0.46	None	0
Ecosystems	Kaktovik	0.64	Exploration	1
Ecosystems	Nuiqsut	0.56	Development	1
Ecosystems	Point Hope	0.79	None	1
Ecosystems	Point Lay	0.74	None	1
Ecosystems	Utqiagvik	0.71	Limited	2
Ecosystems	Wainwright	0.72	Exploration	2

Table A2.4 Ecosystems – data

	Harvest diversity (Simpson diversity index)	Oil and Gas Activities near community in 2019	Number of bowhead harvest seasons with a harvest
Anaktuvuk Pass	8	1	7
Atqasuk	7	1	7
Kaktovik	5	6	3
Nuiqsut	6	8	3
Point Hope	1	1	3
Point Lay	2	1	3
Utqiagvik	4	5	1
Wainwright	3	6	1

Table A2.5 Physical infrastructure – data

	Overcrowding (more than 1 people per room)	% of households that use > 40% of income for housing	Fiber optic cable	% of HH with plumbing	Hospital	Jail
Anaktuvuk Pass	32%	12%	No	86%	No	No
Atqasuk	29%	7%	No	86%	No	No
Kaktovik	22%	9%	No	92%	No	No
Nuiqsut	45%	1%	Yes	95%	No	No
Point Hope	37%	8%	Yes	83%	No	No
Point Lay	47%	9%	No	57%	No	No
Utqiagvik	21%	5%	Yes	92%	Yes	Yes
Wainwright	33%	9%	Yes	79%	No	No

Table A2.6 Physical infrastructure – rank

	Overcrowding (more than 1 people per room)	% of households that use > 40% of income for housing	Fiber optic cable	% of HH with plumbing	Hospital	Jail
Anaktuvuk Pass	4	8	5	4	2	2
Atqasuk	3	3	5	4	2	2
Kaktovik	2	5	5	2	2	2
Nuiqsut	7	1	1	1	2	2
Point Hope	6	4	1	6	2	2
Point Lay	8	5	5	8	2	2
Utqiagvik	1	2	1	2	1	1
Wainwright	5	5	1	7	2	2

Table A2.7 Human capital – data

	Some secondary education (post high school) (2009-2017)	Graduation Rates (2009-2017)	Average percent of students proficient on academic achievement tests (2009-2013)
Anaktuvuk Pass	21%	49%	24%
Atqasuk	25%	49%	19%
Kaktovik	25%	84%	44%
Nuiqsut	17%	36%	32%
Point Hope	25%	62%	26%
Point Lay	21%	55%	25%
Utqiagvik	30%	60%	38%
Wainwright	28%	57%	37%

Table A2.8 Human capital – rank

	Some secondary education (post high school) (2009-2017)	Graduation Rates (2009-2017)	Average percent of students proficient on academic achievement tests
Anaktuvuk Pass	6	6	7
Atqasuk	3	6	8
Kaktovik	3	1	1
Nuiqsut	8	8	4
Point Hope	3	2	5
Point Lay	6	5	6
Utqiagvik	1	3	2
Wainwright	2	4	3

Table A2.9 Social and cultural capital – data

	Sum of the percent of households sharing within and outside the community, rounded	Percent of HH that hunt and fish, rounded	Make sleds, boats, or clothes	Per capita bowhead whale captains (# captains/population) * 1000	Mostly Iñupiat or both Iñupiat and English spoken in Iñupiaq households (2015)
Anaktuvuk Pass	150%	105%	18%	0	48%
Atqasuk	150%	95%	7%	0	43%
Kaktovik	150%	120%	16%	39	22%
Nuiqsut	160%	120%	28%	15	47%
Point Hope	180%	75%	18%	20	20%
Point Lay	170%	80%	12%	9	26%
Utqiagvik	150%	70%	17%	21	60%
Wainwright	150%	80%	13%	17	50%

Table A2.10 Social and cultural capital – rank

	Sum of the percent of households sharing within and outside the community	Percent of HH that hunt and fish	Make sleds, boats, or clothes	Per capita bowhead whale captains (# captains/population) * 1000	Mostly Iñupiat or both Iñupiat and English spoken in Iñupiaq households (2015)
Anaktuvuk Pass	4	3	2	7	3
Atqasuk	4	4	8	7	5
Kaktovik	4	1	5	1	7
Nuiqsut	3	1	1	5	4
Point Hope	1	7	2	3	8
Point Lay	2	5	7	6	6
Utqiagvik	4	8	4	2	1

Wainwright	4	5	6	4	2
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Table A2.11 Financial capital – data

	Percent employment in local government (2001-2014)	Village corporation dividend (\$ per share)	Bank present
Anaktuvuk Pass	72%	<\$2	No
Atqasuk	84%	<\$2	No
Kaktovik	59%	\$2-\$10	No
Nuiqsut	51%	>\$20	No
Point Hope	58%	\$2-\$10	No
Point Lay	76%	<\$2	No
Utqiagvik	55%	\$2-\$10	Yes
Wainwright	60%	\$10-\$20	No

Table A2.12 Financial capital – rank

	Percent local gov.	Village corporation dividend (\$ per share)	Bank present
Anaktuvuk Pass	6	6	2
Atqasuk	8	6	2
Kaktovik	4	3	2
Nuiqsut	1	1	2
Point Hope	3	4	2
Point Lay	7	6	2
Utqiagvik	2	4	1
Wainwright	5	2	2

Table A2.13 Institutional capital – data

	City government	Total seats on subsistence boards	Local police officers
Anaktuvuk Pass	Yes	1	1
Atqasuk	Yes	2	1
Kaktovik	Yes	2	1
Nuiqsut	Yes	2	2
Point Hope	Yes	2	2
Point Lay	No	1	1
Utqiagvik	Yes	7	8
Wainwright	Yes	1	2

Table A2.14 Institutional capital – data

	City government	Representation on subsistence boards	Local police officers
Anaktuvuk Pass	1	6	5
Atqasuk	1	2	5
Kaktovik	1	2	5
Nuiqsut	1	2	2
Point Hope	1	2	2
Point Lay	2	6	5
Utqiagvik	1	1	1
Wainwright	1	6	2