

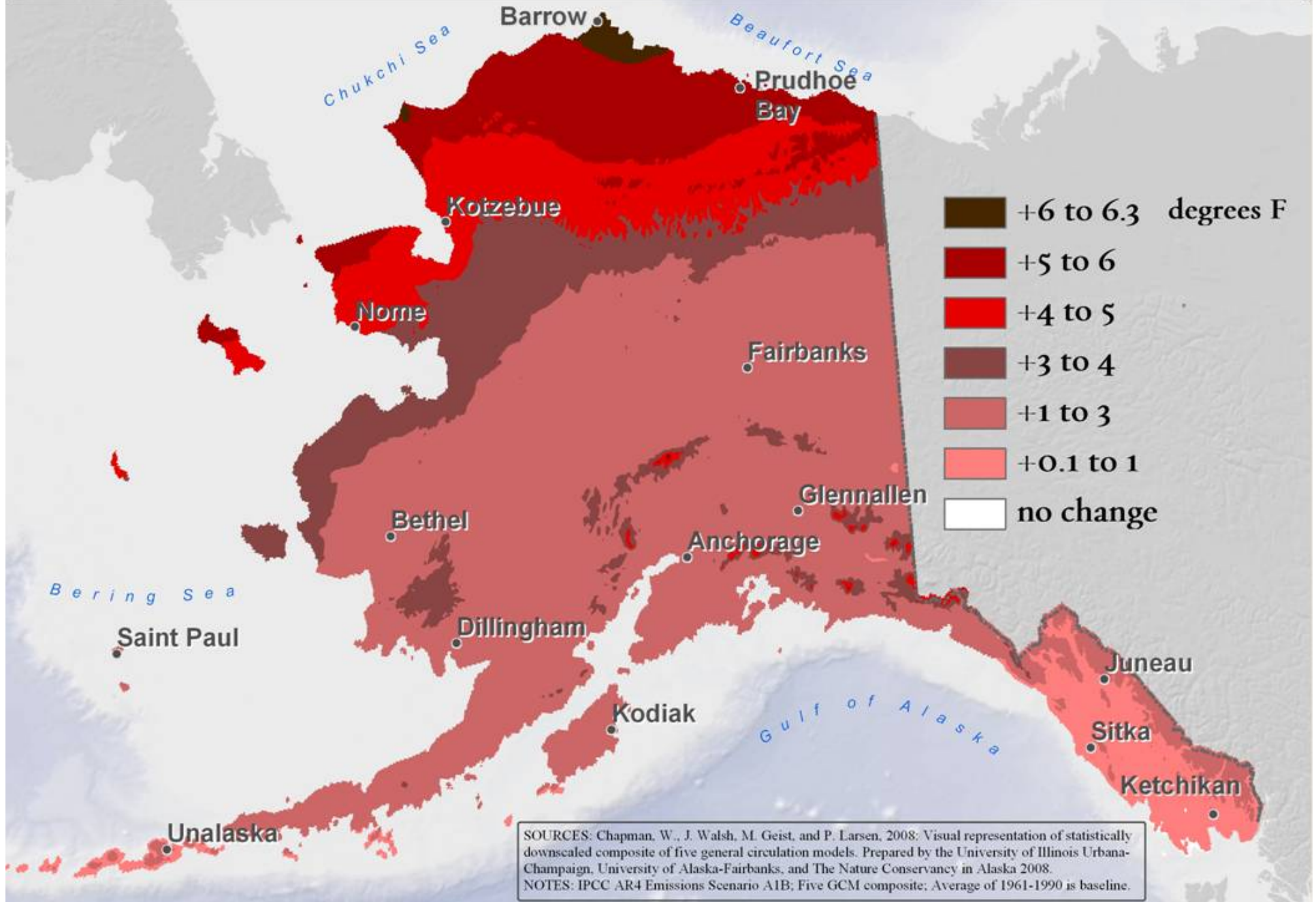
BBC Overview Socio-Economic Drivers of Change (Alaska Focus)

Amy Lauren Lovecraft

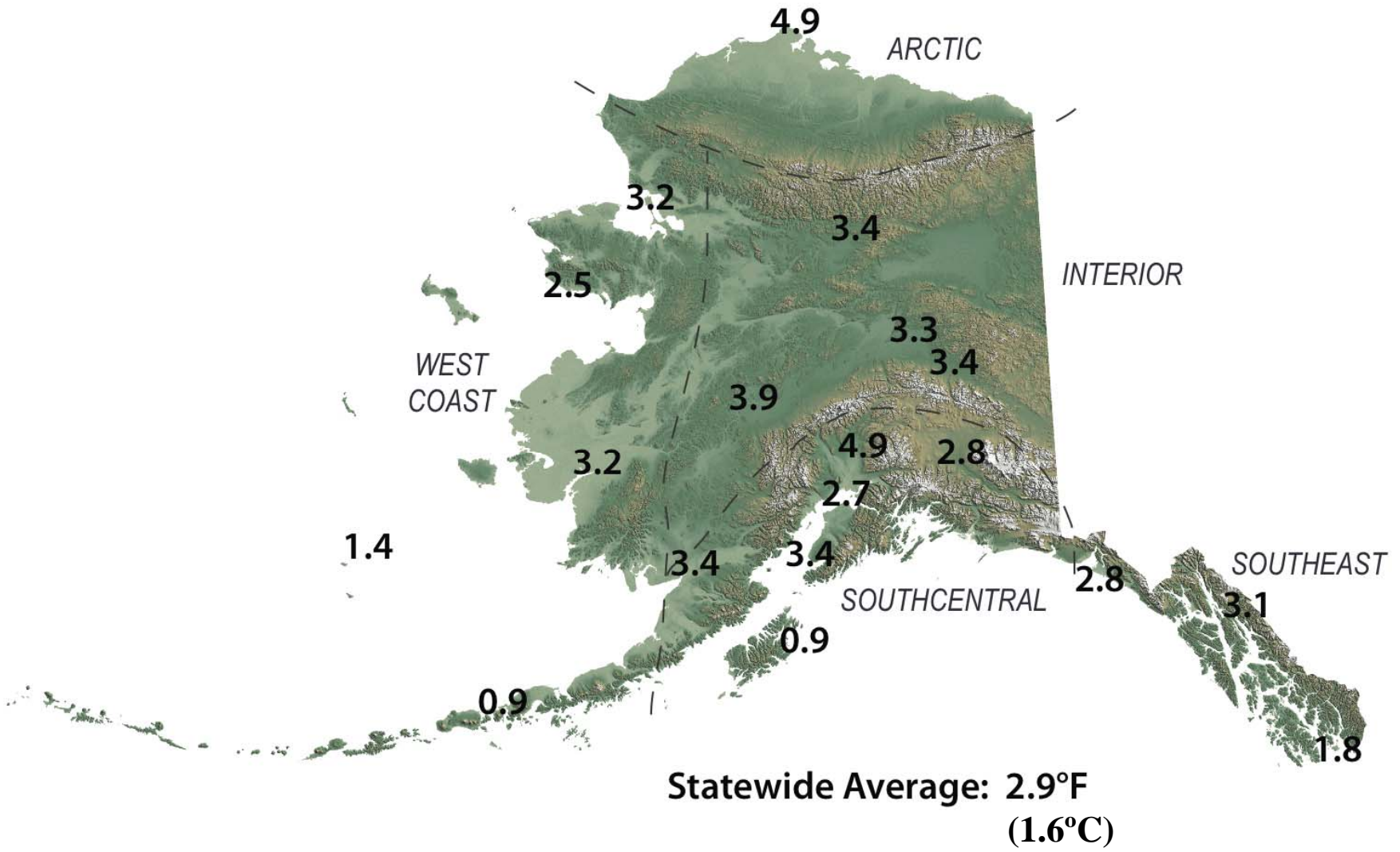
University of Alaska Fairbanks

IIASA 19 May 2014

Projected Annual Temperature Change 1961-90 to 2051-60



Total Change in Mean Annual Temperature (°F), 1949 - 2012

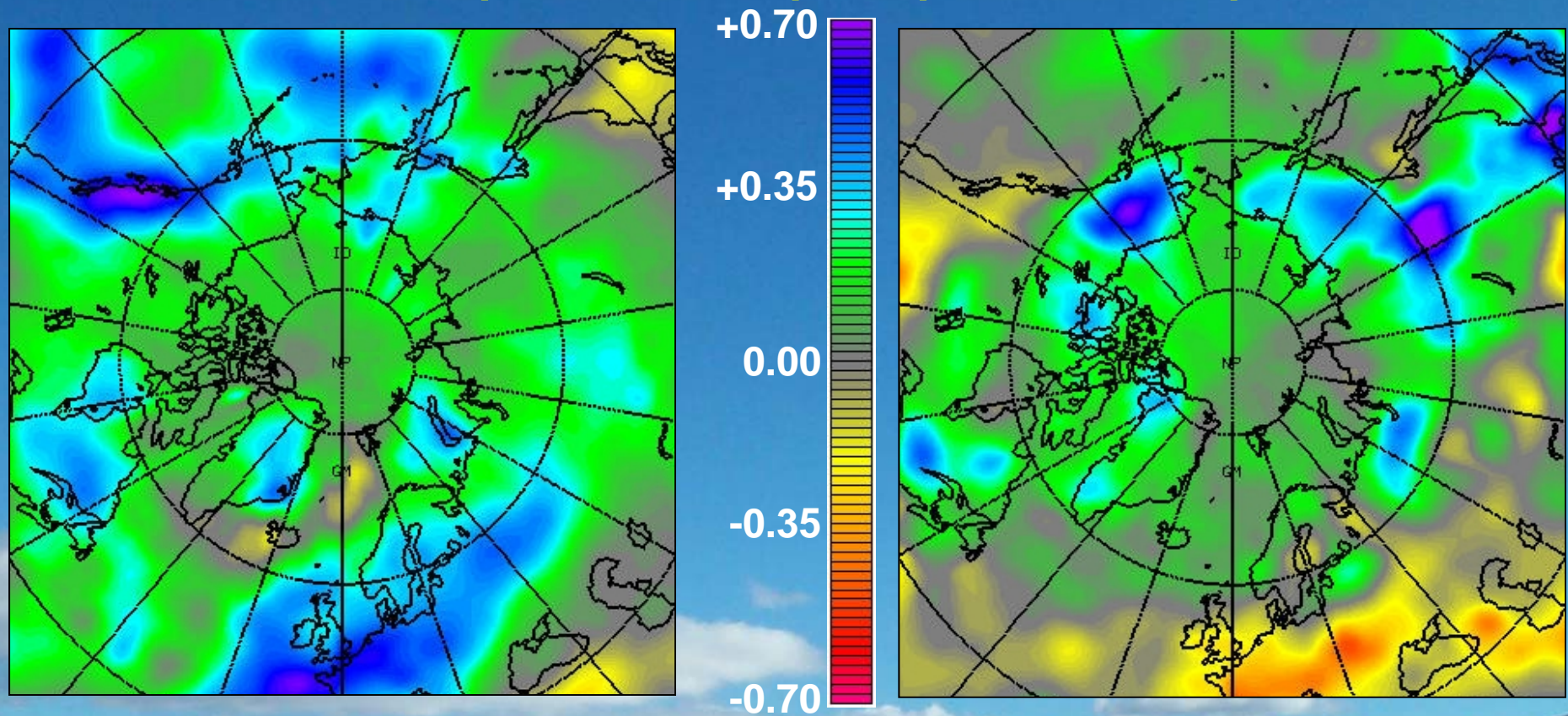


Total Change in Mean Seasonal and Annual Temperature (°F), 1949 - 2013

<i>Region</i>	Location	Winter	Spring	Summer	Autumn	Annual
<i>Arctic</i>	Barrow	7.0	4.8	3.7	5.3	5.2
<i>Interior</i>	Bettles	6.4	3.6	1.8	1.5	3.3
	Fairbanks	6.6	3.0	2.5	0.1	3.0
	Delta Junction	8.8	2.7	1.3	0.1	3.1
	McGrath	7.0	3.9	2.6	1.3	3.7
<i>West Coast</i>	Kotzebue	6.0	1.1	2.8	1.9	3.0
	Nome	3.6	2.4	2.4	0.5	2.2
	Bethel	6.0	3.2	1.8	0.0	2.8
	King Salmon	7.6	3.3	1.2	0.5	3.2
	St Paul	-0.2	0.6	2.1	1.0	0.9
	Cold Bay	1.2	0.7	1.5	0.9	1.1
<i>Southcentral</i>	Talkeetna	8.9	4.7	2.9	2.5	4.7
	Gulkana	7.8	1.8	1.0	0.0	2.6
	Anchorage	5.2	3.0	1.1	1.3	2.7
	Homer	6.0	2.9	2.8	1.6	3.3
	Kodiak	1.1	1.6	1.2	-0.4	0.8
<i>Southeast</i>	Yakutat	5.5	2.6	2.1	0.6	2.6
	Juneau	6.7	2.5	2.0	1.1	3.0
	Annette	3.8	2.1	1.7	0.3	1.9
	Average	5.5	2.7	2.0	1.1	2.8

Composite projections : IPCC/DDC models

Precipitation changes (mm/day) from (1961-1990) to (2060-2089)



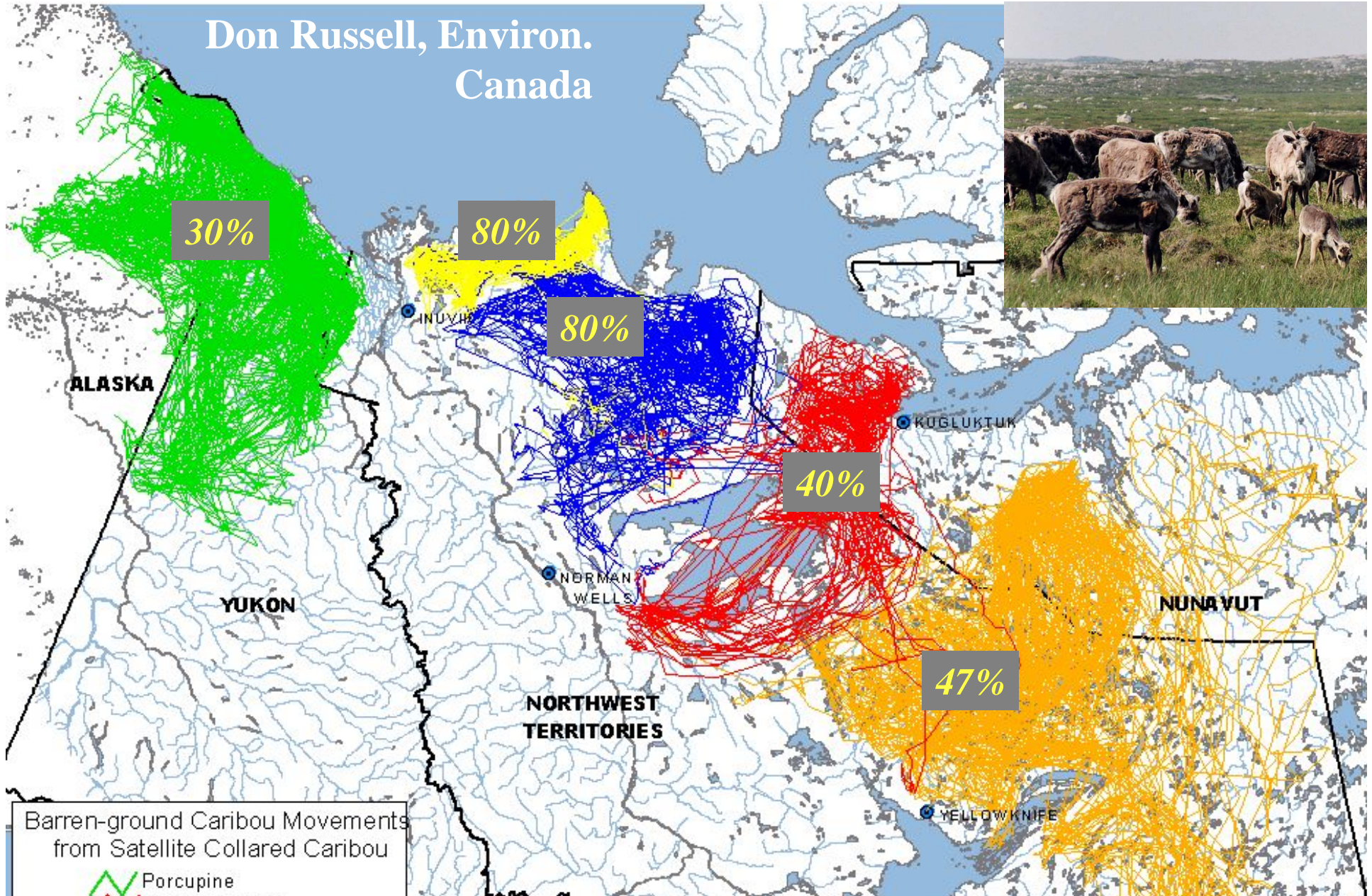
Winter

mm/day

Summer

Walsh et al., 2002. J. Climate

Don Russell, Environ. Canada



Barren-ground Caribou Movements
from Satellite Collared Caribou

- Porcupine
- Bluenose-East
- Bluenose-West
- Cape Bathurst
- Bathurst

200 0 200

Many caribou herds showing
large population declines

Alaska coastal communities' response to changing ice conditions: Resilience and adaptation - Barrow subsistence whaling

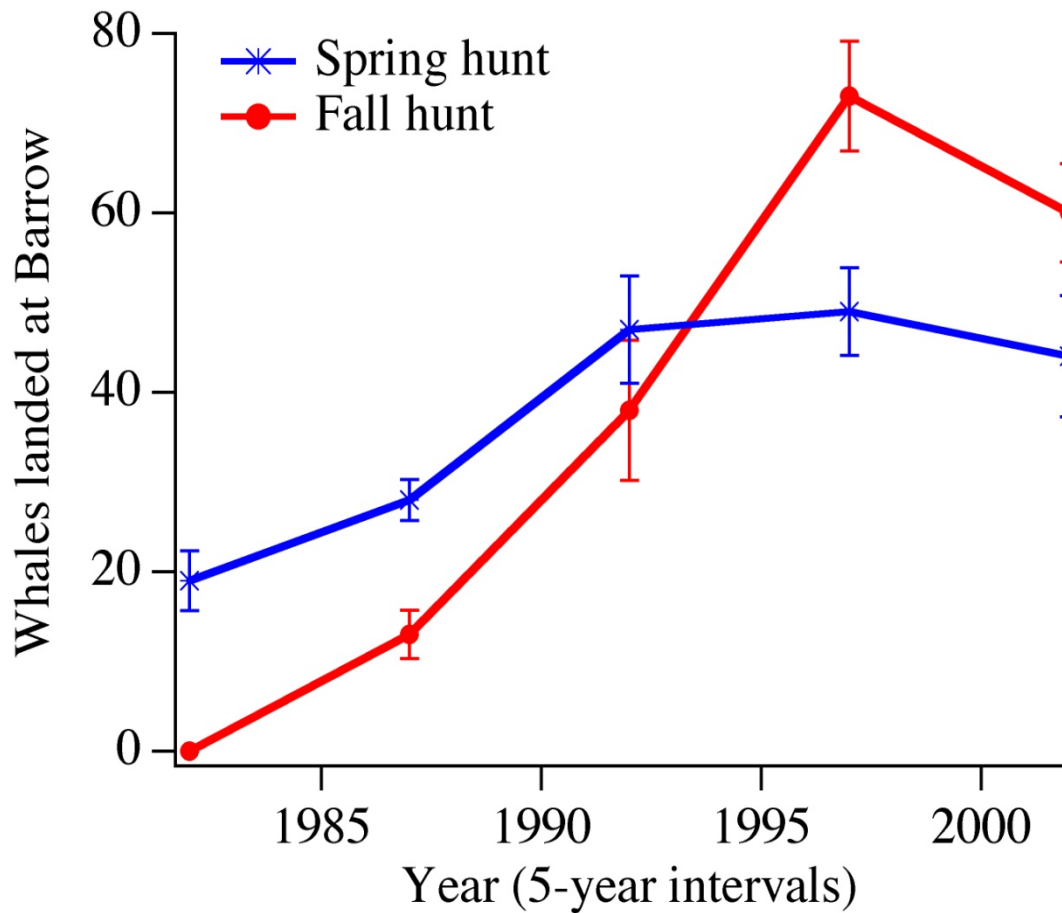


Photo © Bill Hess



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Data: Craig George, North Slope Borough Dept. of Wildlife Management

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IMPACTS OF A WARMING ARCTIC

Possible Changes in Fish Distribution

