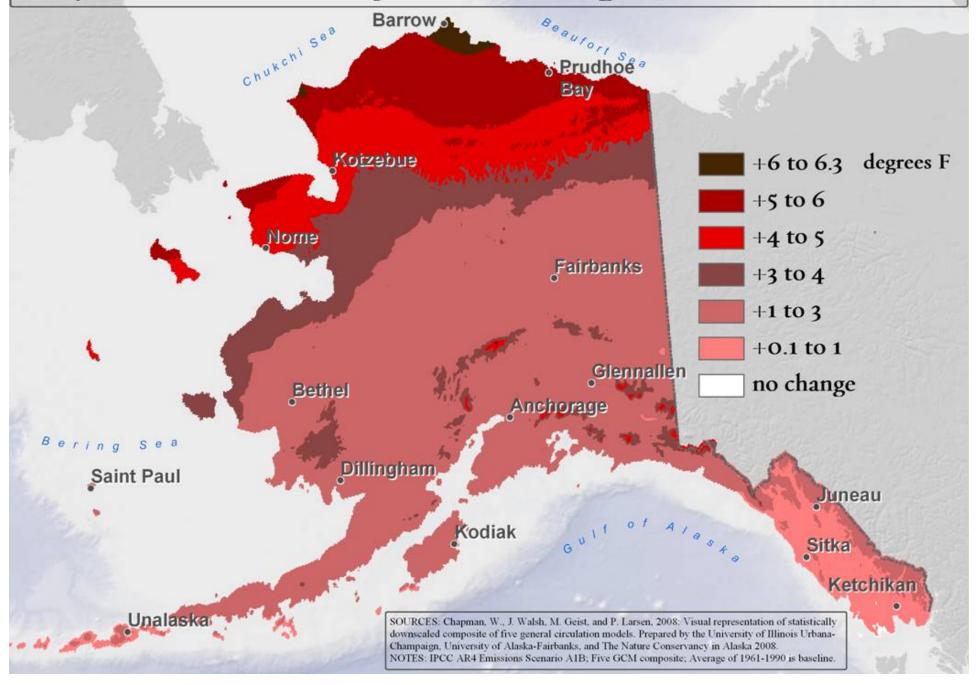
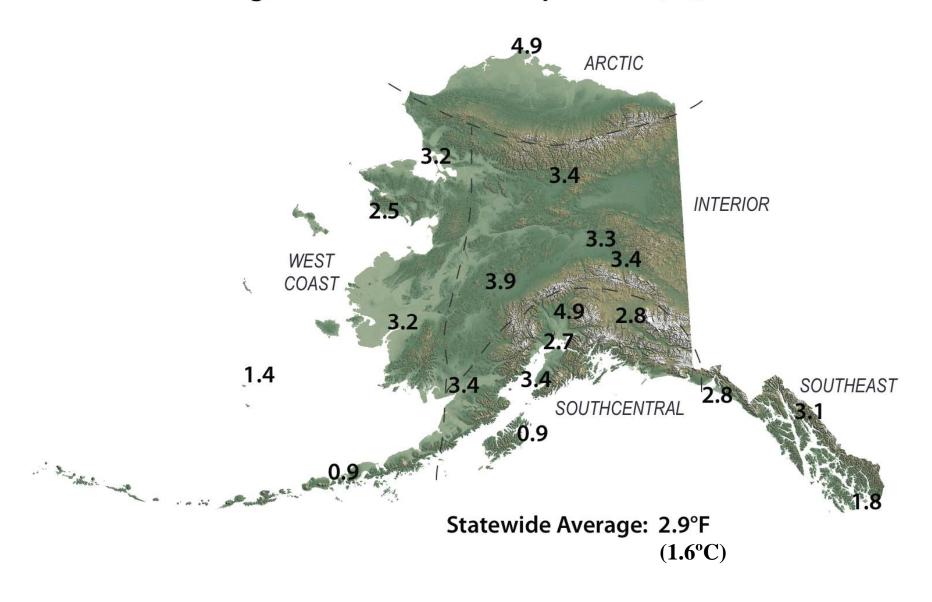
# BBC Overview Socio-Economic Drivers of Change (Alaska Focus)

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



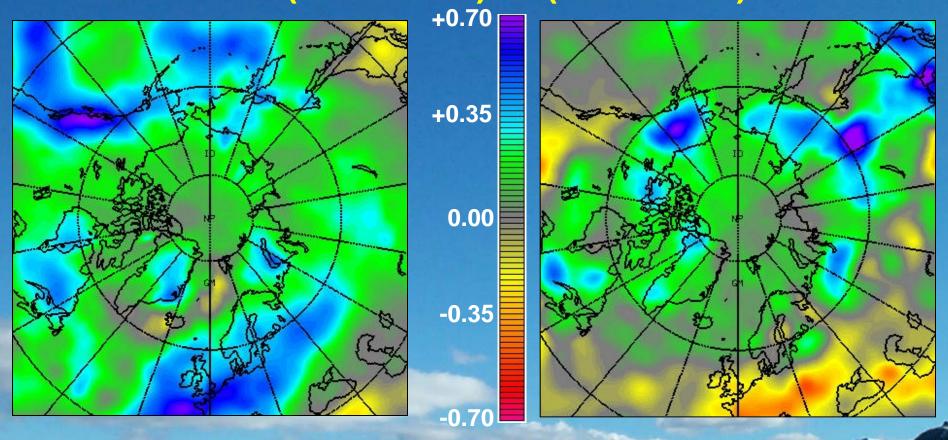
iotai Change in Mean Seasonai and Annuai Temperature (°F), 1949 - 201	ean Seasonal and Annual Temperature (°F), 19	49 - 2013
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	Winter	Spring	Summer	Autumn	Annual
Barrow	7.0	4.8	3.7	5.3	5.2
Bettles	6.4	3.6	1.8	1.5	3.3
Fairbanks	6.6	3.0	2.5	0.1	3.0
Delta Junction	8.8	2.7	1.3	0.1	3.1
McGrath	7.0	3.9	2.6	1.3	3.7
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
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	8.0
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
	Bettles Fairbanks Delta Junction McGrath Kotzebue Nome Bethel King Salmon St Paul Cold Bay Talkeetna Gulkana Anchorage Homer Kodiak Yakutat Juneau Annette	Bettles Fairbanks Delta Junction McGrath Kotzebue Nome Bethel King Salmon St Paul Cold Bay Talkeetna Gulkana Anchorage Homer Kodiak Yakutat Juneau Annette  6.4 6.6 6.6 6.6 6.0 8.8 8.8 7.0 6.0 7.6 8.9 6.0 7.6 8.9 6.0 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8	Bettles       6.4       3.6         Fairbanks       6.6       3.0         Delta Junction       8.8       2.7         McGrath       7.0       3.9         Kotzebue       6.0       1.1         Nome       3.6       2.4         Bethel       6.0       3.2         King Salmon       7.6       3.3         St Paul       -0.2       0.6         Cold Bay       1.2       0.7         Talkeetna       8.9       4.7         Gulkana       7.8       1.8         Anchorage       5.2       3.0         Homer       6.0       2.9         Kodiak       1.1       1.6         Yakutat       5.5       2.6         Juneau       6.7       2.5         Annette       3.8       2.1	Bettles         6.4         3.6         1.8           Fairbanks         6.6         3.0         2.5           Delta Junction         8.8         2.7         1.3           McGrath         7.0         3.9         2.6           Kotzebue         6.0         1.1         2.8           Nome         3.6         2.4         2.4           Bethel         6.0         3.2         1.8           King Salmon         7.6         3.3         1.2           St Paul         -0.2         0.6         2.1           Cold Bay         1.2         0.7         1.5           Talkeetna         8.9         4.7         2.9           Gulkana         7.8         1.8         1.0           Anchorage         5.2         3.0         1.1           Homer         6.0         2.9         2.8           Kodiak         1.1         1.6         1.2           Yakutat         5.5         2.6         2.1           Juneau         6.7         2.5         2.0           Annette         3.8         2.1         1.7	Bettles         6.4         3.6         1.8         1.5           Fairbanks         6.6         3.0         2.5         0.1           Delta Junction         8.8         2.7         1.3         0.1           McGrath         7.0         3.9         2.6         1.3           Kotzebue         6.0         1.1         2.8         1.9           Nome         3.6         2.4         2.4         0.5           Bethel         6.0         3.2         1.8         0.0           King Salmon         7.6         3.3         1.2         0.5           St Paul         -0.2         0.6         2.1         1.0           Cold Bay         1.2         0.7         1.5         0.9           Talkeetna         8.9         4.7         2.9         2.5           Gulkana         7.8         1.8         1.0         0.0           Anchorage         5.2         3.0         1.1         1.3           Homer         6.0         2.9         2.8         1.6           Kodiak         1.1         1.6         1.2         -0.4           Yakutat         5.5         2.6         2.1         0

Alaska Climate Research Center

Geophysical Institute, University of Alaska Fairbanks

## Composite projections : IPCC/DDC models Precipitation changes (mm/day) from (1961-1990) to (2060-2089)

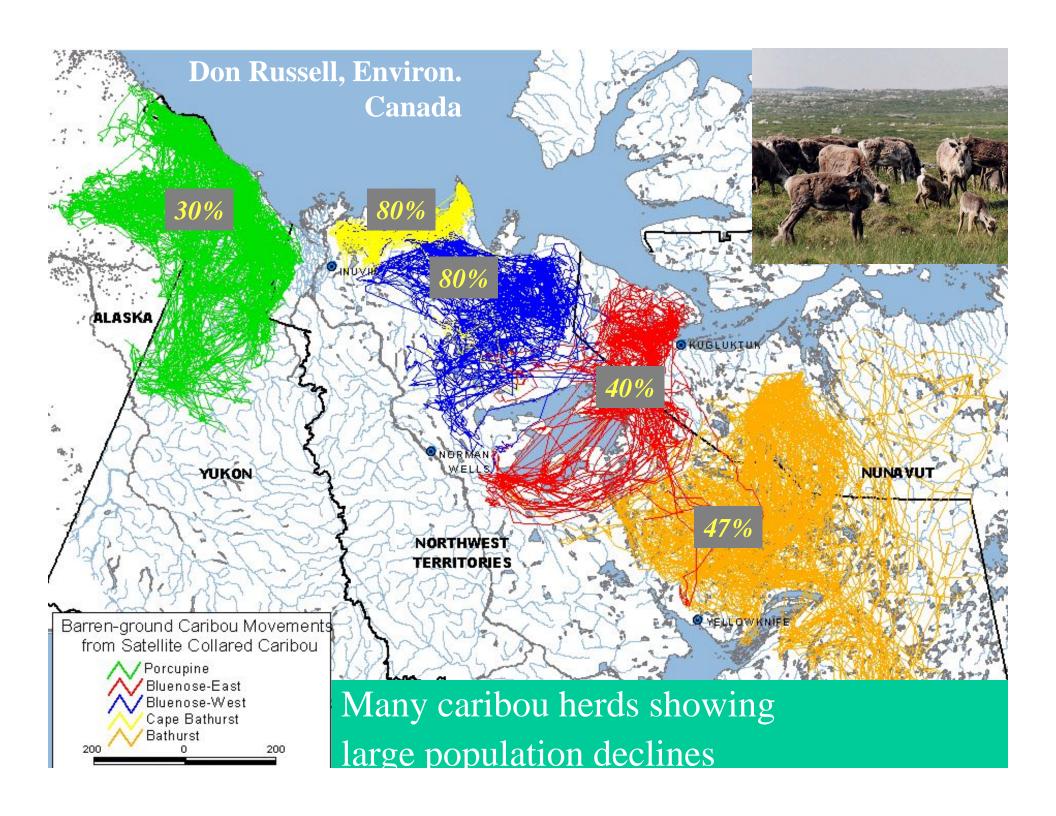


Winter

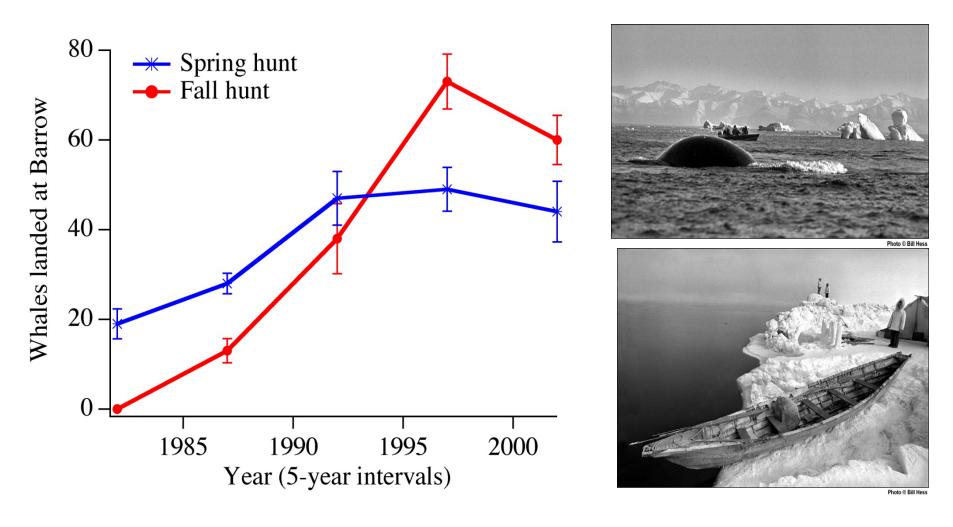
mm/day

Summer

Walsh et al., 2002. J. Climate



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



**Photos: ©Bill Hess** 

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



### **IMPACTS OF A WARMING ARCTIC**

Possible Changes in Fish Distribution

