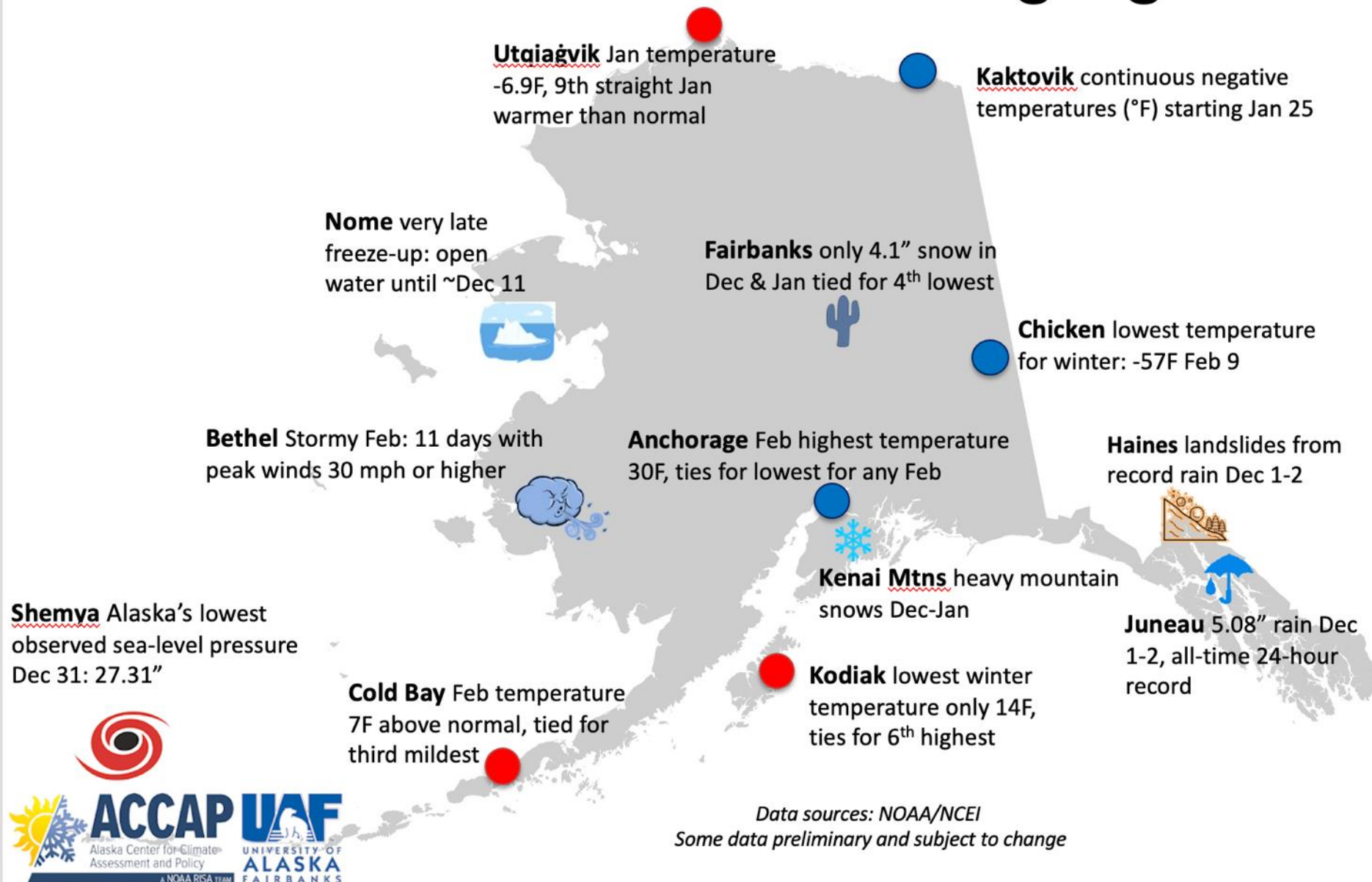


# Circumpolar One Health Winter 2020-21 Climate Review and Spring 2021 Outlook

Rick Thoman

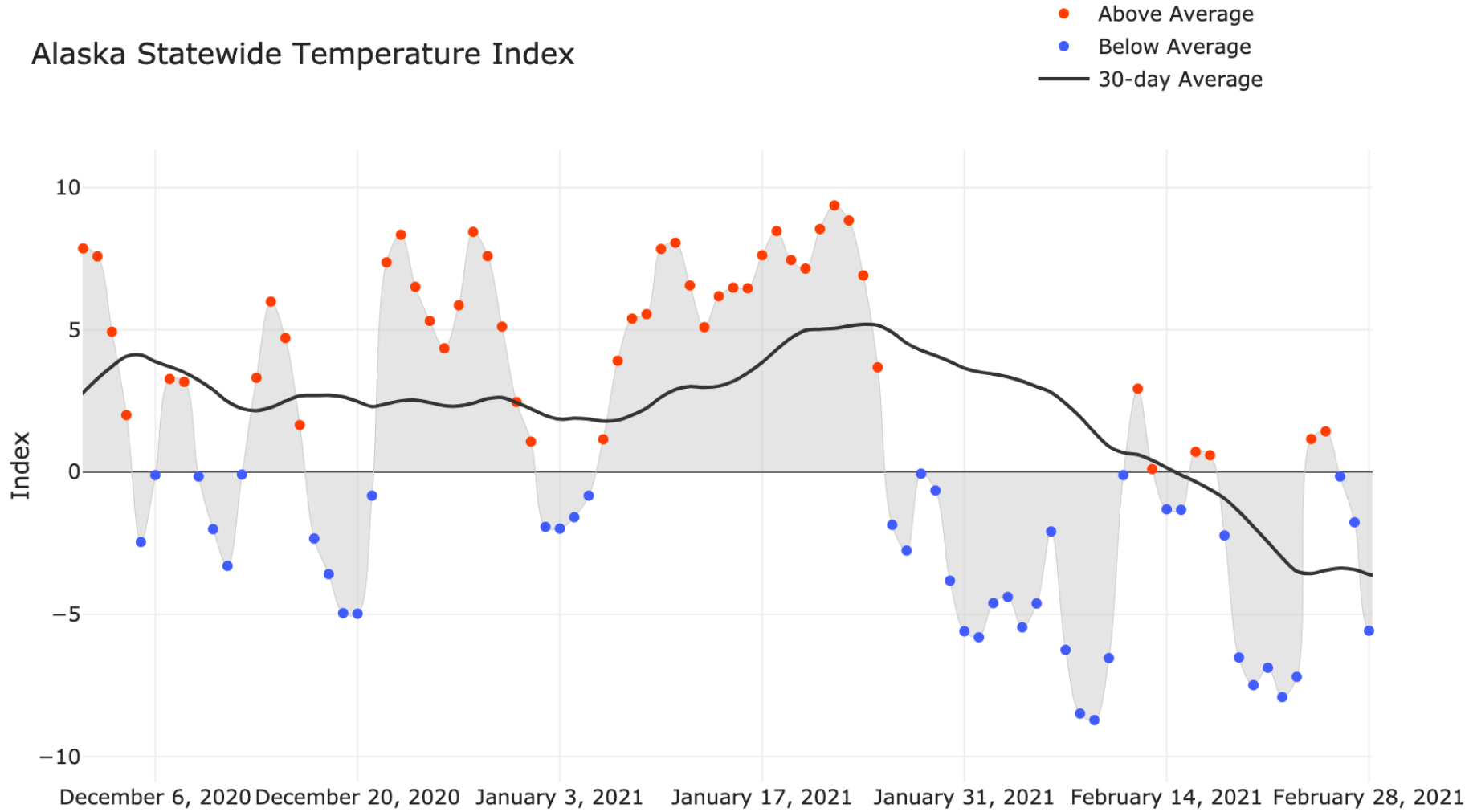
Alaska Center for Climate Assessment and Policy  
University of Alaska Fairbanks

# Winter (December-February) 2020-21 Alaska Weather & Climate Highlights

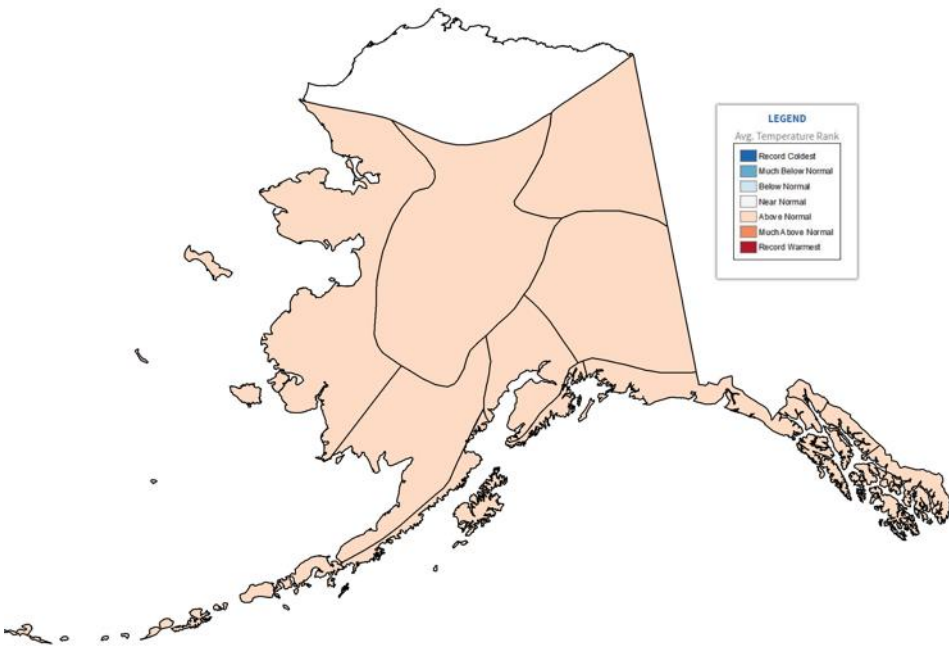


# Alaska Daily Temperature Index

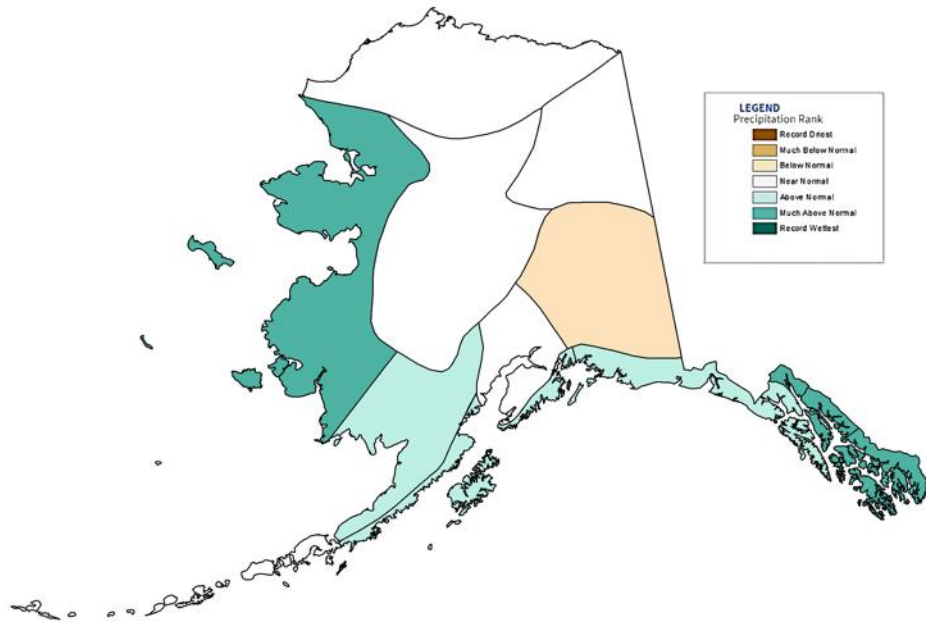
Alaska Statewide Temperature Index



# Alaska Regional Winter (Dec-Feb) 2020-21



**NOAA Temperatures**



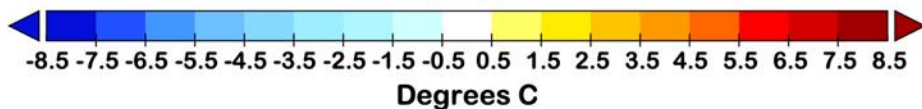
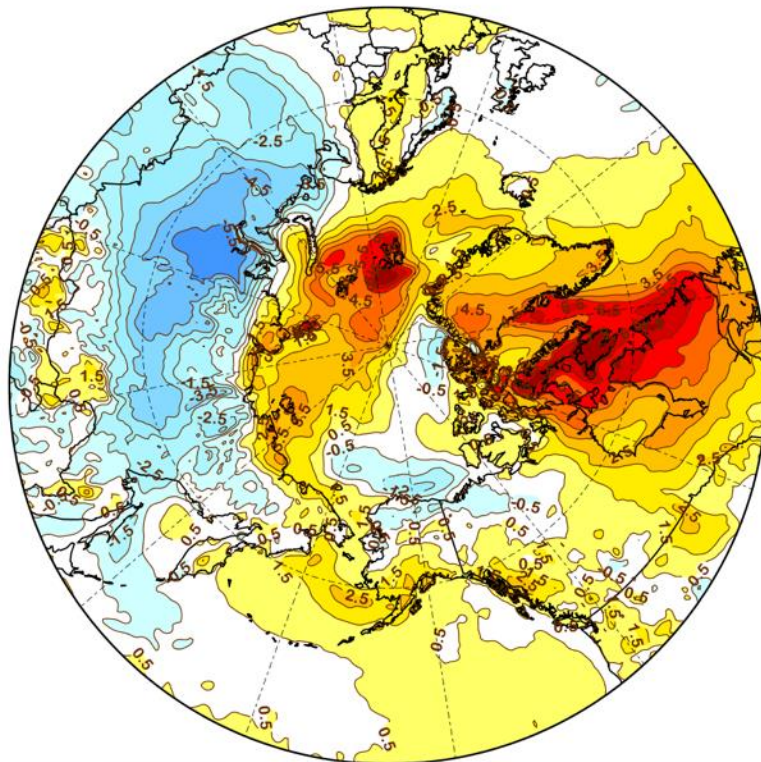
**NOAA Precipitation**

Note: Significant differences between analyses

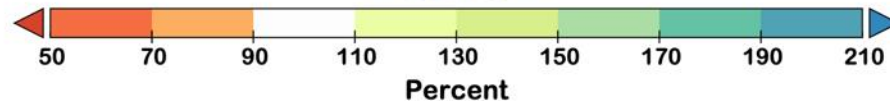
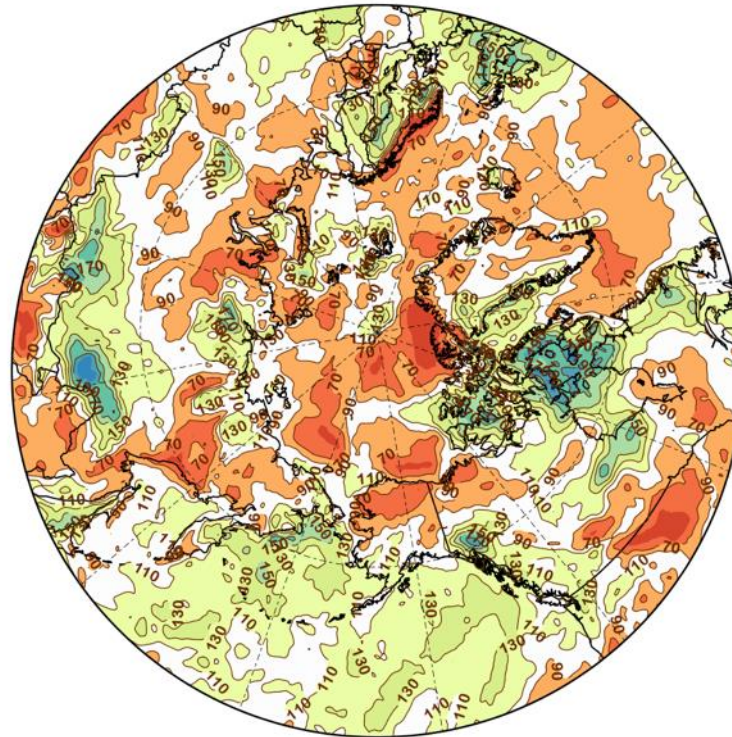


# Winter 2020-21 Arctic-wide

Temperature Departure from Average  
December 2020 through February 2021



Total Precipitation Percent of Average  
December 2020 through February 2021



Temperature Departures from Average

Precipitation Departures from Average

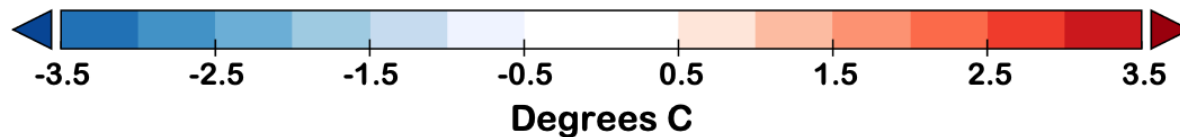
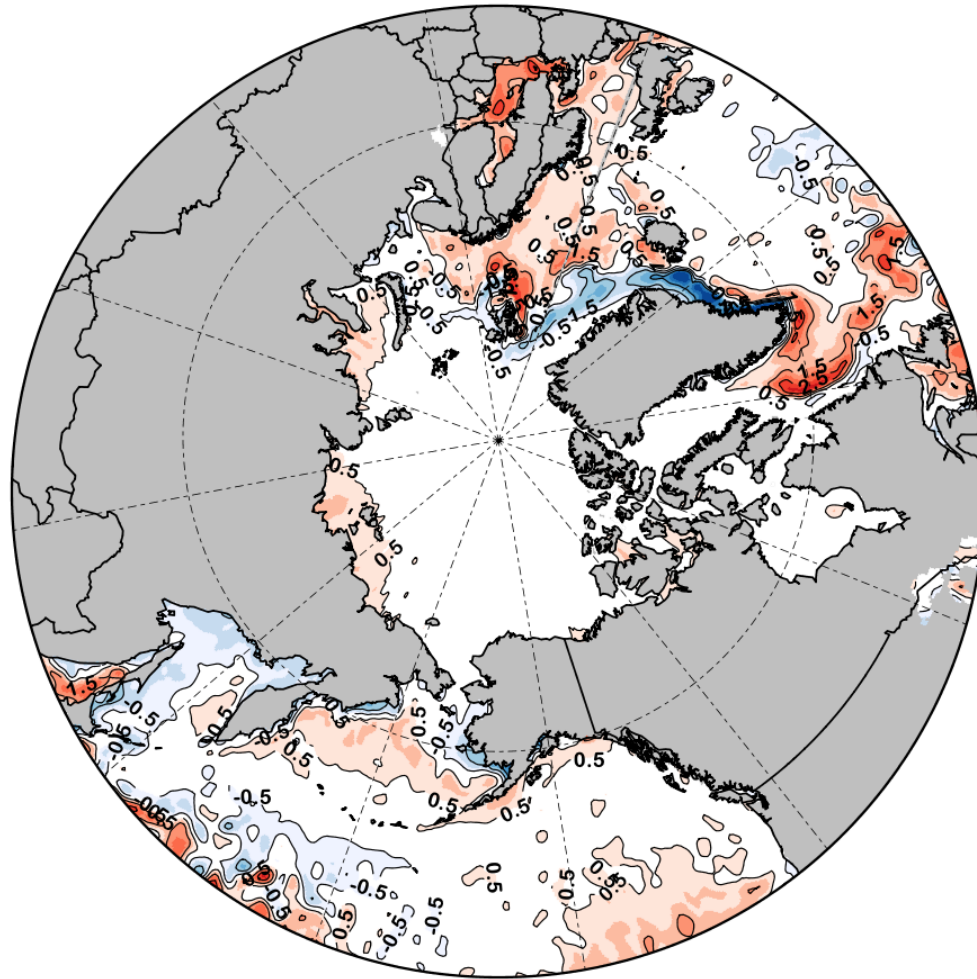
Data: ERA5 courtesy of EMCWF/Copernicus  
1981-2010 Baseline



# Winter 2020-21 Ocean Temperatures

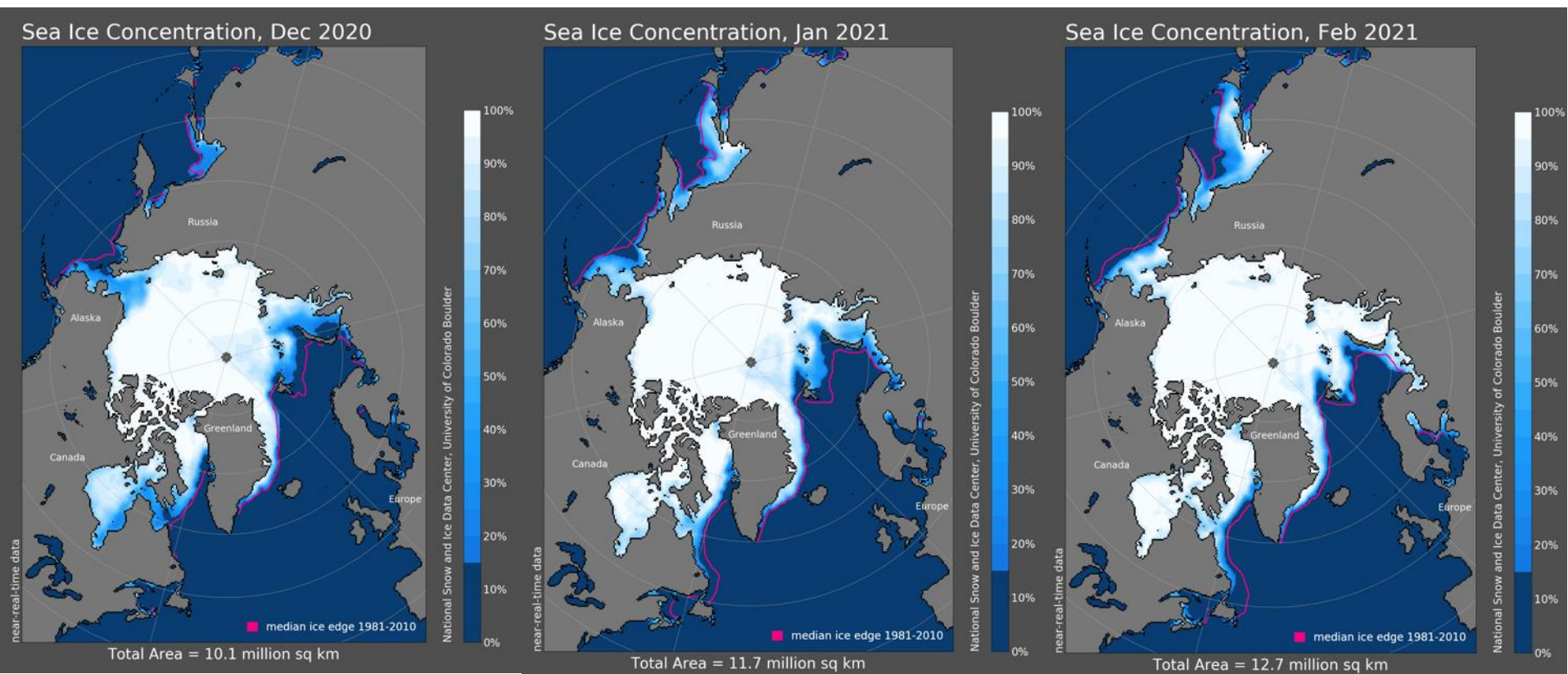
Average Sea Surface Temperature Departure from Normal

December 2020 through Feruary 2021





# Sea Ice Winter 2020-21



3<sup>rd</sup> lowest

6<sup>th</sup> lowest

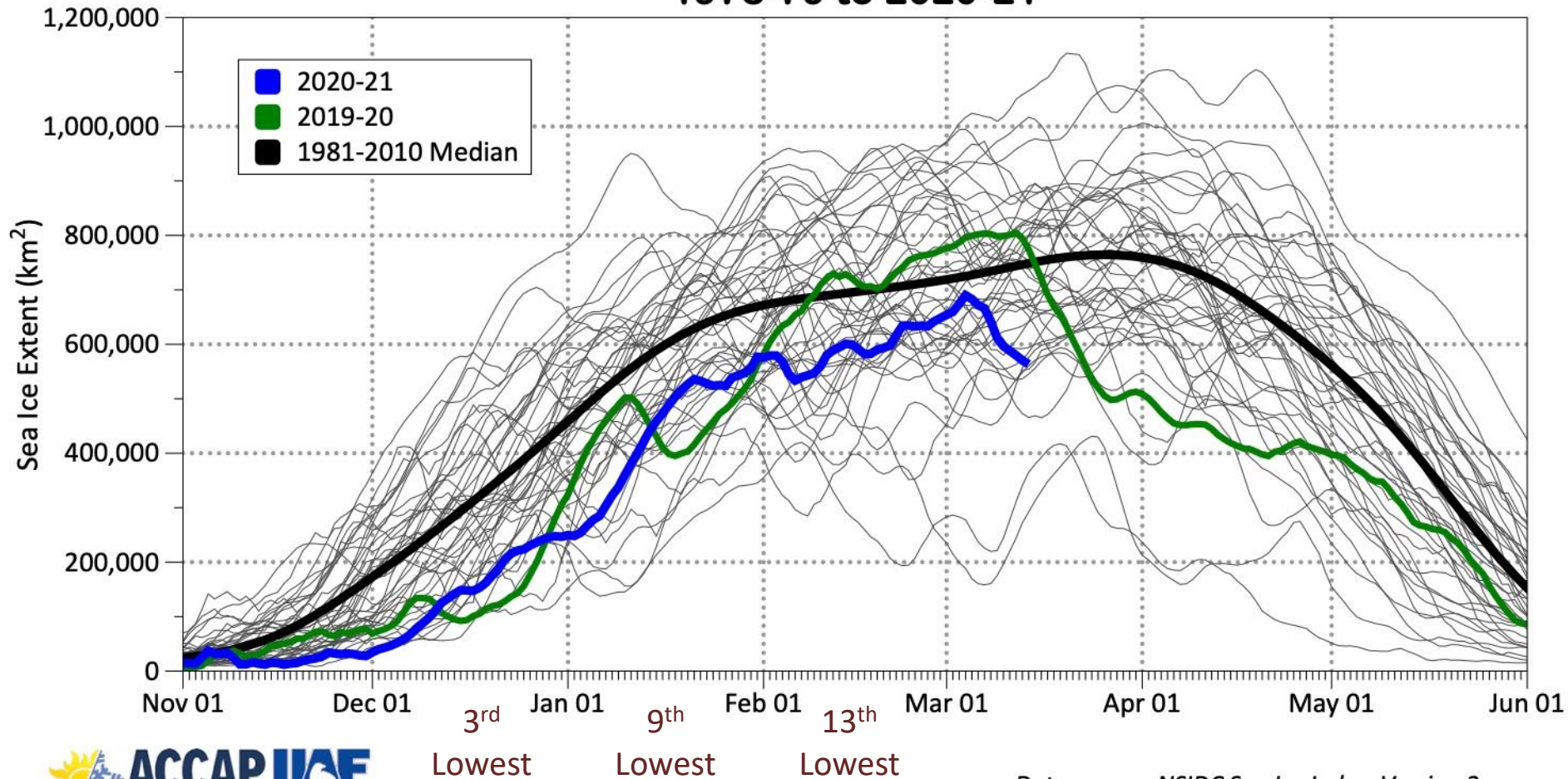
7<sup>th</sup> lowest

Since 1978-79



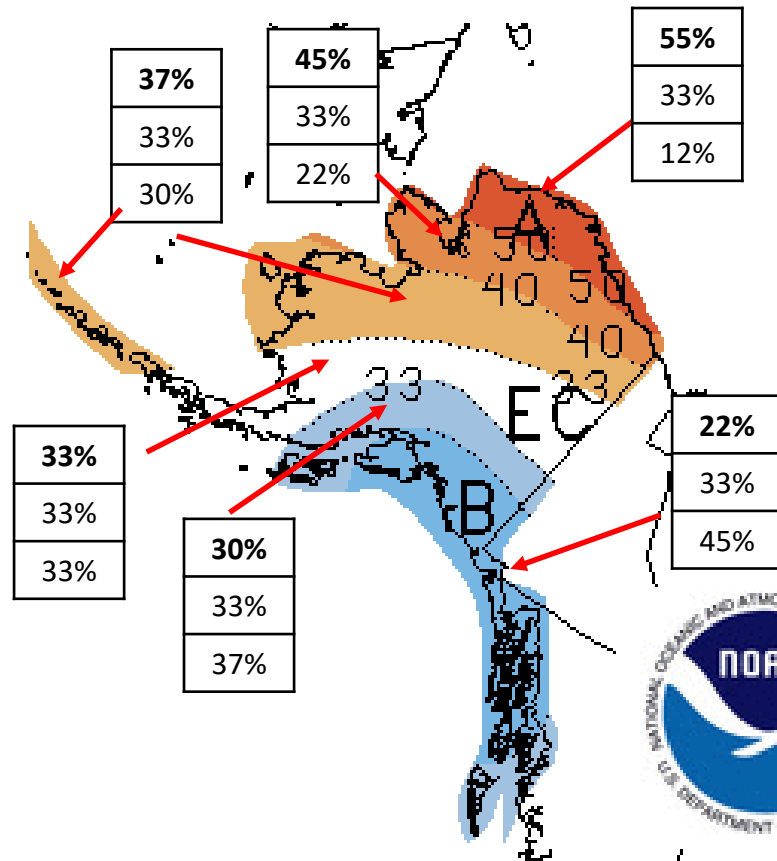
# Daily Bering Sea Ice Extent

Bering Sea Daily Ice Extent  
1978-79 to 2020-21

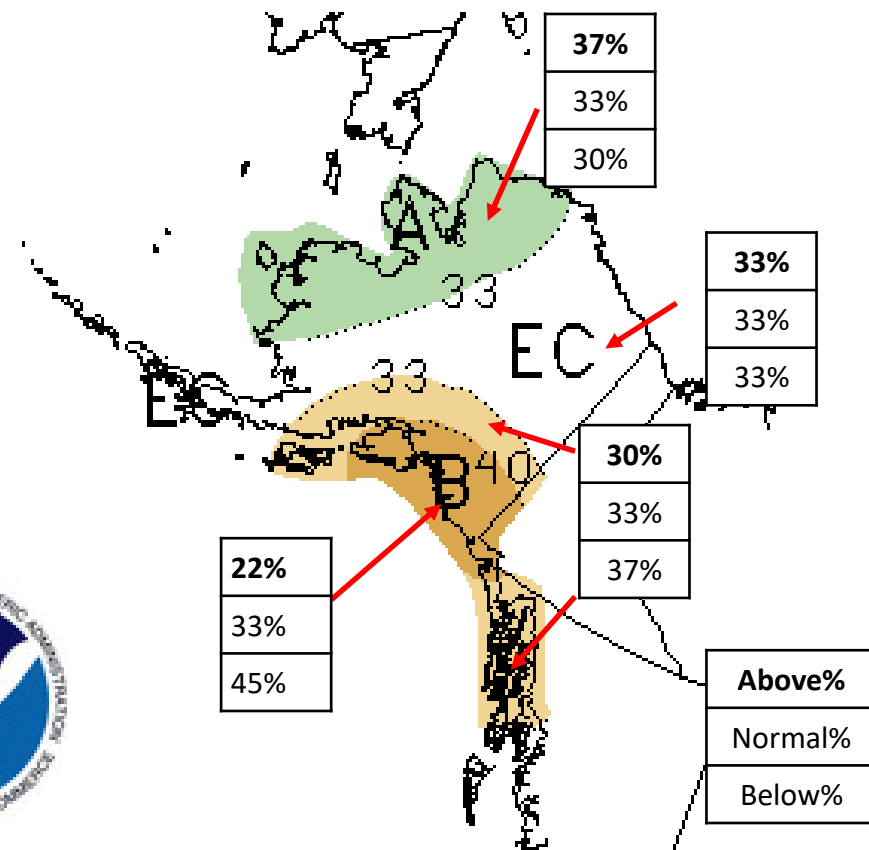




# CPC March to May 2021 Outlook



THREE-MONTH OUTLOOK  
TEMPERATURE PROBABILITY  
0.5 MONTH LEAD  
VALID MAM 2021  
MADE 18 FEB 2021



THREE-MONTH OUTLOOK  
PRECIPITATION PROBABILITY  
0.5 MONTH LEAD  
VALID MAM 2021  
MADE 18 FEB 2021



# Spring 2021

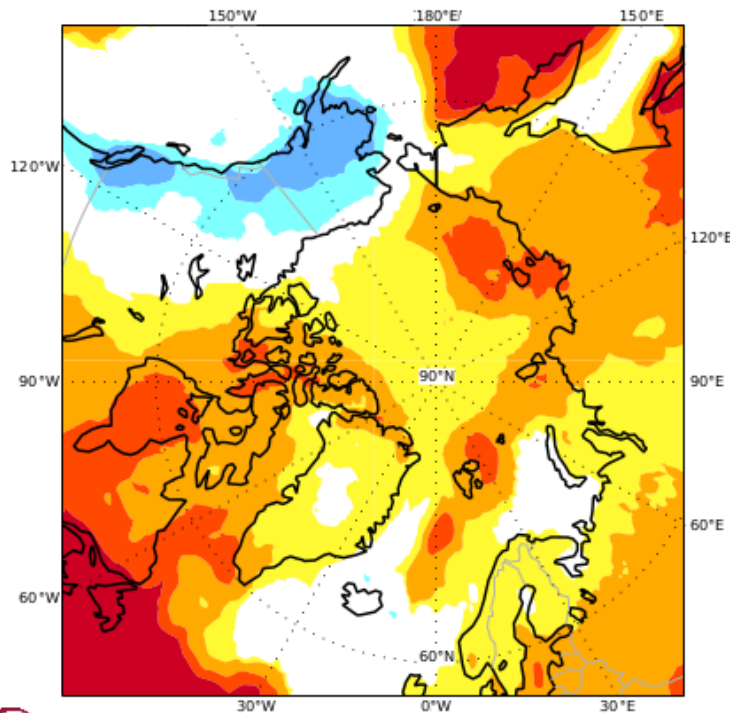
## Arctic Temperature and Precipitation Outlook

C3S multi-system seasonal forecast

Prob(most likely category of 2m temperature)

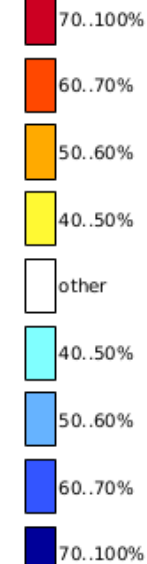
Nominal forecast start: 01/02/21

Unweighted mean



MAM 2021

above upper tercile



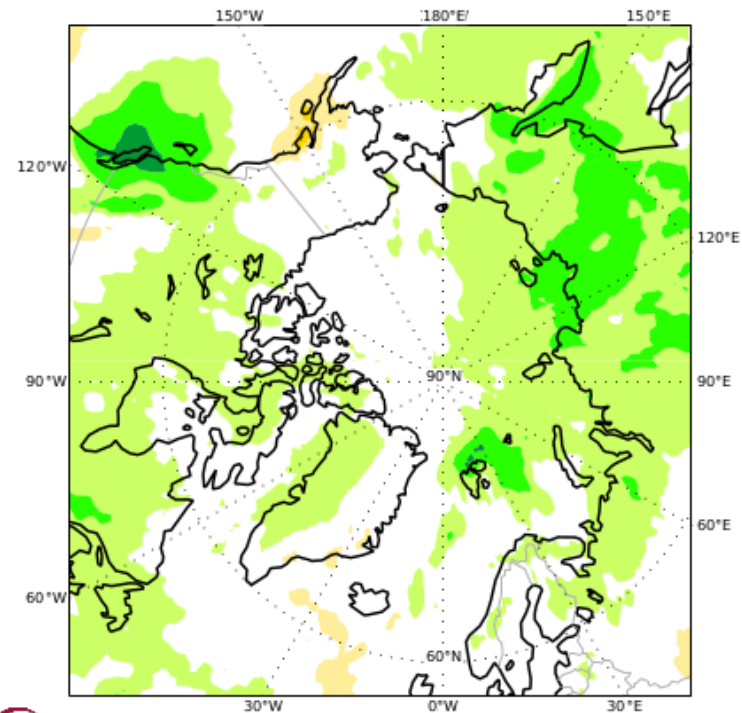
below lower tercile

C3S multi-system seasonal forecast

Prob(most likely category of precipitation)

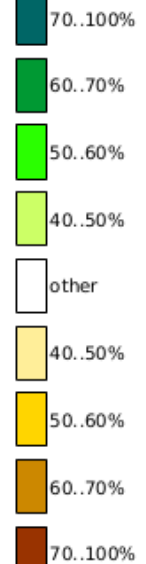
Nominal forecast start: 01/02/21

Unweighted mean



MAM 2021

above upper tercile

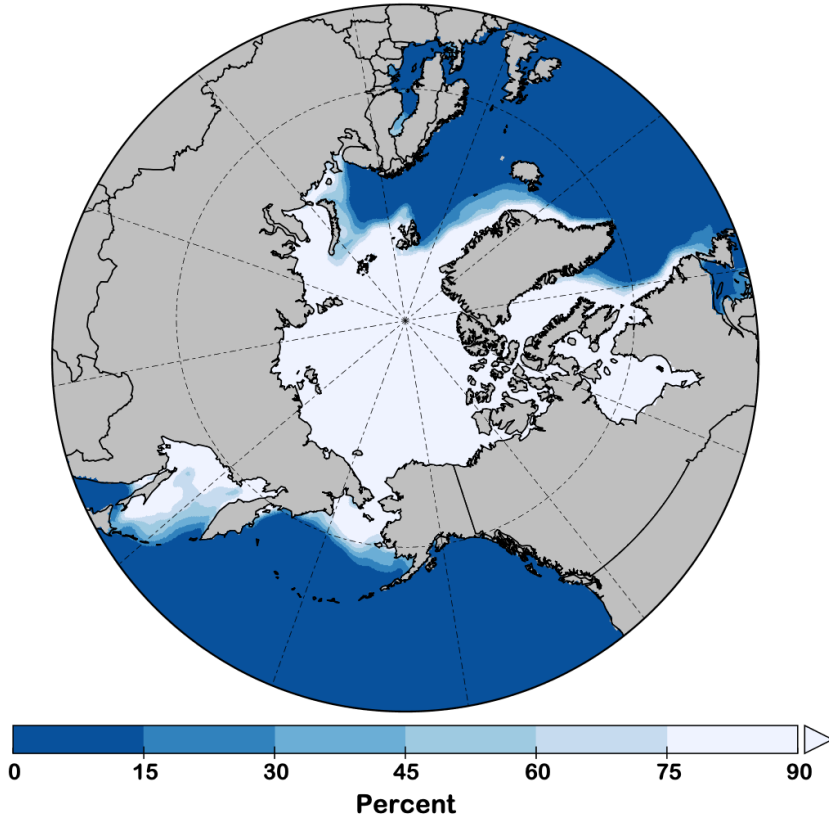


below lower tercile

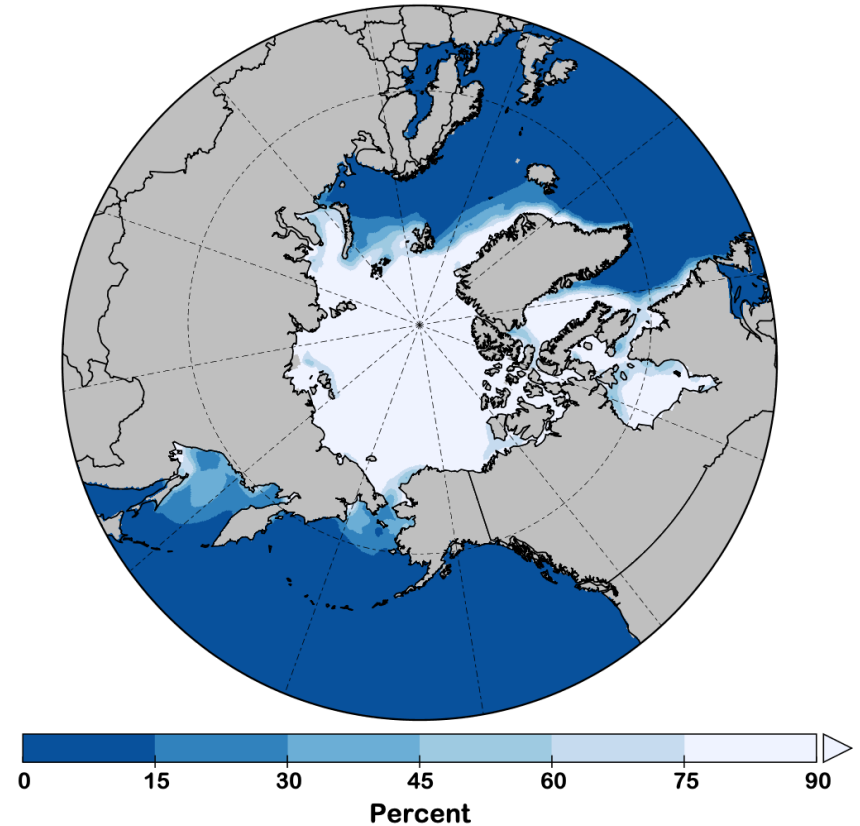
Outlooks courtesy Copernicus C3S (Climate Change Service)

# Spring 2021 Sea Ice Outlook

Average Sea Ice Concentration Outlook  
March 2021



Average Sea Ice Concentration Outlook  
May 2021



Data: NOAA/Climate Prediction Center Exp. Sea Ice Outlook





# Landslide near Haines

## December 2, 2020



Photo credit: USCG

