

# Circumpolar One Health Spring 2023 Climate Review and Summer 2023 Outlook

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# Spring 2023 Alaska Weather & Climate Highlights

**Utqiagvik** daily record high temperatures  
March 7 (31F) and May 14 (40F)

**Kotzebue** March repeated blizzards → state disaster declaration

**Tanana** April average temperature 14.6F, lowest since 1924.

**Nome** April 8: -30F, tied all-time monthly low temperature

**Circle City** May 13: severe ice jam flooding

**Glennallen** May 30-31 extreme 2 to 4 inches rainfall

**Bethel** May 18: Kuskokwim River break-up, latest since 2013

**Haines** 45 inches of snow first half of March

**Sea Ice** persisted near St. Matthew Island through May first time since 2013

**Anchorage** record deep mid-April snowpack

**Cold Bay** March 5<sup>th</sup> 2.98 inches rain, all-time March record

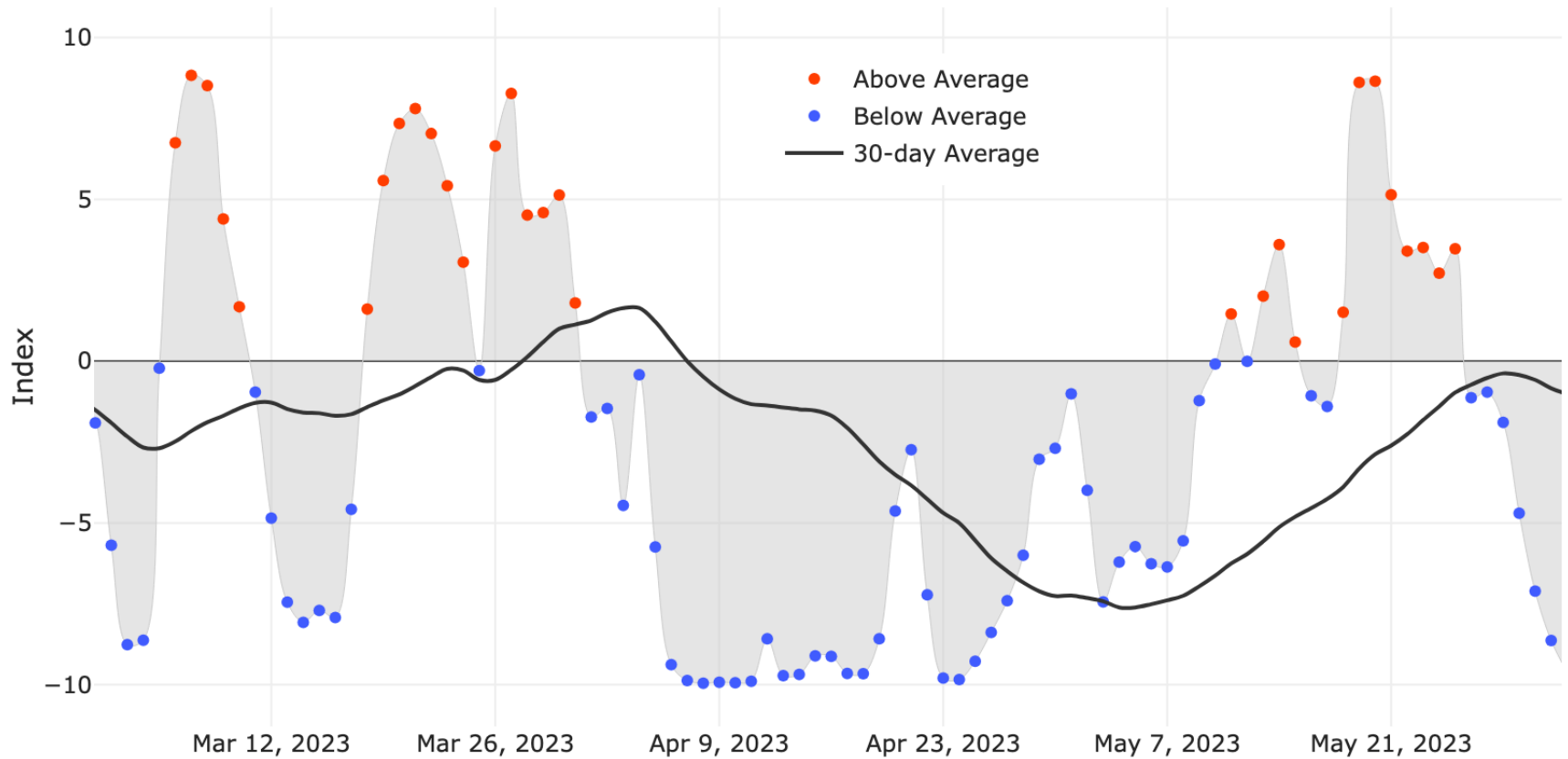
**Kodiak** April rainfall 1.91", lowest since 2002

**Sitka** May 18: 82F tied monthly record high temperature



# Alaska Daily Temperature Index

Alaska Statewide Temperature Index  
March 1 to May 31, 2023

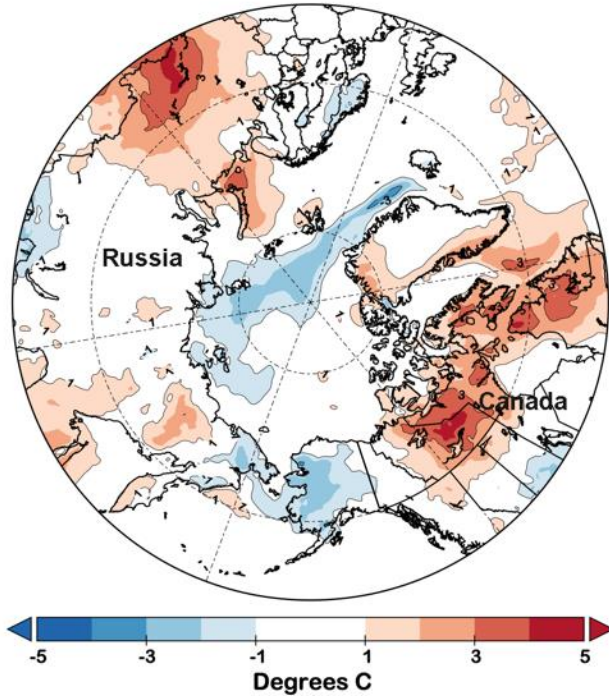


Online: <http://accap.uaf.edu/tools/statewide-temperature-index>



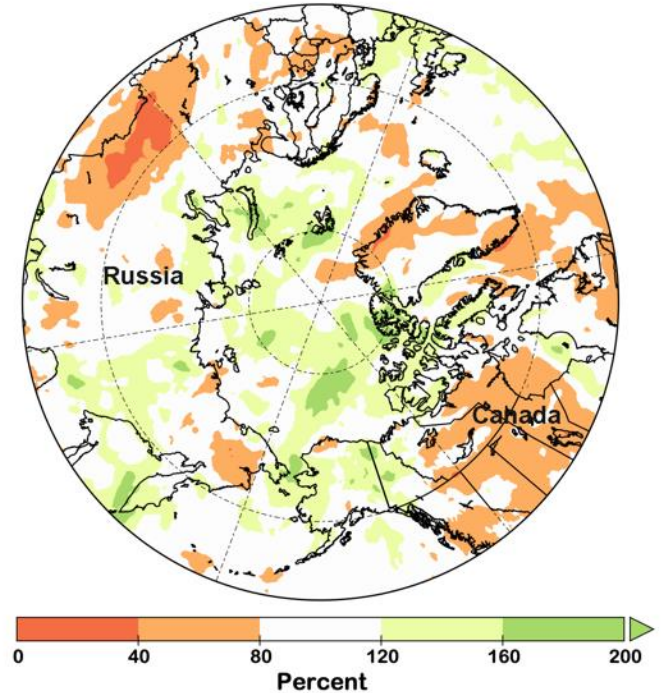
# Spring 2023 Arctic-wide

Average Temperature: Departure from Normal  
Spring (March through May) 2023



ERA5 courtesy of ECMWF/Copernicus

Total Precipitation: Percent of Normal  
Spring (March through May) 2023



ERA5 courtesy of ECMWF/Copernicus

Temperature Departures from Average

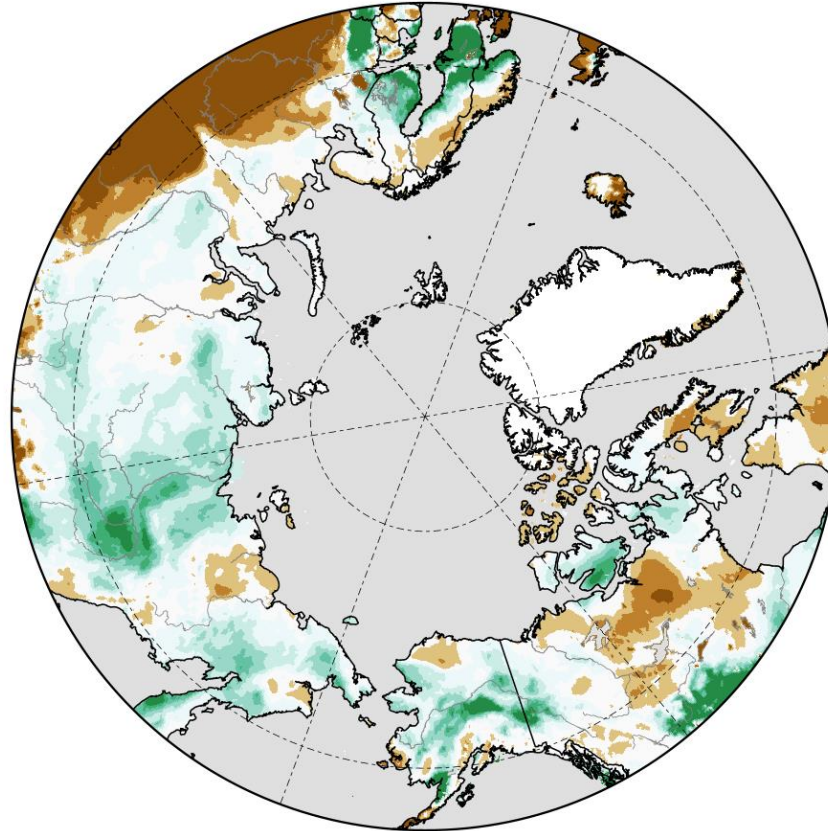
Precipitation Percent of Average

Data: ERA5 courtesy of EMCWF/Copernicus  
1991-2020 Baseline

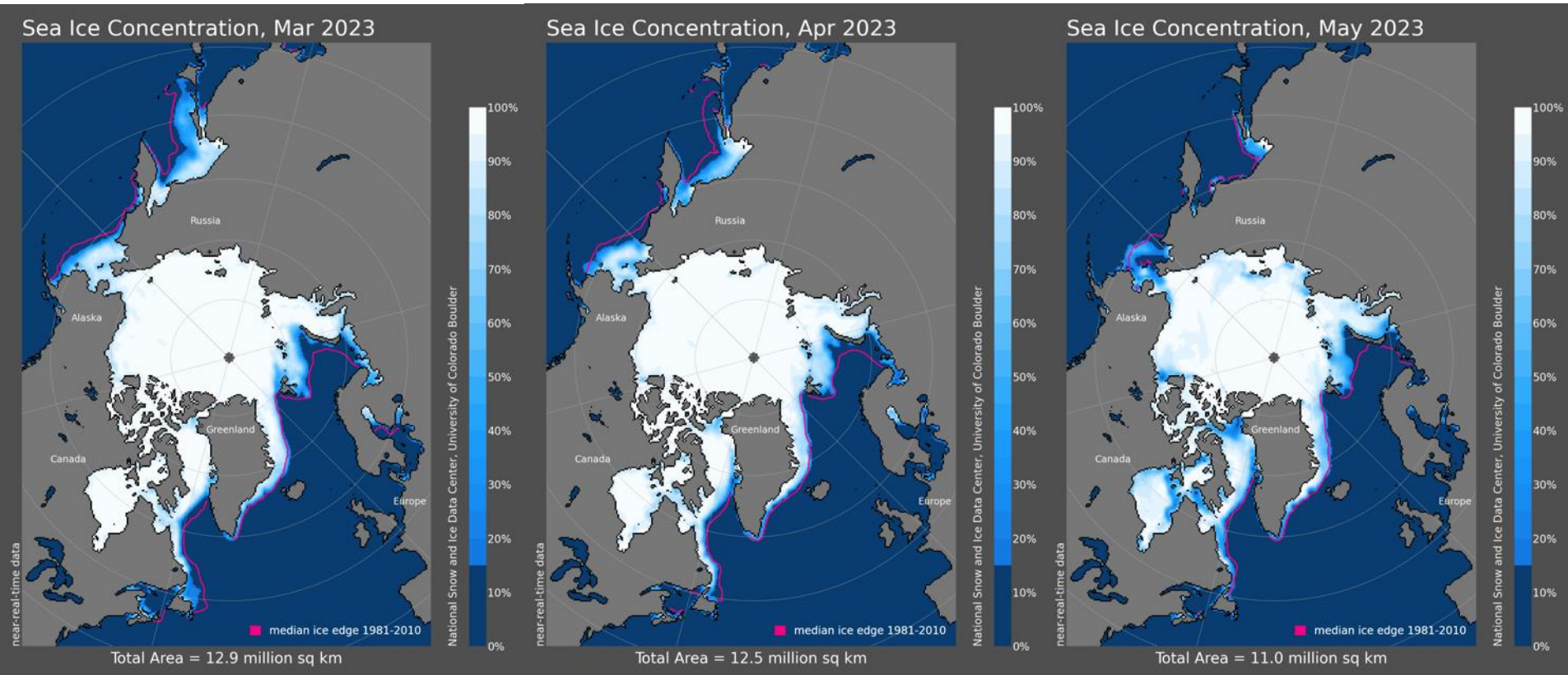


# Spring 2023 Snowpack

Snow Water Equivalent: Percent of Median  
April 2023



# Arctic Sea Ice Extent: Spring 2023



6<sup>th</sup> lowest

10<sup>th</sup> lowest

13<sup>th</sup> lowest

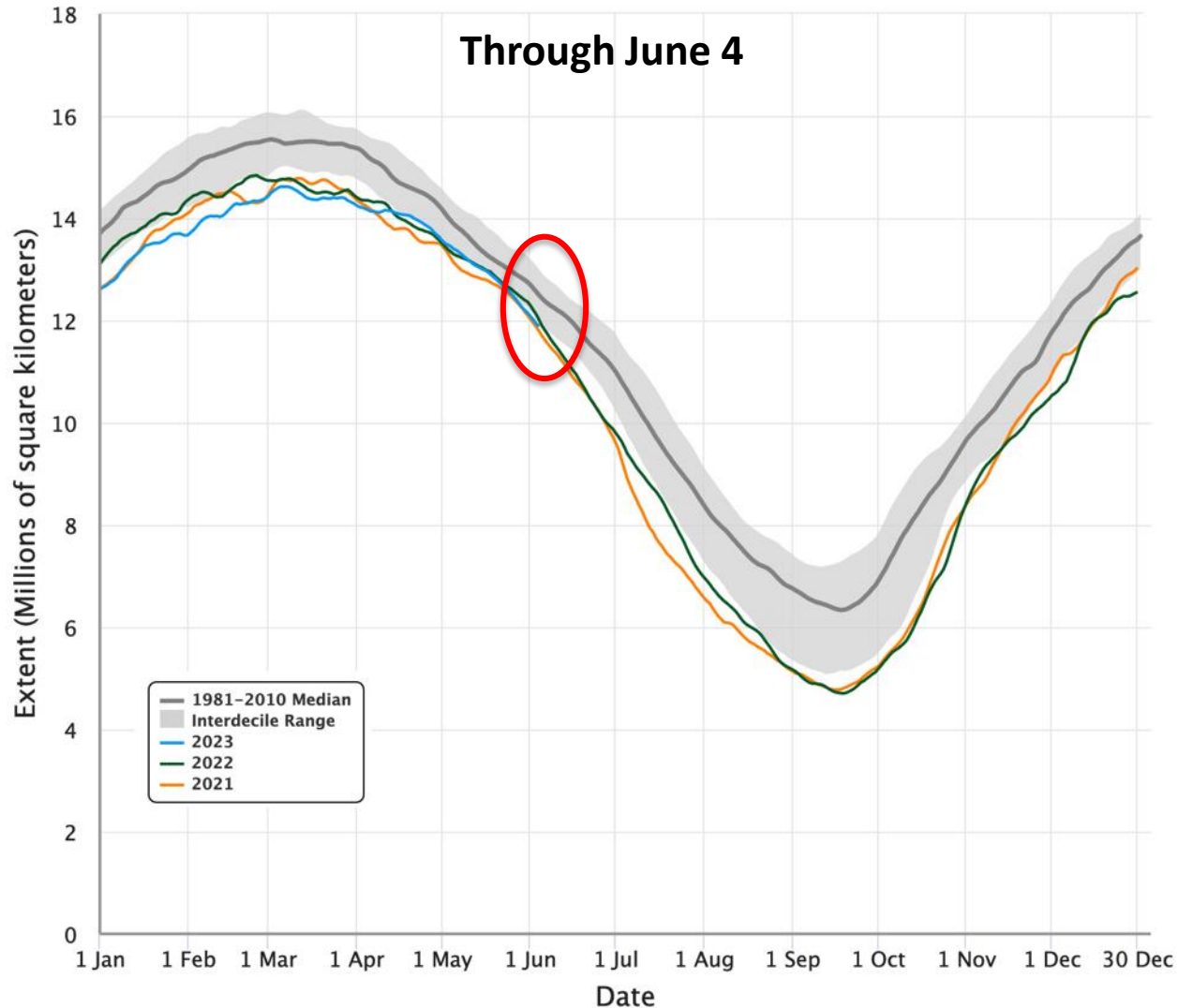
Since 1979

Maximum Arctic-wide extent reach March 6<sup>th</sup>



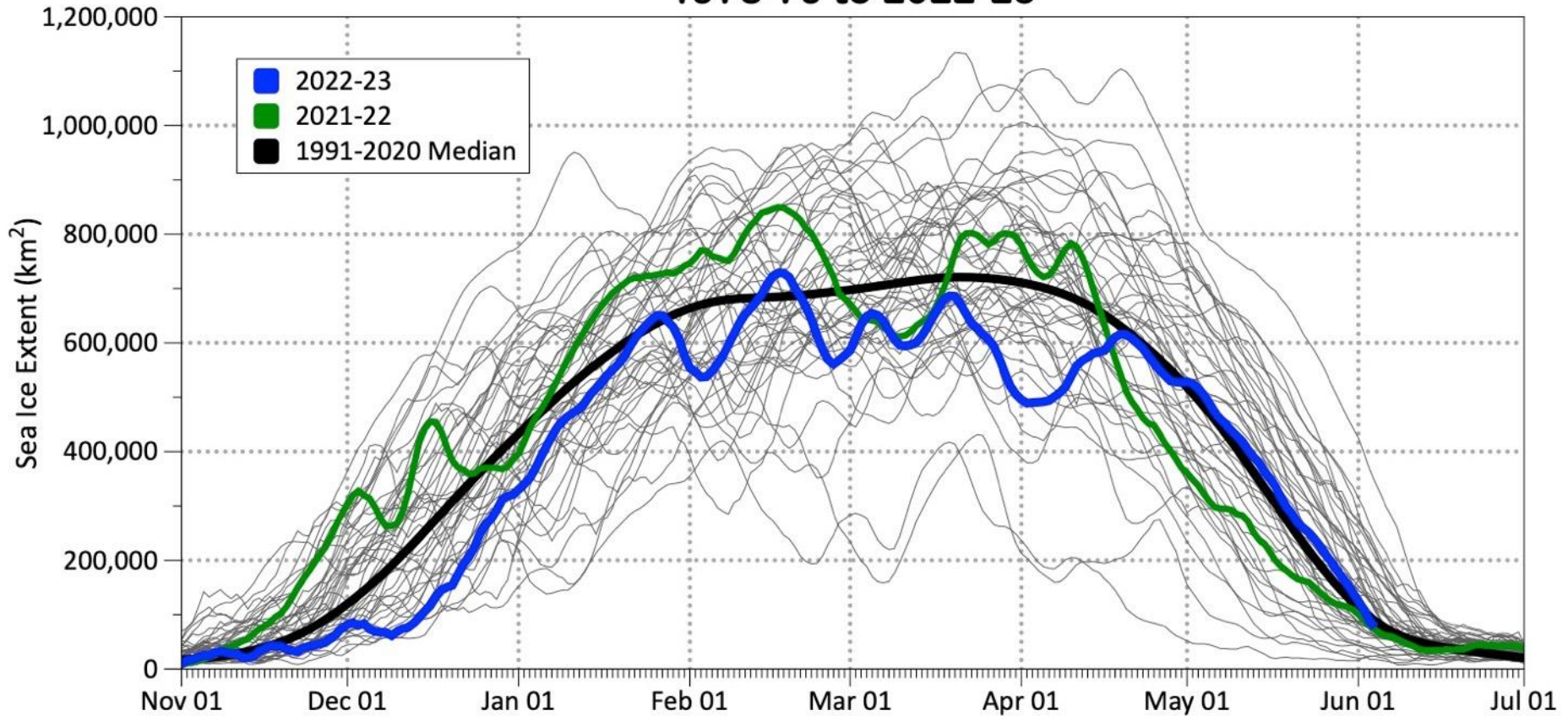
# Daily Arctic Sea Ice Extent

Arctic Sea Ice Extent  
(Area of ocean with at least 15% sea ice)



# Bering Sea Ice Extent

## Bering Sea Daily Ice Extent 1978-79 to 2022-23

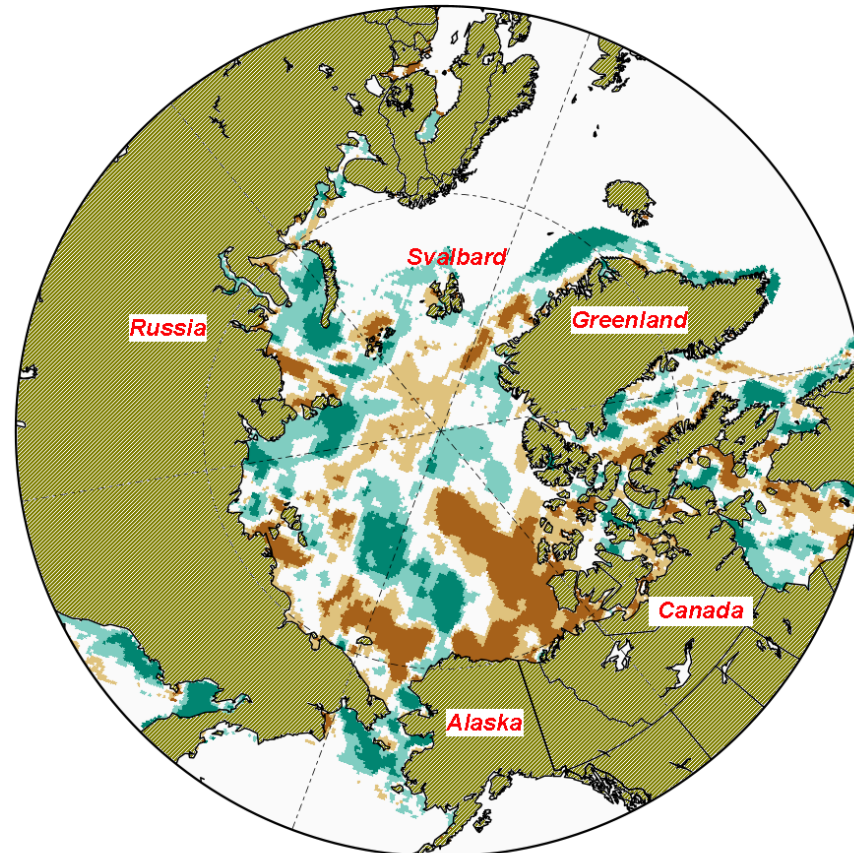




# End of March Sea Ice Thickness

## Sea Ice Thickness Relative to Recent Years

March 24-30, 2023

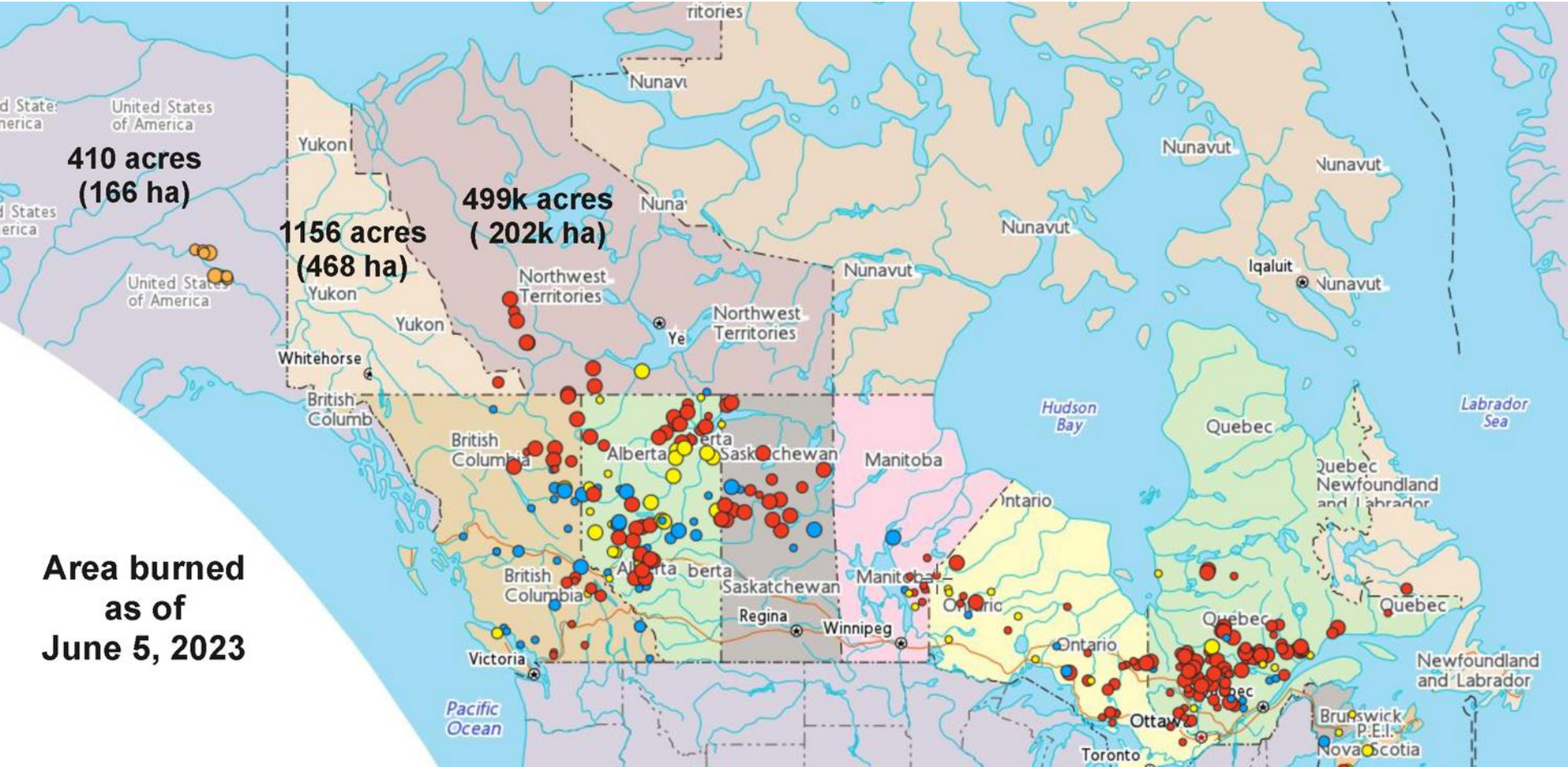


Much Below Below Near Average Above Much Above

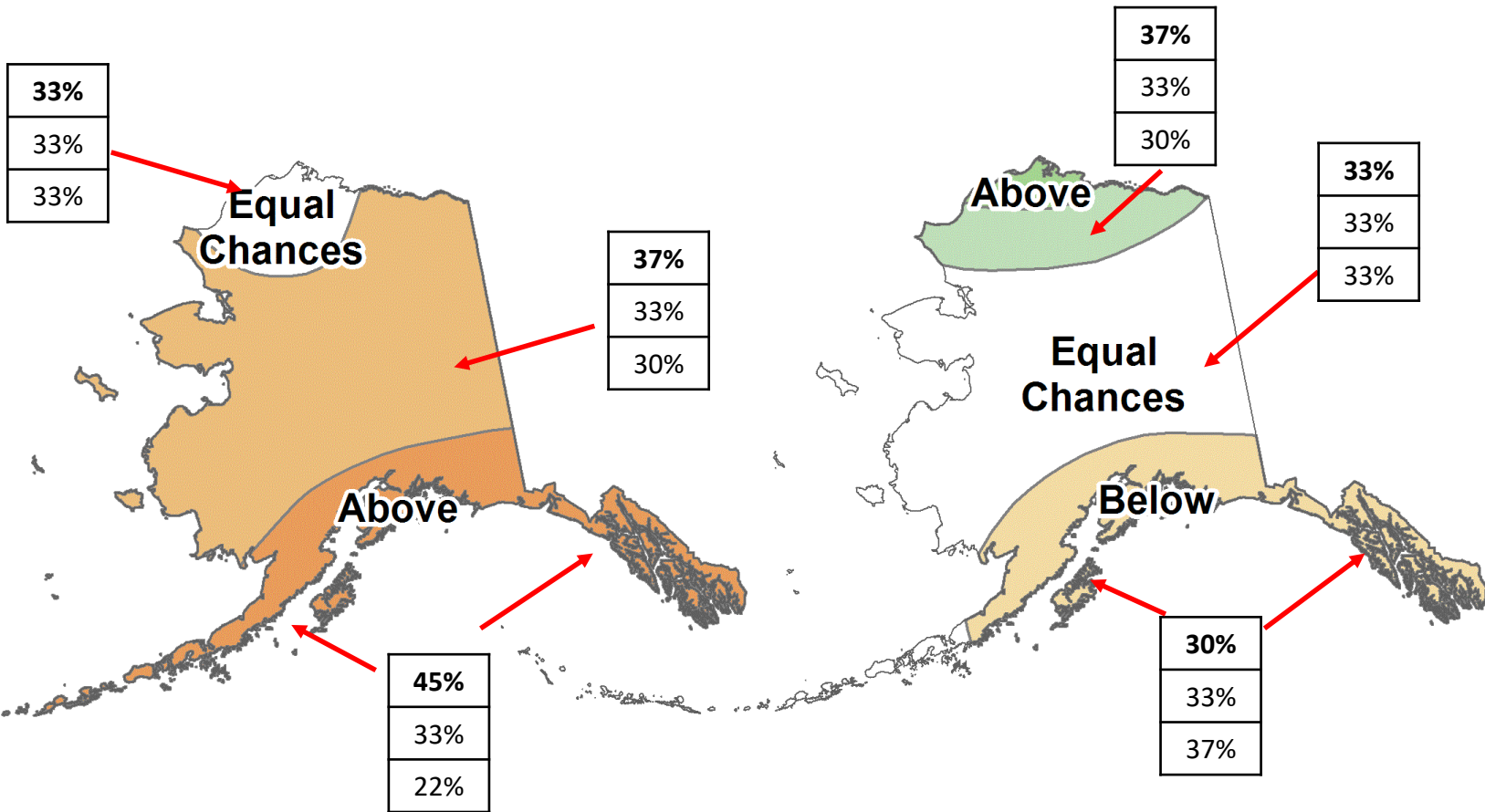


Relative to 2011-2022 baseline

# Northern Wildfire



# CPC June-August 2023 Outlook



Above%
Normal%
Below%

**Average Temperature Outlook**

**Total Precipitation Outlook**

# Summer 2023

## Arctic Temperature and Precipitation Outlook

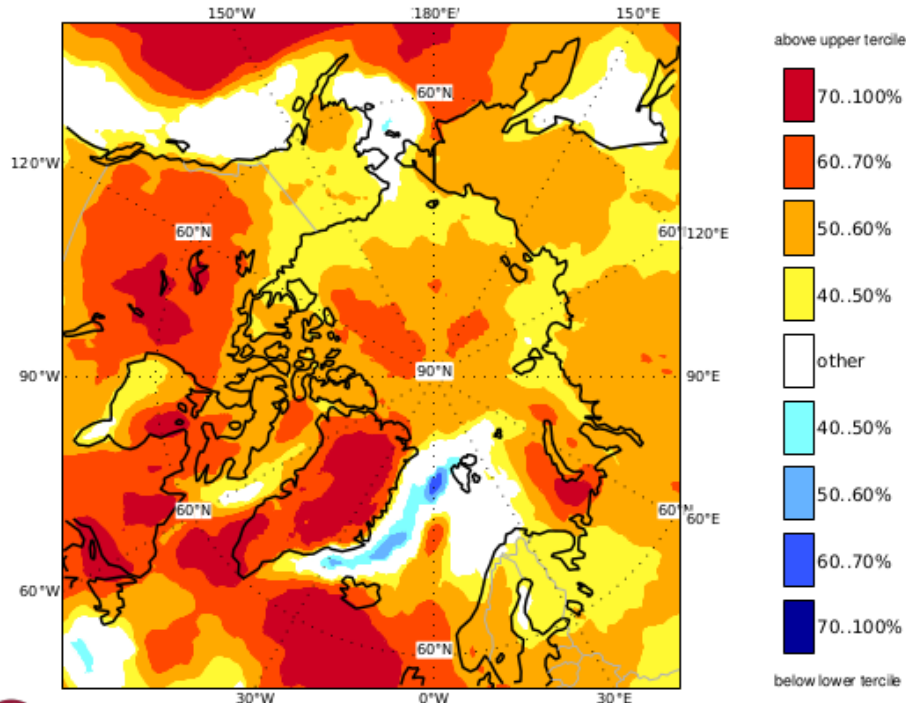
C3S multi-system seasonal forecast

Prob(most likely category of 2m temperature)

Nominal forecast start: 01/05/23

Unweighted mean

JJA 2023



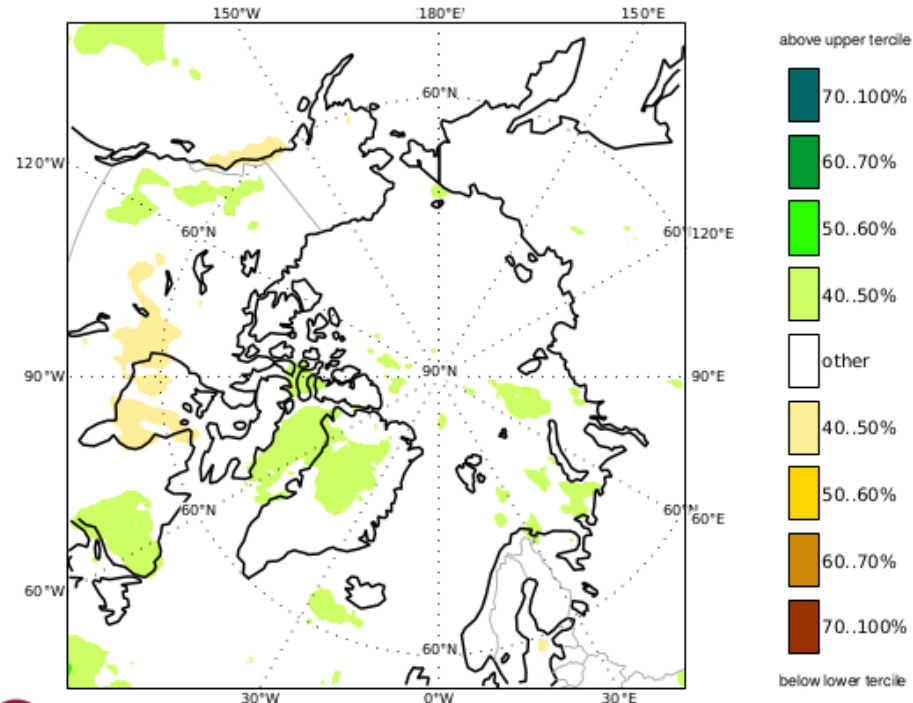
C3S multi-system seasonal forecast

Prob(most likely category of precipitation)

Nominal forecast start: 01/05/23

Unweighted mean

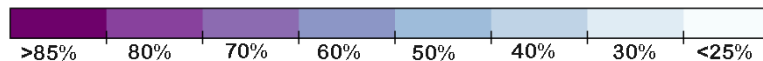
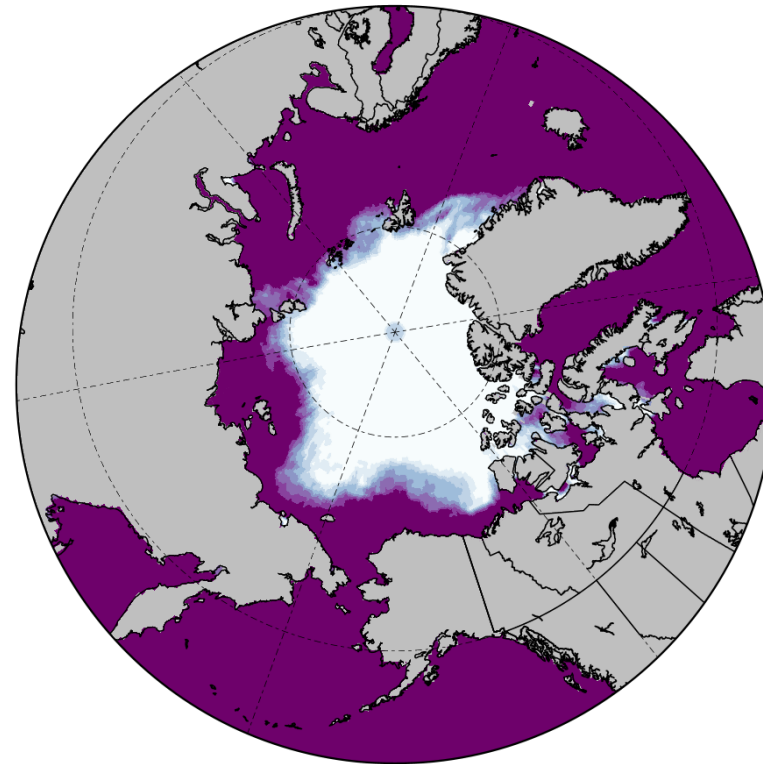
JJA 2023



Outlooks courtesy Copernicus C3S (Climate Change Service)

# Sea Ice Outlook: August Open Water

Chance of Open Water  
August 2023



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



# Thanks very much



**Crooked Creek, May 15, 2023**  
Photo: Alaska DHS & EM

