



ACF

Arctic Climate Forum

# Arctic Consensus Statement

Summary of Summer 2020 and  
Outlook for Winter 2020/2021

## What it is and how it is generated

Eivind Støylen, Norwegian Meteorological Institute  
ACF-6 online, October 2020



## Arctic Regional Climate Center

# What is the ArcRCC Consensus Statement?

A collaborative product developed amongst Arctic meteorological and ice services to synthesize observations, historical trends, forecast models and fill gaps with regional expertise.

The consensus statement provides:

- a review of the major Arctic climate trends of the previous season,
- verification of the previous seasons outlooks and
- outlooks for the upcoming season for temperature, precipitation and sea-ice.

# How is it produced?

- Joint effort by all members of the ArcRCC
- Climate monitoring and Forecast information is collected from the Responsible nodes
- Additional regional information is provided
- Consensus statement document draft is circulated among the team
- Final version published after the Arctic Climate Forum

NATIONAL		REGIONAL		CIRCUMPOLAR
Countries	Meteorological Organizations	Regional Climate Centres (RCCs)		Arctic Regional Climate Centre
United States	NOAA	North American Node	Forecasting	
Canada	ECCC			
Denmark	DMI	Northern European Node	Data Services	
Iceland	IMO			
Norway	NMI			
Sweden	SMHI			
Finland	FMI			
Russia	AARI	Northern Eurasia Node	Monitoring	

# What does it look like?

This is the 6th one



## Third Session of the Pan-Arctic Regional Forum (PARCOF-3), Rovaniemi, Consensus Statement for the Arctic Summer

To meet climate adaptation and decision-making  
has been made towards the establishment of  
(ArcRCC-Network). The ArcRCC-Network is  
Organization (WMO) RCC concept with active contributi  
member countries. The Pan-Arctic Regional Climate Outlook  
activity of the ArcRCC-Network to create a forum to meet di  
information, and follows the well-known Regional Climate  
supported by WMO and its partners around the world. Th  
year of its demonstration phase.

Freezing and thawing periods on the fringes of the warm a  
most important considerations for many sectors of the Arctic  
twice per year: a face-to-face meeting in May preceding t  
virtual meeting in October before the ice returns in the Arctic

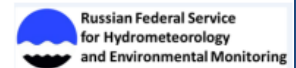
The third PARCOF meeting was held May 8-9, 2019 in Rov  
Participants of the Arctic Council representatives of Arctic  
from all of the Arctic Council Member States, and stakehold  
a collaborative effort by the network which reviews the tr

## Arctic Regional Climate Centre Consensus Statement 2019 Arctic Summer Seasonal Summary and 2019-2020 Arctic Winter Seasonal Outlook

### CONTEXT

Arctic temperatures continue to warm at more than twice the global mean. Annual surface air

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## Arctic Climate Forum Consensus Statement

## 2020 Arctic Summer Seasonal Climate Outlook (along with a summary of 2020 Arctic Winter Season)



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### CONTEXT


Arctic temperatures continue to warm at more than twice the global mean. Annual surface air temperatures over the last 4 years (2016–2019) in the Arctic (60°–85°N) have been the highest in the time series of observations for 1936–2019<sup>1</sup>. The extent of winter sea-ice is at record low levels, and the volume of Arctic sea-ice present in the month of September 2019 has declined by more than 50% compared to the mean value for 1979–2019<sup>2</sup>. To support Arctic decision makers in this changing climate, the recently established Arctic Climate Forum (ACF) convened by the Arctic Regional Climate Centre Network (ArcRCC-Network) under the auspices of the World Meteorological Organization (WMO) provides consensus climate outlook statements in May prior to summer thawing and sea-ice break-up, and in October before the winter freezing and the return of sea-ice. The role of the ArcRCC-Network is to foster collaborative regional climate services amongst Arctic meteorological and ice services to synthesize observations, historical trends, forecast models and fill gaps with regional expertise to produce consensus climate statements. These statements include a review of the major climate features of the previous season, and outlooks for the upcoming season for temperature, precipitation and sea-ice. The elements of the consensus statements are presented and discussed at the Arctic Climate Forum (ACF) sessions with both providers and users of climate information in the Arctic twice a year in May and October, the later typically held online. This consensus statement is an outcome of the 5<sup>th</sup> session of the ACF held online on 27-28 May 2020 and coordinated by the Eurasian Node of ArcRCC-Network hosted by the Russian Federation.

# Where is it published?

We have a website: [arctic-rcc.org](http://arctic-rcc.org)

[Log in/register](#)

search this site



**Arctic Regional Climate Centre Network**  
(in demonstration phase)

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Photo: Lene Østvand

UPCOMING ARCTIC CLIMATE FORUM  
ACF  
Arctic Climate Forum

CLIMATE MONITORING  
Latest seasonal summary product

LONG-RANGE FORECASTING  
Latest seasonal outlooks

DATA ACCESS  
Search different data repositories

CONSENSUS STATEMENTS  
Consensus Statement for the Arctic Summer 2018 Season Outlook

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### News

#### Arctic Climate Forum expects above normal temperatures

Submitted by Lene Østvand on Mon, 2020-06-22 14:03

The fifth Arctic Climate Forum (ACF-5) was held on 27-28 May 2020 as a virtual meeting led by the Arctic and Antarctic Research Institute (AARI), Roshdydromet. It brought together nearly 90...

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### New Arctic Climate Forum



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## Climate monitoring summary for past periods

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Photo: Lene Østvand

SUMMARY FOR FEBRUARY-APRIL 2020


SUMMARY FOR JUNE-AUGUST 2019

SUMMARY FOR FEBRUARY-APRIL 2019

SUMMARY FOR NOVEMBER 2018-JANUARY 2019

SUMMARY FOR JUNE-AUGUST 2018

SUMMARY FOR OCTOBER 2017- MARCH 2018



Summary for February-April 2020

Summary for June-August 2019

Summary for February-April 2019

Summary for November 2018-January 2019

Summary for June-August 2018

Summary for October 2017- March 2018

[Climate Monitoring >](#)

### Climate Summary for February-April 2020

This is the main result from the climate summary stated in the ACF-5 Consensus statement, for temperature, precipitation and sea ice during February, March and April 2020. View the full [climate summary presentation](#) for more details. The strong positive surface air temperature anomaly (warmer than normal) over Eurasia and the Arctic Ocean contributed to below to near normal ice conditions observed in winter 2020 across the entire Arctic region.

#### Temperature FMA 2020 Summary

The figure below shows February, March, and April (FMA) 2020 surface air temperature anomaly based on the 1981-2010 reference period. Red indicates warmer than normal temperatures, and blue indicates cooler than normal temperatures. The map is produced by the Hydrometcenter of Russia <https://meteoinfo.ru/> with ERA-5 as data source. The FMA 2020 average surface air temperatures in the Arctic north of 65°N ranged from higher than normal in the eastern hemisphere, to lower than normal in the western hemisphere. Scandinavia and the majority of the Eastern and Western Scandinavia regions experienced warmer than normal conditions (red areas), while the majority of Canada, Alaska, Greenland, and the North Atlantic Ocean experienced near normal (white areas) or slightly below normal (light blue areas) conditions. Using data from NCEP/NCAR reanalysis to rank the average surface air temperature, the boundary between Eastern and Western Siberia saw their fifth warmest FMA period, on average, since the start of the record in 1949 (not shown).

180°W

<https://arctic-rcc.org/climate-monitoring>

# arctic-rcc.org

## Archive of previous outlooks



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Photo: Lene Østvand

**Outlook for June-August 2020**

Outlook for February-April 2020

Outlook for November-January 2019-20

Outlook for June-August 2019

Outlook for February-April 2019

Outlook for November-January 2018-19

Outlook for June-August 2018

About forecasts

WMO Global Seasonal Climate Update

[Long-Range Forecasting >](#)

### Seasonal outlook for June-August 2020

The images below show seasonal outlooks for June to August 2020, for temperature, precipitation and sea ice. More details can be found in the [Seasonal outlook for June-July-August 2020 presentation](#) and the [Sea-Ice Outlooks Summer 2020 presentation](#).

#### Temperature JJA 2020 Outlook

Surface air temperatures during summer 2020 (JJA: June, July, and August 2020) are forecast to be above normal across the majority of the Arctic regions (orange and red areas). The confidence of the forecast is low to moderate over the majority of the continental Arctic (land areas) (yellow and orange areas), while forecast confidences are high for the maritime parts of the Atlantic region, the Bering Sea, and a portion of the Barents and Kara Seas (dark red areas). The multi-model ensemble did not agree over a few maritime areas across the Arctic (white areas).



# arctic-rcc.org

## Pointer to data access portals



Arctic Data Centre

NSF Arctic Data Center

INTAROS Arctic Data

### Data access





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## Pointers to regional products

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Arctic Regional Climate Centre Network  
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NORDIC NODE  
NORTH AMERICAN NODE  
NORTHERN EURASIA NODE

Photo: Lene Østvand

### Climate monitoring in the Nordic countries

Services from MET Norway

Polar Portal

Arctic-HYPE

Environmental Monitoring of Svalbard and Jan Mayen

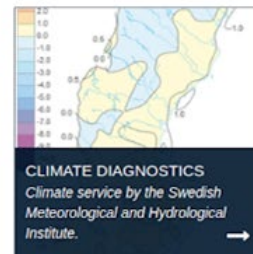
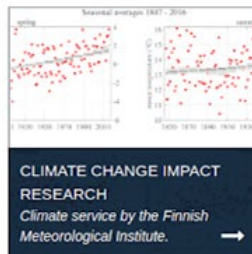
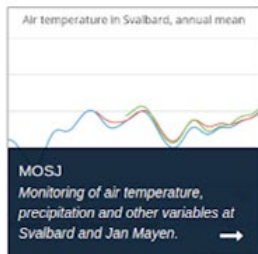
FMI Climate Change Impact Research

Swedish Climate Diagnostics Contributions


About the Nordic node

[Climate monitoring in the Nordic countries >](#)

### Climate monitoring in the Nordic countries



Consensus statement will be published on <https://arctic-rcc.org/acf>



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ACF SPRING 2020

ACF FALL 2019

ACF SPRING 2019

ACF FALL 2018


Photo: Lene Østvand

ACF Spring 2020

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- ACF Fall 2019
- ACF Spring 2019
- ACF Fall 2018
- ACF Spring 2018

Consensus statements




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consisting of three sub-centres: the Arctic Node, the European and Greenland Node and the North American Node

The Arctic Climate Forum (ACF) is the flagship activity of the Arctic Regional Climate Centre Network (ArcRCC-Network) supported by WMO and the Arctic Council.


The first session of ACF was held in 1997 in Oslo, Norway.




**WORLD METEOROLOGICAL ORGANIZATION**




Environment and Climate Change Canada



Norwegian Meteorological Institute



Russian Federal Service for Hydrometeorology and Environmental Monitoring



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### Arctic Climate Forum Consensus Statement

#### 2020-2021 Arctic Winter Seasonal Climate Outlook (along with a summary of 2020 Arctic Summer Season)

#### CONTEXT

Arctic temperatures continue to warm at more than twice the global mean. Annual surface air temperatures over the last 5 years (2016–2020) in the Arctic (60°–85°N) have been the highest in the time series of observations for 1936–2020<sup>1</sup>. Though the extent of winter sea-ice approached the median of the last 40 years, both the extent and the volume of Arctic sea-ice present in September 2020 were the second lowest since 1979 (with 2012 holding minimum records)<sup>2</sup>. To support Arctic decision makers in this changing climate, the recently established Arctic Climate Forum (ACF) convened by the Arctic Regional Climate Centre Network (ArcRCC-Network) under the auspices of the World Meteorological Organization (WMO) provides consensus climate outlook statements in May prior to summer thawing and sea-ice break-up, and in October before the winter freezing and the return of sea-ice. The role of the ArcRCC-Network is to foster collaborative regional climate services amongst Arctic meteorological and ice services to synthesize observations, historical trends, forecast models and fill gaps with regional expertise to produce consensus climate statements. These statements include a review of the major climate features of the previous season, and outlooks for the upcoming season for temperature, precipitation and sea-ice. The elements of the consensus statements are presented and discussed at the Arctic Climate Forum (ACF) sessions with both providers and users of climate information in the Arctic twice a year in May and October, the later typically held online. This consensus statement is an outcome of the 6<sup>th</sup> session of the ACF held online on 28–29 October 2020 and coordinated by the North American Node of ArcRCC-Network hosted by the United States of America.

## Arctic Climate Forum Consensus Statement

### **2020-2021 Arctic Winter Seasonal Climate Outlook** **(along with a summary of 2020 Arctic Summer Season)**



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## **HIGHLIGHTS**

The combination of an Arctic meridional atmospheric circulation (north-south) and high ocean surface heating this summer (JJA: June, July, August 2020) was the main driver of this past season's temperature, precipitation and sea ice anomalies. Above normal temperatures forecast for all Arctic regions this winter (November 2020 to January 2021) will continue to have implications for sea-ice over that time period.

**Temperature:** The summer 2020 average surface air temperatures were above normal for most of the Arctic domain, with Eastern Siberia observing record-breaking temperatures. Above normal temperatures are expected to continue across the majority of the Arctic this winter.

**Precipitation:** High spatial variability between wetter and drier than average conditions was observed across the Arctic during JJA 2020. Wetter than normal conditions are expected across the majority of the Arctic region this winter.

**Sea-ice:** The Northern Hemisphere September 2020 minimum sea-ice extent was the 2<sup>nd</sup> lowest since 1979, with the Eurasian seas and the Northern Sea Route completely ice free while sea-ice conditions in the Beaufort Sea and the Canadian Archipelago were close to normal. Later than normal fall freeze-up is expected for Baffin Bay, East Siberia, and the Kara, Labrador, and Laptev Seas; near normal to early freeze-up is expected for all other regions. Below to near normal 2021 maximum sea ice extent are forecast for majority of the Arctic.



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# Thank you!

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## Arctic Regional Climate Center