



ACF

Arctic Climate Forum

Arctic Consensus Statement

Summary of Winter 2021 and
Outlook for Summer 2021

What it is and how it is generated

Eivind Støylen, Norwegian Meteorological Institute
ACF-7 online, May 2021



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 7th 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 Outloo
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 the
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 1936–2019¹. 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 1979–2019². 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 5th 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

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Arctic Regional Climate Centre Network
(in demonstration phase)

CLIMATE MONITORINGLONG-RANGE FORECASTINGDATA ACCESSREGIONAL SERVICESABOUT USARCTIC CLIMATE FORUMTRAINING



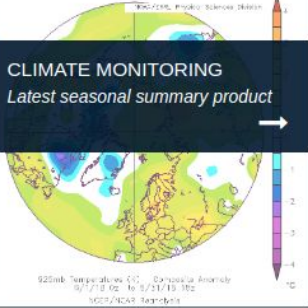


Photo: Lene Østvand

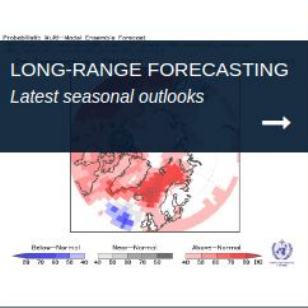


UPCOMING ARCTIC CLIMATE FORUM


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CLIMATE MONITORING
Latest seasonal summary product




LONG-RANGE FORECASTING
Latest seasonal outlooks



DATA ACCESS
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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), Roshydromet. It brought together nearly 90...

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New Arctic Climate Forum

arctic-rcc.org

Climate monitoring summary for past periods

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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




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

[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

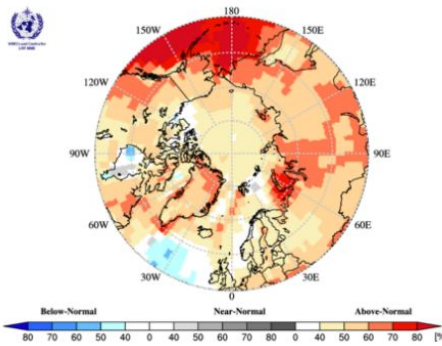
[Long-Range Forecasting >](#)

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](#).

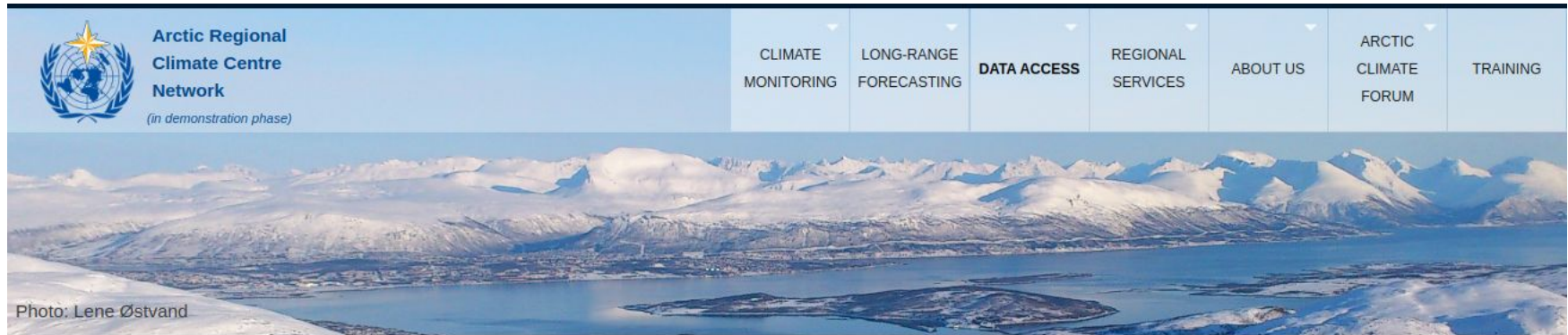
Temperature JJA 2020 Outlook

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

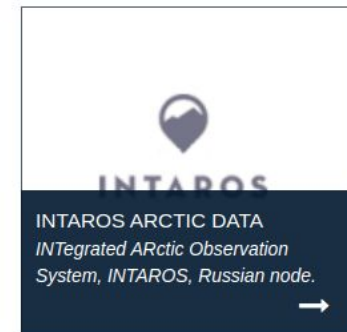


Arctic Data Centre

NSF Arctic Data Center

INTAROS Arctic Data

Data access



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Pointers to regional products

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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

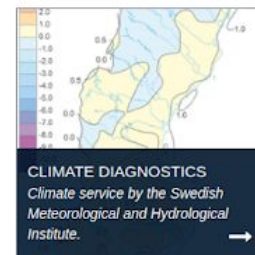
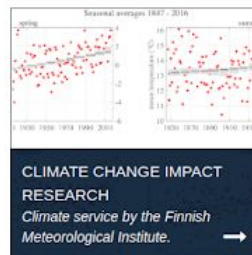
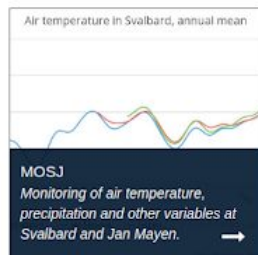
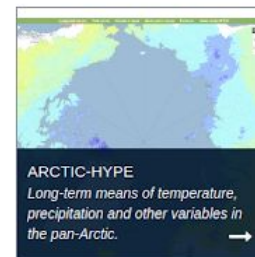
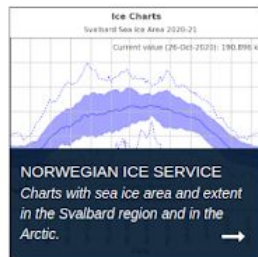
FMI Climate Change Impact Research

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



WORLD METEOROLOGICAL ORGANIZATION



Environment and Climate Change Canada



Norwegian Meteorological Institute



Russian Federal Service for Hydrometeorology and Environmental Monitoring

Photo: Lene Østvand

ACF Spring 2020

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

CONTEXT

Arctic temperatures continue to warm at more than twice the global average. 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 1936–2020¹. 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)². 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 latter typically held online. This consensus statement is an outcome of the 7th session of the ACF held online on 26-27 May 2021 and coordinated by the Nordic Node of ArcRCC-Network hosted by Iceland.

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



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HIGHLIGHTS

Warmer than normal surface air temperatures over the Nordic regions and Arctic Oceans contributed to mostly below normal ice conditions during the 2020-2021 winter all across the Arctic, although some interannual variability was observed. A meridian type of circulation with several 'cold waves' in Nordic, Western Siberian and Alaska regions stimulated ice growth in coastal parts of Eurasian Arctic Seas and Beaufort Sea, and also contributed to the freezing process continuing well after mid March in the Baltic Sea, which otherwise saw extremely mild ice conditions this winter.

Forecast warmer than normal temperatures contribute to early to near normal spring break-up and below to near normal sea ice extent for the summer of 2021.

Temperature: The average surface air temperatures for February, March, and April ranked from much lower than normal in Siberia and Alaska, to higher than normal for Greenland, Svalbard, and the Arctic Seas. Above normal temperatures and sea-surface temperatures are expected over the majority of the Arctic regions in June, July, and August 2021.

Precipitation: February, March, and April were drier than normal over parts of Western and Eastern Siberian regions, while Alaska, Bering and Chukchi, Central Canada, and Svalbard were wetter than normal. Wetter than normal conditions is expected to continue over several Arctic regions: Chukchi and Bering, Alaska, Eastern Canada and Canadian Archipelago. Historically, we do not have a high confidence in the precipitation forecast over the Arctic in June, July, and August 2021.

Sea-ice: The northern hemisphere March 2021 sea-ice extent maximum was the 7th lowest since 1979, driven by significant absences of ice in the Bering Sea, Barents Sea and the East Coast of Canada. For summer 2021, lower to near normal ice cover is the predominant forecast for the Arctic, while early to near normal break-up of sea ice is expected for most regions.



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Thank you!

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