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

<table>
<tr><th colspan="2">NATIONAL</th><th colspan="2">REGIONAL</th><th>CIRCUMPOLAR</th></tr>
<tr><td>Countries</td><td>Meteorological Organizations</td><td colspan="2">Regional Climate Centres (RCCs)</td><td rowspan="10">Arctic
Regional Climate Centre</td></tr>
<tr><td>United States</td><td>NOAA</td><td rowspan="2">North American Node</td><td rowspan="2">Forecasting</td></tr>
<tr><td>Canada</td><td>ECCC</td></tr>
<tr><td>Denmark</td><td>DMI</td><td rowspan="5">Northern European Node</td><td rowspan="5">Data Services</td></tr>
<tr><td>Iceland</td><td>IMO</td></tr>
<tr><td>Norway</td><td>NMI</td></tr>
<tr><td>Sweden</td><td>SMHI</td></tr>
<tr><td>Finland</td><td>FMI</td></tr>
<tr><td>Russia</td><td>AARI</td><td>Northern Eurasia Node</td><td>Monitoring</td></tr>
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What does it look like?

This is the 7th one

Environment and Climate Change Canada | Norwegian Meteorological Institute | Russian Federal Service for Hydrometeorology and Environmental Monitoring | WORLD METEOROLOGICAL ORGANIZATION

First Session of the Pan-Arctic Regional Climate Outlook Forum (PARCOF-1)
Ottawa, Canada, May 2018

Environment and Climate Change Canada | Norwegian Meteorological Institute | WORLD METEOROLOGICAL ORGANIZATION

Second Session of the Pan-Arctic Regional
Forum (PARCOF-2), virtual forum, October

Consensus Statement for the Arctic Winter 2018-2

Third Session of the Pan-Arctic R
Forum (PARCOF-3), Rovaniemi,

Consensus Statement for the Arctic Su

To meet climate adaptation and decision-makin
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 Arcti
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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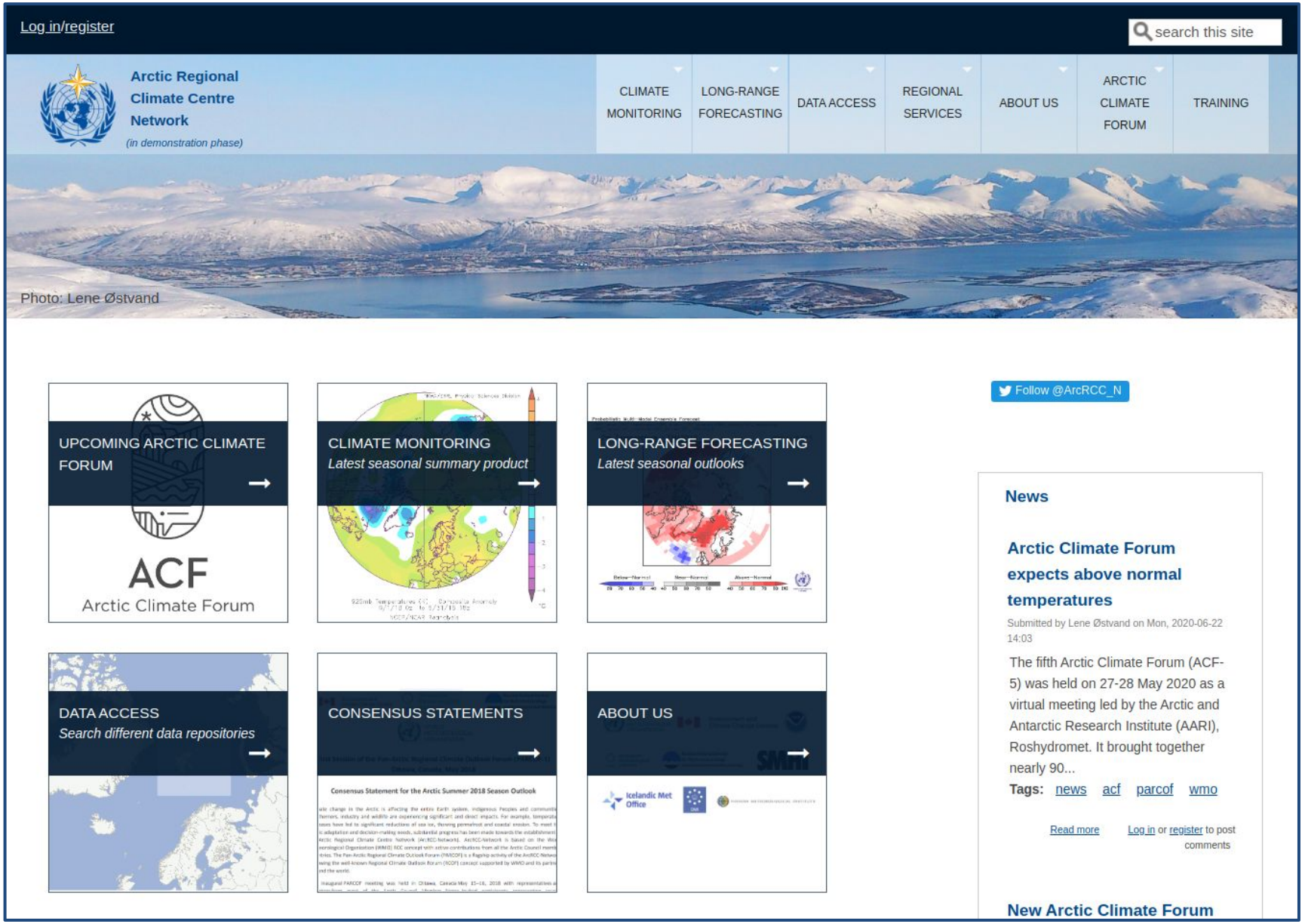
CONTEXT

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[1]. 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[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 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.

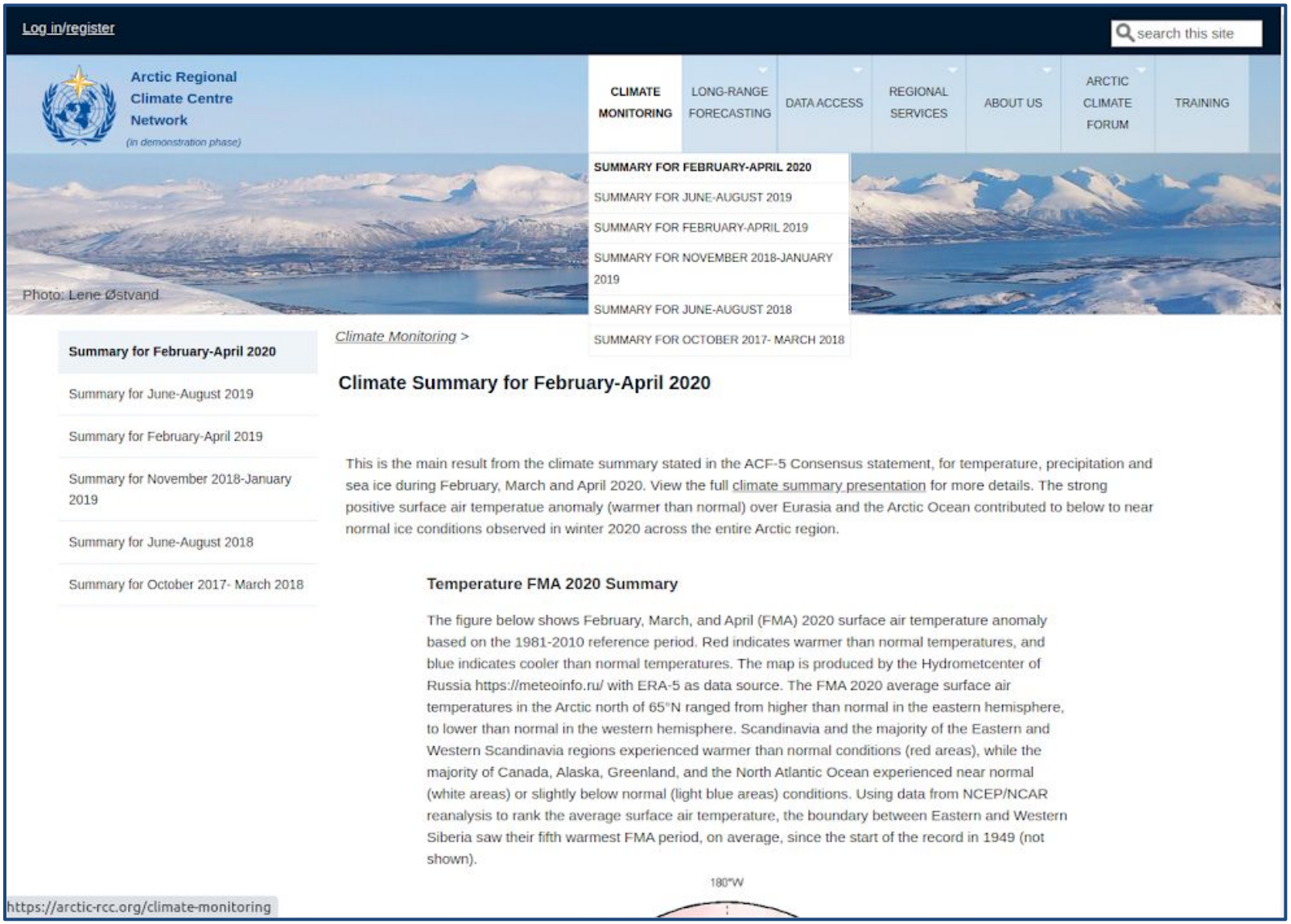
Where is it published?

We have a website: arctic-rcc.org

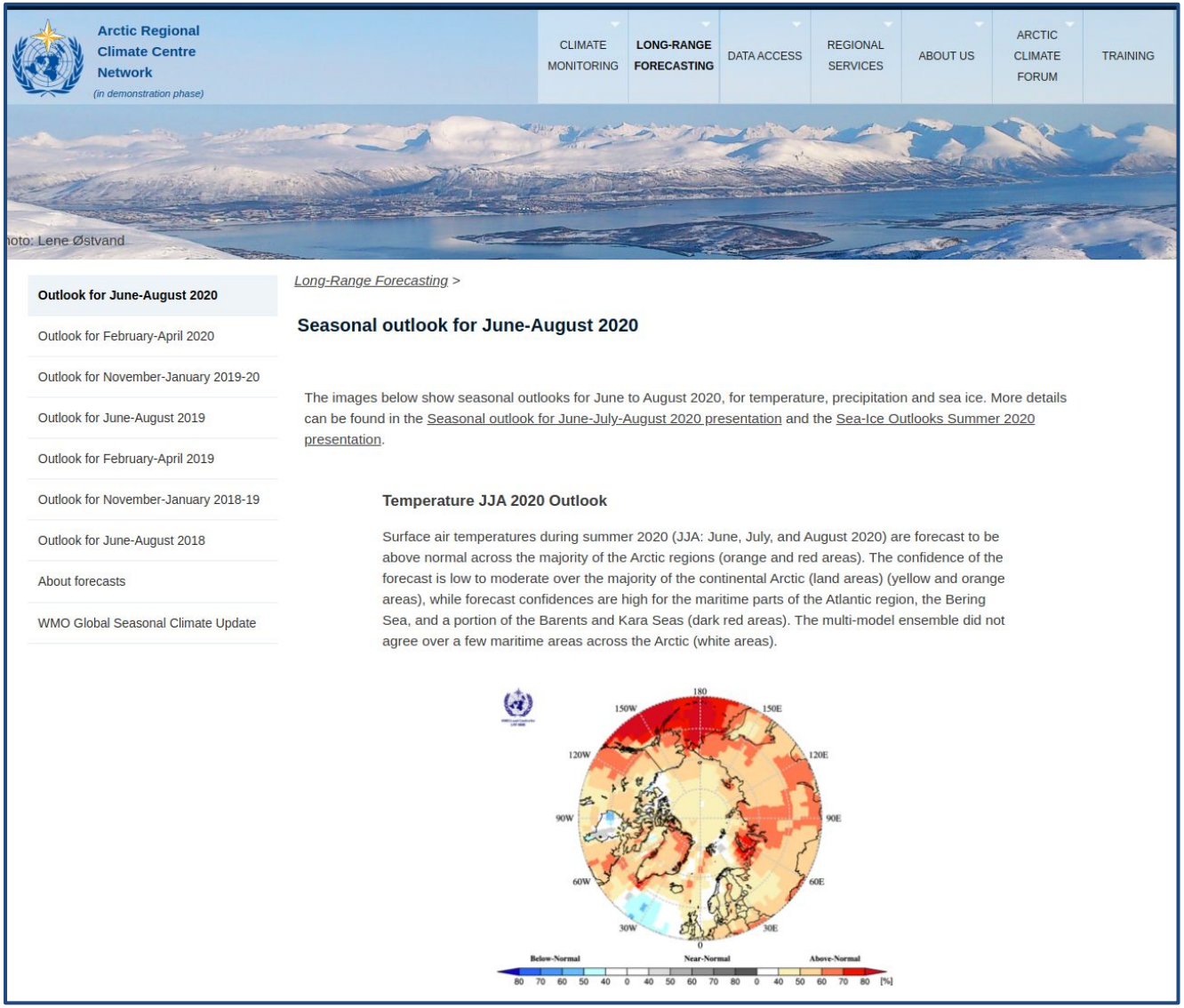


arctic-rcc.org

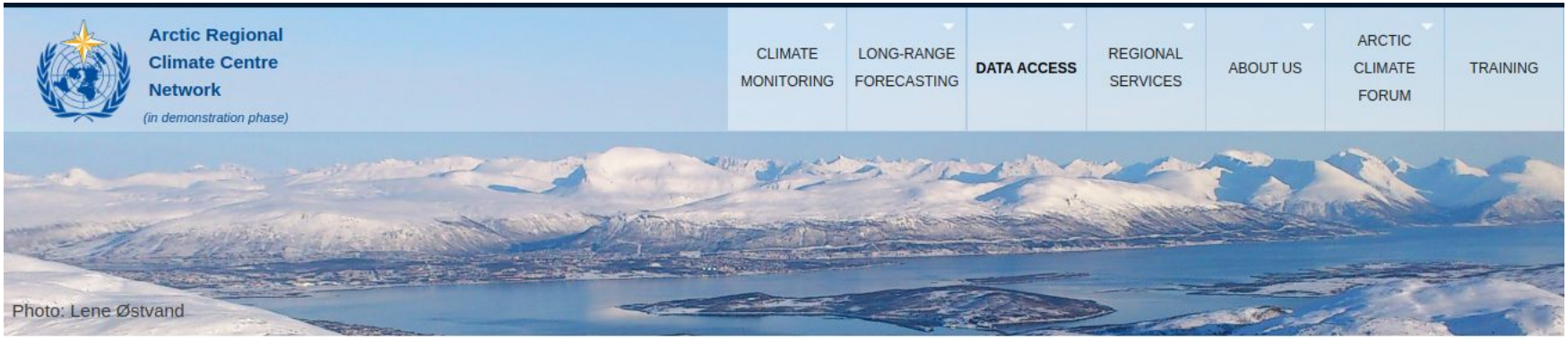
Climate monitoring summary for past periods



arctic-rcc.org
Archive of previous outlooks



arctic-rcc.org
Pointer to data access portals



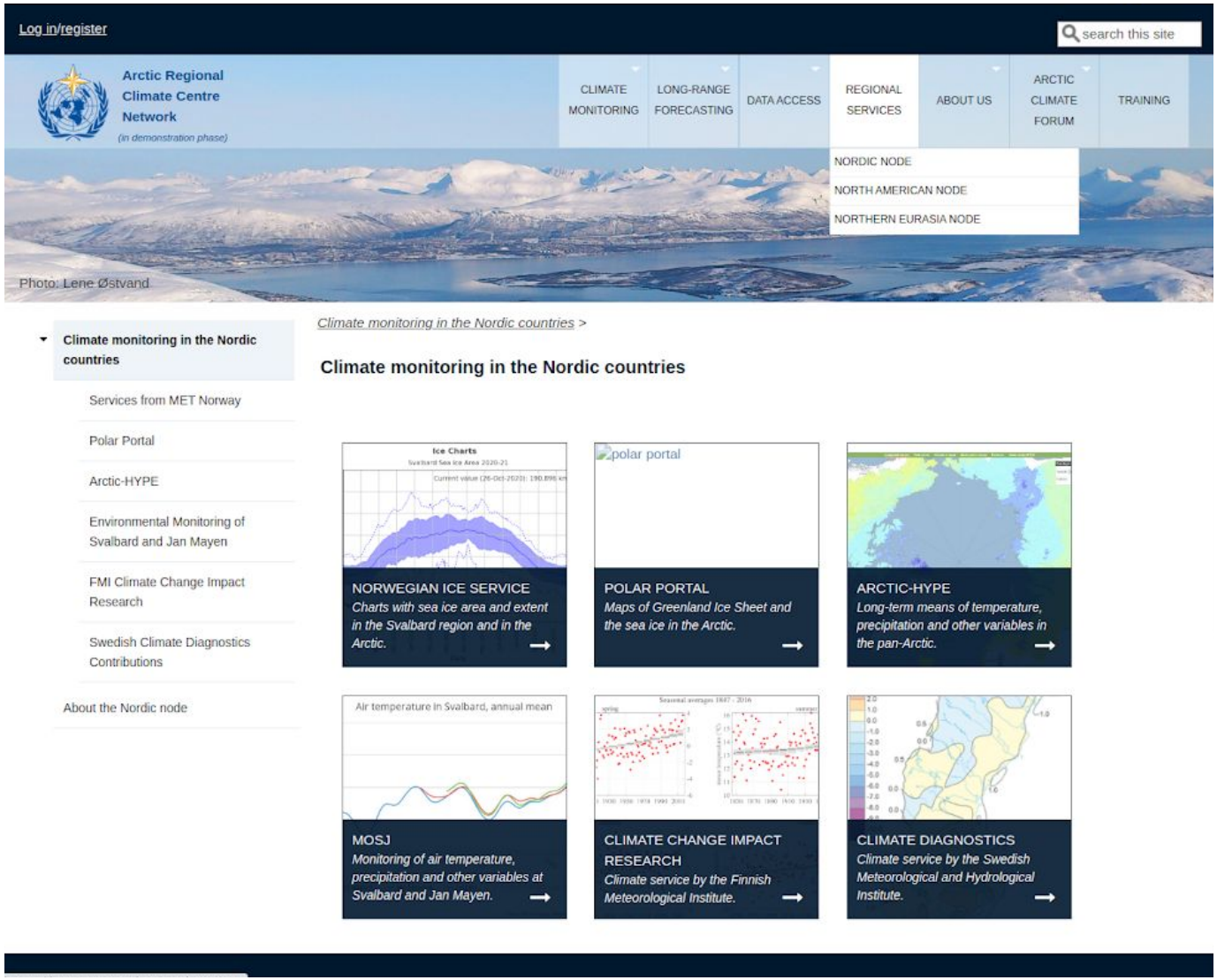
Arctic Data Centre

NSF Arctic Data Center

INTAROS Arctic Data

Data access

arctic-rcc.org
Pointers to regional products



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

Arctic Regional Climate Centre Network
(in demonstration phase)

CLIMATE MONITORING | LONG-RANGE FORECASTING | DATA ACCESS | REGIONAL SERVICES | ABOUT US | ARCTIC CLIMATE FORUM | TRAINING

ACF SPRING 2020

Photo: Lene Østvand

- ACF Spring 2020
- ACF Fall 2019
- ACF Spring 2019
- ACF Fall 2018
- ACF Spring 2018
- Consensus statements

WORLD METEOROLOGICAL ORGANIZATION
Environment and Climate Change Canada
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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 1936-2020[1]. 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.

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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!

eivinds@met.no

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