Icelandic Met Office

Norwegian Meteorological Institute

Environment and Climate Change Canada

Introducing the Arctic Regional Climate Centre Network (ArcRCC-N)

https://www.arctic-rcc.org

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Photo: Helge Tangen

AARI

ACF
Arctic Climate Forum

NOAA
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

FINNISH METEOROLOGICAL INSTITUTE

SMHI

DMI

Welcome to Arctic Climate Forum number 8
ACF-8

- A forum for Arctic Regional Climate Centre Network to meet stakeholders and users
- Usually: Every spring a face-to-face meeting (hopefully happening in 2022)
- Every fall a virtual meeting - like this one

ACF
Arctic Climate Forum
Weather · Climate · Water

What's the difference?

Weather

- Conditions of the atmosphere over a short period of time
- Reported in terms of hours and days for a city, town, region

It answers these questions

- ***What is the temperature right now?***
- ***Will I need a coat this afternoon?***
- ***Will it rain this weekend?***

Climate

- Average weather of a place over period of many years
- Tells us what's normal for an area.

It answers these questions

- ***What is an average winter like in Reykjavik?***
- ***Was 2015 the warmest summer on record?***
- ***Will Tromsø have above normal temperatures this summer?***

Climate is what you expect, weather is what you get

(sources: NOAA, NSIDC and WMO and websites)

Scale of Weather and Climate Information

Time Scale	Days	Weeks	Months (sub-seasonal)	Seasons (3 months)	Years	Decades	Centuries
Weather or Climate Information	Weather forecasting		Arctic Regional Climate Centre		Satellite and in-situ monitoring	Climate Change Models	
Geographic Scale	Local		← filling this gap →			Global/Regional	
Sources of Information	National Meteorological Services				• National Meteorological Services • Arctic Report Card	• IPCC assessments • AC Working Group assessments	

ArcRCC products are filling the seasonal gap using

- State of the art modeling for **temperature, precipitation and sea-ice**
- Regional expertise at Meteorological organizations
- By providing operational products for decision-makers every
  - May for the Arctic summer season
  - October for the Arctic Winter season

The Arctic Regional Climate Centre

<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="9">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 / Greenland 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>
</table>

Collaboration/Networking across Arctic regional nodes and Meteorological Organizations

Status for ArcRCC-Network

- An activity started and supported by the World Meteorological Organization (WMO)
- Entered Demonstration Phase in 2018 and held the first ACF that year
- ArcRCC-N will seek designation, meaning obtaining a “stamp” from WMO as a fully operational Regional Climate Centre

ArcRCC Products
produced each May and October

1. Arctic Consensus Statement:

Text and graphics that summarize the temperature, precipitation and sea-ice climate trends for the past season and forecasts for the upcoming season. A collaborate effort by the network in reviewing:

- Trends in the historical monitoring data
- Forecasts from the models
- Using Met/Ice climate expertise, fill gaps in the data

https://arctic-rcc.org/consensus-statements

2. Regional Summaries

- The same information that is in the consensus statement but organized by Arctic region and added information about potential impacts to regional users.

How is this information different than?

The Arctic Council's Arctic Monitoring and Assessment Programme (AMAP)

- i.e. the Snow Water Ice and Permafrost Assessment (SWIPA) report discusses trends and future predictions, updated once every 5-6 years
- Status report on climate extremes, impact on Arctic societies etc, every 2 years

National Snow and Ice Data Centre –Arctic Report Card

- Annual Summary of the Arctic climate over the past year

ArcRCC products are <u>ongoing</u> operational Arctic climate summaries and forecast products that are updated every Winter and Summer

World Meteorological Organization

Weather · Climate · Water

Thank you!