



Environment and  
Climate Change Canada



Norwegian  
Meteorological  
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for Hydrometeorology  
and Environmental Monitoring

# Introducing the Arctic Regional Climate Centre (ArcRCC)

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WEATHER CLIMATE WATER  
TEMPS CLIMAT EAU

**SMHI**



FINNISH METEOROLOGICAL INSTITUTE



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# 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 snow 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 Ottawa?*
- *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)*

# New levels of Climate Information

Time Scale	Days	Weeks	Months (sub-seasonal)	Seasons (3 months)	Years	Decades	Centuries
Weather or Climate Information	Weather forecasting		<b>New climate products with scientific advances</b>			Climate Change Models	
Geographic Scale	Local		Regional			Global	

- ***Filling an information gap between***
  - ***Local and global***
  - ***Daily/weekly and decadal***
- ***Our focus is on regional coverage at sub-seasonal (monthly) and seasonal (3 months) scales***



# WMO Regional Climate Centres

Climate goes beyond national borders

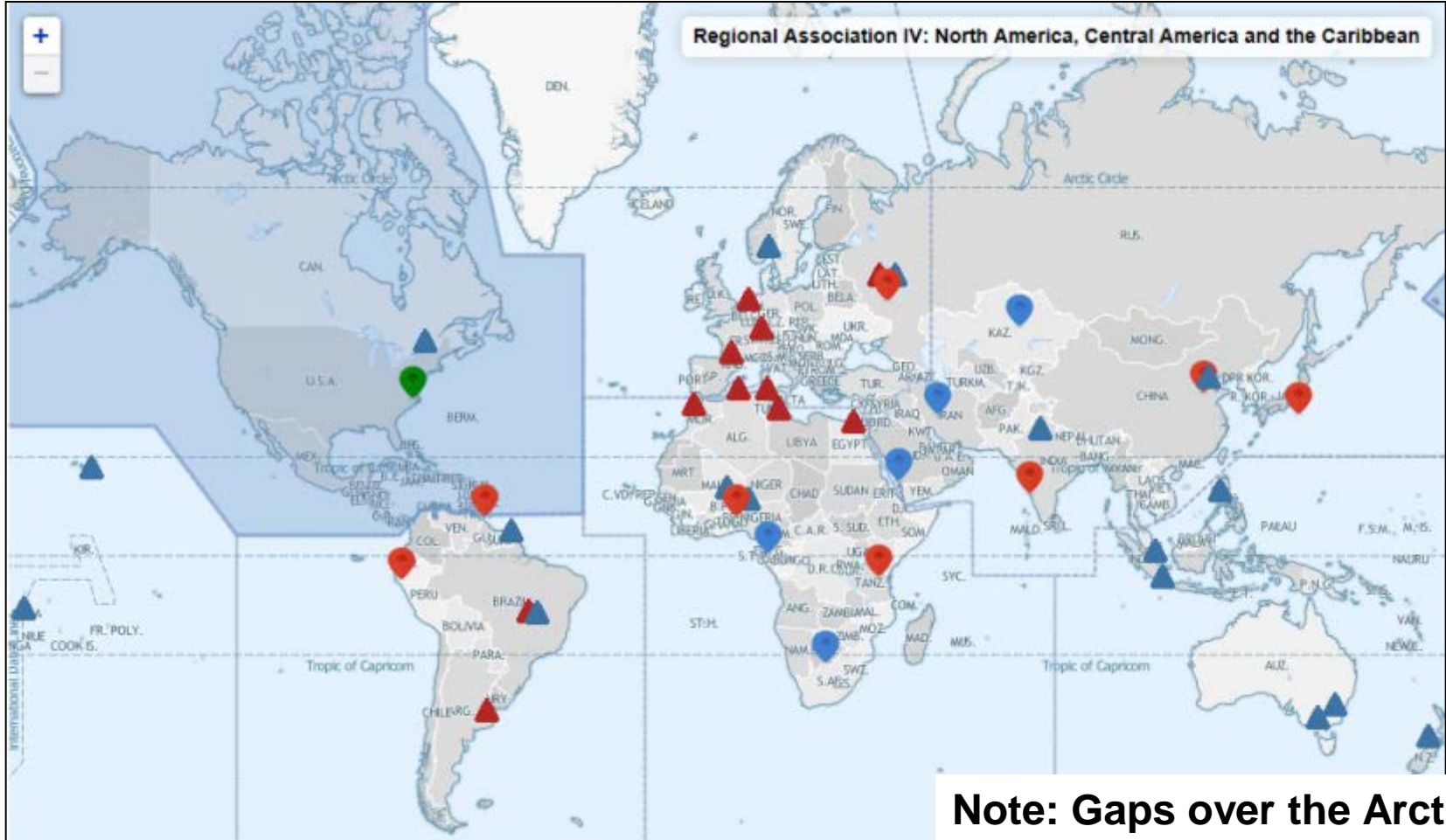
Regional Climate Centres of excellence that link national meteorological services.

To share, coordinate and enhance climate products and services to:

- Fill geographical gaps in products and services between countries
- Fill gaps in products and services between countries
- Deliver and potentially harmonize products and services
- Enhance Research and development



# WMO Regional Climate Centres



## Legend

- designated RCC
- RCC in demonstration phase
- RCC proposed
- ▲ designated RCC-Network
- ▲ RCC-Network in demonstration phase
- ▲ RCC-Network proposed



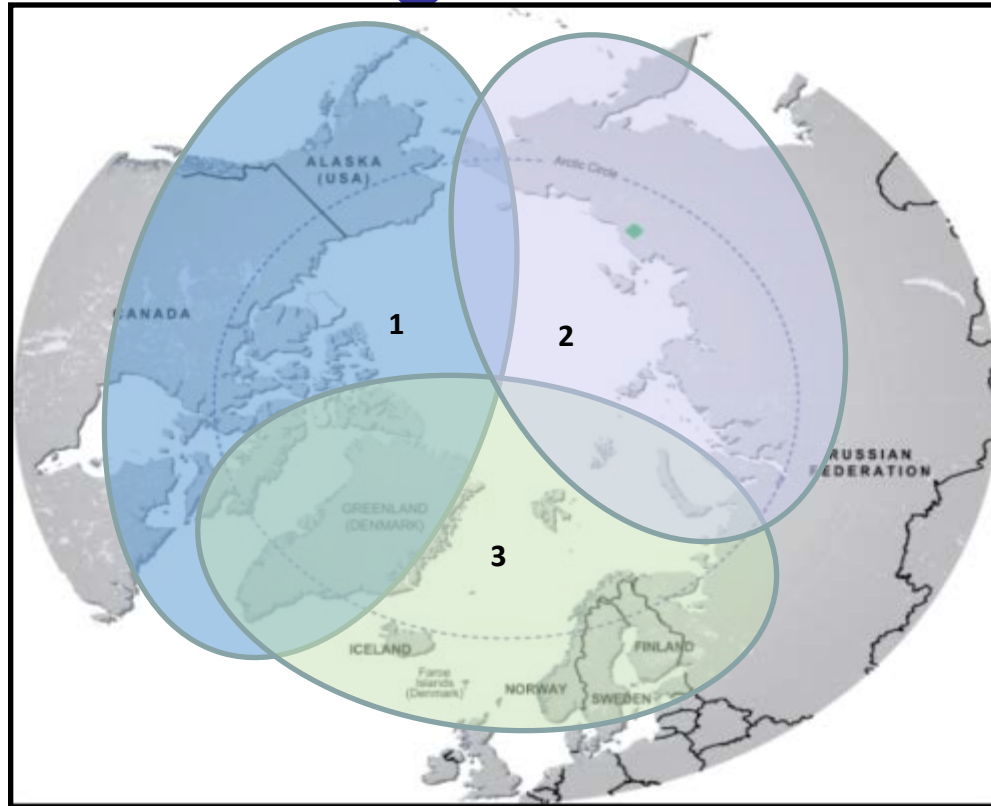
# The Arctic Regional Climate Centre

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

**Collaboration/Networking across Arctic regional nodes and Meteorological Organizations**



# Arctic Polar Regional Climate Centre



## Benefits:

- Link Arctic nations and fill geographical gaps in coverage
- Improve collaboration on climate forecasting and monitoring
- *Collaboration on climate products, accessible through one website*
- Understanding regional variability, climate processes and climate change adaptation needs



# ArcRCC Products

- 1. Seasonal Outlooks** for the upcoming season: forecasts from models on
  - temperature,
  - precipitation and
  - sea-ice forecasts
- 2. Seasonal Summaries** of the past season: describes actual temperature, precipitation and sea-ice details based on monitoring observations
- 1. Arctic Consensus Statement** a collaborate effort by the network which reviews
  - Trends in the historical monitoring data
  - Forecasts from the models
  - Using Met/Ice climate expertise, fill gaps in the data
  - Develop a consensus outlook for the Arctic for the upcoming season





# 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

National Snow and Ice Data Centre –Arctic Report Card

- Annual Summary of the Arctic climate over the past year

**ArcRCC products are ongoing operational Arctic climate summary and forecast products that are updated every Winter and Summer**





**World  
Meteorological  
Organization**

Weather · Climate · Water

Thank you!