



Environment and  
Climate Change Canada



Norwegian  
Meteorological  
Institute



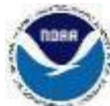
Russian Federal Service  
for Hydrometeorology  
and Environmental Monitoring

# Introducing the Arctic Regional Climate Centre (ArcRCC)

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WEATHER CLIMATE WATER  
TEMPS CLIMAT EAU

**SMHI**



FINNISH METEOROLOGICAL INSTITUTE



Icelandic Met  
Office



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 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***



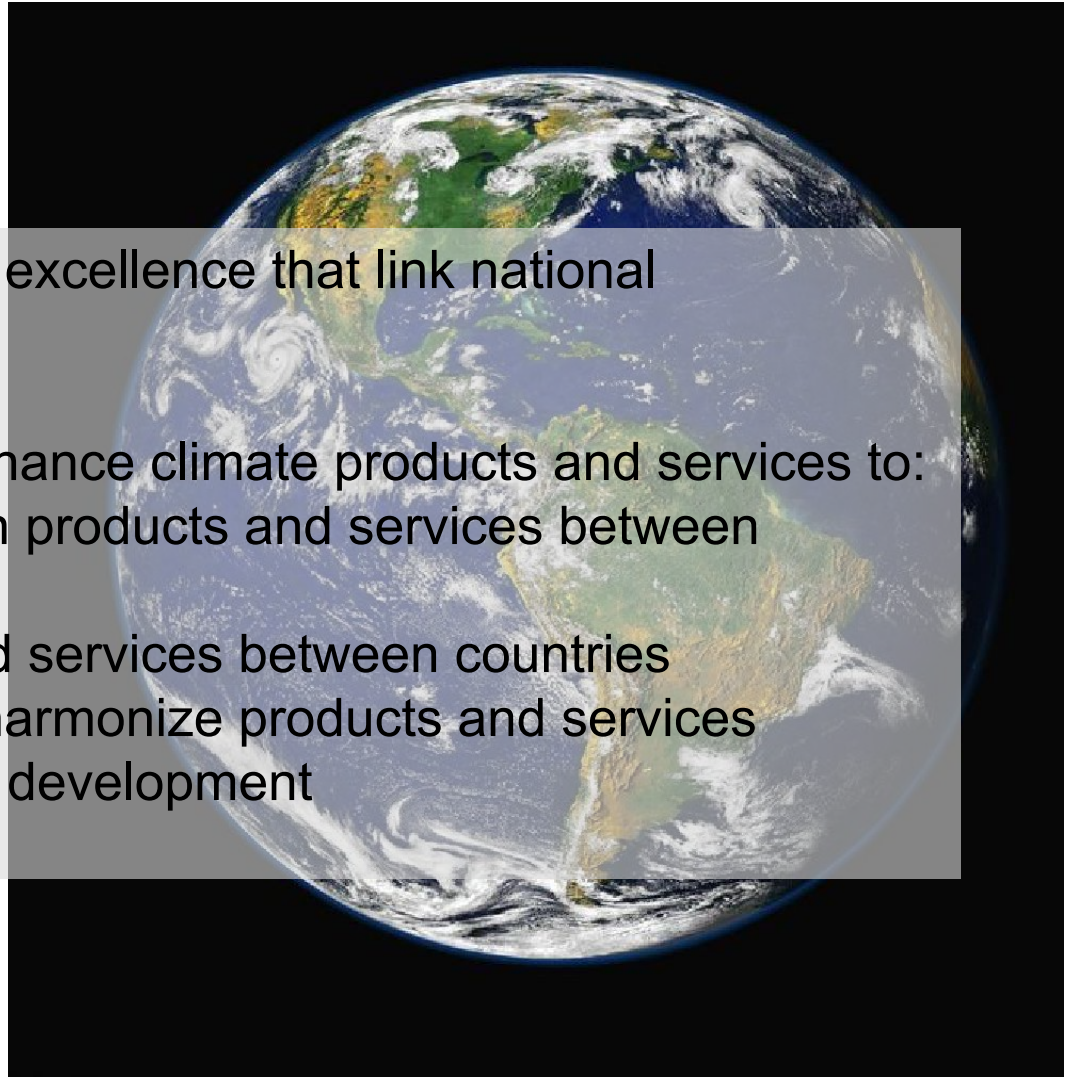
# WMO Regional Climate Centres

Climate goes beyond national borders

Regional Climate Centres of excellence that link national meteorological services.

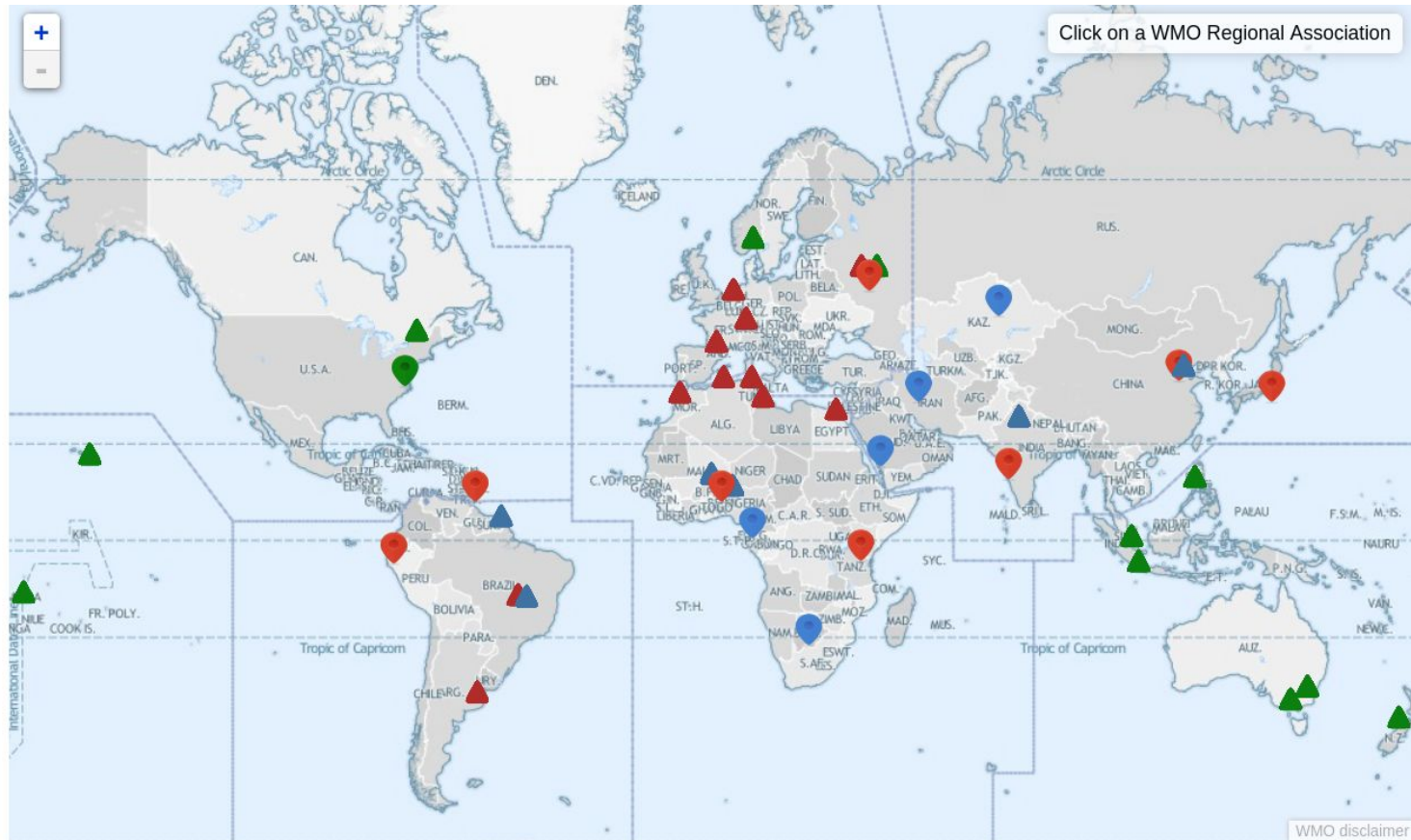
To share, coordinate and enhance climate products and services to:

- 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

Note: Gaps over the Arctic

# The Arctic Regional Climate Centre

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 / 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 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



# Status for the ArcRCC NETWORK

- Demonstration Phase started May 2018 (at PARCOF-1)
- 2018 to show Proof of Concept; WMO to acknowledge the network model to function
- Plan to seek designation as an operational RCC by mid-2020
  - Prove ability to deliver Mandatory Functions within then
- User forums (PARCOFs) are important to achieve the designation
- In today's PARCOF-2 we will assess the performance of the outlooks/LRFs given in May (PARCOF-1)





# 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
3. **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!