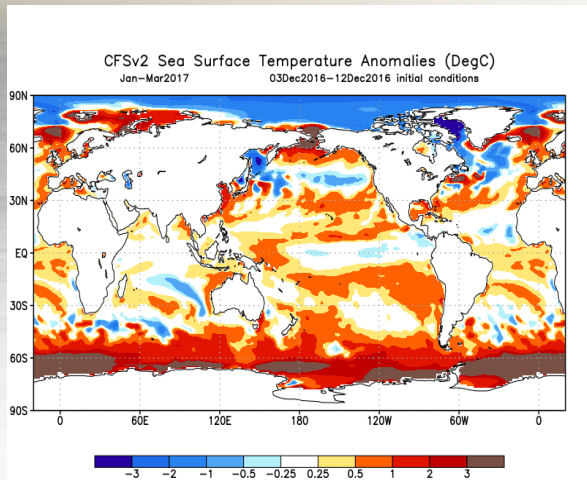
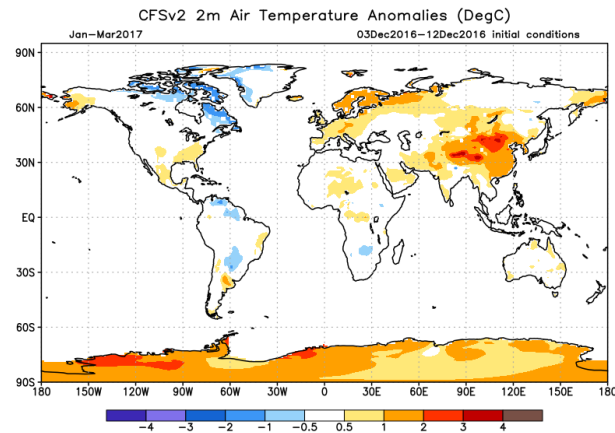



Strengthening Regional Capacity for Climate Adaptation and Risk Management: U.S. Support for WMO Regional Climate Centers



Shanna Pitter (NWS)
Wassila Thiaw (NWS)
Meredith Muth (OAR)
John Marra (NESDIS)



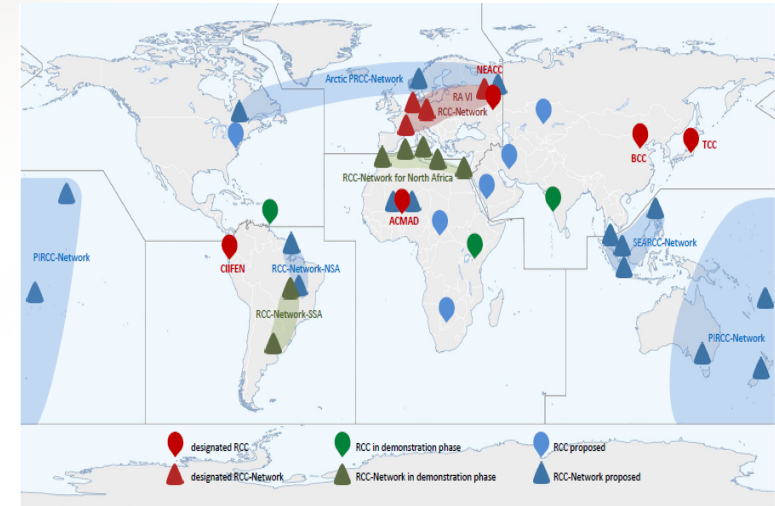


Why do we need RCCs?

- Uneven climate services available in all countries due to resource and capacity constraints.
- Some regions have similar climate impacts and could benefit from similar information and services.
- The Global Framework for Climate Services calls for building regional capacity for climate services to support the NMHSs
- In RA-IV, the Caribbean RCC in Barbados helped to solve that issue by strengthening regional collaboration, building capacity, and covering smaller island nations.
- **Grand results are better coordination, early warning of climate impacts, improved data and information, prepared NMHSs, and improved ability to adapt to climate impacts.**

World Meteorological Organization (WMO) Regional Climate Centers

- RCCs are Centres of Excellence to perform regional-scale climate functions
- Established at the request of the Members of the Regional Associations
- Official accreditation given by WMO after a successful 2- 4 yr demonstration phase
- Primary users are the National Meteorological and Hydrological Services (NMHS)
- RCCs are complementary to and supportive of NMHSs, who will deliver all warnings and national-scale products in the appropriate language.
- Tries to adhere to WMO recommendations for open data sharing and metadata



Sources:

1. Anahit Hovsepian; 2016. "WMO Regional Climate Centers: CCI/CBS procedures for establishment and designation"
2. How to establish and run a WMO RCC. http://www.wmo.int/pages/prog/wcp/wcasp/rcc/documents/WCASP80_TD1534.pdf



WMO RCC Functions

Mandatory Functions

- Operational Activities for Long Range Forecasting
- Operational Activities for Climate Monitoring
- Operational Data Services, to support operational LRF and climate monitoring
- Training in the use of operational RCC products and services

Mandatory products focus on temperature and precipitation at a minimum

Non-temp and precip products are encouraged as needed by the RA but are not mandatory for accreditation.

Highly Recommended Functions

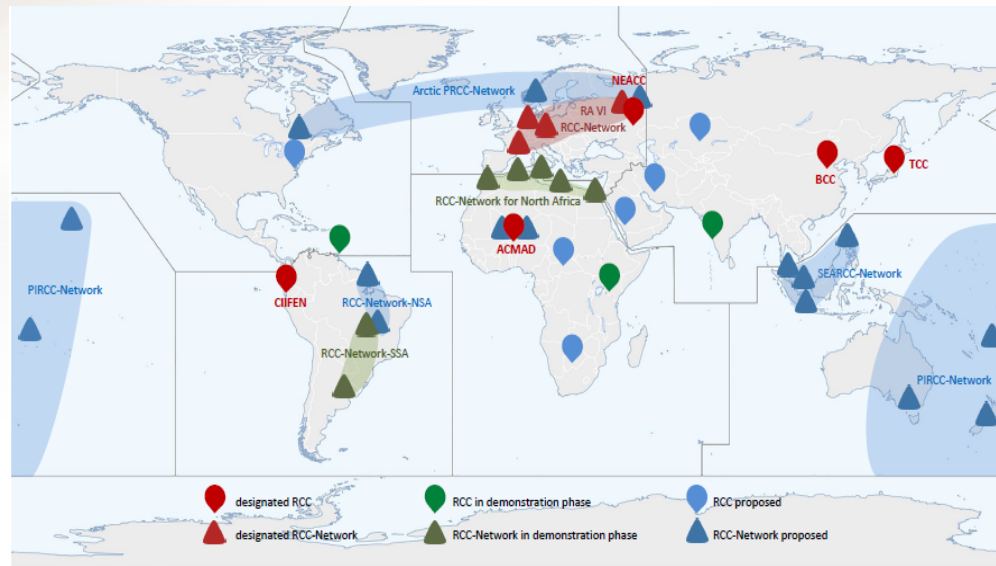
- Climate prediction and projection (beyond 2 yrs)
- Non-operational data services
- Coordination functions
- Training and capacity building
- Research and development

Sources:

1. Anahit Hovsepyan; 2016. "WMO Regional Climate Centers: CCI/CBS procedures for establishment and designation"
2. How to establish and run a WMO RCC. http://www.wmo.int/pages/prog/wcp/wcasprcc/documents/WCASP80_TD1534.pdf

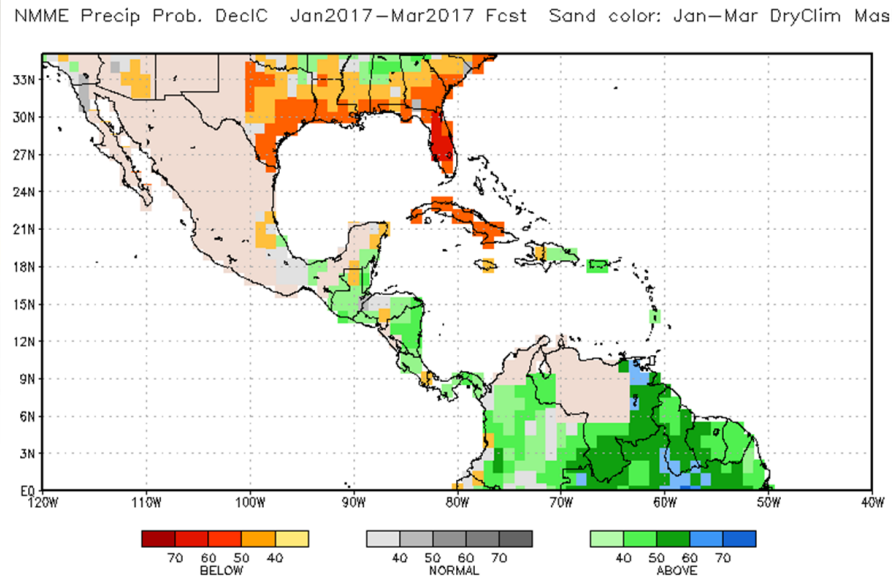
US Involvement

- The US has interest in 3 proposed WMO RCCs at different stages in their development:
 - US-Based RCC,
 - Pan-Arctic Polar RCC, and
 - Pacific RCC
- NOAA has provided technical and scientific support to other RCCs;
- USAID has financially supported the Caribbean RCC and other regional climate outlook forums.
- The US benefits by having access to better data and information taken by well trained partners



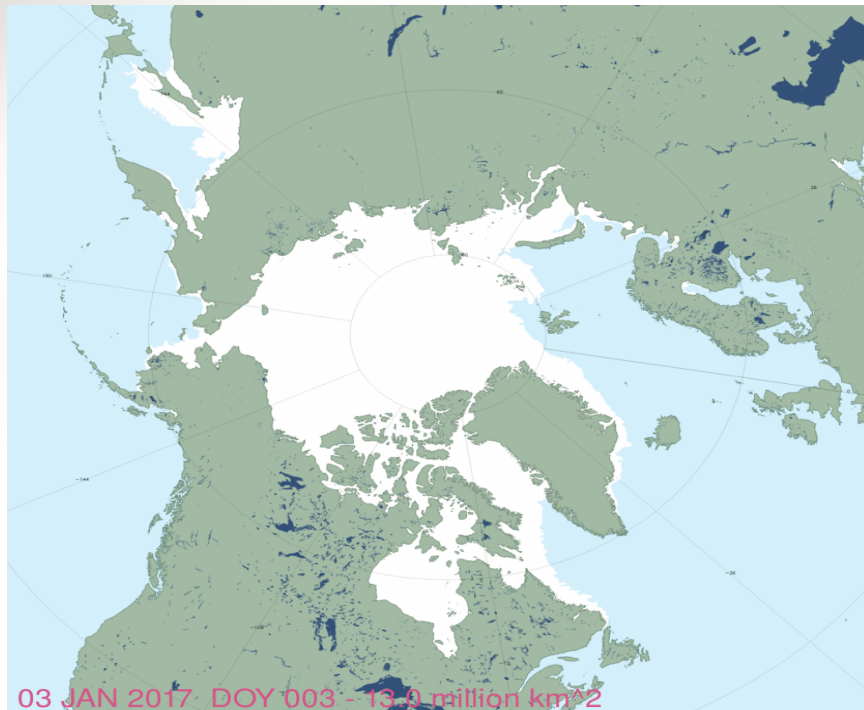
United States Regional Climate Center

- Endorsed to seek WMO accreditation by the Regional Association IV (North America, Central America, and the Caribbean)
- Will provide climate services to RA-IV, with an emphasis on Central America
 - Will work with the existing Caribbean RCC and the North American Climate Services Partnership to provide climate services coverage for the entire region
 - Leverage existing NOAA climate services
- Hosted and operated by NWS/NCEP/Climate Prediction Center (CPC) with input from other NOAA Line Offices and other interested parties
- CPC will stand up a website for the USRCC.
- Supported by funding from USAID and existing NOAA resources



Arctic Polar Regional Climate Center Network

- The 8 Arctic Nations and other interested countries will form a WMO RCC Network
- 3 Geographic nodes with multiple RCC functions
 - North American Node- US and Canada with Canadian leadership
 - Northern Europe and Greenland Node – Norway, Iceland, Finland, Denmark with Norway Leadership
 - Eurasia Node- Russia
- US plans to provide numerous pan-Arctic and regional data sets and operational long range forecasts to the Arctic PRCC



Sea ice extent; NSIDC

RA-V Pacific Regional Climate Center Network

- Australia, New Zealand, the Secretariat for the Pacific Regional Environment Programme (SPREP), and the US are the main service providers
- Serves the NMHSs of the Pacific Islands, Australia and New Zealand, and the US Pacific territories
- Multi-functional node structure
- SPREP is proposed as the overall leader and potentially will provide the online portal for the RCC
- The US plans to co-lead the Operational Data Services mandatory function.

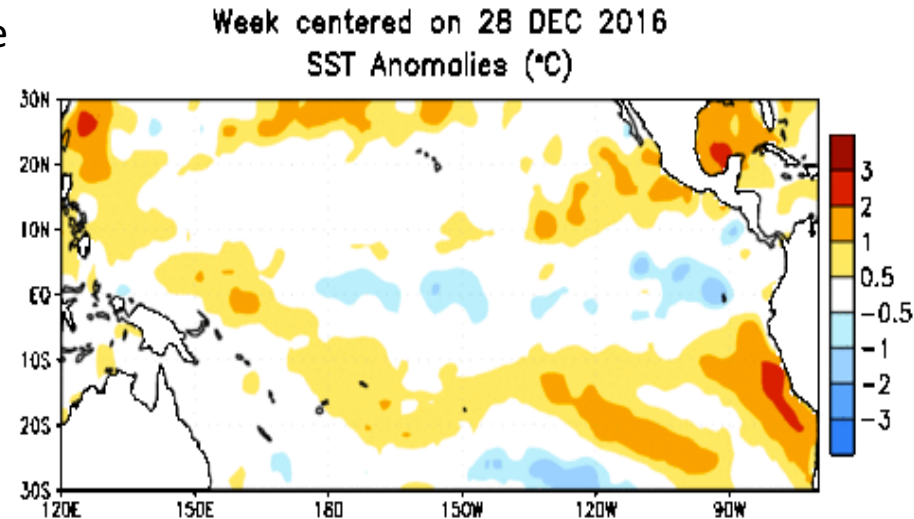


Image: NWS/NCEP/CPC



Next Steps and Summary

- USRCC will work with partners to complete the demonstration phase and gain accreditation.
- The implementation plans for the Arctic PRCC and RA-V Pacific RCC will be developed in Spring 2017
- Arctic PRCC and RA-V Pacific RCC will seek endorsement for accreditation from their regional associations in 2017 and expect to enter into the demonstration phase.
- Interested US agencies and organizations are encouraged to participate with data, products and services where appropriate.



Reach me at
shanna.pitter@noaa.gov