WEATHER CLIMATE WATER
TEMPS CLIMAT EAU

Current status of operations of RCC

CIIFEN - WSA

WMO OMM

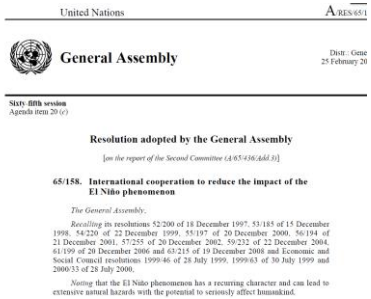
World Meteorological Organization
Organisation météorologique mondiale

WMO International Workshop on Global Review of RCC Operations, Pune, India, 12 – 14 November 2018

RCC CIIFEN–WSA Background

National Meteorological and Hydrological Services (NMHSs) of Bolivia, Colombia, Chile, Ecuador, Peru and Venezuela in recognition of its achievements providing climate services, proposed CIIFEN to assume as Climate Center for the region. The Regional Climate Center for Western South America (RCC WSA) started the demonstration phase in August 2014. At the time, 4 meetings of the Steering Committee have been held, 5th meeting is going to be held this week in Santiago-Chile. Steering Committee by Directors of NMHSs of Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela, and International Director of CIIFEN.

Applications of the RCC products are authorities and development sectors in a region often affected by ENSO impacts and high asymmetries in terms of technical and human resources.


United Nations A/RES/65/1

General Assembly

Distr.: Gene
25 February 20

Sixty-fifth session
Agenda item 20 (c)

Resolution adopted by the General Assembly

[on the report of the Second Committee (A/65/436/Add.3)]

65/158. International cooperation to reduce the impact of the El Niño phenomenon

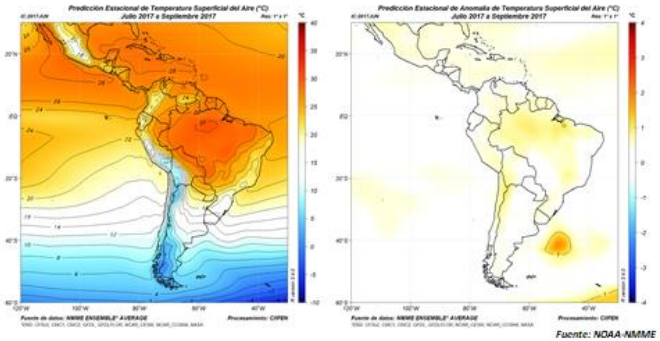
The General Assembly,

Recalling its resolutions 52/200 of 18 December 1997, 53/185 of 15 December 1998, 54/220 of 22 December 1999, 55/197 of 20 December 2000, 56/194 of 21 December 2001, 57/255 of 20 December 2002, 59/232 of 22 December 2004, 61/199 of 20 December 2006 and 63/215 of 19 December 2008 and Economic and Social Council resolutions 1999/46 of 28 July 1999, 1999/63 of 30 July 1999 and 2000/33 of 28 July 2000,

Noting that the El Niño phenomenon has a recurring character and can lead to extensive natural hazards with the potential to seriously affect humankind.

Steering committee

SENAMHI | DMC | IDEAM | INAMHI | SENAMHI | INAMEH | CIIFEN



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RCC Operations: Mandatory Functions

1. Operational Data Services

- **Map generator of SST for four fixed domains. Data from NOAA-IOSST v2 AVHRR**

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=247&Itemid=671

- ***Database of daily ECVs (LACA&D-KNMI) from meteorological stations of participant countries***

http://lacad.ciifen.org/

- ***Data and plots of: Oceanic Niño index, SST, 0-300 depth sea temperature, southern oscillation index, Pacific decadal oscillation, Outgoing longwave radiation, multivariate ENSO index, Indian Ocean dipole.***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=176&Itemid=539

- ***Gridded datasets of precipitation at different periods (decadal, pentads and monthly) for the reference period 1981-2010, annual and monthly averages.***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=218&Itemid=645

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RCC Operations: Mandatory Functions

2. Climate Monitoring 1/3

- **Monthly air surface temperature**
- **Monthly air surface temperature anomaly**
- **Monthly air surface temperature (year animation)**
- **Monthly air surface temperature anomaly (year animation)**

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=208&Itemid=611

- **Monthly and weekly wind vectors**

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=210&Itemid=612

- **Pentad, Decadal, and monthly accumulated precipitation (land and ocean)**

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=206&Itemid=614

- ***Monthly OLR (observed and anomaly)***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=211&Itemid=616

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RCC Operations: Mandatory Functions

2. Climate Monitoring 2/3

- **Monthly and weekly SST (*observed and anomaly) for fixed domains***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=207&Itemid=604

- ***Biweekly longitudinal section of sea temperature and salinity***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=246&Itemid=669

- ***Sea subsurface temperature at 25, 45, 75, 105 meters depth (observed and anomaly) Direct contribution from NOAA***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=209&Itemid=608

- ***Depth of 20°C isotherm depth (observed and anomaly). Direct contribution from NOAA***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=227&Itemid=648

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RCC Operations: Mandatory Functions

2. Climate Monitoring 3/3

- ***Hovmoller (Lat/time) of sea temperature at 25, 45, 75, 105 meters depth. Direct contribution from NOAA***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=226&Itemid=649

- ***Sea level anomaly (monthly and decadal) equatorial Pacific***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=236&Itemid=658

- ***Sea level anomaly (monthly and decadal) eastern Pacific***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=237&Itemid=657

- ***Hovmoller (time/lon) of Sea level anomaly***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=238&Itemid=656

- **Monthly and weekly sea surface salinity (*observed and anomaly) for fixed domains***

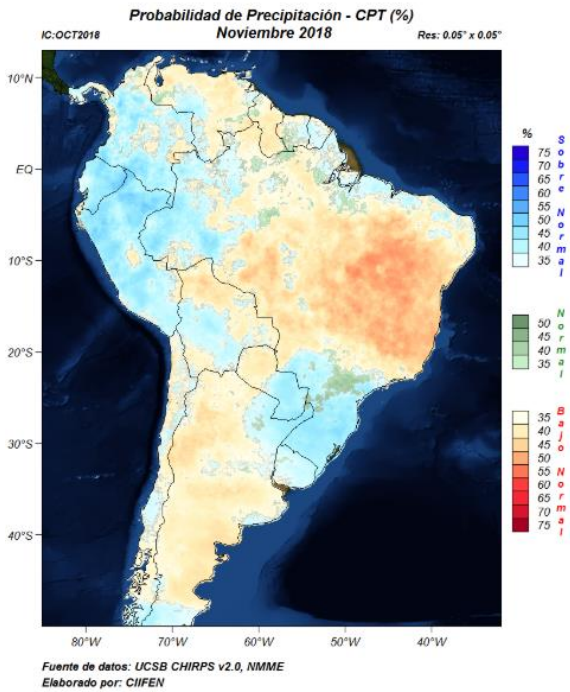
http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=231&Itemid=605

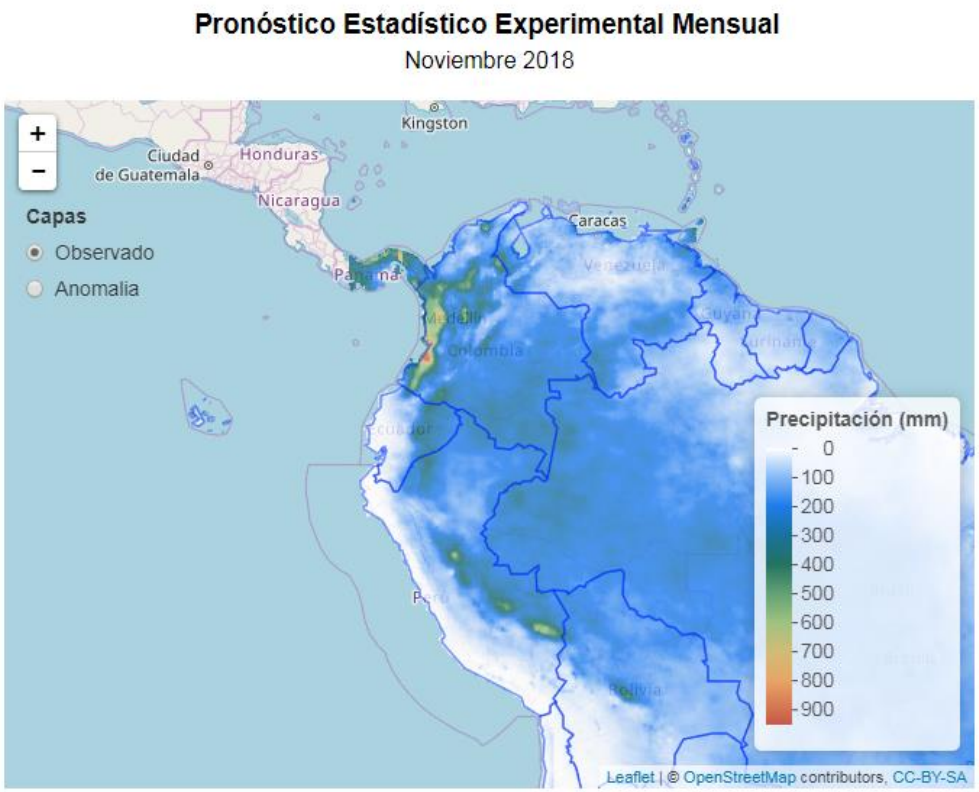
RCC Operations: Mandatory Functions

3. Long Range Forecasting

- ***Statistical downscaled (6x6 km) rainfall forecast at substernal (NNME ensemble forecast experimental) scale, using IRI´s CPT and CHIRPS gridded dataset. Available monthly in experimental mode at:***

http://crc-osa.ciifen.org/index.php?option=com_content&view=article&id=243&Itemid=664





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RCC Operations: Mandatory Functions

4. Training/Guidance in the use of RCC products

Subject	Participants: target audience, number	Duration and venue
Training in Linux CPT (IRI's tool for statistical forecast). During RCOF in Santiago-Chile 2017	2 technicians from NHMS of Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela	2 days
Training in verification of seasonal forecast. During RCOF in Lima-Peru 2016	2 technicians from NHMS of Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela	2 days
Training in CPT (IRI's tool for statistical forecast). During RCOF in La Paz-Bolivia	2 technicians from NHMS of Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela	2 days

Role in RCOF Activities

CIIFEN-RCC is in charge to coordinate seasonal forecast for the region. NMHS's elaborate probabilistic seasonal forecast.

Each year, in the last quarter a Regional Climate Outlook Forum RCOF is coordinate by CIIFEN-RCC with the support of WMO.

Every year during the RCOF a training in an specific topic is held (mentioned above)

CIIFEN is also supporting capacity building in the region trough projects implemented in the countries of the WCSA-RCC. **Capacity building covers mainly, seasonal forecasts, forecast verification, data management, and data sharing.**

CIIFEN mobilize resources from international cooperation to enhance operations of the WCSA-RCC, training and capacity building to NMHSs, and coordination of regional activities.

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User Engagement

During yearly RCOF is a sessions designed for feedback, suggestions, and cooperation mechanism from NMHSs.

Feedback mechanism needs to be improved because more of the improvements comes from RCC initiative. Sometimes products developed are not necessarily what the NMHS need to their operation.

Main messages from feedback is the need of:

- **Access to preprocessed gridded data**
- **Training, manuals, advice on seasonal forecast, and data management**
- **Access to higher resolution model outputs**

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RCC Web Portal

http://crc-osa.ciifen.org/

WSA-RCC portal is supported by CIIFEN

It provide access to a wide range of data products and access to pre-processed data.
Is mainly organized following WMO´s recommendations for RCC implementation.

90% of the data products are automated using R to download data, plot and publish in the web portal.

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SWOT analysis

Strengths

History of positive regional cooperation developed by CIIFEN, in addition to 17 regional climate outlook forums developed to date, together with the OSA's NMHSs.

Consolidated institutional network for regional seasonal forecast

Weaknesses

The rotation of experts and key points of contact within the NMHSs.

Existence of non-digitized and processed data for the analysis.

Opportunities

The designation of WMO as an accredited agency before the Adaptation Fund and the Green Climate Fund.

The Conference of Directors of NMHSs of Ibero-America.

Threats

The international financial crisis

Limited interaction between the scientific, academic and operational sectors.

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Way Forward

Strengthening capacities for the management and exchange of climate data

- Strengthening of integrated data management systems
- Strengthening of climate data interoperability systems

Strengthening capacities for climate prediction

- Strengthening of capacities in seasonal and sub-seasonal forecasting
- Strengthening of capacities in numerical modeling and data assimilation
- Strengthening of verification and validation systems

Strengthening of climate services

- Development of tools for the generation of sectorial products
- Support for the implementation of the National Climate Services Frameworks (NFCS)
- Strengthen alliances with FAO, WHO / PAHO, UNESCO-IHP and UNISDR in support of climate services

Coordination

- Coordination with other RCCs for the exchange of experiences.
- Coordination with the CPGs for the development of new products useful for the region
- Promote coordinated actions among the NMHSs of the region for the generation of regional proposals aimed at improving climate services in support of risk management and adaptation.

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Thank you
Merci

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