



WMO RAI



WMO RA VI  
RCC-Network



METEO  
FRANCE



**Step 3 of the  
MEDITERRANEAN CLIMATE OUTLOOK FORUM (MedCOF-5)  
Last updated 26<sup>th</sup> November 2015**

**SEASONAL OUTLOOK FOR THE WINTER SEASON 2015-16 FOR THE  
MEDITERRANEAN REGION**

Climate experts from WMO RA VI RCC Network Node on long-range forecasting (Meteo France and Hydrometeorological Centre of Russia), WMO RA VI RCC Network Node on climate monitoring (Deutscher Wetterdienst, Germany), WMO Nord Africa developing RCC Network Node on long-range forecasting (Directorate of National Meteorology, Morocco), WMO Northern Africa developing RCC Network Node on climate monitoring (National Institute of Meteorology, Tunisia), WMO African Center of Meteorological Application for Development (ACMAD, Niger), South East Europe Virtual Climate Change Centre (SEEVCCC, Serbia), Euro-Mediterranean Center on Climate Change (CMCC, Italy), Istituto de Biometeorología (IBIMET CNR, Italy), National Hydrometeorological Services and Research Institutes of MedCOF region provided their valuable contribution to the successful implementation of MedCOF-5 by developing the relevant documents and providing scientific guidance and recommendations.

The MedCOF-5 comprised of the following steps:

- Step 1: verification of the MedCOF-4 seasonal forecast
- Step 2: assessment of the current state of the climate including large-scale climate patterns worldwide and assessments of its likely evolution in the course of the next months;
- Step 3: building the consensus forecast for 2015-16 winter season.

All relevant documentation is posted and updated in MedCOF web site:  
<http://www.medcof.aemet.es> .

## MedCOF- 5 CLIMATE OUTLOOK FOR THE 2015-2016 WINTER SEASON<sup>1</sup>

This prediction is based on output from dynamical models, statistical models and known teleconnections of large-scale climate features.

A strong and mature El Niño event is now established in the tropical Pacific Ocean; ocean-atmosphere coupling has already shaped global teleconnections and will continue to play a role over the next few months. Models and expert opinion suggest that this event will peak around the end of the year, its amplitude placing it among the three strongest previous events since 1950 (1972-73, 1982-83, 1997-98). Many other ocean areas around the world are currently experiencing above-average surface temperatures, notably the extra-tropical region of the eastern Pacific and most of the Indian Ocean. By contrast, the North Atlantic is colder-than-average over a large area to the south of Greenland. These sea surface temperature patterns are predicted to persist over the next few months and may offer some predictability for winter. The Quasi-Biennial Oscillation is currently, and will remain over the next few months, in its westerly phase.

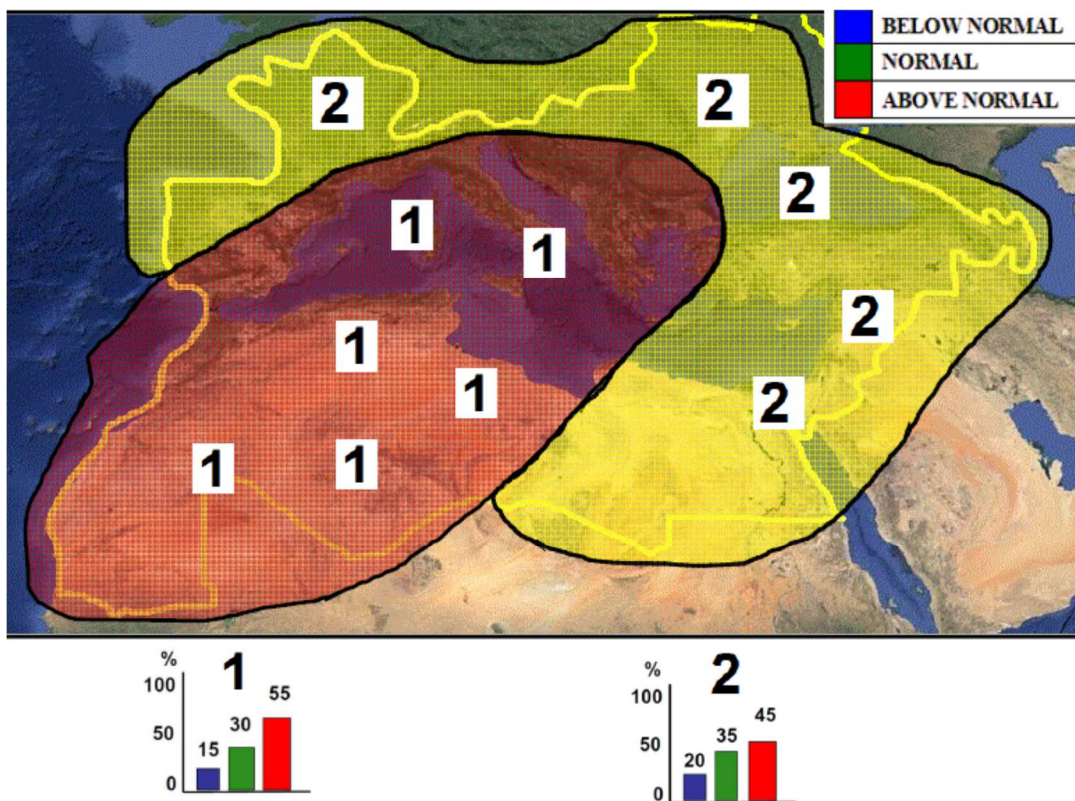


Figure 1. Graphical presentation of the 2015-16 winter temperature outlook. The maps show the probabilistic consensus forecast for tercile categories of anomalies for seasonal mean temperature, relative to the period 1981-2010. Due to the climate warming trend anomalies are affected by the selected reference period.

<sup>1</sup>The graphical representation of climate outlook in this statement is only for guidance purposes, and does not imply any opinion whatsoever concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Despite the presence of strong anomalies in the oceans and stratosphere, there is uncertainty in the forecasting systems' prediction of large-scale atmospheric circulation over the North Atlantic/European sector during the winter. The most probable scenario has an anticyclonic anomaly pole over western North Africa and a cyclonic anomaly pole over northwestern Europe. Over southern Europe and northern Africa this would explain the consensus for a tendency for above-average temperature for the winter as a whole (see figure 1).

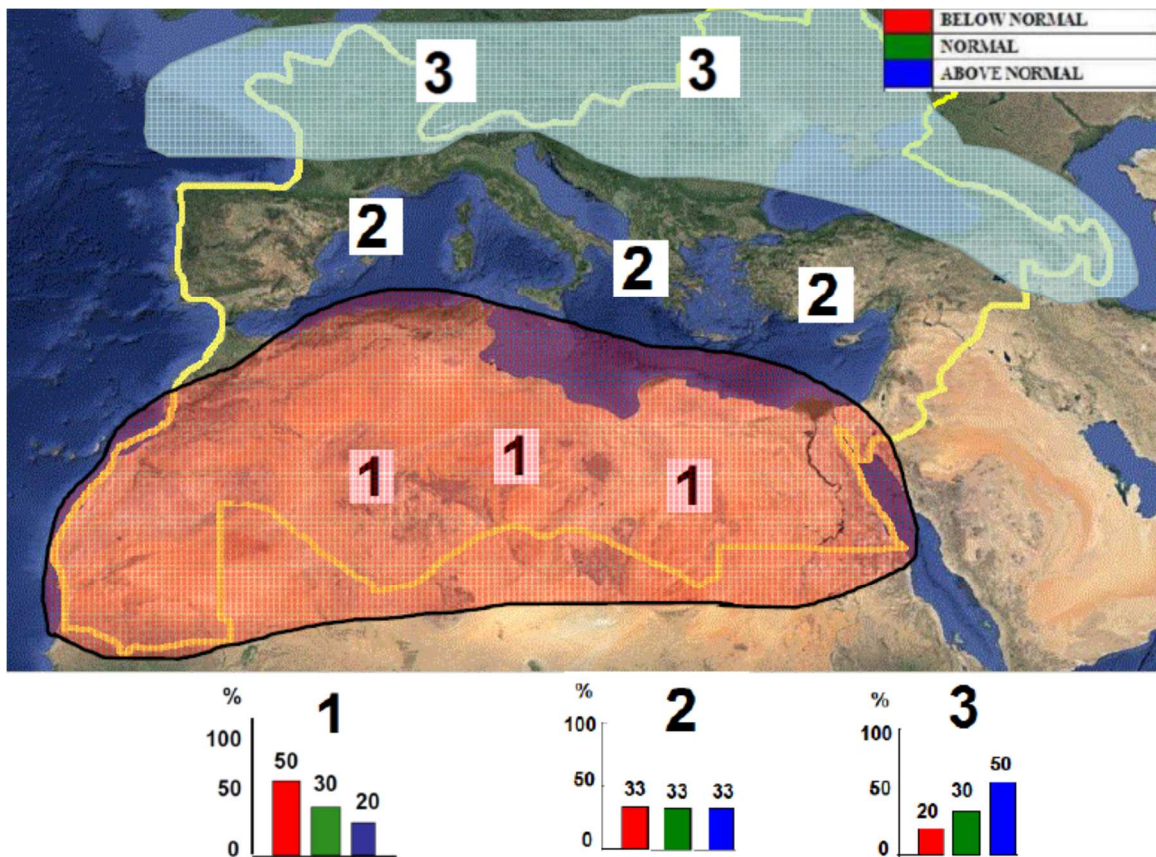


Figure 2. The same as figure 1 but for precipitation.

For precipitation uncertainties are larger than for temperature: over the northern part of the MedCOF region a wetter-than-normal winter is favoured, for most coastal areas of North Africa a drier-than-average season is favoured, but for the rest of the region no large-scale precipitation signal is present in the forecasts (see figure 2).

Sub-seasonal variations, not predictable a long time in advance, may dominate at times, so regular updates to the forecast are strongly recommended. In addition, local factors (for example SSTs in the smaller basins of the region) may shape local variability at a regional level.

Note that it is necessary to express seasonal forecasts in terms of probability due to inherent uncertainty. Any further advice on the forecast signals, smaller scales, shorter-range updates and warnings will be available throughout the winter from the National Meteorological Services, along with details on the methodology and skill of long-range predictions.

## **APPENDIX: Contributors to MedCOF-5**

- World Meteorological Organization
- Met Office, United Kingdom
- European Centre for Medium Range Weather Forecast, United Kingdom
- Météo France, Republic of France
- Agencia Estatal de Meteorología, Spain
- Deutscher Wetterdienst, Federal Republic of Germany
- African Centre of Meteorological Applications for Development, Niger
- National Centre of Meteorology and Aeronautical Climatology, Italy
- Euro-Mediterranean Center on Climate Change, Italy
- Institute of Biometeorology, Italy
- South East European Virtual Climate Change Center hosted by Republic Hydrometeorological Service of Serbia, Republic of Serbia
- National Meteorology Office, Algeria.
- Egyptian Meteorological Authority, Egypt
- National Institute of Meteorology and Hydrology, Republic of Bulgaria
- Meteorological and Hydrological Service, Republic of Croatia
- Meteorological Service, Republic of Cyprus
- National Environmental Agency of Georgia, Georgia
- Republic Hydrometeorological Institute, Former Yugoslav Republic of Macedonia
- Ministry of Transport, National Office of Meteorology, Mauritania
- Institute of Hydrometeorology and Seismology of Montenegro, Montenegro
- National Centre for Meteorological Research, Directorate of National Meteorology, Morocco
- National Meteorological Administration, Romania
- Republic Hydrometeorological Service of the Republic of Srpska, Bosnia and Herzegovina
- Meteorological Service, Hungary
- Hydrometeorological Center, Ukraine
- Republic Hydrometeorological Service of Serbia, Republic of Serbia
- National Institute of Meteorology, Tunisia