



**Step 3 of the
MEDITERRANEAN CLIMATE OUTLOOK FORUM (MedCOF-11)
Last updated 28th November 2018**

**SEASONAL OUTLOOK FOR THE WINTER SEASON 2018-19 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 Northern Africa RCC Network Node on long-range forecasting (Directorate of National Meteorology, Morocco), WMO Northern Africa RCC Network Node on climate monitoring (National Institute of Meteorology, Tunisia), 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-11 by developing the relevant documents and providing scientific guidance and recommendations.

The MedCOF-11 session comprised of the following steps:

- Step 1: verification of the MedCOF-10 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 2018-19 winter season.

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



MedCOF- 11 CLIMATE OUTLOOK

FOR THE 2018-2019 WINTER SEASON¹

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

The tropical Pacific reflects weak El Niño conditions in terms of SST indices. The latest ENSO predictions indicate that a moderate El Niño event will continue throughout the winter. Some influence of El Niño on general circulation at mid-latitudes is expected by the canonical response of positive PNA and the potential teleconnection up to the Atlantic Ocean. Most dynamical models suggest that El Niño conditions would favor negative North Atlantic Oscillation (NAO). Additionally, this is supported by the analysis of different sources of predictability (solar activity, NH snow cover, sea ice extent) favoring a shift of the low pressure systems track southwards and the associated increased in precipitation over the Mediterranean basin.

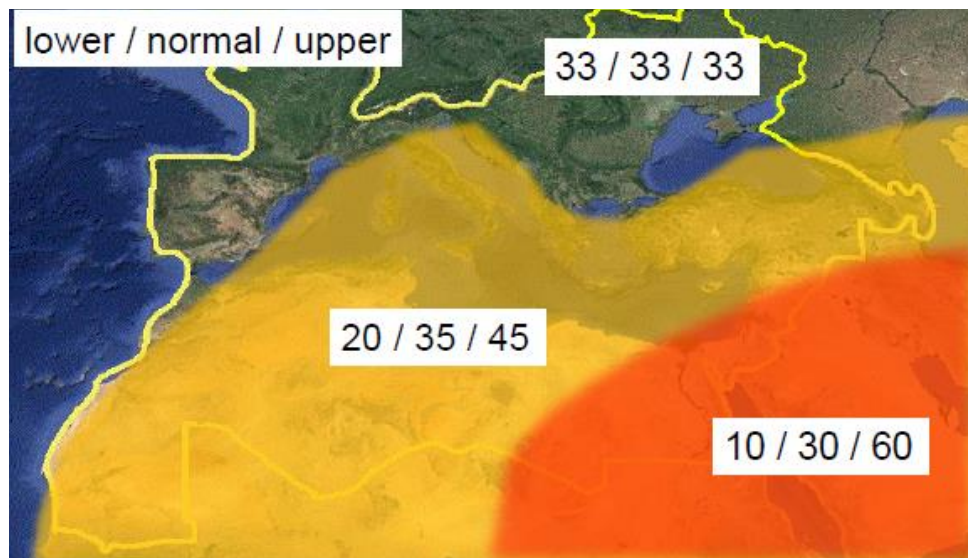


Figure 1. Graphical presentation of the 2018-19 winter temperature outlook. The maps show the probabilistic consensus forecast for tercile categories of anomalies for seasonal mean temperature, relative

¹The 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.

to the period 1981-2010. Due to the climate warming trend anomalies are affected by the selected reference period.

A tendency for above-average temperatures the main feature over most of the southern part of the region, including northern Africa, Middle East and the Mediterranean Sea. The highest probability for above average temperatures is expected over the southeastern part of the domain (see figure 1)

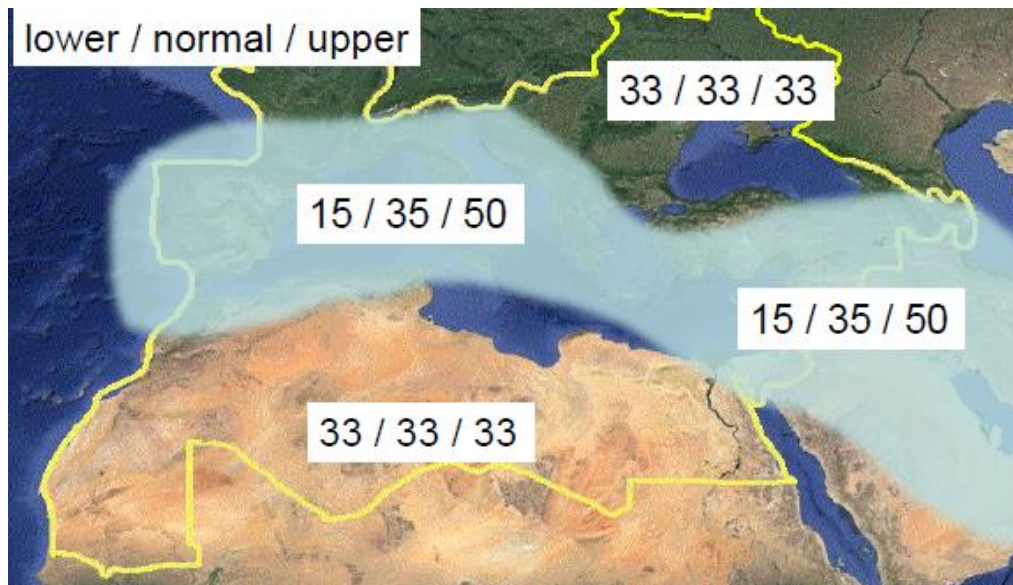


Figure 2. The same as figure 1 but for precipitation.

Although precipitation uncertainties are generally larger than for temperature, additionally the uncertainty related to the predominance of negative NAO may shift the precipitation distribution over the Mediterranean Sea. The negative NAO pattern will favor wetter-than-normal conditions over most of the Mediterranean Sea, including most of southern Europe, northern Morocco, Anatolia, Caucasus and Middle-East (see figure 2). 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-11

- World Meteorological Organization
- European Centre for Medium Range Weather Forecast, United Kingdom
- Météo France, Republic of France
- Roshydromet, Russia
- African Centre of Meteorological Application for Development, Niger
- Agencia Estatal de Meteorología, Spain
- Deutscher Wetterdienst, Federal Republic of Germany
- 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
- Meteorological Service, Israel
- Meteorological Department, Jordan
- Meteorological Department, Lebanon
- National Environmental Agency of Georgia, Georgia
- Hydromet Service, Armenia
- 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
- Federal Hydrometeorological Institute, Bosnia and Herzegovina
- Hydrometeorological Center, Ukraine
- Slovenian Environment Agency, Meteorological Office, Slovenia
- State Hydrometeorological Service, Republic of Moldova
- Palestinian Meteorological Department
- Republic Hydrometeorological Service of Serbia, Republic of Serbia
- National Institute of Meteorology, Tunisia
- State Meteorological Service, Turkey