



**WMO Northern Africa**  
RCC Network

**WMO RA VI**  
RCC Network



**Step 3 of the  
MEDITERRANEAN CLIMATE OUTLOOK FORUM (MedCOF-21)  
Updated 22<sup>nd</sup> November 2023**

**SEASONAL OUTLOOK FOR THE WINTER SEASON 2023 FOR THE  
MEDITERRANEAN REGION**

Climate experts from WMO RA VI RCC Network Node on long-range forecasting (Meteo France), 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), National Hydrometeorological Services and Research Institutes of MedCOF region provided their valuable contribution to the successful implementation of MedCOF-21 by developing the relevant documents and providing scientific guidance and recommendations.

The MedCOF-21 comprised of the following steps:

- Step 1: verification of the MedCOF-20 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 2023-2024 winter season.

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

## MedCOF- 21 CLIMATE OUTLOOK FOR THE 2023-2024 WINTER SEASON<sup>1</sup>

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

Observed sea surface temperatures and forecast for the coming three months show moderate to intense El Niño conditions, positive Indian Ocean Dipole and positive anomalies over most of Atlantic Ocean. In the atmosphere, models show cyclonic anomalies over northwestern Europe, and anticyclonic anomalies over northwestern Africa and parts of Mediterranean Sea. Diagnostic of upper levels show tendency to a weaker than normal Stratospheric Polar Vortex, with would favour negative NAO phase for late winter, in agreement with El Niño impacts.

With this general context, above normal temperatures can be expected over most of the domain, although the signal is weaker over northern half of the domain.

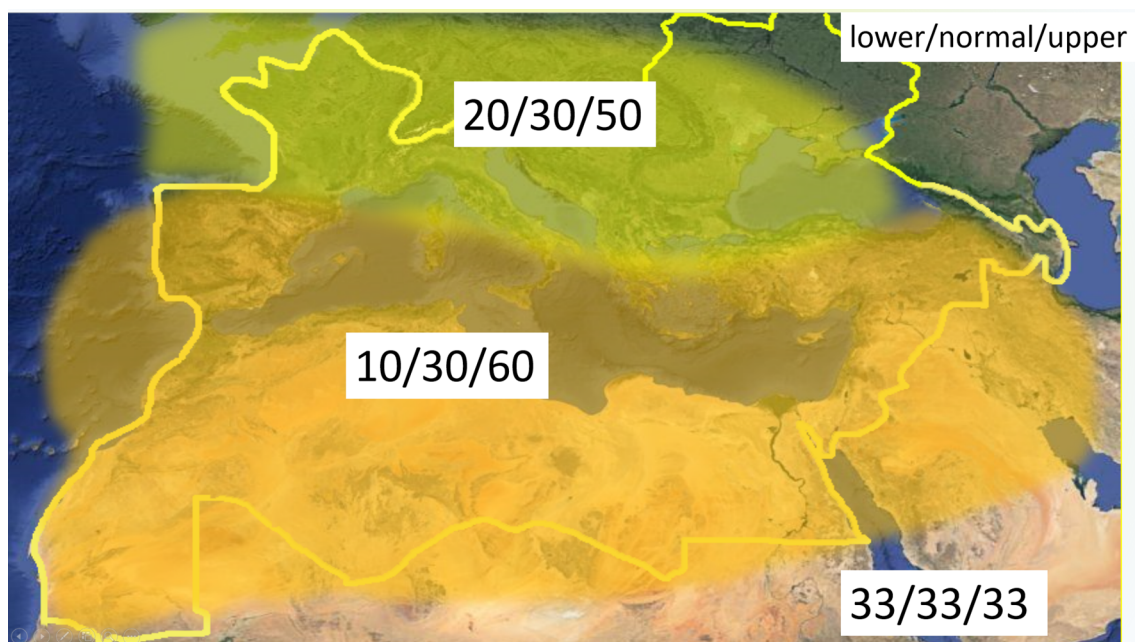


Figure 1. Graphical presentation of the 2023 summer temperature outlook. The maps show the probabilistic consensus forecast for tercile categories of anomalies for seasonal mean temperature, relative to the period 1991-2020. Due to the climate warming trend anomalies are affected by the selected reference 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.

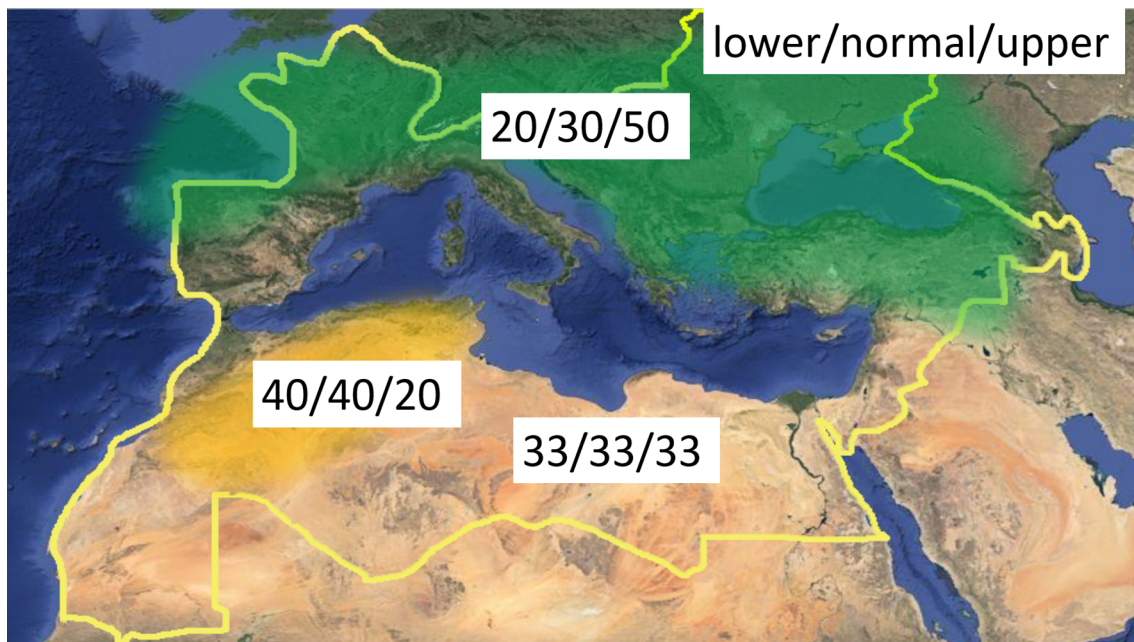


Figure 2. The same as figure 1 but for precipitation.

Precipitation forecast show wet signal over north of the domain, and normal to dry conditions over parts of Northwestern Africa, with no clear signal over the rest of the domain.

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. Notice that the sub-Regional Climate Outlook Forums (SEECOF and PRESANORD) can provide smaller scale details. Any further advice on the forecast signals, smaller scales, shorter-range updates and warnings will additionally be available throughout the summer from the National Meteorological Services, along with details on the methodology and skill of long-range predictions.