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**Step 3 of the
MEDITERRANEAN CLIMATE OUTLOOK FORUM (MedCOF-17)
Updated 19th November 2021**

**SEASONAL OUTLOOK FOR THE WINTER SEASON 2021/22 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-17 by developing the relevant documents and providing scientific guidance and recommendations.

The MedCOF-17 comprised of the following steps:

- Step 1: verification of the MedCOF-16 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 2021/22 winter season.

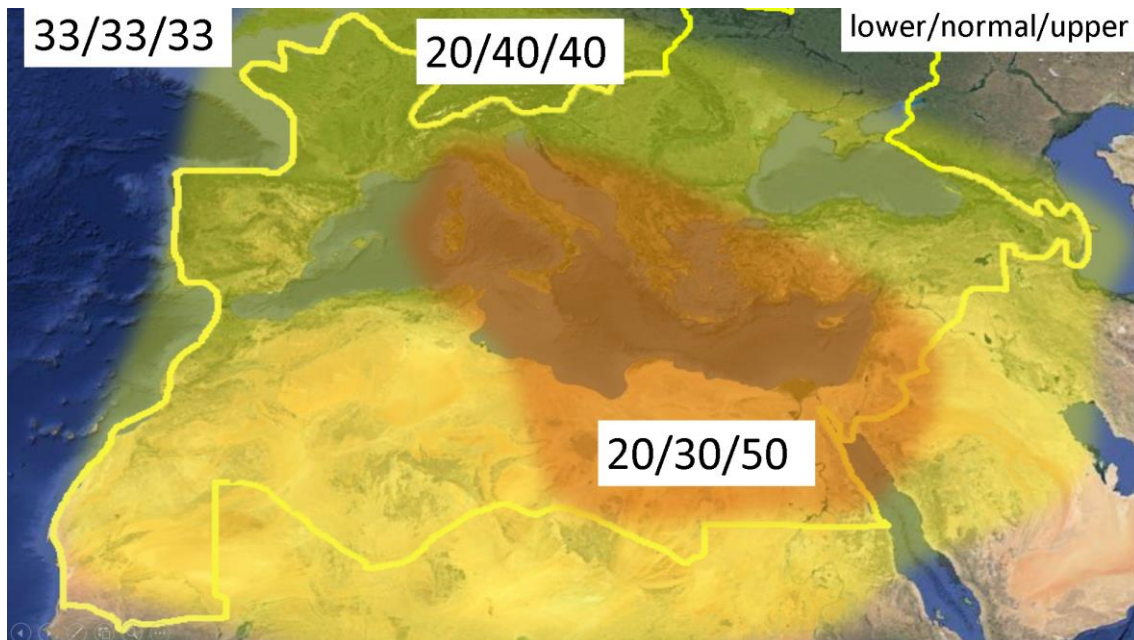
All relevant documentation is posted and updated in MedCOF web site:
<http://www.medcof.aemet.es> .

MedCOF- 17 CLIMATE OUTLOOK FOR THE 2021/22 WINTER SEASON¹

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

A moderate La Niña event is taking place with expected peak towards the end of the year and starting to decrease from February on. Models suggest a slightly weaker than normal polar vortex during winter.

Models shows the typical atmospheric response to La Niña event over the tropics and also over North America, with less agreement in the response over North Atlantic. Many models show strong negative PNA, but there is uncertainty in circulation over MedCOF domain, with some models suggesting NAO+ and other suggesting blocking as most frequent regime. A tendency of higher than normal geopotential is suggested by most models over Central Europe and Mediterranean Sea, with areas of low surface pressures over Southern MedCOF domain.



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.

Figure 1. Graphical presentation of the 2021/22 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.

Within this general context, temperature should be normal or warmer than normal over most of the domain. Probabilities for the warmer tercile are higher over central and eastern Mediterranean shores.

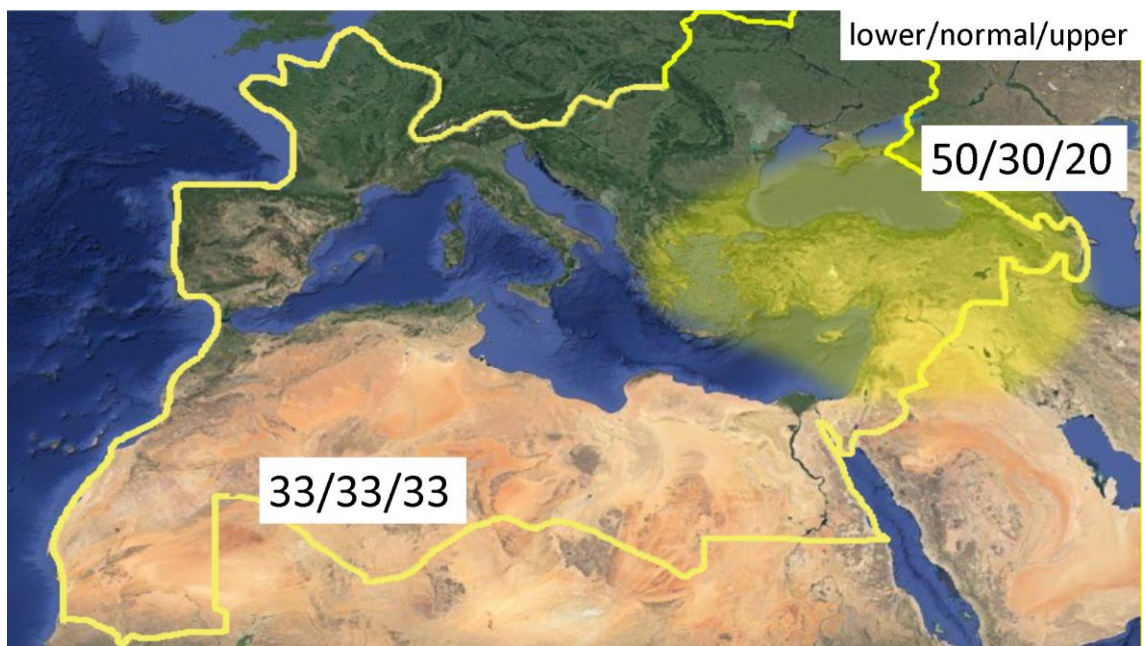


Figure 2. The same as figure 1 but for precipitation.

Precipitation forecasts shows drier than normal conditions over the Eastern part of the domain. For the rest of the region no large-scale precipitation signal is present in the forecasts (see figure 2). The climatological forecast (33, 33, 33) over the Southern part of the domain also implies the fact that no meaningful forecast can be provided for these seasonally dry areas.

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.



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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.