



## **SOUTH-EAST EUROPEAN CLIMATE OUTLOOK FORUM (SEECOF-24) 24 November 2020**

### **SEASONAL OUTLOOK FOR THE WINTER SEASON 2020/2021 FOR THE SOUTH EASTERN EUROPE AND CAUCASUS REGION (SEE&C)**

Climate experts from WMO RA VI RCC Network Node on long-range forecasting (Meteo France, France and Roshydromet, Russia) and WMO RA VI RCC Network Node on climate monitoring (Deutscher Wetterdienst, Germany), Global Producing Centre ECMWF, International Research Institute for Climate and Society (IRI, USA), National Centers for Environmental Prediction (NCEP, USA), South East European Virtual Climate Change Centre (SEEVCCC, Serbia), and National Hydrometeorological Services of the SEECOF region provided their valuable contribution to the successful implementation of SEECOF-22 by developing relevant documents and providing their scientific guidance and recommendations.

SEECOF-24 was composed of the following Steps:

- Step 1: qualitative verification of the SEECOF-23 climate outlook for 2020 summer season;
- Step 2: assessment of the current state of the climate, including large-scale climate patterns worldwide, and assessments of likely climate evolution in the course of the following months;
- Step 3: building the consensus forecast for 2020/2021 winter season.

All relevant documentation is posted and updated on the SEEVCCC web site:  
<http://www.seevccc.rs>

## SEECOF-24 CLIMATE OUTLOOK FOR 2020/21 WINTER SEASON

This prediction is based on output from dynamical models, statistical models and known teleconnections of large-scale climate features prepared by MedCOF-15, which also applies and has been adapted to the South East European region.

Development of a moderate La Nina event with peak toward the end of year as of February will start to decrease. The polar vortex seems to show some slight reinforcement.

Models show the typical atmospheric response to La Nina event over tropics and also over North America, with less agreement in response over North Atlantic. Many models show strong negative PNA, and positive phase of NAO, EA and SCAN modes of variabilities. A higher probability of blocking events is expect over Europe with some differences among models in their location.

Winter temperature is likely to be above normal in the whole SEECOF region with probabilities decreasing from western toward eastern parts of the SEECOF region. Hence, winter temperature is likely to be above-normal in most of the SEECOF region (zone 1 and 2 in Figure 1), while it will be near- or above-normal in Israel and Lebanon, Jordan, Caucasian region, eastern parts of Turkey, as well as along the eastern and southeastern coasts of the Black Sea (zone 3 in Figure 1).

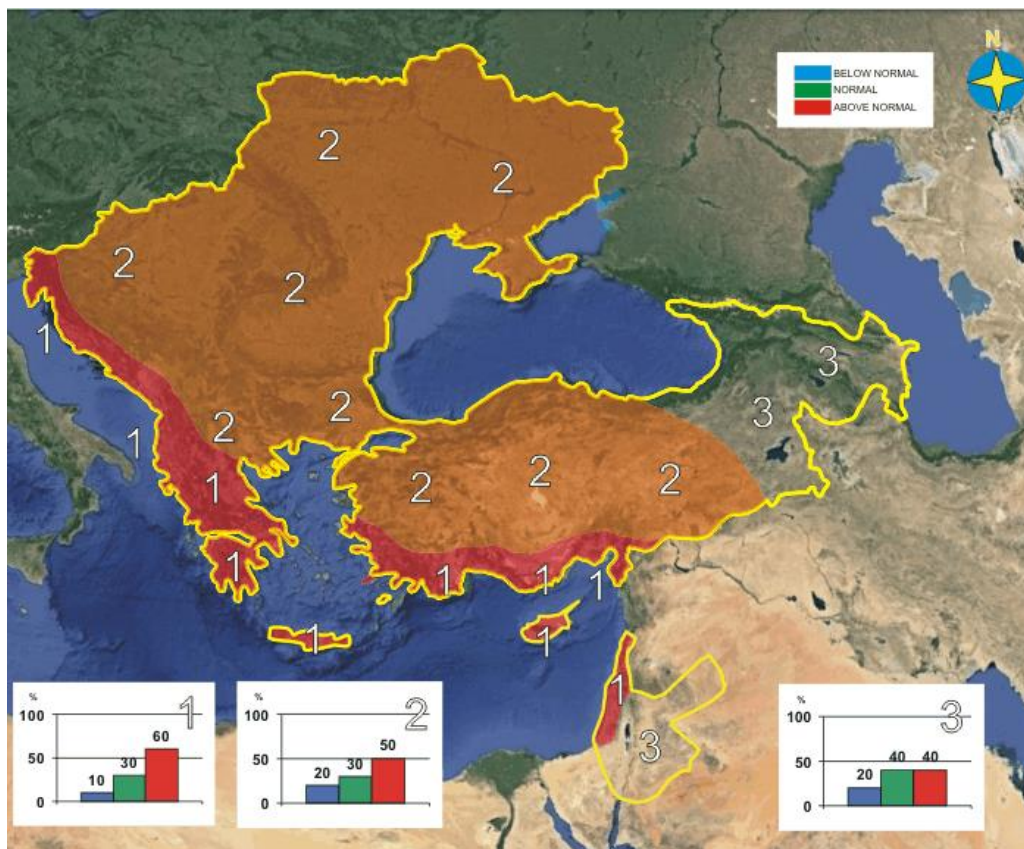


Figure 1. Graphical presentation of the 2020/21 winter temperature outlook

In Greece, along the coasts of Ionian, Aegean Sea and Eastern Mediterranean with hinterland, Israel, Jordan and Lebanon, as well as in most of the Turkey (zone 1 in Figure 2), winter precipitation totals are likely to be below-normal. In rest of the SEECOF region (zone 2 in Figure 2) the uncertainty is high: with equal probabilities for below, near- or above-average conditions of winter precipitations.

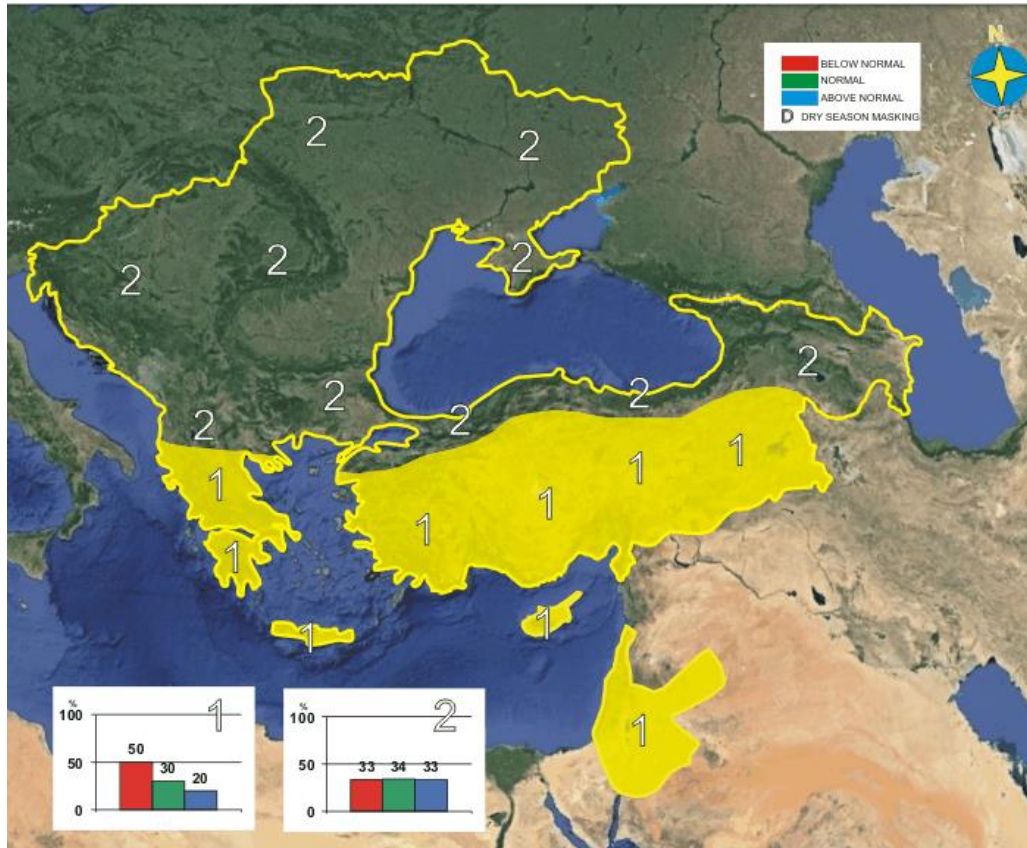


Figure 2. Graphical presentation of the 2020/21 winter precipitation outlook

Sub-seasonal developments may occur 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.

The maps show the probabilistic consensus forecast for tercile categories of anomalies for seasonal mean temperature and precipitation, relative to the period 1981-2010. Due to the climate warming, trend anomalies are affected by the selected reference period.

Seasonal averages cannot provide details about short spells of weather during the season. It is possible than even in an average season spells of severe wintry weather (for example: winter storms, very cold episodes, very wet spells) occur and lead to significant local socio-economic impacts.

Note that it is necessary to express seasonal forecasts in terms of probability due to inherent uncertainty. Any further advice on the forecast signals, 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.

*\* 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.*

#### **APPENDIX A: Contributors to SEECOF-24**

- World Meteorological Organization
- Met Office, United Kingdom
- Météo France, Republic of France
- Roshydromet, Russia
- European Center for Medium Range Weather Forecasts
- Deutscher Wetterdienst, Federal Republic of Germany
- Centro-EuroMediterraneo sui Cambiamenti Climatici (CMCC), Italy
- International Research Institute for Climate and Society, United States of America
- National Center for Environmental Prediction, United States of America
- South East European Virtual Climate Change Center hosted by Republic Hydrometeorological Service of Serbia, Republic of Serbia
- Armenian State Hydrometeorological and Monitoring Service, the Republic of Armenia
- National Institute of Meteorology and Hydrology, Republic of Bulgaria
- Meteorological and Hydrological Service, Republic of Croatia
- Meteorological Service, Republic of Cyprus
- Hellenic National Meteorological Service, Greece
- National Environmental Agency of Georgia, Georgia
- Institute of Geosciences, Energy, Water and Environment, Albania
- Israel Meteorological Service, State of Israel
- Jordan Meteorological Department, Hashemite Kingdom of Jordan
- Republic Hydrometeorological Institute, Republic of North Macedonia
- Hydrometeorological Institute of Montenegro, Montenegro
- State Hydrometeorological Service of the Republic of Moldova
- National Meteorological Administration, Romania
- Federal Hydrometeorological Service of the Federation of Bosnia and Herzegovina, Federation of Bosnia and Herzegovina, Bosnia and Herzegovina
- Republic Hydrometeorological Service of the Republic of Srpska, Republic of Srpska, Bosnia and Herzegovina
- Republic Hydrometeorological Service of Serbia, Republic of Serbia
- Slovenian Environment Agency, Republic of Slovenia
- Turkish State Meteorological Service, Republic of Turkey
- Ukrainian Hydrometeorological Center, Ukraine