







# Seventeenth Session of SOUTHEASTERN EUROPE CLIMATE OUTLOOK FORUM (SEECOF-17) April-May, 2017

# SEASONAL OUTLOOK FOR SUMMER SEASON 2017 FOR THE SOUTH EASTERN EUROPE AND CAUCASUS REGION (SEE&C)

Climate experts from WMO RA VI RCC Network Nodes on long-range forecasting (Meteo France, France and Roshydromet, Russia) and WMO RA VI RCC Network Node on climate monitoring (Deutscher Wetterdienst, Germany), UK Met-Office, Global Producing Centre ECMWF, International Research Institute for Climate and Society (IRI, USA), National Centers for Environmental Prediction (NCEP,USA), WMO RA VI RCC South East Europe Virtual Climate Change Centre (SEEVCCC, Serbia) and National Hydrometeorological Services of SEECOF region provided their valuable contribution to the successful implementation of SEECOF-17 by developing the relevant documents and providing scientific guidance and recommendations.

The SEECOF-17 comprised of the following Steps:

- > Step 1: qualitative verification of the SEECOF-16 climate outlook for 2016-2017 Winter:
- ➤ 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 2017 summer season.

All relevant documentation is posted and updated at the SEEVCCC web site: <a href="http://www.seevccc.rs">http://www.seevccc.rs</a>

## SEECOF-17 CLIMATE OUTLOOK FOR THE 2017 SUMMER SEASON

Similarly to MedCOF-8 seasonal climate outlook, SEECOF-17 prediction is based on the output from dynamical models, including, inter alia, the operational products of the SEEVCCC centre, statistical models and teleconnections of large-scale climate features.

The tropical Pacific remains in an ENSO-neutral state, with above-average SSTs present in the eastern Pacific Ocean, and near-average SSTs across the central and east-central part of the basin. The trend of ENSO based on prediction models indicates increasing chances of El Niño into the summer and fall of 2017. Over the Atlantic Ocean the long lasting North Atlantic cold blob extending from Labrador to Newfoundland and south of Iceland maintains its strong anomaly. Over the Mediterranean sea SST is uniformly warmer than normal. The absence of any clear driver in the climate system and hence the very weak large-scale signal, in conjunction with the low consistency among models make this seasonal forecast particularly uncertain.

In addition to the natural climate drivers, such as El Nino Southern Oscillation (ENSO) and the Indian Ocean Dipole (IOD), climate of the region is affected by the long-term increase trend of the air and ocean temperature due to the global warming.

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

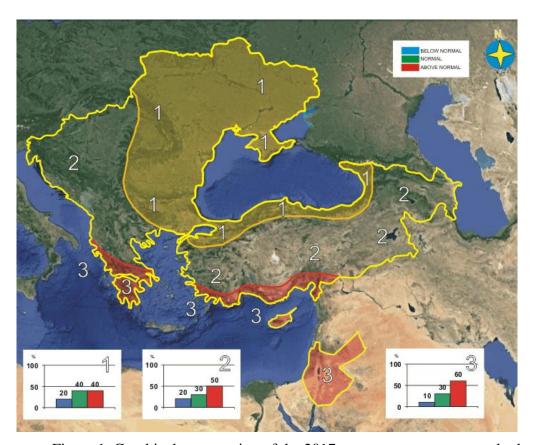


Figure 1. Graphical presentation of the 2017 summer temperature outlook

The entire SEECOF region is likely to experience above-average summer temperature. Probability for above-average summer temperature is increasing across the areas spreading from northern-northeastern toward western and southern parts of the SEECOF region. Probability for exceeding average summer temperature is lower in eastern part of the Balkan Peninsula, as well as Ukraine and along the coasts of the Black Sea (zone 1 in Figure 1), while probability for above-average conditions is highest for southern Greece, eastern Mediterranean with belonging coasts, as well as in Jordan and Israel (zone 3 in Figure 1). The generalized relatively high warm signal is probably partly due to the background climatic warming trend.

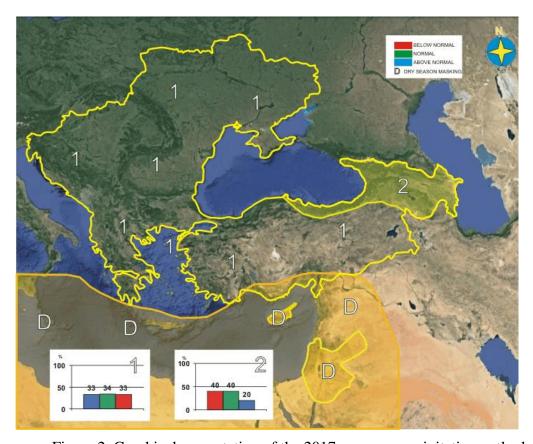


Figure 2. Graphical presentation of the 2017 summer precipitation outlook

Uncertainties in regional predictions are higher for precipitation than for temperature. The uncertainty is high for the entire SEECOF region (zone 1 in Figure 2), - probabilities for below-, near- or above-average conditions are approximately equal. The exception is the South Caucasus region and the northeastern coasts of the Turkey (zone 2 in Figure 2) with below- or near-normal summer precipitation sums. It should be noted that certain parts of the country, particularly mountain regions may receive near- or above- normal summer precipitation sums due to the episodes of enhanced convection accompanied by heavy precipitation. Due to dry season masking, it is not possible to forecast summer precipitation totals for the Eastern Mediterranean with belonging coasts and hinterland, Crete as well as in Israel and Jordan.

### **Reference:**

The maps show the probabilistic consensus forecast for tercile categories of anomalies of seasonal-mean temperature and precipitation, relative to the period 1981-2010.

Any further advice on the forecast signals, shorter-range updates and warnings will be available throughout the summer from the National Meteorological Services, along with the details on the methodology and skill of long-range predictions.

\* The graphical representation of climate outlook in this statement is for guidance purposes only, 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-17**

- World Meteorological Organization
- ➤ Met Office, United Kingdom
- > International Research Institute for Climate and Society, United States of America
- ➤ European Canter for Medium Range Weather Forecast
- ➤ Meteo France, Republic of France
- ➤ Deutscher Wetterdienst, Federal Republic of Germany
- National Canter for Environmental Prediction, United States of America
- South East European Virtual Climate Change Canter hosted by Republic Hydrometeorological Service of Serbia, Republic of Serbia
- Institute of Geosciences, Energy, Water and Environment, Albania
- Armenian State Hydrometeorological and Monitoring Service, 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
- > The National Environmental Agency of Georgia, Georgia
- > Hungarian Meteorological Service, Hungary
- ➤ Israel Meteorological Service, State of Israel
- Republic Hydrometeorological Institute, Former Yugoslav Republic of Macedonia
- State Hydrometeorological Service, Republic of Moldova
- ➤ Hydrometeorological Institute of Montenegro, Montenegro
- 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
- Turkish State Meteorological Service, Republic of Turkey
- Ukrainian Hydrometeorological Center, Ukraine