



**Fifth Session of
SOUTHEASTERN EUROPE CLIMATE OUTLOOK FORUM (SEECOF-5)
April-May, 2011**

**SEASONAL OUTLOOK FOR 2011 SUMMER SEASON 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), 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-5 by developing the relevant documents and providing scientific guidance and recommendations.

The SEECOF-5 comprised the following Steps:

- Step 1: qualitative verification of the SEECOF-4 climate outlook for 2010-2011 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 2011 summer season.

All relevant documentation is posted and updated on SEEVCCC web site:

<http://www.seevccc.rs/?p=705>

SEECOF- 5 CLIMATE OUTLOOK FOR 2011 SUMMER SEASON

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

Main diagnostic features for the climate outlook of summer season 2011 in the South East Europe (SEE) region are the sea surface temperature (SST) patterns, particularly over North Atlantic, some parts of the Mediterranean Sea, Indian Ocean and the Equatorial Pacific. These SST patterns are believed to influence the summer conditions over the European continent. Recurrent atmospheric patterns (i.e. blocking events over Europe) present in both spring observations and model summer predictions are also highlighted by the diagnostic analysis.

Models show a consistent signal of the SSTs for the next summer over the North Atlantic area. SST anomalies are likely to be negative in its central part, but positive over eastern North Atlantic. This pattern seems to be related to blocking regimes as April 2011 conditions also suggest. Blocking regimes are roughly compensated by decreasing in the occurrence of Atlantic Ridge regimes. Both circulation types lead to increase of temperature over the European-Atlantic region. However, they could have a different impact over the South East Europe regions. Blocked atmospheric circulation prevents Atlantic low pressure systems to pass often over the European continent which favours hot and dry conditions, but this holds true to a lesser extent for the southeast compared to central and northern Europe. The particular position of blocking axis over the continent has implications for the locations of positive thermal anomalies in certain regions and related extreme rainfall in other ones (e.g. the heat waves in Russia and extreme floods in Pakistan which occurred in summer of 2010). The Mediterranean SST's, especially in the western part, are likely to be warmer than climatology and they could affect summer precipitation regime over parts of SEE by increasing the chances for episodes with high intensity rainfall to occur. Over the Indian Ocean, SSTs are only slightly warmer and it is likely they will be near normal in the western part of Indian Ocean. Neutral El Niño/La Niña (ENSO) conditions are considered to be the most likely scenario for at least July and August, so ENSO influence over climate predictability would be relatively low in the next season.

The maps show the probabilistic consensus forecast for tercile categories of anomalies of seasonal-mean temperature and precipitation, relative to the period 1961-1990.

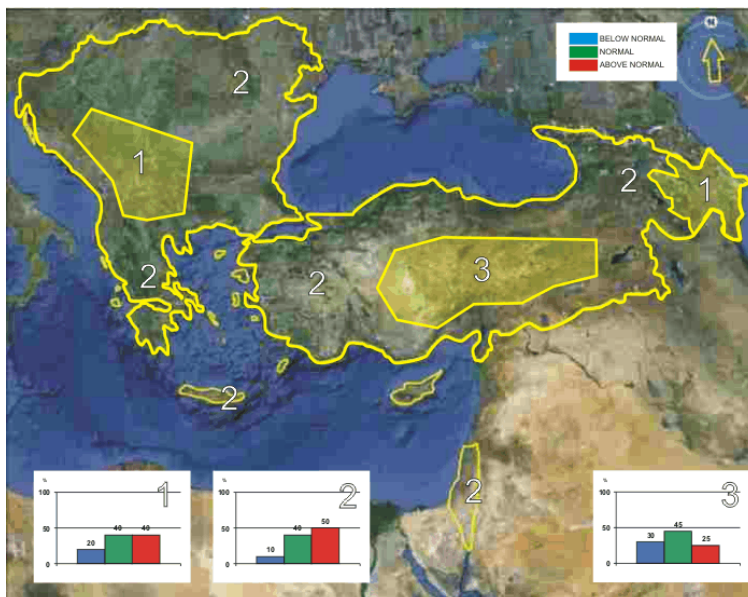


Figure 1. Graphical presentation 2011 summer temperature outlook

In summary, in the most of the SEECOF region, summer season temperature will be above normal (see Figure 1). In the eastern part of south Caucasus and central part of Balkan peninsula summer season temperature will be above normal to normal, while no confident signal is detected in the forecasts for the central part of Turkey (within normal values).

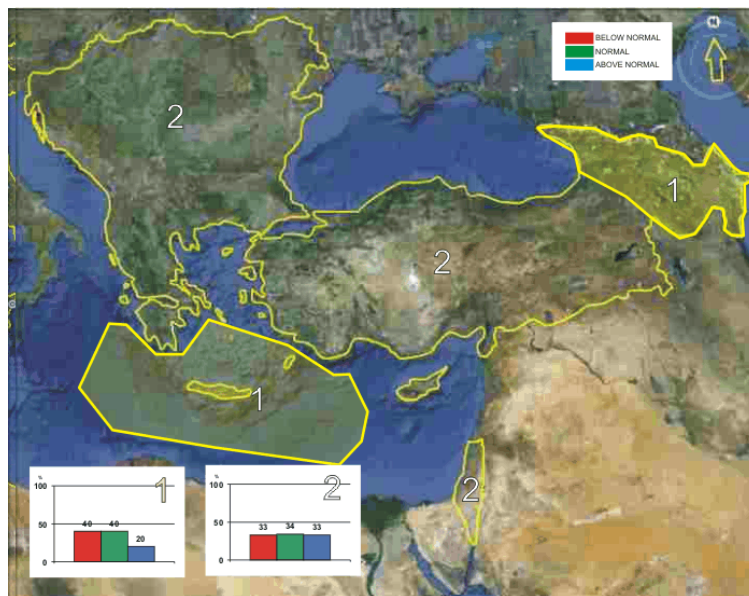


Figure 2.

Graphical presentation 2011 summer precipitation outlook

Uncertainties in regional predictions are larger for precipitation than for temperature. There is no clear summer season precipitation signal for the most part of the SEECOF region (see Figure 2). Only the southern part of Greece, central and eastern Mediterranean and the Caucasus have tendency for summer season precipitation below normal. It might also be possible that some of the other parts, especially mountainous parts, might have, locally, above normal summer season precipitation due to episodes of the enhanced convection with high intensity rainfall.

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 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-5

- World Meteorological Organization
- Met Office, United Kingdom
- International Research Institute for Climate and Society, United States of America
- European Center for Medium Range Weather Forecast
- Météo France, Republic of France
- Federal Service for Hydrometeorology and Environmental Monitoring, Russian Federation
- Deutscher Wetterdienst, Federal Republic of Germany
- National Centers for Environmental Prediction, United States of America
- South East European Virtual Climate Change Center hosted by Republic Hydrometeorological Service of Serbia, Republic of Serbia
- Institute for Energy, Water and Environment, Republic of Albania
- Armenian State Hydrometeorological and Monitoring Service, Republic of Armenia
- National Hydrometeorological Department, Republic of Azerbaijan
- National Institute of Meteorology and Hydrology, Republic of Bulgaria
- Meteorological and Hydrological Service, Republic of Croatia
- Hellenic National Meteorological Service, Greece
- Meteorological Service, Republic of Cyprus
- The National Environmental Agency of Georgia, Georgia
- Meteorological Service of the Republic of Hungary, Republic of 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
- Meteorological Office, Republic of Slovenia
- Turkish State Meteorological Service, Republic of Turkey