



**Fourth Session of
SOUTHEASTERN EUROPE CLIMATE OUTLOOK FORUM (SEECOF-4)
November 22-26, 2010, Belgrade, Serbia**

**SEASONAL OUTLOOK FOR WINTER SEASON 2010/2011 FOR THE SOUTH
EASTERN EUROPE AND CAUCASUS REGION (SEE&C)**

Under the overall coordination of WMO and the South East European Virtual Climate Centre (SEEVCCC), hosted by Republic Hydrometeorological Service of Serbia, SEECOF-4 was held in Belgrade, Serbia, from 22 to 26 November 2010. Representatives from fourteen National Meteorological and Hydrological Services of Southeast Europe and Caucasus region, namely Albania, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Greece, Former Yugoslav Republic of Macedonia, Israel, Moldova, Montenegro, Romania, Serbia and Turkey participated in the implementation of SEECOF-4.

Climate experts from WMO RA VI Pilot RCC Network Nodes on long-range forecasting (Meteo France, France and Roshydromet, Russia) and 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-4 by developing the relevant documents and providing scientific guidance and recommendations.

The SEECOF-4 comprised the following Steps:

- Step 1: qualitative verification of the SEECOF-3 climate outlook for Summer 2010;
- 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 winter season 2010/2011.

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

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

SEECOF- 4 CONSENSUS OUTLOOK FOR WINTER SEASON 2010/2011

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

Amongst the large scale modes of variability expected to influence the southeastern European climate this winter are North Atlantic sea-surface temperatures and Eurasian snow cover extent. For both, the values observed recently are most commonly associated with non-zonal flow over Europe during winter. Also, La Niña conditions currently established in the tropical Pacific and predicted to continue beyond winter are likely to have a similar effect on the large scale circulation over the area of interest. In addition, several general circulation models concur in predicting a seasonal pressure pattern with positive anomalies over the eastern North Atlantic, impeding development of zonal flow over the continent.

The consequences for temperature and precipitation vary across the region due to local factors. The maps show the probabilistic consensus forecast for tercile categories of anomalies of seasonal-mean temperature and precipitation, relative to the period 1971-2000.

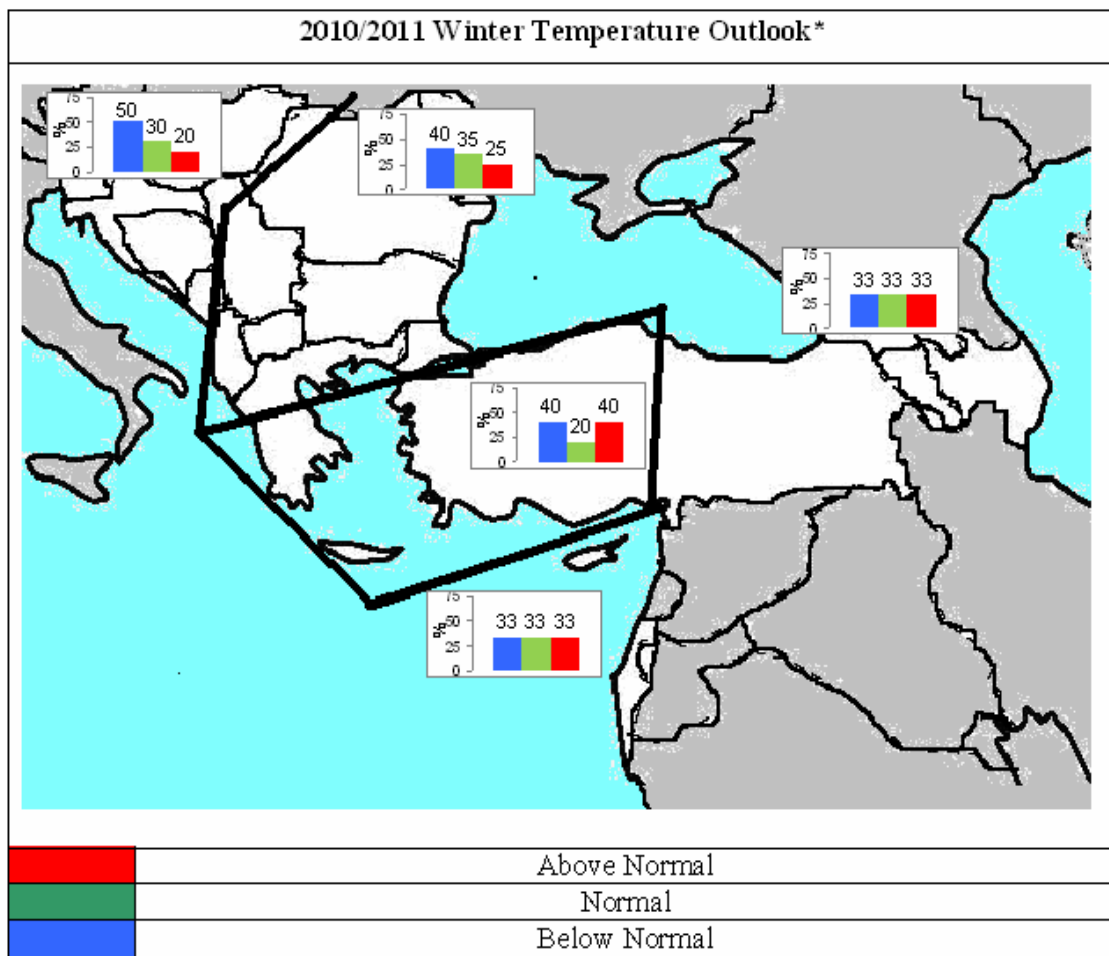


Figure 1. Graphical presentation 2010/2011 winter temperature outlook

In summary, there are higher probabilities for below-average than for near – or above–average temperatures in the northwestern part of the region. The prediction uncertainty

increases towards the southeast. For the southern and eastern regions of the domain (see Figure 1) there is currently no predictive signal.

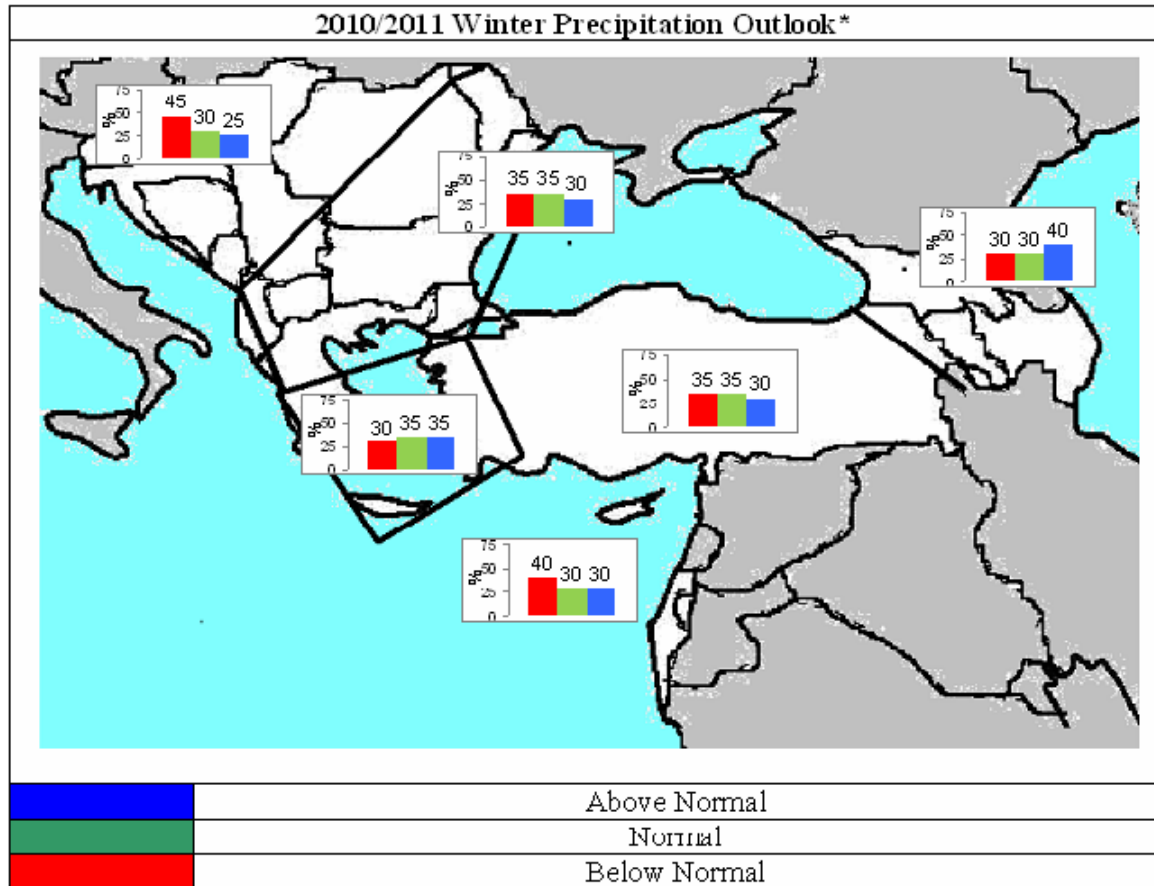


Figure 2. Graphical presentation 2010/2011 winter precipitation outlook

Uncertainties in regional predictions are larger for precipitation than for temperature. In summary, current indications are for a slight shift towards drier-than-average conditions in the northwestern and southern parts, and towards wetter-than-average conditions for eastern and southwestern regions. It must be emphasised that even in the event of seasonal totals below the long-term average, shorter wet spells of heavy precipitation, possibly snow in places, are still possible, especially given the predicted large-scale atmospheric circulation.

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-4

- 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