

WORLD METEOROLOGICAL ORGANIZATION

Sixth Session of the Southeastern Europe Climate Outlook Forum (SEECOF-6)

Belgrade, Serbia, 28-30 November 2011

FINAL DRAFT MEETING REPORT

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OPENING

The 6th session of the Southeastern Europe Climate Outlook Forum (SEECOF-6) was opened at 09:30 hours on Monday, 28th of November 2011, at Hotel Balkan in Belgrade, Serbia. Mr Milan Dacic, Director of the Republic Hydrometeorological Service of Serbia and PR of Serbia with WMO welcomed the participants. He emphasised the fact that SEECOF gained already momentum towards a sustained process in the region. Referring to the long-lasting drought conditions in the region in autumn 2011 he highlighted the need to service economic sectors such as the energy/hydropower sector. Innovative science-based and user-oriented meteorological services have a great potential to support related decision making regarding, e.g., the costly import of energy should unfavourable drought conditions persist throughout the upcoming weeks or months. Eventually, he expressed his gratitude to the Drought Management Centre for Southeastern Europe (DMC-SEE) as potential collaborative partner as well as the WMO Secretariat for facilitating SEECOF-6.

Mr Peer Hechler addressed the Session on behalf of WMO. He stressed the important role of RCOFs in the GFCS and congratulated the SEECOF community for its engagement in the SEECOF process. He mentioned that (i) further strengthening user liaison, (ii) in-depth training and (iii) appropriate communication of the outlook statements are amongst the topics to be addressed by future SEECOF sessions. Mr Hechler informed the Session of the meeting of the RA VI Task Team on RCOFs, organised as a SEECOF-6 side event. He finally thanked the host, the resource persons from Russian Federation, Spain, and the UK, the contributing institutions, such as SEE-VCCC (Southeastern Europe Virtual Climate Change Centre, consortium member of the RA VI Pilot RCC-Network), ECMWF (GPC ECMWF), Deutscher Wetterdienst (RA VI Pilot RCC-Node Offenbach), Météo-France (GPC and RA VI Pilot RCC-Node Toulouse), Roshydromet (GPC and RA VI Pilot RCC-Node Moscow), UK MetOffice (GPC Exeter) as well as all SEECOF NMHSs and contributing entities for their valuable contributions to SEECOF-6.

ORGANIZATION OF THE SESSION

The agenda was adopted with minor adjustments (ANNEX 1). The *List of Participants* in the meeting is provided as ANNEX 2 to this report.

SESSION I: MONITORING RESULTS FOR SUMMER 2011 AND EVALUATION OF THE SEECOF-5 OUTLOOK STATEMENT FOR SUMMER 2011

Mr Branko Bijelic, Serbia, informed the Session of the process and outcome of SEECOF-5, which was held as an online forum in April and May 2011, co-ordinated and led by RHMS and SEE-VCCC. He reported a very good participation of SEECOF member countries as well as the RA VI Pilot RCC Node on Climate Monitoring (RCC-CM) in providing climate monitoring results for summer 2011. The Session discussed the draft document 'Analysis and Verification of SEECOF-5 Climate Outlook for 2011 Summer Season for Southeast Europe', which was introduced by Ms Jasminka Smailagic, Serbia, and adopted the final version as attached to this report (ANNEX 3). In summary, the SEECOF-5 outlook was in principle correct regarding temperature except for Albania and parts of Turkey whilst the mixed patterns of observed precipitation are consistent with the lack of a clear forecast signal as reflected in the SEECOF-5 outlook statement.

In its discussions the Session reflected on the issue of the reference period on which anomaly information is based. Participants agreed that whatever decision will be taken the reference period must always be communicated properly with the anomaly products. Such communication shall include information on the fact that reference periods 1971-2000 and 1981-2010 reflect the trend of global warming relative to the standard reference period 1961-90. It was

also emphasised that users might appreciate statements on how a current season relates to a season in most recent years.

The fact that the host introduced tercile categories in climate monitoring maps was highly acknowledged. Related consistency in the presentation of monitoring and prediction information was strongly recommended by the Expert Meeting on Scoping Global Seasonal Climate Updates (GSCU; cf. <http://www.wmo.int/pages/prog/wcp/wcasp/GSCU.html>). Extension of this approach, however, requires enhanced provision of related data by SEECOF countries.

Participants concluded that user responses to SEECOF outlooks are still very rare and that further efforts are needed to liaise with users more closely.

Eventually, it should be considered to include more climate monitoring information in the SEECOF outlook statements, e.g. on the significant drought conditions in parts of the SEECOF region in autumn 2011. Such an approach would also help to relate the outlook to recently observed conditions or anomalies faced by the users. Even more, in years of very low skill in the seasonal outlook, the SEECOF community would 'at least' be able to communicate useful climate monitoring information to the users.

Finally, it was concluded that the definition of a forecast success or failure depends on the tercile boundaries. Therefore, the forecast verification process enhances the awareness not only of the temporal changes in average temperature and precipitation values, but also of their distribution function evolution with time.

SESSION II: CONSENSUS OUTLOOK AND USER INTERACTION

Ms Roxana Bojariu, Romania, delivered a talk on 'Seasonal to Interannual and Decadal Predictability for Southeast Europe'. She concluded that predictability exists in Southeast Europe and encouraged again an extended predictability study for the SEECOF region as a further scientific basis for the SEECOF consensus discussions.

Recommendation: *To elaborate a joint paper on predictability in Southeast Europe*

Action: *Ms Bojariu to share a first draft of a study on predictability in Southeast Europe with SEECOF Focal Points as well as SEECOF resource persons in December 2011. SEECOF Focal Points and SEECOF resource persons to contribute to the study by means of, e.g., relevant national CPT studies, data and knowledge input, comments etc. in the course of the first half of 2012.*

Ms Anca Brookshaw and Mr Dmitry Kiktev presented analyses and predictions for December-January-February 2011/2012 from global and regional models, including from GPCs and the RA VI Pilot RCC-Network and discussed large-scale anomalies relevant for the SEECOF outlook.

The following SEECOF country representatives presented their national and/or regional seasonal outlooks including a brief introduction to the methods and data/products used:

Ms Dunja Mazzocco Drvar, Croatia

Ms Roxana Bojariu, Romania

Mr Ilian Gospodinov, Bulgaria

Mr Yoav Levi, Israel

Mr Dragan Mihic, Serbia

The presentations were followed by a consensus discussion amongst the SEECOF-6 participants, which resulted in the adopted SEECOF-6 outlook statement 'Seasonal Outlook for Winter Season 2011/2012 for Southeast Europe and Caucasus Region' (ANNEX 4)

A training session was imbedded in Session II where the following presentations were delivered:

'On the Interpretation of Daily Time Series of Seasonal Forecasts' by Mr Dmitry Kiktev, Russian Federation

Mr. Kiktev highlighted the fact that many users are not satisfied with the current information content of seasonal outlooks. Users usually prefer various statistical derivatives of seasonal forecasts, such as heating degree days, number of days exceeding thresholds etc. He discussed prospects of modifying the Extreme Forecast Index (EFI, Lalaurette, 2003) for the purposes of seasonal forecasting. The EFI had been developed to alert forecasters to anomalous or extreme events by relating a current model forecast probability distribution to a corresponding model climate probability distribution. He concluded that the method has its potentials, but appears to be not yet sensitive enough. Further studies are required.

'Presenting the 3 Months Outlook' by Ms Anca Brookshaw, United Kingdom

Ms Brookshaw introduced an approach to present seasonal outlooks to UK governmental users, taking into account the following aspects: (i) communicating the probabilistic nature of forecasts, (ii) placing the forecast in the context of the climatology, (iii) presenting the wealth of information available to make the outlook more scientific, (iv) using a consistent graphical display across many variables and many regions, and (v) providing flexibility to add functionality e.g. via web. The approach has been implemented in the UK very recently.

'Activities of AEMet on Climate Services' by Ernesto Rodriguez Camino, Spain

Mr Rodriguez Camino presented AEMet's current climate service suite, which is based on an open data and information policy. Accordingly, AEMet made significant efforts to provide as much information as possible through the Web in an easy accessible fashion. He showed several examples and concluded with a set of best practices for seasonal forecasting in Southern Europe, such as (i) making use of all sources of predictability, (ii) introducing downscaling techniques, (iii) properly communicating value and limitations of climate information etc.

SESSION III: APPLICATION OF CLIMATE CHANGE IN THE ENERGY SECTOR

Mr Yoav Levi showed a recent example of meteorological impact on energy supply where the Israel Electric Power Company requested reduction of public consumption of electricity between 17:00 and 20:00 hours due to persistent low temperatures.

Mr Julien Najac, Electricité de France (EDF), France, delivered a presentation on 'Weather and Climate for the Power Sector: Needs, Recent Developments and Challenges'. He addressed the complexity of the electric power system including energy supply, which is, however, mainly influenced by temperature. He noted the huge progress in weather and climate forecasts during the last 10 years and highlighted the close collaboration of EDF with Météo-France.

Mr Branko Sparavalo, Electric Power Industry of Serbia (EPS), Serbia, delivered a talk on the 'Use of Long-term Weather Forecast in Planning of the Power System Operations in Serbia for the Month or More in Advance'. Like the EDF representative he mentioned the impact of temperature anomalies on energy generation and supply for which he showed several examples. Mr Sparavalo introduced the process used within EPS to generate monthly forecasts for temperature as well as estimation of river inflow probabilities using products of the Climate Prediction Center (CPC, USA), the International Research Institute for Climate and Society (IRI, USA), the Republic Hydrometeorological Services of Serbia (RHMS, Serbia) and others. Mr Sparavalo concluded his presentation with a couple of EPS requirements to be considered by the

SEECOF community within their outlook statements, such as provision of monthly information, use of the reference period 1981-2010 as well as provision of monthly temperature and precipitation amounts or anomalies in terms of percentage.

SESSION IV: CPT TRAINING

Ms Emily Hamilton, United Kingdom, delivered a presentation on current and upcoming features in CPT. She stressed that one of the important upcoming features will enable the reference period to be set to any period within the length of the observations. She then demonstrated the use of CPT to predict winter temperature in the SEECOF region using Atlantic sea surface temperatures from October. The remainder of the session took the form of hands-on training. An exercise sheet was provided those who had not used CPT before. Participants that were familiar with CPT were encouraged to ask questions on the use of CPT.

CLOSING

In closing, Mr Dacic, Director of the Republic Hydrometeorological Service of Serbia and PR of Serbia with WMO thanked all the participants for their dedication and valuable inputs to the discussion and the WMO Secretariat staff for their support and advice. He also thanked the organising team for the efficient arrangements to facilitate the meeting. Mr Dacic announced his intent to closely liaise with other Directors of NMHSs in the SEECOF region to invite them considering hosting one of the physical SEECOF sessions.

Mr Hechler, WMO, congratulated the SEECOF community to the successful 6th session of the Forum. Particularly he noted a much better participation in the consensus process compared to SEECOV-IV one year ago and encouraged continuation of this excellent example of international collaboration. Mr Hechler also mentioned the fruitful link between the Pilot RA VI RCC-Network and SEECOF through the SEE-VCCC.

Mr Yoav Levi, Israel, finally thanked the host for the warm hospitality and invited consideration of continued in-depth CPT training attached to the SEECOF process.

The 6th Session of SEECOF was closed on Wednesday, 30th of November 2011 at 17:01 hours.

Note: For further information on SEECOF-6 please refer to the SEE-VCCC website: <http://www.seevccc.rs>