# THE FIRST SESSION OF THE MEDITERRANEAN CLIMATE OUTLOOK FORUM (MedCOF-1)

**Belgrade, Serbia, November 18-19, 2013**

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## Executive Summary

The MedCOF-1 forum was held in Belgrade from 18 to 19 November 2013 hosted by the Republic Hydrometeorological Service of Serbia. The MedCOF-1 forum was held jointly with Regional Training and SEECOF-10 events. The coordination of all three events has been essential to distribute tasks and avoid overlaps. The MedCOF-1 forum was mainly focused on the production of the consensus climate outlook for the winter 2013-2014. MedCOF-1 has finally released a large scale seasonal forecast for the whole Mediterranean region which is due to be further refined by sub-regional COFs (PRESANORD and SEECOF) for their respective areas. Following discussions have also allowed agreeing on some features relevant for the design of future MedCOF forums.

## I. Introduction

### I.1.- Background

Following the recommendations given by RA VI Task Team on RCOF and supported by the RA VI Working Group on Climate and Hydrology targeting South Western Europe/ Mediterranean basin as suitable for a RCOF implementation and considering the recommendation by the Scoping Workshop on Seasonal Climate Prediction (Algeria, January 2012) of extending the existing RA I PRESANORD to the whole Mediterranean area involving thus RA I and RA VI;

AEMET jointly with WMO -and after conversations with many parties- convened a Scoping Meeting (SC) at AEMET headquarters in Madrid from 12 to 14 June 2013 to define the features and objectives of a future Regional Climate Outlook Forum encompassing among others National and Regional Services around the whole Mediterranean region. It was agreed there to hold the first formal MedCOF meeting in November jointly with the next SEECOF meeting in Belgrade. The appointed Interim Management Group -including representatives of relevant RCCs from both RA I and VI- worked together with the Republic Hydrometeorological Service of Serbia (RHMSS) to prepare the programme, The RHMSS, as host institution, organized very efficiently all logistic aspects of the meeting.

The MedCOF-1 forum is one of the three events planned in a consecutive way as follows:

- 13–16 November 2013 - Regional training on Long-Range Forecasts,
- 18–19 November 2013 - MedCOF-1,
- 20-21 November 2013 - SEECOF-10.

South-East European Climate Outlook Forum was established in 2008 and has been conducted nine times in cooperation with the South East European Virtual Climate Change Centre (SEEVCCC), hosted by the Republic Hydrometeorological Service of Serbia. It has developed as a regular event held twice a year to produce climate outlooks for the summer and winter seasons. SEECOF sessions have followed two formats either face-to-face or on-line meetings. Further details of SEECOF and links to climate outlooks are available at: http://www.seevccc.rs.

The MedCOF collaborative initiative will contribute to the capacity building and will build trust among climate information providers as well as user communities. However, as some participants in MedCOF are still in an incipient status of developing the seasonal forecasting both in operations and research domains, MedCOF will also facilitate the periodic organization of courses, workshops and other activities aiming to strengthen the existing capabilities in seasonal forecasting and other working areas.

Funding for this initiative comes from WMO, from the European Commission Directorate General for Enlargement for joint implementation by the UNISDR and the WMO through the IPA/2012/290552 Multibeneficiary Project “Building resilience to disasters in Western Balkans and Turkey” and from AEMET through the ACMAD Trust Fund established in WMO.

## I.2. Date and Venue

The MedCOF-1 forum was hosted from 18 to 19 November 2013 by the Republic Hydrometeorological Service of Serbia at the premises of the Best Western Hotel Sumadija, Sumadijski trg 8, 11000 Belgrade, Serbia. More details are available on the following web site: www.hidmet.gov.rs.

## I.3. Participants

Most climate experts were invited to attend the three consecutive events: LRF training and climate outlook forums for the Mediterranean sub-region and for the South-East European sub-region. A list of participants is available in Annex II

## I.4. Meeting Agenda and Programme

Agenda and Programme are available in Annex I

## II. 1. Meeting Concept and Format

The MedCOF-1 was designed in a way to accommodate six sessions:

Session I – Opening Session
Session II – Climate monitoring information
Session III – Production of the climate outlook for the winter 2013-2014
Session IV – Production of the climate outlook for the winter 2013-2014 (continuation)
Session V -- MedCOF mode of operation
Session VI – Closing session - Wrap up and the way forward

The Opening session started with a welcome speech by the Director of the of the Republic Hydrometeorological Service of Serbia and with the words of the representative of the WMO Secretariat setting the context of MedCOF as one of the key elements of the Climate Services Information System contributing to the implementation of the Global Framework for Climate Services.

The Session II provided climate monitoring information which in successive forums will serve as input for evaluation and verification of previous seasonal forecasts.

The Session III was devoted to the production of the climate outlook for winter 2013-2014. In this session all inputs received from the Global Producing Centers, the Regional Climate Centers and the climate experts of the Mediterranean countries were presented.

The Session IV was mainly focused on discussing the presented information for the consensus outlook.

In Session V features of MedCOF mode of operation were discussed as continuation of the preliminary design started during the Scoping Meeting in Madrid.

## II.2. Session I – Opening Session

The Opening Session was conducted by Branko Bijelic, who is forecaster and Chief of the Monthly weather forecast unit of the Department of Hydrometeorological Early Warning System and Aviation Meteorology at the Republic Hydrometeorological Service of Serbia (RHMSS).

Vladan Kocic**,** Director of the Republic Hydrometeorological Service of Serbia, welcome participants to the first session of the Mediterranean Climate Outlook Forum (MedCOF), organized by the Republic Hydrometeorological Service of Serbia (RHMSS), under the auspices of the World Meteorological Organization (WMO). He recalled that the establishment of MedCOF, which includes the countries from two regional associations: Regional Association I – Africa and Regional Association VI – Europe, has been supported by WMO at the 16th session of the Regional Association VI held in Helsinki, Finland, in September this year. He remarked that WMO entrusted the RHMSS with the organization of the first MedCOF session considering the previous experience of RHMSS in the successful organization of several South East Europe Climate Outlook Forums (SEECOFs). The previous experience with nine SEECOFs held so far will certainly contribute to the extension of cooperation in the field of climate prediction to the whole Mediterranean region. He was certain that the organization of the first MedCOF will create new possibilities for the strengthening of the inter-regional scientific and technical cooperation in the field of meteorology, hydrology and climate change. He also stressed that transfer of technology, knowledge and experience should contribute to faster strengthening of technical, technological and human resources of the National Hydrometeorological Services, with the view to reducing vulnerability and increasing resilience of the countries from the region to natural disasters caused by climate change. Finally, he wished participants a successful work and a pleasant stay in Belgrade.

Natalia Berghi, the Representative of the WMO Secretariat, delivered an opening address to the participants of the first Session of the Mediterranean Climate Outlook Forum, highlighting the role of WMO in addressing the climate applications and services issues with the ultimate objective of enhancing the capacity of National Meteorological and Hydrological Services to provide user-targeted climate services pertinent to regional, national and local interests. It was underlined that since the launch of the Regional Climate Outlook Forum (RCOF) in 1997, WMO and its partners have actively supported the establishment and operation in many parts of the world, of the RCOF process, which provides plenty of collaboration opportunities for the national and international experts. She emphasized that RCOFs, getting inputs from the Global Prediction Centers and the Regional Climate Centres are the key elements of the Climate Services Information System and contribute to the implementation of the Global Framework for Climate Services. It was mentioned that as part of capacity building component the climate services are developed through the implementation of a series of regional projects by WMO in cooperation with its partners such as European Commission Directorate -General for Enlargement, UN Economic and Social Commission for West Asia, Swiss Development Agency and others. "The success of the RCOF process is determined by the participation and support of all stakeholders", she said. Finally, she expressed high appreciation to the Republic Hydrometeorological Service of Serbia, to the South-East European Virtual Climate Change Center and to the Spanish Meteorological Agency for the support in the organization of the first MedCOF' session and wished all participants a fruitful meeting.

Ernesto Rodriguez-Camino (AEMET) made a short introduction to the goal of consensus seasonal forecasts. He started by recalling the steps given so far for the establishment of MedCOF. He also summarized the main outcomes of the Scoping Meeting (SM) held in Madrid from 12 to 14 June 2013. He underlined that the rationale behind the MedCOF seasonal consensus outlook for the whole Mediterranean region was to look first at large-scales and then, at regional ones. Therefore, MedCOF would produce first the consensus seasonal forecast for the whole Mediterranean basin and then SEECOF and PRESANORD would refine the consensus forecast for their respective regions. He stressed that the seasonal consensus forecast should ensure the proper flow of information from GPCs through RCCs feeding RCOFs to analyse/diagnose the large scale state of the climate system and its predictability. Finally, he recalled some examples of good practices and cautions that should be always taken into account in the consensus outlook forums.

### II.3. Session II – Climate monitoring information

Peter Bissolli (WMO RA VI RCC - Climate Monitoring) presented the *Climate monitoring information on the Mediterranean*. He showed temperature and precipitation anomalies for the recent months and seasons in the MedCOF region. Summer 2013 was clearly warmer and mostly drier than normal in the whole MedCOF region, though the anomalies were not so outstandingly high like in summer 2012. In October 2013, a highly meridional pattern over Europe (characterized by a positive phase of the East Atlantic circulation pattern) was to be found with large positive temperature anomalies in western and central parts of the MedCOF region, but colder-than-normal conditions in eastern parts. Some periods of heavy precipitation were recorded particularly around the Black Sea during July to September.

Fatima Driouech (Nord Africa RCC on CM) presented an overview of the products generated by the Nord African RCC on climate monitoring based on historical information. She also mentioned the links between Moroccan precipitation and temperatures and North Atlantic weather regimes, North Atlantic Oscillation, SST, Northern hemisphere teleconnection patterns and ENSO.

### II.4. Session III – Production of the climate outlook for the winter 2013-2014

Session III was intended to present all relevant sources of information for the following session discussions aiming at reaching consensus for the seasonal forecasts either coming from empirical predictive signals or from GPC or regional models. As some participants were not in the LRF Training event, they also presented some brief introduction to their activities on seasonal forecasting.

Roxana Bojariu (National Meteorological Administration, Romania) reviewed the empirical climate predictive signals for the Mediterranean region and the winter season. She started by discussing ENSO and AO/NAO current situation and probable evolution. Then she discussed the Atlantic SST May predictive signal and the Eurasian Snow Cover October predictive signal. She concluded that May SST indicator and snow related indicator suggested opposite NAO phases. She also noted that SST anomalies reflected past conditions mostly related to the short episode of late negative phase of NAO in March 2013. Finally, she remarked that the snow-related indicator seems to be consistent with model predictive information.

Jean-Pierre Ceron (RA VI RCC Network – LRF Node) described the present situation as close to normal in equatorial waveguides of Atlantic and Indian Oceans. No significant change is foreseen during winter season. In the Pacific waveguide, the East-West contrast presently observed on SST would continue (warm anomaly in the Western Pacific in warm pool region, ENSO neutral). The large scale tropical convection would be influenced by this dipole-like pattern, but its response seems to be trapped in tropics. Consequently, mid-latitudes would not be influenced by tropical forcing. No other consistent influence (AO, SST patterns …) could be drawn either from observations or from models. Therefore, predictability is very limited for winter season, especially over Europe and Mediterranean basin. He presented and discussed results from a variety of models paying special attention to diagnostics applied to ECMWF and ARPEGE models. He finally concluded that the warm signal, probably due the climate change trend, forecasted by some of models over Mediterranean regions should be taken cautiously.

Stefano Materia (CMCC) also confirmed that SST in the equatorial Pacific (NINO3 region) was near normal during the autumn and that Indian Ocean and Tropical Atlantic did not show significant anomalies either. This situation, based on the CMCC model, was predicted to persist over the course of the winter reducing the predictability for most of the world regions. An important warm SST anomaly centered on the central and west Northern Pacific will be associated with cold SSTs along the Canadian coast. The Atlantic coasts of North America will likely be warmer than normal, while central North Atlantic will be probably colder. With this global outlook, Northern and Eastern Europe might experience a colder than normal winter, but only in the Baltic region and the eastern Mediterranean will the probability of occurrence of such an event be of actual significance. In particular, high chances for cold anomalies are predicted for part of Turkey, Greece, Bulgaria and southern Balkans. Part of western Mediterranean might be warmer than normal, especially between Algerian and south Spanish coasts. Precipitation might be slightly above normal in the entire Mediterranean basin, but uncertainties are too high for a robust interpretation. British Isles, northern France, Benelux and the Baltic countries will be significantly drier than the period of reference, due to anomalous geopotential heights at 500hPa with maximum anomaly in the European and Western Asian sector of the Arctic. Although uncertainties are high and conditions may be fluctuating in the three months, overall the winter season could be characterized by negative NAO.

Filippo Maimone (CNMCA - Italian Air Force Met Service) first described the novel statistical downscaling system for seasonal projections, developed by the Italian Air Force Met Service (CNMCA) within a project funded by CMCC. The system is based on outputs of a neural network ensemble (NNE) incorporating Bayesian regularization and it is able to take as input multiple predictor fields, and/or time series, which may be either model outputs, past observations, or even a combination of them. A module for an optimal area domain selection and another for a (forward) screening selection of the available potential predictors are also included. A first (basic) operational version of the system takes as inputs to train the system, on the one side the direct parameter outputs (same parameter for each couple predictor-predictand) of the ECMWF S4 (for which a set of 15 members ensemble reforecasts are available since 1981), and on the other side the EOBS gridded observational datasets. Based on this system the outlook for DJF 2013-2014 show a quite low predictability (consistently with most of the global model outputs), with a stronger signal of positive anomaly over the peninsular part of Italy, particularly over Sicily and Calabria. For precipitations, the signal is quite low everywhere. This analysis has benefited from a strict comparison with several skill and score measures (Brier Skill Score with respect to ECMWF, ‘accumulated’ ROC diagrams

for tercile categories), computed for the period of interest. It was emphasized the importance of a joint use of probability maps (for example for tercile categories) together with the corresponding skill and score maps/diagrams in order to asses in the most objective way the confidence associated with a given forecast.

Daniele Mastrangelo (CNR-ISAC, Italy) presented the monthly probabilistic forecasting system run experimentally at the ISAC institute of the National Research Council (CNR). The forecasting system is based on GLOBO, an atmospheric general circulation model developed at the same institute, and is run in the framework of a cooperation with the Italian Civil Protection Agency. GLOBO is a finite-difference model implemented on a regular latitude/longitude grid that, for the monthly forecast, is set up with a horizontal grid spacing of 0.75 × 1.0° and 50 vertical hybrid levels. The model is run to produce an ensemble of 32 forecast runs initialized with the perturbed analyses deriving from the 00 and 12 UTC NCEP-GFS forecasts of the initialization day. The CNR-ISAC monthly forecasting system is proposed as an instrument to provide further information of possible forecast signals on the subseasonal scale.

### II.5. Session IV – Production of the climate outlook for the winter 2013-2014 (continuation)

This Session was mainly devoted to discuss and evaluate all information presented in the previous session aiming at reaching consensus for the tercile based outlook. The analysis of all information and the absence of a clear forcing from tropical oceans affecting midlatitudes gave some preference to the forecast provided by the EUROSIP multimodel. An interesting discussion aroused on the nature of the weak warm signal affecting parts of the region possibly linked to the climate change signal and therefore very dependent on the chosen period taken as reference for the climatology. In general terms and considering all sources of information, the outlook resulted very close to climatology both for temperature and ptrecipitation for most of the areas in the Mediterranean region.

The final result of this session was the outlook for the winter season which is reproduced below.

**First Session of the**
**MEDITERRANEAN CLIMATE OUTLOOK FORUM (MedCOF-1)**
**(18-19) November, 2013**

# SEASONAL OUTLOOK FOR THE WINTER SEASON 2013/2014 FOR THE MEDITERRANEAN REGION

Climate experts from WMO RA VI RCC Network Nodes on long-range forecasting (Meteo France, France), WMO RA VI RCC Network Node on climate monitoring (Deutscher Wetterdienst, Germany), WMO Nord Africa RCC Network Nodes on long-range forecasting (Directorate of National Meteorology, Morocco), WMO Nord Africa RCC Network Node on climate monitoring (National Institute of Meteorology, Tunisia), Global Producing Centre ECMWF, Euro-Mediterranean Centre for Climate Change (Italy), Institute of Atmospheric Sciences and Climate of the Italian National Research Council (Italy), Institute of Biometeorology (Italy), South East Europe Virtual Climate Change Centre (SEEVCCC, Serbia) and National Hydrometeorological Services of MedCOF region provided their valuable contribution to the successful implementation of MedCOF-1 by developing the relevant documents and providing scientific guidance and recommendations.

The MedCOF-1 comprised of the following Steps:

- Step 1: 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 2: building the consensus forecast for 2013/2014 winter season.

All relevant documentation is posted and updated in SEEVCCC web site: http://www.seevccc.rs

# MedCOF- 1 CLIMATE OUTLOOK

# FOR THE 2013/14 WINTER SEASON

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

Sea surface temperatures have been near to normal for the autumn season in the Equatorial Pacific. These conditions are very likely to persist for the coming winter season. No clear signal appears for the winter season neither from tropics nor from other sources of predictability, e.g., North Atlantic Oscillation index, etc.

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.

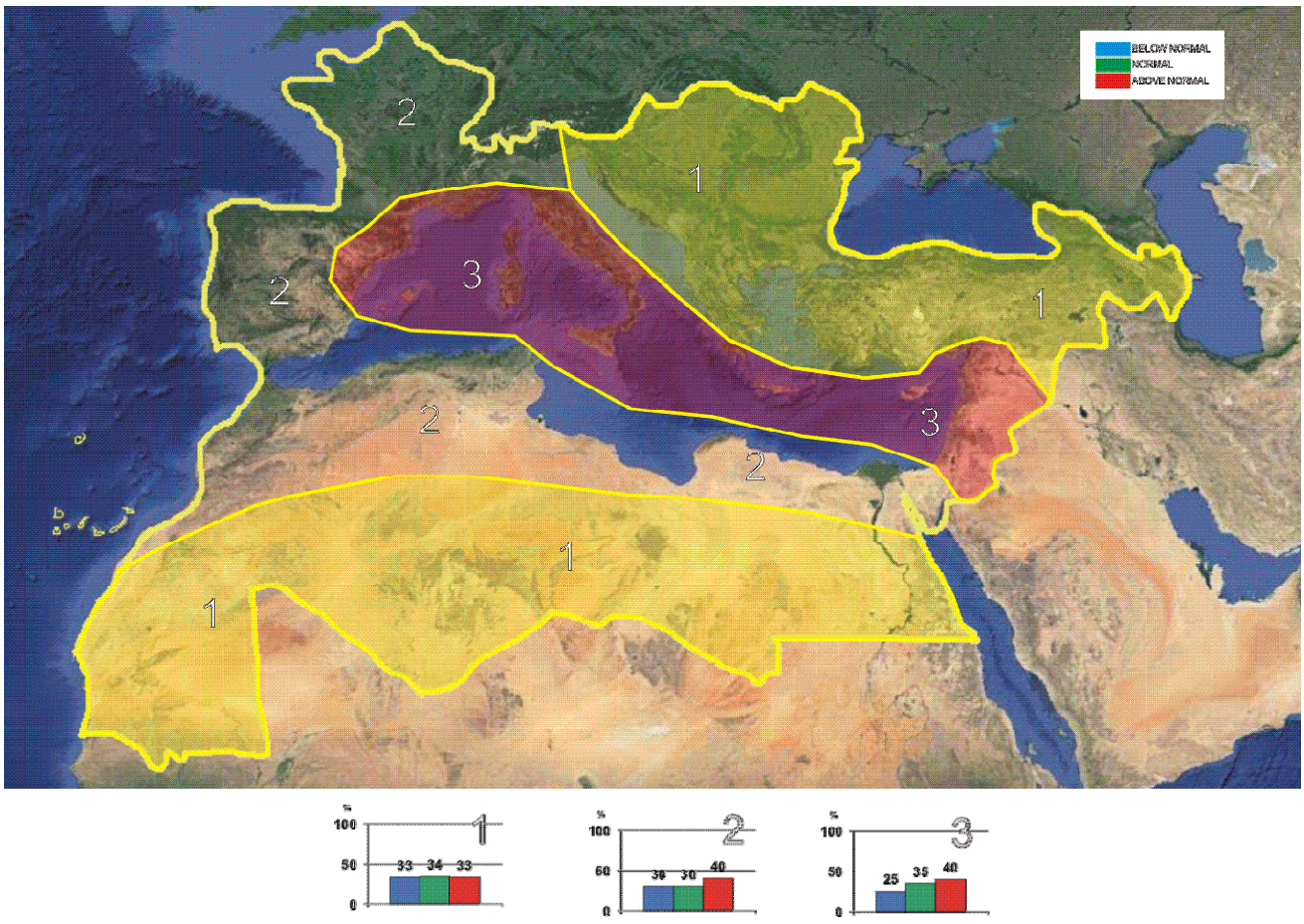


Figure 1. Graphical presentation of the 2013/14 winter temperature outlook

Although for most of the MedCOF domain the uncertainty for the temperature prediction is high, there is a weak tendency for the upper tercile in the Western part of the domain and most of the Mediterranean Sea (regions 2 and 3). Most of the Balkan Peninsula, Turkey, the South Caucasus region and Sahara show no signal and climatology is therefore assigned for all three categories.

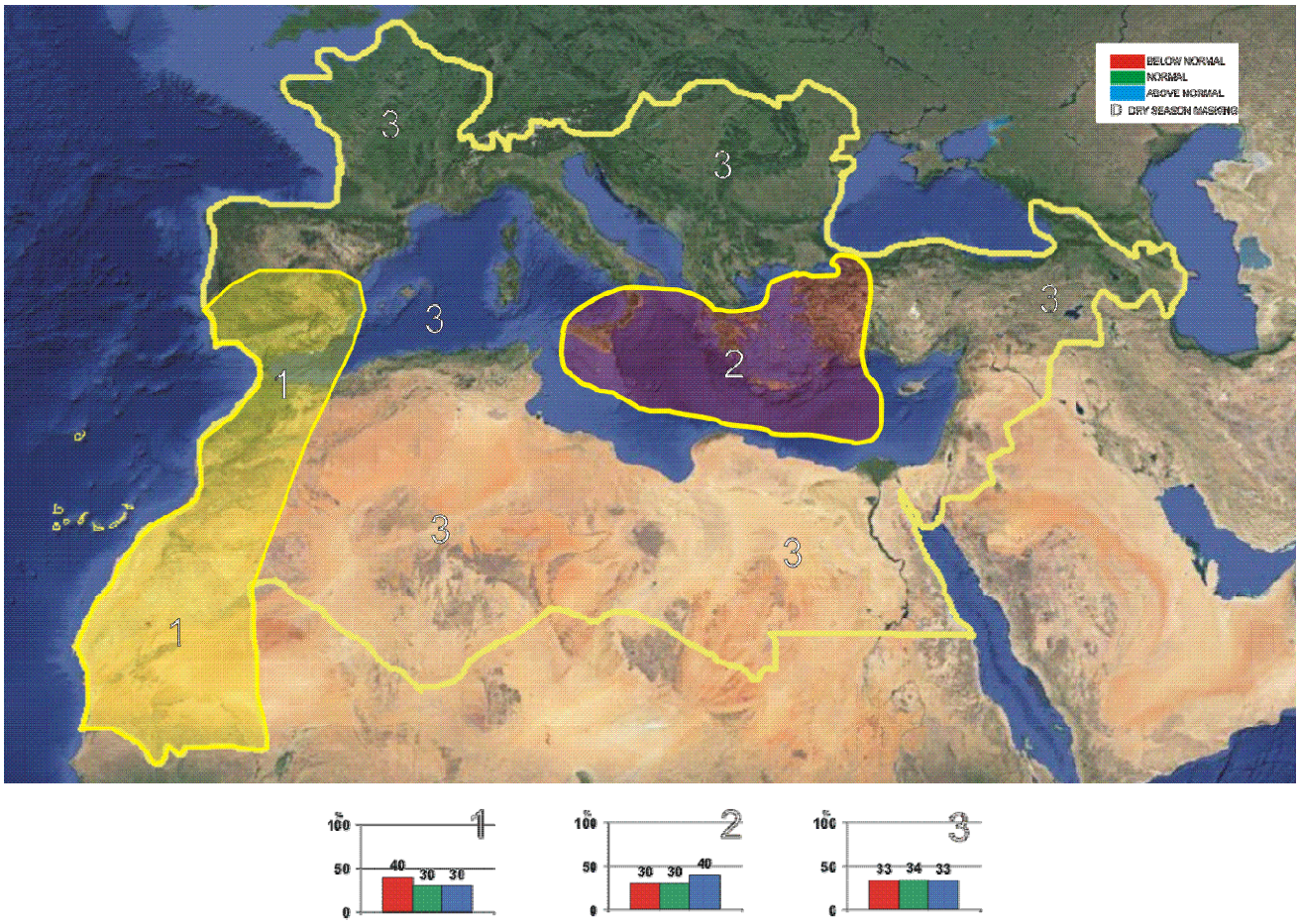


Figure 2. Graphical presentation of the 2013/14 winter precipitation outlook

Precipitation in most of the MedCOF domain shows no preference for any climate defined categories (region 3). Only the southern part of the Iberian Peninsula and the Atlantic facade of the African region show some slight tendency for the dry tercile (region 1), whereas the central Mediterranean region slightly points to the wet tercile (region 2).

Note that it is necessary to express seasonal forecasts in terms of probability due to inherent uncertainty. Any further advice on the forecast signals, smaller scales, 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 MedCOF-1**

- 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
- Meteo France, Republic of France
- Agencia Estatal de Meteorología, Spain
- National Center for Environmental Prediction, United States of America
- Deutscher Wetterdienst, Federal Republic of Germany
- National Centre of Meteorology and Aeronautical Climatology, Italy
- Euro-Mediterranean Center on Climate Change, Italy
- Institute of Atmospheric Sciences and Climate of the Italian National Research Council, Italy
- Institute of Biometeorology, Italy
- Institute of Geosciences, Energy, Water and Environment, Albania
- South East European Virtual Climate Change Center hosted by Republic Hydrometeorological Service of Serbia, Republic of Serbia
- National Institute of Meteorology and Hydrology, Republic of Bulgaria
- Meteorological and Hydrological Service, Republic of Croatia
- Meteorological Service, Republic of Cyprus
- National Environmental Agency of Georgia, Georgia
- Jordan Meteorological Department, Jordan
- Republic Hydrometeorological Institute, Former Yugoslav Republic of Macedonia
- Ministry of Transport, National Office of Meteorology, Mauritania
- Hydrometeorological Institute of Montenegro, Montenegro
- National Centre for Meteorological Research, Directorate of National Meteorology, Morocco
- 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
- National Institute of Meteorology, Tunisia

## II.6. Session V – MedCOF mode of operation

As Session V was programmed at the end of the second day many participants not staying for SEECOF-10 event had already left and many points intended to be decided during the session were only discussed postponing relevant decisions until next MedCOF meeting.

With respect to MedCOF Management Group was suggested to also include a representative of the RCC Climate Monitoring . The Interim Management Group will continue his mandate until next forum meeting were Terms of Reference will be examinated.

It was also discussed and agreed to decouple forum and training sessions to allow more flexibility both with regard to dates and venue for the training part. It was also agreed to proceed to the nomination of MedCOF focal points. Due to the informal character of MedCOF it was suggested to nominate as focal points the same contact persons already designated for SEECOF and PRESANORD and proceed to contact via email with the rest of the countries.

It was also discussed and recognized the importance of having a dedicated web page for MedCOF. Initially this web page would be simply a repository of information and later more interactive features would be added. AEMET volunteers to host this web page and it would start its development in close contact with the Management Group.

Financial issues were also discussed and the importance of having sustainable funding for MedCOF activities was pointed out. The engaging of stakeholders was identified as a priority to ensure the long term viability of MedCOF.

## II.7. Session VI – Closing session - Wrap up and the way forward

Work to further develop MedCOF was agreed to be done in close contact with WMO and RCCs. It was recalled the need to organize MedCOF activities as an extension of RCCs duties and responsibilities. As MedCOF is an inter-regional RCOF involving AR I and VI, it was pointed out that it is essential to ensure a perfect coordination among all involved RCCs.

The forumMedCOF-1 event was closed thanking the hosts for the arrangements and the perfect organization of the meeting.

## III. Conclusions and Recommendations

### Conclusions:

With regard to the consensus outlook, it was agreed that the lack of a clear tropical forcing and of other sources of predictability (e.g., Eurasian snow cover and Atlantic SST) would not significantly favor any scenario different from climatology. Therefore, the probabilities assigned to the different tercile categories do not differ very much from the climatological ones.

Although this time there was no previous outlook to verify, it was conclude that qualitative verification should be progressively superseded by a minimum verification package adequate for the probabilistic forecasts based on terciles. It was also recalled the need to adopt a common reference period for seasonal forecasting purposes.

With respect to MedCOF Management Group, it was agreed to include a representative of the RCC Climate Monitoring. The Interim Management Group will continue his mandate until next forum meeting were Terms of Reference will be examinated.

It was also agreed to decouple forum and training sessions to allow more flexibility both with regard to dates and venue for the training part.

It was also agreed to proceed to the nomination of MedCOF focal points

### Recommendations:

- Implementation of a verification package suitable for probabilistic forecasts following the recommendations of the CCI,
- Guarantee the suitable coordination of MedCOF activities with the involvement of the relevant RCCs from RA I and VI. In that sense it was suggested to also include in the Management Group a representative of the RCC Climate Monitoring.
- Implementation of a dedicated MedCOF web page hosted by AEMET to disseminate their products, increase their visibility among the countries in the region, facilitate information to their members, allowing preparation of on-line sessions or preparation for live sessions, quick exchange of draft forecasts to facilitate consensus process.
- Following the agreement adopted during the Scoping Meeting it was recommended to start MedCOF forum activities with two forums (pre-winter and pre-summer) per year.
- Engaging of stakeholders to ensure the long term viability of MedCOF within the GFCS.

# Appendix I

## THE FIRST SESSION OF THE MEDITERRANEAN CLIMATE OUTLOOK FORUM (MedCOF-1)

*Belgrade, Serbia, November 18-19, 2013*

# AGENDA

| | | |
|---|---|---|
| **18 November 2013 (Monday) - MedCOF-1** | | |
| 8:30-9:00 | **Registration** | |
| 9:00-10:30 | **Session 1: Opening session**<br>Opening/Welcome addresses<br><br>Introductory remarks: what is the goal of a consensus seasonal forecast? | *Vladan Kocic***,** Director of the Republic Hydrometeorological Service of Serbia<br>*N. Berghi*, WMO Secretariat<br>*E. Rodriguez Camino*, AEMET |
| 10:00-10:30 | Coffee break & Group photo | |
| 10:30-12:30 | **Session 2: Climate monitoring information by RA VI**<br>**Climate monitoring information by RA VI and RA I RCCs on Climate Monitoring with discussion** | *P. Bissolli*, RA VI RCC on CM<br>*F.Driouech*, RA I RCC on CM |
| 12:30-14:00 | Lunch break | |
| 14:00-15:30 | **Session 3: Production of the climate outlook for the winter 2013-2014**<br>• Climate predictive signals for the Mediterranean region<br>• GCM seasonal forecasts for DJF<br>• Regional inputs:<br>➢ CMCC Climate outlook for next winter<br>➢ CNR Seasonal climate output for DJF<br>➢ Statistical Downscaling system at the Italian Air Force Met Service<br>➢ The CNR-ISAC monthly forecasting system | *R.Bojariu,* National Meteorological Administration, Romania<br>*J. P. Ceron*, RA VI RCC on LRF<br><br>*S. Materia*, CMCC<br><br>*M. Pasqui*, CNR – IBIMET<br><br>*F. Maimone*, CNMCA<br><br>*D. Mastrangelo*, CNR - ISAC |
| 15:30-16:00 | Coffee break | |
| 16:00- | **Session 3: Continuation** | |
| **19 November 2013 (Tuesday)** | | |
| 9:00-10:30 | **Session 4: Production of the climate outlook for the winter 2013-2014 (cont.)**<br>• Discussion and adoption of consensus statement | |
| 10:30-11:00 | Coffee break | |
| 11:00-12:30 | • MedCOF-1 consensus statement – climate outlook for the winter | |

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|---|---|---|
| | 2013/2014 | |
| 12:30-14:00 | Lunch break | |
| 14:00-15:30 | **Session 5: MedCOF mode of operation**<br>• Discussion on MedCOF issues, such as: administrative and financial aspects, web page content, the format of the output products, frequency of forums and others.<br>• Any other business | |
| 15:30-16:00 | Coffee break | |
| 16:00- | **Session 6: Closing session -** Wrap up and the way forward | |

# ANNEX II

## PARTICIPANTS TO
## THE LONG-RANGE FORECASTING TRAINING (LRF Training)

*Belgrade, Serbia, November 13-16, 2013*

| RY | PARTICIPANT<br>NAME / SURNAME/<br>POSITION | ORGANISATION | CONTACT ADDRESS<br>PHONE / MOB<br>E-MAIL | SIGNATUR |
|---|---|---|---|---|
| IA | **Mr. Vangjel MUSTAQI**<br>Meteorologist | IGJEUM | Tel: +35542250601<br>Fax: +35542250601<br>aspetalb@yahoo.com | |
| AND<br>VINA | **Mr. Bakir KRAJINOVIC**<br>Expert associate for Research of renewable energy sources | Federal Hydrometeorological Service of Bosnia and Herzegovina | Tel: +387 33 276 730<br>bakirk@fhmzbih.gov.ba<br>bakir.krajinovic@hotmail.com | |
| | **Ms. Nada RUDAN**<br>Expert in climatology | Republic hydrometeorological service of Republic of Srpska | Tel: +387 51 346 492<br>Fax: +387 51 433 521/ 307 943<br>n.rudan@rhmzrs.com | |
| RIA | **Mr Ilian GOSPODINOV**<br>Researcher | NIMH | Tel: +359 2 462 46 07<br>Fax: +359 2 988 03 80<br>Ilian.gospodinov@meteo.bg | |
| IA | **Ms. Dunja MAZZOOCCO DRVAR**<br>Head of Operations Support Office | Meteorological and Hydrological Service | Tel: +385 1 4565 783<br>Fax: +385 1 4565 7757<br>drvar@cirus.dhz.hr | |
| E | **Mr. Jean – Pierre CERON**<br>Scientific Deputy Director of Climatology | Météo-France | Tel: +33 687864539<br>Fax: +33 561078309<br>jean-pierre.ceron@meteo.fr/<br>jeanpierre.ceron@gmail.com | |
| | **Mr. Massimiliano PASQUI**<br>Researcher | Institute of Biometeorology | Tel: +39 064 993 7615<br>m.pasqui@ibimet.cnr.it | |
| | **Mr. Enrico SCOCCIMARRO** | | enrico.scoccimarro@bo.ingv.it | |
| N | **Mr. Raed Ahmd SUBHI RAFID**<br>Head of Forecasting Center | Jordan Meteorological Department | raedrafid@yahoo.com | |
| NIA | **Mr. Dieh SIDI HAIBA**<br>Director of the Operational and Meteorological Forecasts | Ministry of Transport National Office of Meteorology | +222 220 98 142/4646 62 44<br>diehmv@yahoo.fr | |
| CO | **Ms. Fatima DRIOUECH**<br>Chief Engineer, Service Manager Climate Studies | National Centre for Meteorological Research, Directorate of National Meteorology | Tel: +22 5 22 65 48 72<br>driouechfatima@yahoo.fr | |
| IA | **Ms. Roxana BOJARIU**<br>Head of Climate Section | National Meteorological Administration, Bucharest | Tel: +40724485493<br>Fax: +40213162140<br>bojariu@meteoromania.ro | |
| | **Mr. Ernesto RORIGUEZ-CAMINO**<br>Head of Climate Evaluation and Modelling | AEMET | Tel: +34 91 5819869<br>erodriguezc@aemet.es | |
| MER<br>AV<br>C OF<br>NIA | **Mr. Aleksandar KARANFILOVSKI**<br>Head of Climate Data Base and Archive Division | Hydrometeorological Service of Macedonia | Tel: +389 (0)2 3097 105, Fax: +389 (0)2 3097 118<br>akaranfilovski@meteo.gov.mk | |

| | | | | |
|---|---|---|---|---|
| | **Ms. Nina ALEKSOVSKA**<br>Head of Meteorology Dpt. | Hydrometeorological Service of Macedonia | Tel: +389 (0)2 3097 105, Fax: +389 (0)2 3097 118<br>naleksovska@meteo.gov.mk | |
| Y | **Mr. Ömer DEMIR**<br>Engineer | Turkish State Meteorological Service | Tel: +90 544 533 15 79<br>omerdemir@mgm.gov.tr | |
| | **Mr. Osman ESKİOĞLU** | Turkish State Meteorological Service | Tel: +90 312 302 24 45<br>aakcakaya@mgm.gov.tr | |
| A | **Ms. Soumaya Ben RACHED**<br>Chef de Service | Institut National de la Météorologie | Tel: 216 71 773400<br>Fax: 216 71 770609<br>soumaya@meteo.tn | |
| CE<br>NS | **Mr. Peter BISSOLLI**<br>Scientist | Deutscher Wetterdienst (DWD, German Meteorological Service) | Tel: +49 69 8062 2936<br>Fax: +49 69 8062 3759<br>peter.bissolli@dwd.de | |
| | **Mr. Timothy STOCKDALE**<br>Principal Scientist | ECMWF | Tel: +44 118 9499117<br>Fax: +44 118 986 9450<br>t.stockdale@ecmwf.int | |
| | **Mr. Goran PEJANOVIC**<br>Assistant Director | SEEVCCC | Tel: 2066-900; 064/8385-002; :<br>goran.pejanovic@hidmet.gov.rs | |
| | **Ms. Jasminka SMAILAGIC** | SEEVCCC | Tel: 3050-855; 064/8385-170<br>jasminka.smailagic@hidmet.gov.rs | |
| | **Mr. Dragan MIHIC** | SEEVCCC | Tel: 2066-925; 064/8385-205<br>dragan.mihic@hidmet.gov.rs | |
| | **Ms. Ana SAVOVIC** | SEEVCCC | Tel: +381 11 2066 923<br>ana.pjevic@hidmet.gov.rs | |
| A | **Ms. Dragana MARKOVIC** | SEEVCCC | Tel: +381 11 3050 804<br>dragana.markovic@hidmet.gov.rs | |
| | **Ms. Daliborka NESIC** | SEEVCCC | Tel: +381 11 3050 804<br>daliborka.nesic@hidmet.gov.rs | |
| | **Ms. Aleksandra KRZIC** | SEEVCCC | Tel: +381 11 2066 926<br>aleksandra.krzic@hidmet.gov.rs | |
| | **Ms. Marija DJORDJEVIC** | SEEVCCC | Tel: +381 11 2066 928<br>marija.djordjevic@hidmet.gov.rs | |
| | **Ms. Marija IVKOVIC** | SEEVCCC | Tel: +381 11 2066 925<br>marija.ivkovic@hidmet.gov.rs | |
| | **Mr. Bojan CVETKOVIC** | SEEVCCC | Tel: +381 11 2066 927<br>bojan.cvetkovic@hidmet.gov.rs | |
| | **Mr. Vladimir DJURDJEVIC** | | vdj@ff.bg.ac.rs | |
| | **Ms. Katarina STEFANOVIC** | SEEVCCC | Tel: +381 11 3050 852<br>katarina.stefanovic@hidmet.gov.rs | |
| A | **Ms. Ana VUKOVIC** | | pazisadana@gmail.com | |
| | **Mr. Branko BIJELIC** | RHMSS | Tel: +381 11 3050 903<br>branko.bijelic@hidmet.gov.rs | |
| | **Ms. Tijana RADOVIC** | RHMSS | Tel: +381 11 3050 903<br>tijana.radovic@hidmet.gov.rs | |
| | **Mr. Dragan Djukic** | RHMSS | Tel: +381 11 3050 858<br>dragan.djukic@hidmet.gov.rs | |