



Twenty-fifth Session of SEECOF and
Sixteenth Session of the MedCOF FORUM

Issues and suggestions on Operational Practices for Objective Seasonal Forecasting

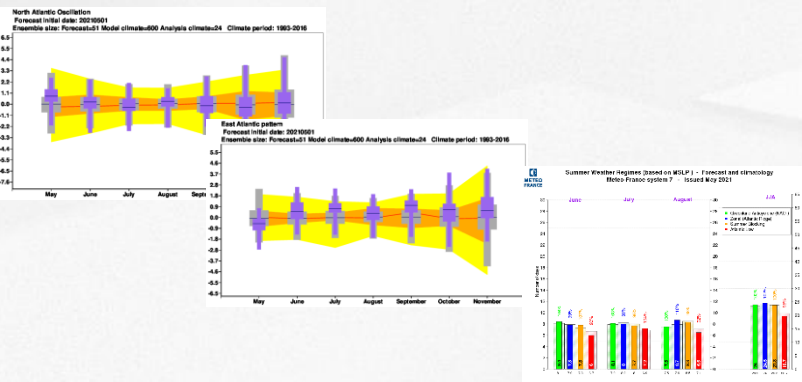
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All the issues and considerations in this presentation is related to the WMO Guidance on Operational Practices for Objective Seasonal Forecasting, which is the one of the topics of the preCOF of the MedCOF-15 online Forum. This outlined issues are my personal point of view above mentioned topic and contribution to the preCOF online Forum for further discussion.

WMO Guidance on Operational Practices for Objective Seasonal Forecasting suggest us to find set of teleconnection pattern index's which have highest influence in certain region. (For example SEECOF or medCOF region).

Issue: does the GPCs (NCEP, ECMWF, Meteo-France) use the same domains for the teleconnection patterns (NAO, East Atlantic, European Blocking,) ?



If domain differences exists between GPCs - there is need to standardize them and then to look after the proper indexes in certain regions and their influence on the seasonal temperature or seasonal precipitation totals.



As we know SST's, as a represent of the Ocean thermal state, have the highest influence on the teleconnection patterns. SSTs are the outputs from the Ocean model, which is simulating all the processes in the Oceans. During last decade it was noticed that Ocean models shows differences in certain areas. During the last several years some of the GPCs starts to support NHMSs with probabilistic outputs of the Ocean model.

Issue:

Need for some kind of verification of the SST outputs of the GPC Ocean models (for example on the global level as a map, or in the domains of the well known teleconnection patterns – NAO, El Nino, East Atlantic, TANI, TASI,.....).

The main idea of the Objective Seasonal forecasting on the first place is to find proper teleconnection indexes for different seasons for the certain region and to find one GPC or super-ensemble of different GPC which shows the best results.

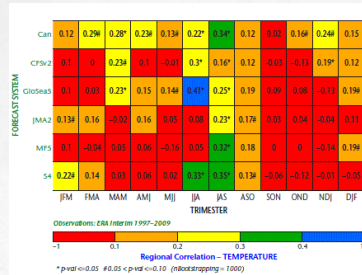


Figure 2.4. Correlation coefficient computed for regional temperature anomalies (without removing trends), for 12 different three-month periods; and for a one-month lead forecast over the Mediterranean region (common verification period: 1997-2009). Three-month periods are shown on the X-axis, and systems (GPC Reading, S4, GPC Toulouse, S5, GPC Tokyo, S2, GPC Exeter, GPC Sea5, GPC Washington v2 and GPC Montreal CanSIPS) are represented on the Y-axis.

Source: MedCOF

During last decade of SEECOF Forum we noticed that outputs from different GPC's, for example precipitation, could differ a lot (example: GPC Washington comparing to ECMWF or UKMO) from season to season in some parts of SEECOF region. It can also be seen on the picture of the correlation coefficient for the regional temperature anomalies on the left.

Issue:

- How could we solve this problem in bigger domain such as MedCOF region?
- Does it mean that we should apply the same GPC for all seasons and all regions or to choose the different GPC for different season (depending on the verification of the GPC Ocean model outputs)?
- How to define the criteria for choosing one the GPC model as referent one for all seasons and all regions of the COF's to get objective seasonal forecast?
- How to behave -when new generation of Ocean models starts to be used ?



THANK YOU FOR YOUR ATTENTION!

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