

**Third Session of the
MEDITERRANEAN CLIMATE OUTLOOK FORUM
MEDCOF-3 MEETING**

**ANALYSIS AND VERIFICATION OF THE MEDCOF-2 CLIMATE
OUTLOOK FOR THE 2014 SUMMER SEASON FOR THE NORTH
AFRICA REGION (RAI-NA)**

1. MedCOF 2- Climate outlook for the 2014 summer season:

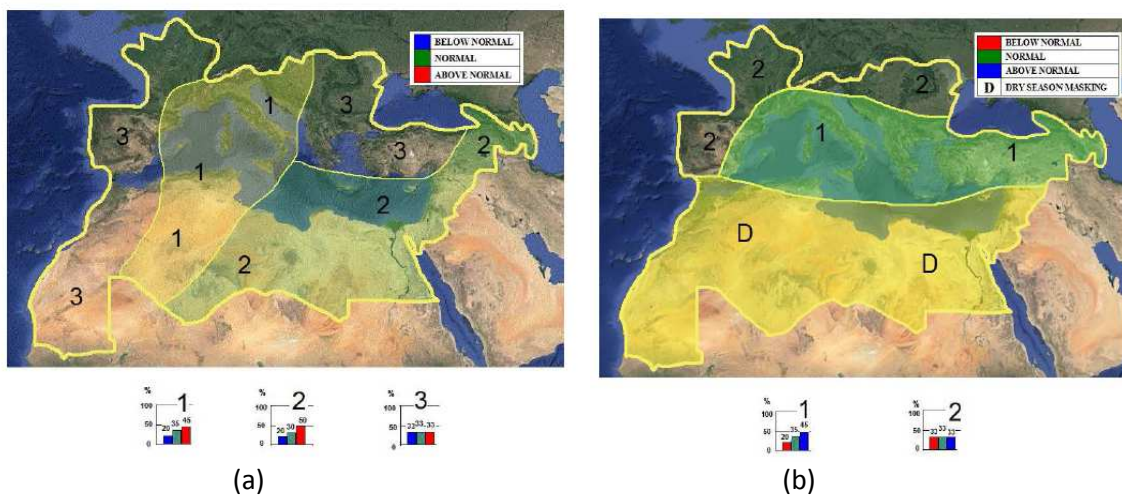


Figure 1: Graphical presentation of the climate outlook for the 2014 summer season for the Mediterranean region

(a) Temperature Outlook; (b) Precipitation Outlook

Temperature:

The Seasonal Climate Outlook for the 2014 summer season for the North Africa region assigned 40% probability for the above normal tercile in Tunisia and most of Algeria (region 1 in figure 1(a)), 50% probability for the above normal tercile in Libya and Egypt (region 2 in figure 1(a)). Morocco shows no clear signal and climatology is therefore assigned for the three categories (region 3 in figure 1 (a)).

Precipitation:

The MedCOF-2 precipitation outlook for North Africa region showed dry season nearly over the complete RA I-NA area with exception of the northern Tunisia and the extreme northeastern Algeria where there is a slightly higher probability (45%) that the normal of precipitation will be exceeded (figure 1 (b)).

2. Analysis of the 2014 summer season:

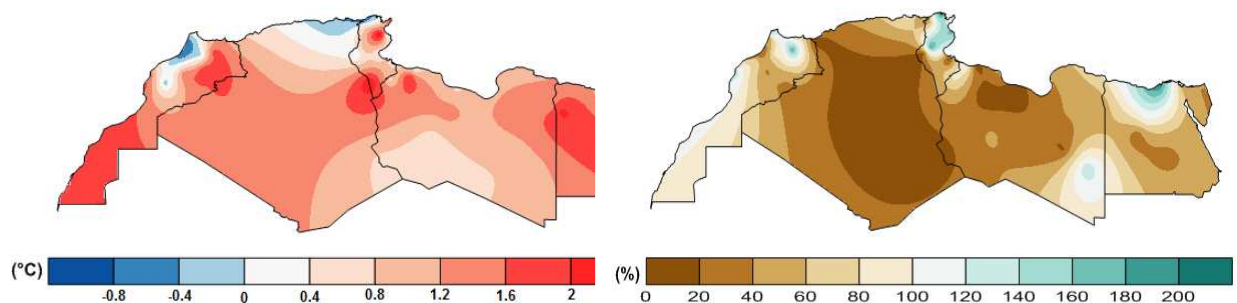


Figure 2: Left: temperature anomalies (1981-2010 reference) for summer 2014. Source: RCC-NA CM node (NIM), http://www.meteo.tn/htmlen/donnees/Summer_2014.pdf.

Right: Percentage of precipitation (1981-2010 reference) for summer 2014. Source: RCC-NA CM node (NIM), http://www.meteo.tn/htmlen/donnees/Summer_2014.pdf.

Analysis of the summer season temperature anomalies and precipitation percentage are based on seasonal bulletins on climate in the WMO RA I-NA for the summer 2014 (WMO RA I RCC Node on Climate Monitoring: http://www.meteo.tn/htmlen/donnees/Summer_2014.pdf).

Temperature:

In summer 2014 the maximum temperature was observed in the south of the region and the minimum in the north. It was ranged between 22°C in RABAT-SALE in the north west of Morocco and 36°C in Asswan in the south of Egypt.

The season was warmer than normal nearly over the complete RA I area with exception of the northwestern Morocco and the extreme north east of Algeria and the extreme north of Tunisia. Seasonal temperature was above normal in the most of Algeria, Morocco and Tunisia, the all of

Libya, and the all of Egypt. Anomalies were even higher with values up to +2°C above normal. This was registered in the south of Morocco, the south of Tunisia, and the south of Egypt.

Precipitation:

Summer 2014 was wetter than normal in the center and the north east of Tunisia. It was as well wetter than normal in the north of Egypt and the extreme north of Morocco. Around normal in the western south of Morocco.

Less than 40% of the normal fell in large parts of Algeria and Libya. It was also drier than normal in the south of Tunisia, the eastern part of Morocco and the south east of Egypt.

3. Verification of the MedCOF-2 climate outlook for the 2014 summer season:

Temperature:

The MedCOF-2 climate outlook for the 2014 summer season concluded that the seasonal temperature over the most parts of the region would be above normal, in Libya and Egypt with probability of 50% and in Tunisia and Algeria with probability of 45%. In fact, these positives anomalies occurred.

It was not possible to predict the summer season temperature in Morocco due to the equal probabilities for below-, near-, or above-normal conditions.

This indicates that the climate outlook for the summer season air temperature was able to predict temperature anomalies registered for the most of North African region.

Precipitation

According to MedCOF-2, it was predicted that the summer season precipitation totals would be above normal in the northern Tunisia. This prediction turned out to be quite accurate. In the rest of the North African domain the prediction was accurate except in the northern of Morocco and the northern of Egypt where the amounts of precipitation were above normal.

4. Users' perceptions of the MedCOF-2 outlook

Users of seasonal forecasts use to be mainly the general public and the media, partly also the public and private sector (water management, energy, agriculture) and governmental authorities. Whereas this part should be improved in the forum and a lot of work has to be done by organizing debates with the end users to identify their needs and the way to produce tailored products.

Appendix A: Contributors to the Pre-COF of MEDCOF-3

- National Meteorological Directorate, Morocco
- National Institute of Meteorology, Tunisia

Country	Seasonal temperature (JJA)		Seasonal precipitation (JJA)		High impacts events
	Observed	MedCOF-1 climate outlook for temperature	Observed	MedCOF-1 climate outlook for precipitation	
Algeria (2) *	Below normal in the extreme north-east of the country and above normal elsewhere	Normal in the western region and normal to above normal in the rest of the country	Below normal	Dry season in most part of the country except the extreme northeastern region	No comment
Egypt (1) *	Above normal	Above normal	Above normal in the north Below normal in the south	Dry season	No comment
Libya (1) *	Above normal	Above normal	Below normal	Dry season	No comment
Morocco (1)	Above normal in the East(oriental) - Below normal in the North -Normal in the west and south	Normal	Normal to above normal in the north	Dry season	No comment
Tunisia (1)	Above normal	Above normal	Above normal in the north Below normal The south	above normal in the north dry conditions in the south	In June, heavy rain occurred in the southeastern (58 mm in 24 hours in Tozeur), causing floods. Deaths and damage in the infrastructures were recorded.

Note:

(1) - Basic climatological period (1981-2010)

(2) - Basic climatological period (1961-1990)

* Data source: The National Climatic Data Center (NCDC)