



The impact of the "New Climate" warmed on the " New Water Cycle " in the Maghreb

Mohammed-Said Karrouk

University Hassan II, FLSH Ben M'Sick, Geography, Climatology, Casablanca, Morocco (climdev.morocco@gmail.com)

The "New Climate" causes the effects of the new atmospheric regime characterized by Meridian Atmospheric Circulation (MAC) to cause the Maghreb and the geoclimatic space of mid-latitudes to alternate conditions of freshness and humidity under the negative atmospheric wave (planetary valley), and heat and dryness under the positive atmospheric wave (planetary crest) along the year. This imposes on the Maghreb people a situation of uneasiness and perplexity with regard to their socio-economic activities; agitated agricultural calendar, decision makers' hesitations, uncertainty and expectations, etc.

The recent example of autumn 2014 and autumn-winter 2015-2016 reveals these conditions which left a deep psychological, economic and social impact on Moroccans in particular, and the Maghreb in general.

In autumn 2014, atmospheric conditions were marked by a stronger meridian atmospheric circulation, characterized by the persistence of high temperatures during this autumn period in Morocco, mainly south of the Atlas, combined with the intrusion of a drop cold at the beginning of the event on 17/11/2014, and the frank installation of a very deep planetary valley off the Moroccan coasts on 24/11/2014, which evolved in storm (Xandra) where the depression reached the surprising value of 975 hPa on 28/11/2014.

The human and material damage caused by this flood is impressive: people have died, roads and roads destroyed, dams overflowing, crops destroyed, infrastructures dilapidated; it's a catastrophe.

Reverse conditions were established the following year. During this period, the summer heat continued into the late fall of 2015, and even into the winter. And precipitation decreased by more than 51% of the fall rainfall cumulative, compared with the same period of a normal year. A slowdown in economic growth has been felt since December, and continued until the return of rain (and snow!) In mid February 2016.

The meteorological conditions during this period were marked by the succession and persistence of very active planetary crests projected to the northern confines of Western Europe (Christmas heat 2015!), Thus rejecting the negative waves to the east: Algeria, Tunisia, Italy, the Balkans, Anatolia, and even the Middle East.

These and similar events (Mohammedia, November 2002 flood, Tangier in October 2008, the Gharb flood 2009-2010, the Casablanca downpour in November 2010, El Attaf in October 2007, Algiers in October 2015, Tunis in October 2007, etc.), should be considered as reference laboratory cases for the simulation of future situations, and integration into development plans in the future.