

**Country: Spain**

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Assessment of the seasonal forecast for the winter season  
DJF 2013-14

**1. MedCOF-1 Climate outlook for the 2013-14 winter season:**

Slightly increased probability of temperatures above normal, particularly for eastern Spain (probability for tercile warm of 40%).

Precipitation around normal in the Northern half of Spain and slightly drier than normal in the southern half. Probability for tercile dry in Southern Spain of 40%.

**2. Analysis of the 2013-14 Winter Season:**

*Winter temperatures (reference period 1981-2010)*

December was colder than normal in most of the country, particularly in some areas of the northern half of Spain, where the negative mean anomaly exceeded  $-1^{\circ}\text{C}$ . The temperature anomaly averaged over the territory was  $-0.7^{\circ}\text{C}$ .

January was very warm throughout the Spanish territory. The temperature anomaly averaged over the Spanish territory was  $+1.8^{\circ}\text{C}$ . It has been the third warmest month of January since 1960. In many areas of western and northeastern part of Spain, the mean temperatures exceeded by  $2^{\circ}\text{C}$  -  $3^{\circ}\text{C}$  their normal values.

February was slightly warmer than normal overall, with an average temperature anomaly of  $+0.2^{\circ}\text{C}$ . It was warmer than normal in extended zones of east and north Spain, with positive monthly anomalies over  $1^{\circ}\text{C}$  in most of the Mediterranean coastal area. On the contrary, in central and western Spain February was about normal or slightly colder than normal.

Over the winter season, temperatures were on average slightly higher than normal. The average temperature for the December-February period over Spain was  $0.4^{\circ}\text{C}$  above its normal value. The seasonal mean temperature anomaly was positive over all the Spanish territory with the only exception of some very irregularly distributed small areas.

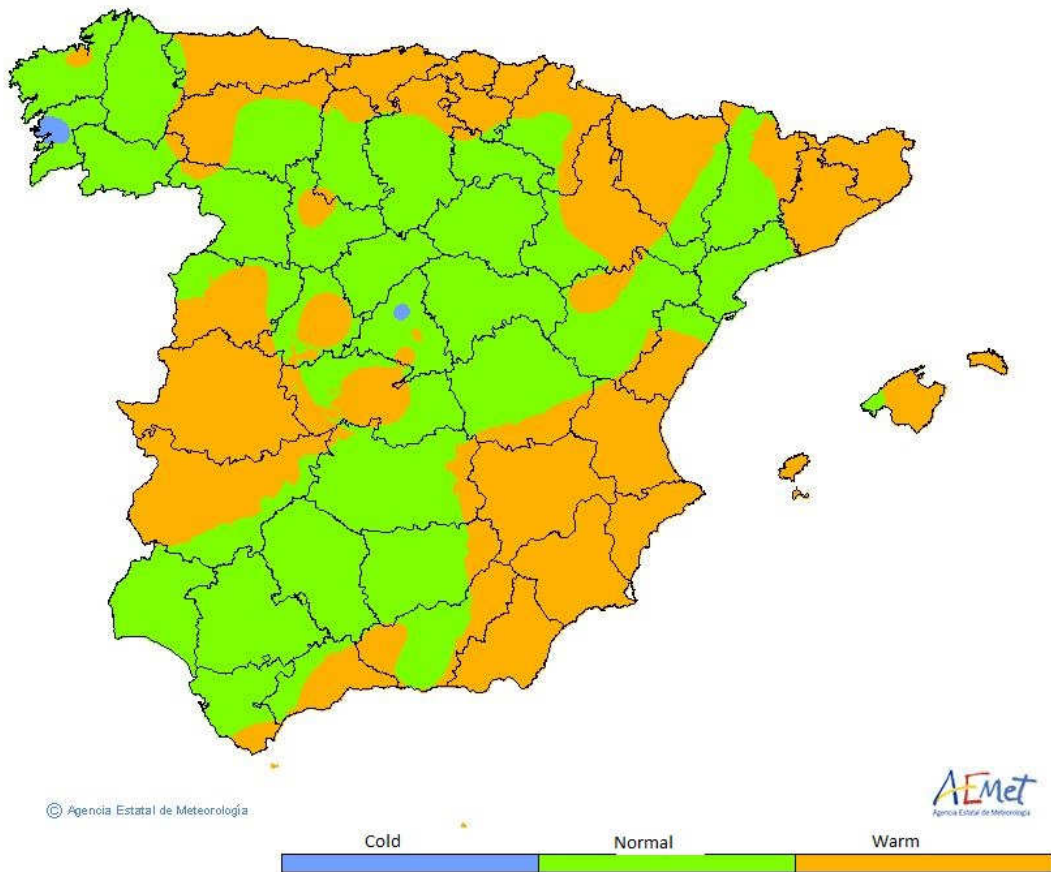


Figure 1: Character of mean temperature (cold/normal/warm) over Spain in Winter Season (December-February).

#### *Winter Precipitation (reference period 1981-2010)*

December was slightly drier than normal, with an average precipitation over Spain reaching a 17 % below the mean value for the reference period. It was dry to very dry in the northeast of Spain and in some areas of the southwest corner and normal or wetter than normal in the rest of Spain.

January was wetter than normal with an average precipitation over Spain that exceeded by 44 % its normal value. The geographical distribution of the monthly precipitation was very irregular, and thus it was very dry in the Mediterranean coastal area and on the contrary very wet in the Peninsula's north-western part, as well as in both interior plateaus.

The pluviometric character of February was similar to that of January. The average precipitation over Spain in this month exceeded by 66 % the normal value. Similarly to the previous month, February was very dry in the Mediterranean part of Spain, and wet to very wet in the rest. Over large areas in central and western Spain the precipitation exceeded the double of the February normal values.

Considering the country as a whole the winter season average precipitation exceeded 20% of its mean value. The season was dray in eastern Spain, with a strong deficit in the Mediterranean coastal zone, and wet to very wet in the rest of Spain. This pattern in the

geographic distribution of seasonal precipitation was due to the persistence along the wintertime of rainy situations characterized by wet air masses coming from the Atlantic Ocean.

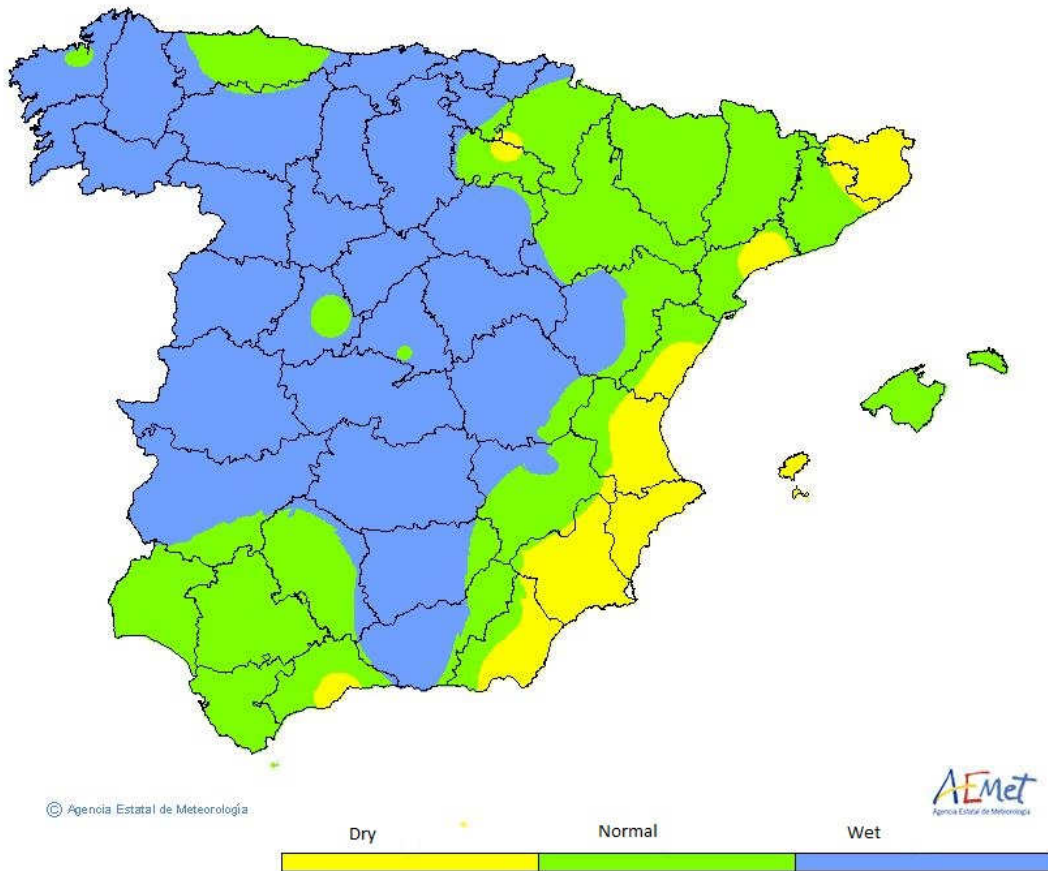


Figure 2: Character of total precipitation (dry/normal/wet) over Spain in Winter Season (December-February).

### 3. High Impacts Events:

The passage of successive low pressure systems whose center were located very near the north coast of the Iberian Peninsula, leads to very stormy conditions in north Spain in the last decade of December and during the months of January and February. Several storm events with very strong wind gusts affected Galicia and Cantabrian regions during winter season. In the coastal areas of north Spain there were very significant economic damages and several people dead, due to the combined action of very strong winds, big waves and storm surges.

### 4. Verification of the MedCOF -01 climate outlook for the 2013-14 winter season:

Country	Seasonal temperature (DJF)		Seasonal precipitation (DJF)	
	Observed	MedCOF-1 climate outlook for temperature	Observed	MedCOF-1 climate outlook for precipitation

Spain	Seasonal mean temperature slightly higher than normal. Mean anomaly of +0.4°. Tercile normal. (reference period: 1981-2010).	Slightly increased probability for tercile warm (40%)	Wetter than normal as a whole. The season was dry in eastern Spain, and wet to very wet in the rest of Spain.  Tercile wet (reference period: 1981-2010).	Around normal in the Northern half of Spain and slightly drier than normal in the southern half. Probability for tercile dry in South Spain was of 40%.
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## 5. Users' perceptions of the MedCOF-1 outlook

There are no feedback from users yet.