

# Analysis of mean air temperature and precipitation for winter 2011-2 for Greece

1. First, an analysis of air temperature and precipitation on a monthly basis was carried out for winter 2011-2. Then an assessment for the whole winter period was made. The reference climatological period used was 1961-1990.

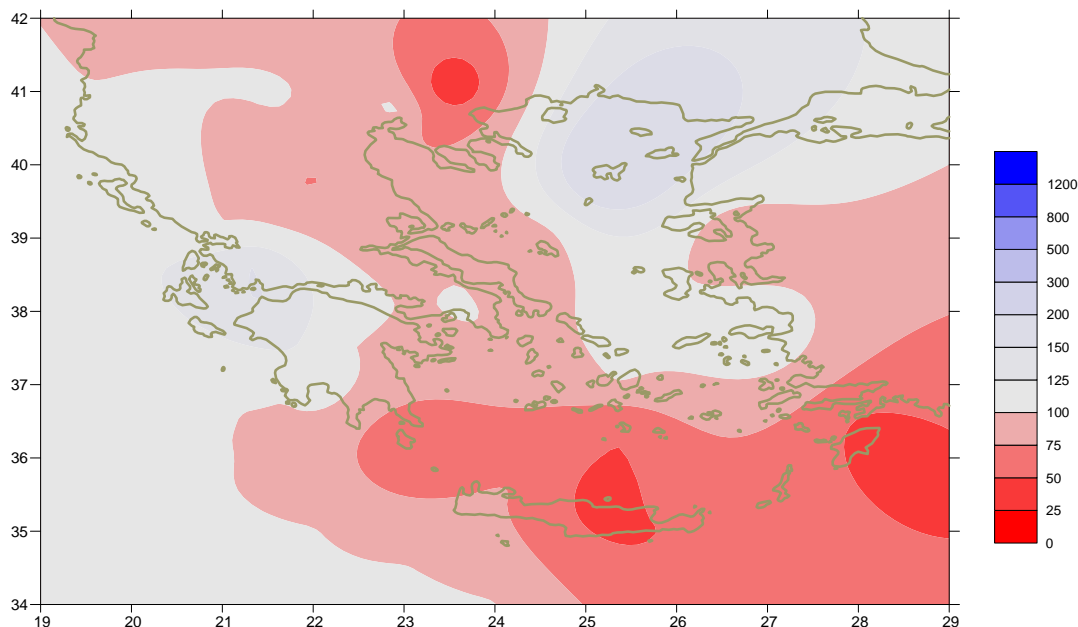
## 1.1 On a monthly basis:

### December 2011

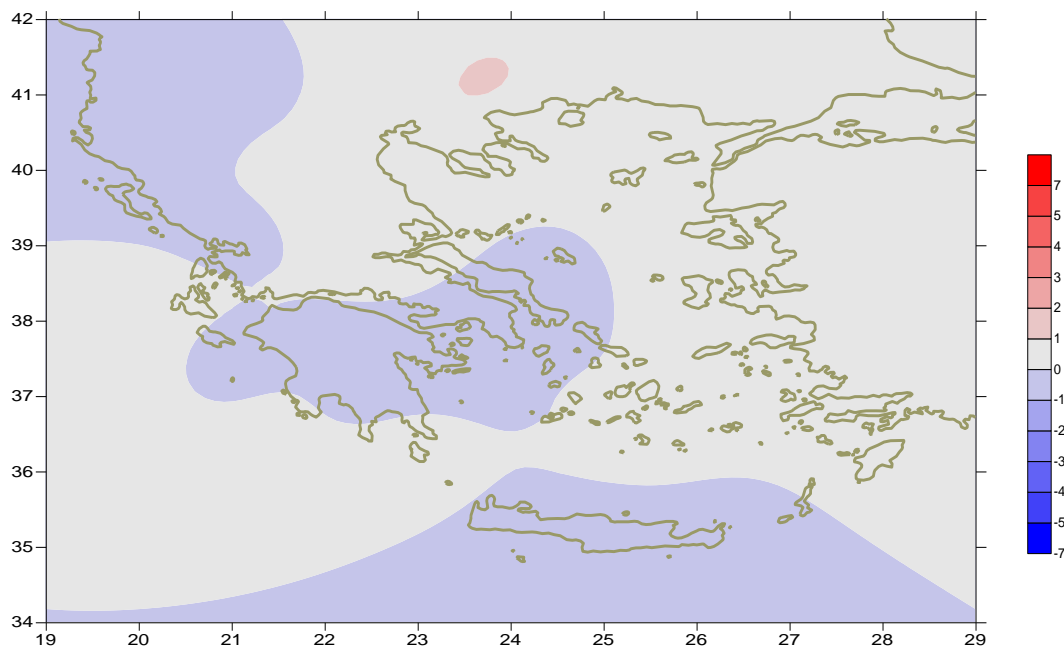
December began with mild conditions which continued for the two ten-day periods, but was extremely cold during last six days. Heavy snowfalls were recorded on the mountains and also in the plains of western-central Macedonia. Total frost conditions prevailed locally in Northwestern mainland. For instance, in the town of Florina the temperature remained below zero for three consecutive days.

The mean temperature was, in general, close to normal values in the most areas of the country, except locally in the northwest part, Cyclades and Crete, where was slightly below normal values.

December was in general wetter in the west part and drier in the east part of the country. Particularly, precipitation amounts were 120-150 % of normal values in the west and northeast part of the country. In contrast, the corresponding amounts were 70-80 % in east mainland and 35-65 % of the normal values in southeastern island part of the country.



Precipitation: departure from normals (%)



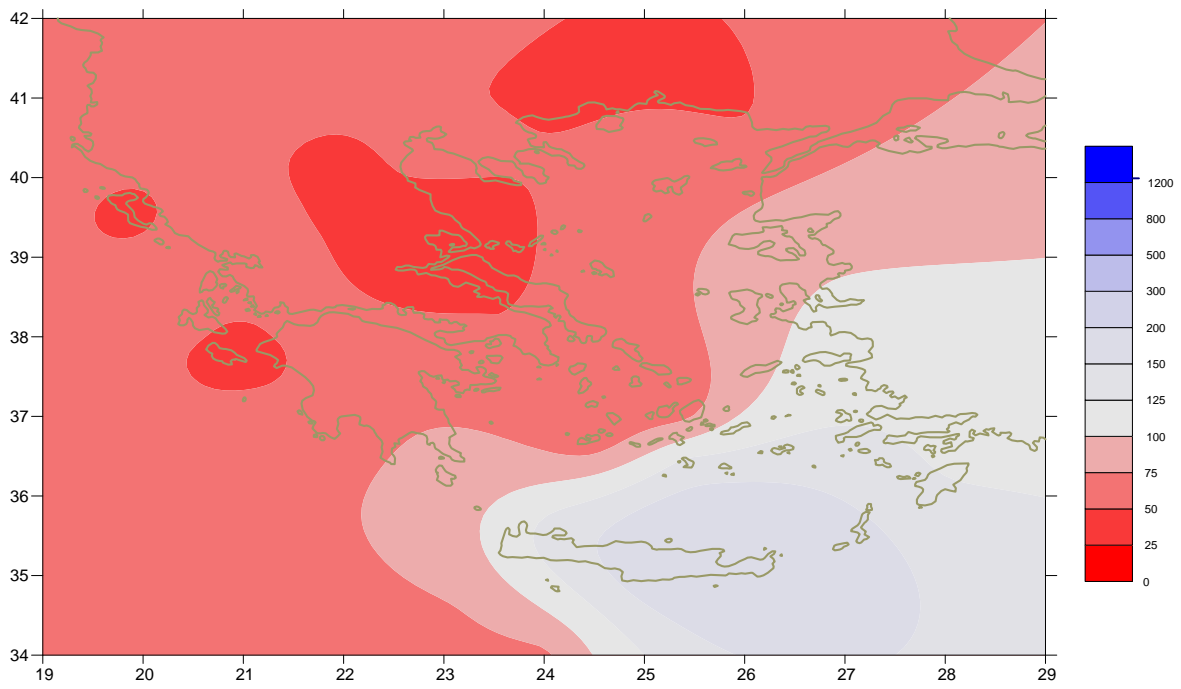
Mean Temperature: departure from normals (in °C)

### **January 2012**

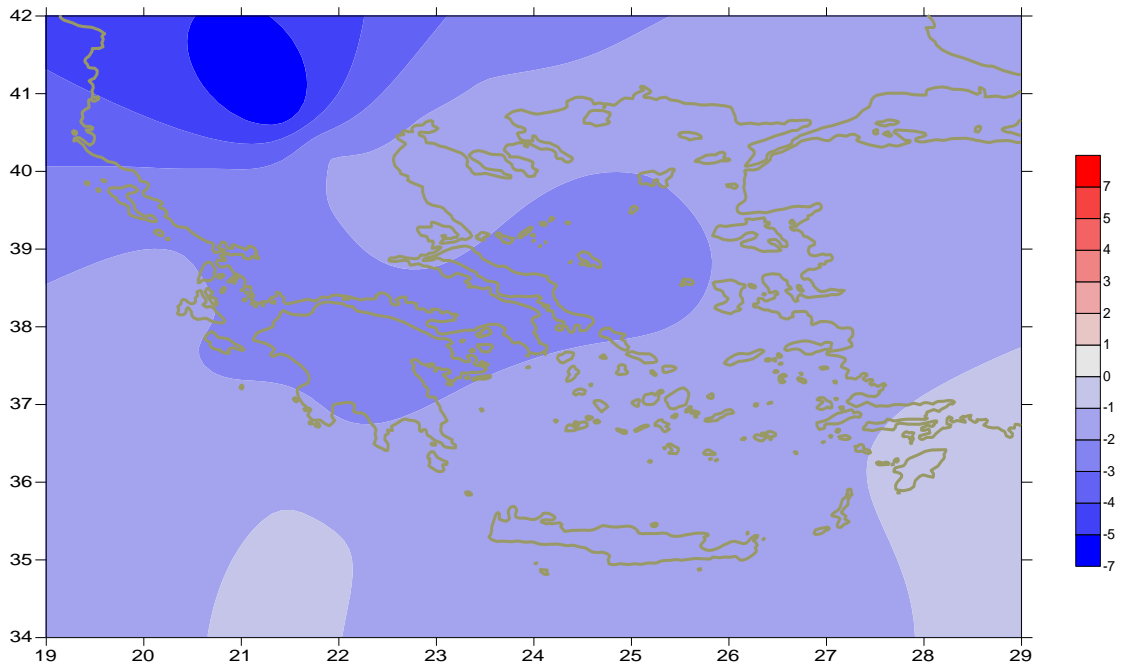
January was, in general, characterized by unusual low temperatures, mainly over North and central parts of the country, accompanied by strong frosts, and long lasting snowfalls. It is remarkable that a new record of minimum temperature ( $-25.1^{\circ}\text{C}$ ) was set in Florina (old record was  $-21.0^{\circ}\text{C}$ , set in 1989). Moreover, heavy rain falls and hails were recorded over southern parts, while gale force winds prevailed at times.

In particular, the mean temperatures were well below the normal values in all the country, varied from  $2.5-3.0^{\circ}\text{C}$  below in the west part,  $\sim 2^{\circ}\text{C}$  below in the east mainland and eastern Aegean islands, and  $0.6-1.7^{\circ}\text{C}$  below in Cyclades, Crete, and Dodecanese).

Precipitation amounts were, in general, below normal values (in several cases below 50% of normal values), except some places in of southern Aegean, in Crete and Dodecanese (locally  $\sim 130-180\%$  of normal values).



Precipitation: departure from normals (%)



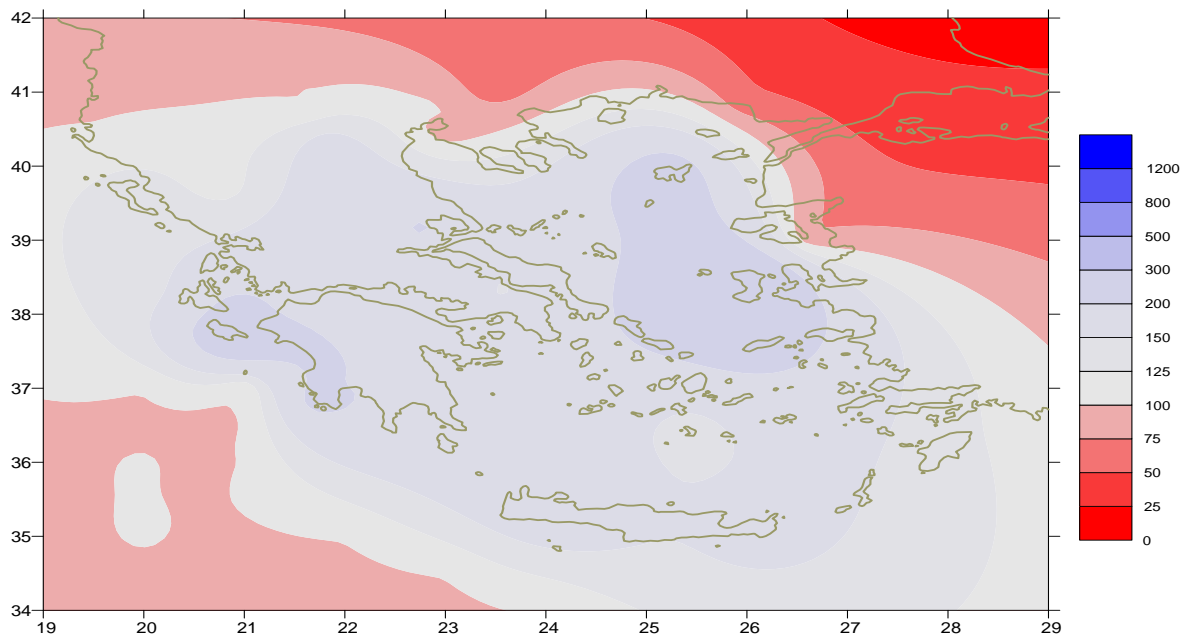
Mean Temperature: departure from normals (in °C)

## February 2012

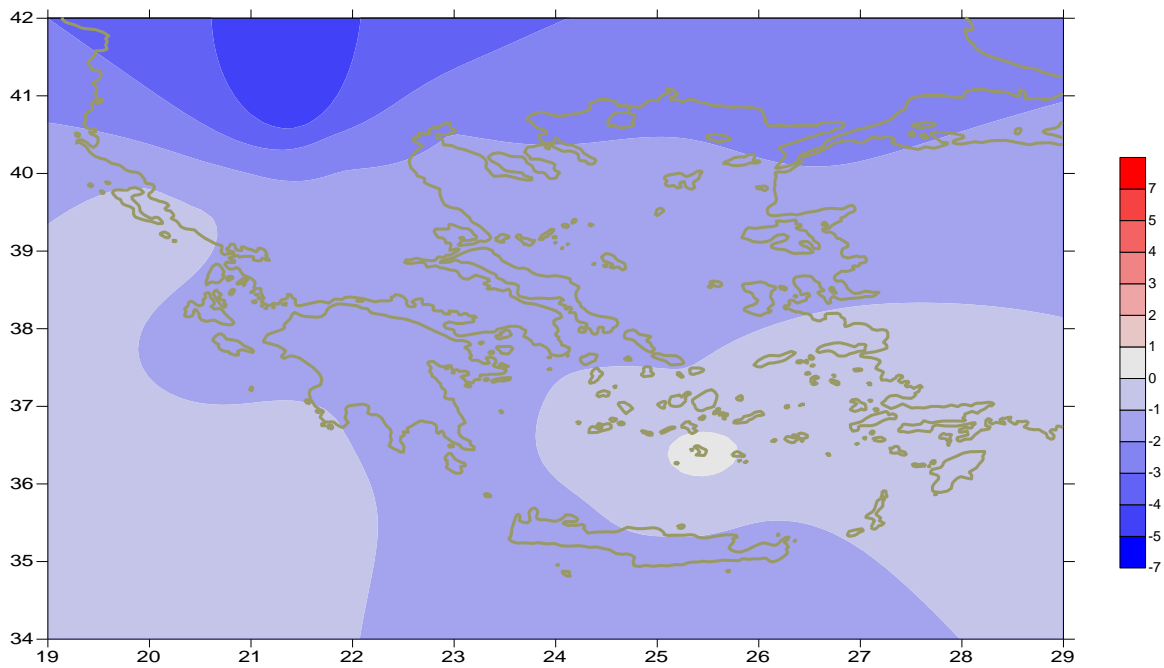
February 2012 followed January and presented a similar behavior. So, it was a month with much lower mean temperatures than normal values. In addition, heavy snowfalls and high rainfall amounts were recorded in most areas of the country.

Particularly, the departures of mean temperatures from normal values varied from 2,3-4,9°C below in the north part, from 1,1-1,7°C below in the rest of mainland and northeast Aegean, and from 0,4-1,2°C below in Cyclades, Crete and Dodecanese.

Regarding precipitation, the rainfall amounts were, in general, higher than normal values, varied from 130%, and in some cases exceeded twice the normal heights.



Precipitation: departure from normals (%)



Mean Temperature: departure from normals (in °C)

### **1.2 On a seasonal basis, winter 2011-2:**

Regarding the winter period as a whole, there were the following findings:

Winter 2011-2 was generally colder than average as compared to 1961-1990 period. Particularly, the mean temperature was, in general, below normals in almost the entire country. The greatest departures of mean temperatures from normal values were observed in islands of Ionio sea and mainland (-0,7 to -1,4 °C), with an extreme value of -3,8 in Florina city (northwest part). The smallest departures of mean temperatures from normal values were observed (-0,2 to -1,0 °C) in south Aegean and Dodecanese.

With regards to precipitation, winter was relatively drier than normals in the north part of the country (40-98% of the normal values). In contrast, the winter was wetter than normals in parts of west Greece, east Aegean, and Crete (114-160%).