

## **Seasonal weather forecast for the months of**

### **January, February and March 2018**

#### **General over view of the weather expected to prevail during January, February and March 2018.**

The weather for the following period consists of a part (January and February) of the traditional winter, where the most of the annual accumulated precipitation is climatologically expected, while in the period in focus normal temperatures (both maximum and minimum) are significantly lower than the other months of the year and the first month (March) of the traditional Spring, which is also a part of the period of forecast. During the period the frequency of baroclinic depressions affecting the area is at its most resulting in higher accumulated precipitation amounts.

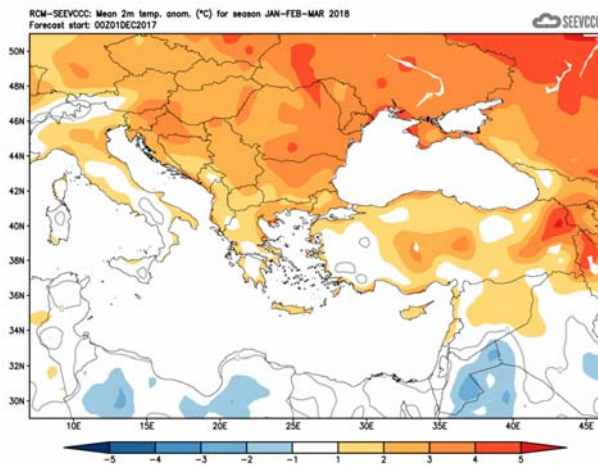
From the climatological data kept by the Department of Meteorology **January** results at a mean of 10 snow days while a record of snow days was recorded with 22 snow days, in 1981. **February** results in a mean of 11 snow days with the 1990 **February** resulting in 16 days. During **March** 8 days of fresh snow are climatologically expected while during 1987 **March** resulted in 21 snow days.

#### **Seasonal forecast for the next three months**

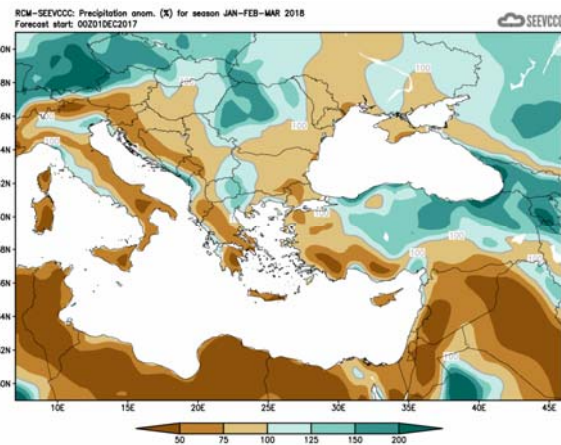
Specifically, regarding the seasonal forecast for the period of the three first months of the year (**January, February and March 2018**), the temperature is expected to be generally above normal by 1 to 2°C. The amount of the accumulated precipitation is relatively disappointing, as it will range between 50% to 75% of normal all over Cyprus, except the western coasts, where the accumulated precipitation is expected to be normal.

The greater surrounding area is forecasted with almost the same characteristics as Cyprus.

Bearing in mind the models suggestion (the results of which are presented in graphical form in the charts below) and also the long climatology of the area of Cyprus the next three month period is expected to be warmer than normal with mean season temperatures ranging slightly above normal and precipitation to be generally below normal with an exemption of the western coasts where normal accumulated precipitation is expected. But based on the climatology of Cyprus snow days are to be expected, during the period, while isolated areas will accumulate sufficient precipitation.

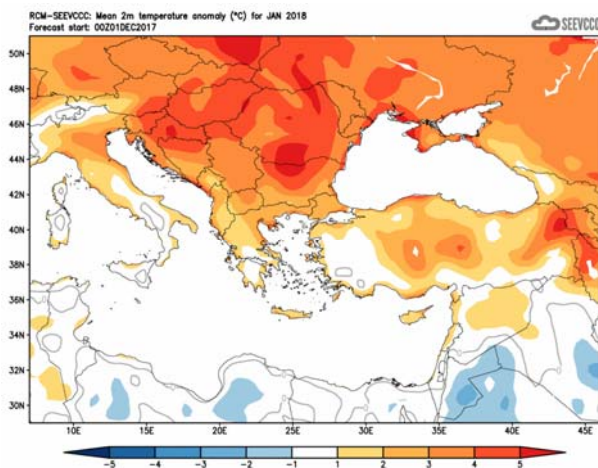


Divergence of temperature from normal from the mean seasonal temperature ( $^{\circ}\text{C}$ ) for January, February and March

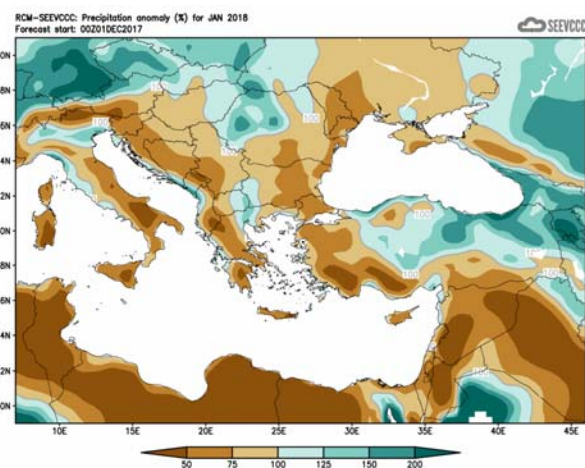


Percentage (%) of the mean seasonal accumulated precipitation compared to the mean normal for January, February and March

The seasonal forecast for **January 2018** suggests that temperature will be slightly above normal (by  $1^{\circ}\text{C}$  to  $2^{\circ}\text{C}$ ). The accumulated precipitation of **January** is again disappointing since the forecast suggests a mainly dry month with accumulation ranging only from 50% to 75% of normal, except the western part where the accumulation will range almost up to normal. Low accumulations are characterizing all the surrounding area.



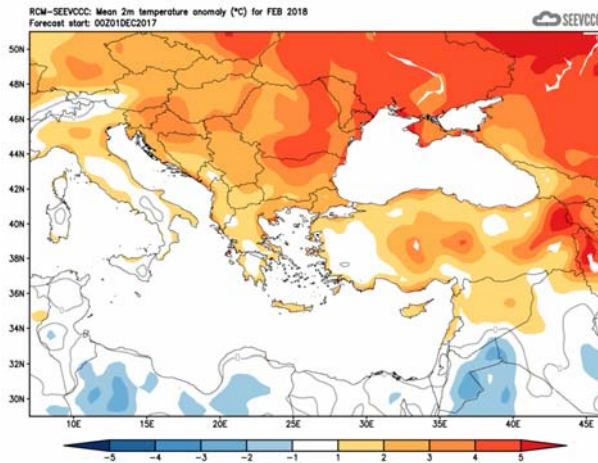
Divergence of the mean monthly temperature ( $^{\circ}\text{C}$ ) from normal during January



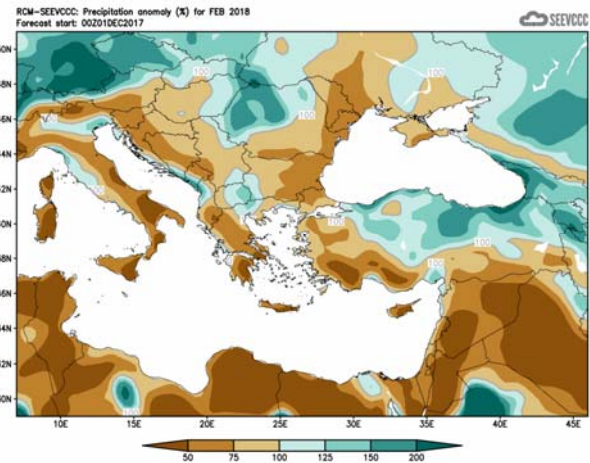
Percentage of the mean monthly precipitation (%) compared with the normal of January

The seasonal forecast for **February 2018** is almost similar to the one of January and it will be warmer than normal by  $1^{\circ}\text{C}$  to  $2^{\circ}\text{C}$ . The accumulated precipitation of **February** is again disappointing since the southern and eastern part of the island will not exceed 50% and over the rest of the areas will not

exceed 75% of normal and only over the western coastal zone is expected to be around normal. The above temperature and accumulated precipitation characteristics apply also for the surrounding area.

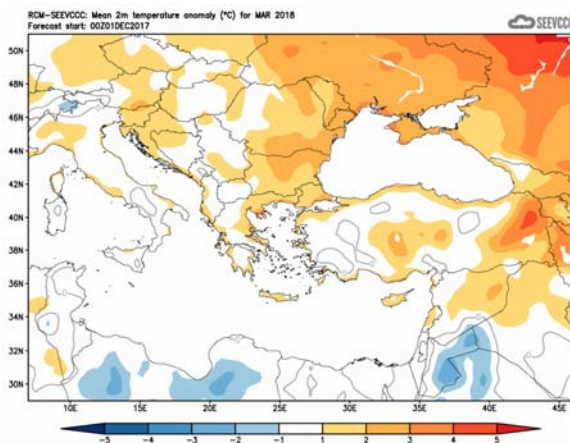


Divergence of the mean monthly temperature ( $^{\circ}\text{C}$ ) from normal during February

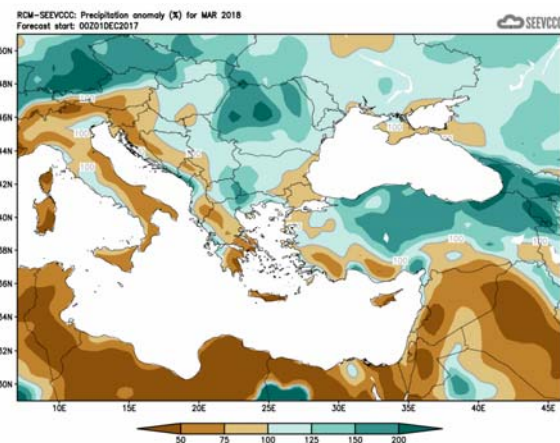


Percentage of the mean monthly precipitation (%) compared with the normal of February

The seasonal forecast for **March 2018** is almost similar to the one of the previous months suggesting that **March** will be warmer than normal by  $1^{\circ}\text{C}$  to  $2^{\circ}\text{C}$ . The accumulated precipitation of **March** is again relatively disappointing since the forecast suggests that over the southeastern coasts of the island the accumulated precipitation will not exceed 50% and over the rest of the areas will not exceed 75% of normal and only over the western coastal zone is expected to be around normal. The above temperature and accumulated precipitation characteristics apply also for great parts of the surrounding area.



Divergence of the mean monthly temperature ( $^{\circ}\text{C}$ ) from normal during March



Percentage of the mean monthly precipitation (%) compared with the normal of March

## Normal values of temperature (mean maximum and mean minimum) and accumulated precipitation for January, February and March 2018

The normal values of mean maximum, mean minimum temperature and accumulated precipitation are presented below for sample stations, concerning the three months the period of forecast is covering, in order to gain a better view of the normal seasonal climate. The temperatures, both maximum and minimum, of **January** and **February** are the lowest climatological temperatures of the year while the accumulated precipitation has the greater amount of the year during **January**, as a result of the increased frequency of reoccurrence/redeveloping of depressions over the area of the east Mediterranean. During **March** a transitional month from winter to summer an increase of mean maximum and mean minimum temperature is noted with a simultaneous drop of the accumulated precipitation over all sample stations.

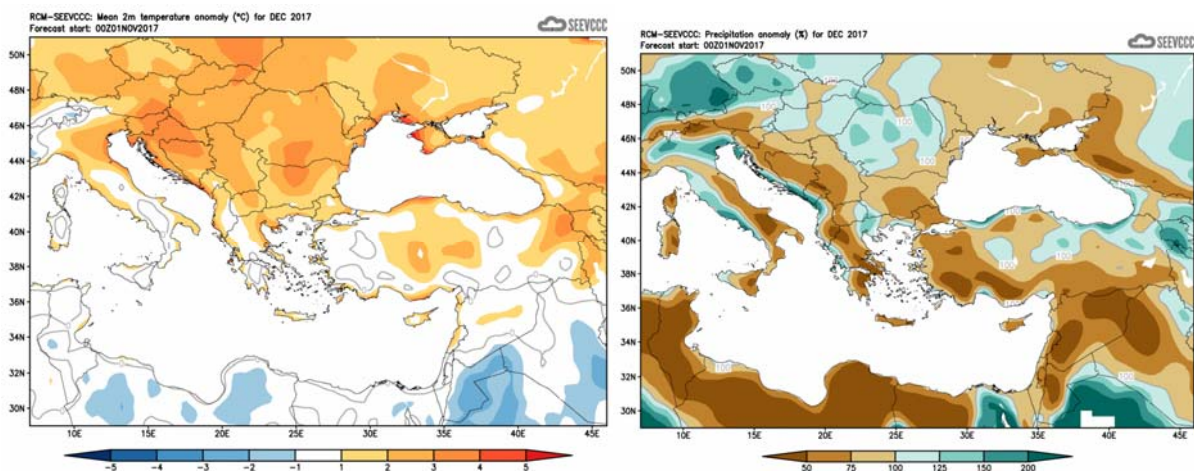
TEMPERATURE AND PRECIPITATION NORMAL VALUES FOR THE PERIOD 1981-2010									
Area Name	MEAN DAILY MAXIMUM TEMPERATURE (°C)			MEAN DAILY MINIMUM TEMPERATURE (°C)			MEAN MONTHLY TOTAL PRECIPITATION (mm)		
	January	February	March	January	February	March	January	February	March
NORTH COAST	16.3	16.3	18.3	7.6	7.3	8.3	85.3	68.5	45.7
WEST COAST*	17.1	17.1	18.6	8.3	8.1	8.9	78.8	59.8	34.4
MOUNTAINOUS AREAS	6.3	6.7	10.4	0.7	0.5	2.8	150.0	128.7	92.1
INLAND*	15.5	16.0	19.2	5.4	5.3	6.9	48.8	44.5	31.9
SOUTH COAST	16.8	17.0	19.3	7.5	7.1	8.6	73.7	50.3	35.8
EAST COAST**	16.3	16.5	19.1	6.6	6.3	7.8	67.3	50.7	35.2

\* West Coast and Inland Values cover the period 1983-2010

\*\* East Coast Temperature Values cover the period 1981-2007

## Evaluation of Decembers seasonal forecast for the area of Cyprus

The seasonal forecast for **December** suggested that temperature would be slightly above normal in most of the coastal areas. The accumulated precipitation of **December** was disappointing since the forecast suggested a mainly dry month with accumulation ranging only from 50% to 75% of normal, except the western and northern coastal parts where the accumulation would range almost up to normal. Low accumulations characterized all the surrounding area.



Divergence of the mean monthly temperature (°C)  
from normal during December

Percentage of the mean monthly precipitation (%)  
compared with the normal of December

From the provisional data recorded by the Department of Meteorology, for the selected portion of the meteorological stations, which are presented in the table below,

TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR DECEMBER 2017														
St. No.	Station Name	Mean Daily Maximum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Highest Daily Maximum Temperature (°C)	Lowest Daily Maximum Temperature (°C)	Mean Daily Minimum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Lowest Daily Minimum Temperature (°C)	Highest Daily Minimum Temperature (°C)	Monthly Total Precipitation (mm)	Normal Value (1981-2010)	Difference from Normal Value
41	POLIS CHRYSOCHOUS	20.4	18.0	2.4	22.7	16.3	9.9	9.3	0.6	5.0	14.8	25.9	93.6	-67.7
82*	PAFOS (AIRPORT)	20.2	18.9	1.3	22.5	16.1	11.1	10.0	1.1	5.3	18.5	26.5	90.1	-63.6
225	PRODROMOS (C.F.C.)	12.3	8.3	4.0	20.7	3.9	3.5	2.6	0.9	-3.4	11.2	73.4	157.3	-83.9
666*	ATHALASSA (RADIOSONDE)	20.3	17.3	3.0	22.9	13.6	8.1	7.0	1.1	3.3	14.5	28.6	57.2	-28.6
731	LARNAKA (AIRPORT)	20.0	18.6	1.4	21.9	15.4	10.7	9.2	1.5	6.1	15.1	13.4	79.0	-65.6
800**	ACHNA (DASAKI)	19.6	18.0	1.6	22.4	14.0	9.5	8.3	1.2	4.0	14.8	9.2	76.8	-67.6

\* Pafos' and Athalassa's Station Normal Values cover the period 1983-2010  
\*\* Achna's Temperature Normal Values cover the period 1981-2007

= VALUES FROM AUTOMATIC WEATHER STATION

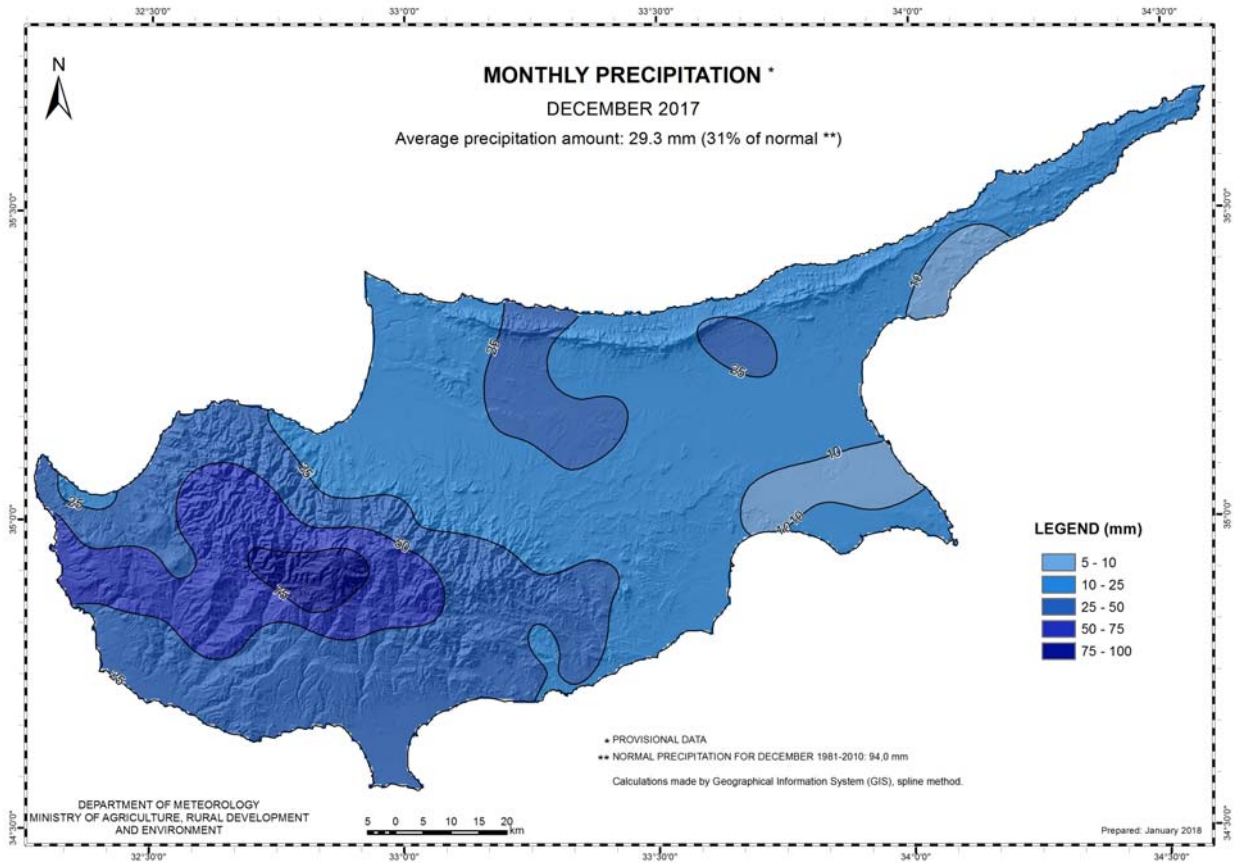
Is evident that the model did not perform well, since it did not forecast correct both the observed temperature anomalies and the accumulated precipitation. The seasonal forecast for **December** suggested that temperature would be normal inland and slightly above normal in most of the coastal areas. From the recorded data is shown that mean daily maximum and most of the mean daily minimum temperatures were above normal, not only inland but also for the coastal areas. All the mean daily maximum temperatures that were recorded, were significantly above normal with differences that ranged between 1.3 and 4°C. Most of the mean daily minimum temperatures were above normal, but not far from the normal temperatures.

Extremes (deviating by 4°C or more from normal) were also recorded at almost all the selected meteorological stations. As an example note the recorded maximum of Prodrornos that was 20.7°C (with a normal of 18°C) and the maximum of Athalassa that was 22.9°C (with a normal of 17.3°C). Concerning the mean daily minimum temperatures note the recorded minimum of Prodrornos that was -3.4°C (with a normal of 2.6°C) and the minimum of Pafos that was 5.3°C (with a normal of 10°C).

As regarding the accumulated precipitation, **December** was a very dry month, as presented from the table above. From the distribution (provisional accumulated precipitation chart) of the accumulated precipitation of **December** is evident that the surface distribution was well below normal reaching only 29,3mm (31% of normal). **December** 2017 is ranked as the 15<sup>th</sup> driest **December** since 1901. It is worth mentioning that the higher amount of precipitation of the month was recorded on the 30<sup>th</sup> and 31<sup>st</sup> of **December**.

Based on the provisional data, snowfall was recorded during the 5, 6, 24 and 30-31 of the month. Hail was recorded on the 5<sup>th</sup> and 24<sup>th</sup> of the month.

For the purpose of better visualization of **December** accumulated precipitation, a chart of Cyprus with the total preliminary accumulated precipitation is presented.



A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **December** is also presented.

